

A Compleat
H I S T O R Y
O F
DRUGGS,

Written in *French* by Monsieur *POMET*,
Chief Druggift to the late *French* King *LEWIS* XIV.

To which is added

What is further obfervable on the fame SUBJECT,
FROM

Mess. *LEMERY* and *TOURNEFORT*,

Divided into Three CLASSES,

Vegetable, Animal and Mineral ;

With their Use

In **PHYSICK, CHYMISTRY, PHARMACY,**
And feveral other ARTS.

ILLUSTRATED

With above Four Hundred Copper CUTTS, curiously
done from the Life; and an EXPLANATION of their different
Names, Places of Growth, and Countries from whence they are
brought; the Way to know the True from the False; their Vir-
tues, &c. A WORK of very great Use and Curiofity.

Done into *Engliſh* from the ORIGINALS.

The THIRD EDITION,

L O N D O N,

Printed for *J. and J. Bonwicke, R. Wilkin, S. Birt, T. Ward* and *E. Wickſteed*,
MDCCXXXVII.

T O T H E

Truly Ingenious and Learned Dr. SLOANE,
Physician Extraordinary to Her Most Sacred
Majesty, Secretary to the Royal Society, and
Fellow of the College of Physicians, London.

S I R,

I THINK my self under many Obligations of offering this Undertaking to you, which I should be much wanting to my self if I did not acknowledge. The first is, That you have been a very generous Encourager of this Design, not only by recommending the Work, but in assisting the Performance; which is a Favour I beg leave to thank you for, as well as the kind Present you made me of your *Natural History of Jamaica*. And tho' these were Inducements, they were not the real Motives that made me think this Work could come to none so properly as yourself; but it was the Consideration, that you are, without the least Tincture of Flattery, the only Person of the Faculty in these Kingdoms who of late Years have made the *Materia Medica* your Study: So that it is hard to say, whether your Discoveries in the Theory of Medicine, or your judicious Improvements of those Discoveries in the Practice, have exceeded.

It would look vain in me to attempt the Characters of my Authors to one who is so much better acquainted with them, and

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whose single Recommendation would be sufficient to make the Publick value their Productions: But I flatter my self you will forgive me if I briefly inform you of the Method us'd in compiling and translating this Work, wherein I hope you will be of Opinion I have done my Authors no Injustice. For in the first Place I have taken Monsieur *Pomet* for my Text, making use of the Liberty of throwing out Repetitions, or whatever else was foreign to the Purpose, or better describ'd by others, especially Messieurs *Tournefort* and *Lemery*, whom you know well to be more accurate and concise. And in the next Place I have added several Things to Mr. *Pomet*, wherein he was erroneous in Description, Dose, or Choice of Druggs, which were much better known in these Countries, and more in use amongst us. And indeed I have pursued the same Rule with Mr. *Lemery*, but with more Caution; so that it made this a Work of more Time than I expected, when I first engaged in it. And yet perhaps I have not come up to the Taste of some curious Gentlemen, who are more accurate in Botany than I can pretend to; therefore I throw my self entirely upon your Favour, because I am assur'd you have too much Candour for Industry, and Concern for useful Knowledge, not to pardon small Faults for the sake of many things that may be commendable and instructive, and that otherwise would not be so readily usher'd into the World.

And tho' it is certain that the Knowledge and Choice of Druggs is one of the most useful and important Parts of Physick, yet it has been the most neglected of any to this Day; and it is not easily apprehended how much the Publick suffers in the Sale, which is daily made of I know not what sophisticated and decay'd Druggs, which are not capable of producing the Effects that are design'd by them, and expected from them, either to restore or preserve the Health of Mankind.

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kind. We may yet be more surpriz'd at the fatal Mischief that flows from Mens Ignorance in the common Choice of Druggs; and that nothing is more frequent in Druggifts and Apothecaries Shops than adulterated Medicines, which deserve not the least Tittle of those pompous Names, by which they enhance the Prices of them.

Hence, Sir, you may plainly see our Author's Designs were to expose the ill Practices of those Men who did so much Prejudice to the Profession of Physick, by rendering the Practice precarious, and setting a greater Value on a decay'd Drugg, or Composition of the Shops, than on the Life or Health of one of their Fellow Creatures: Therefore as one can scarce discover their Works of Darknes without suffering by the Malignity of their Tongues, who so undeservedly make a Gain of Peoples Credulity, I stand in Need not only of an Advocate but a Protector: And since every one knows that you are universally skill'd in all the most curious and useful Secrets of Nature, either in the Vegetable, Animal, or Mineral Kingdoms, whatever is here treated of in the following Books, your Travels into those Countries abroad, where many of them are produc'd, and your Diligence in furnishing your *Museum* at Home, from all Parts of the World, have made you intimately familiar with; so that no Person but will allow your Approbation a sufficient Sanction to this Work, and Protection to the Compiler thereof, who is with the utmost Esteem,

S I R,

Your very Humble

Servant to Command, &c.

T H E

P R E F A C E.

THE Knowledge of simple Druggs is a Study so agreeable, and so exalted in its own Nature, that it has been the Pursuit of the finest Genius's in all Ages. Several Princes have apply'd themselves to it with a great deal of Satisfaction to their own Minds, and Improvement to the Publick, as Mesue, Matthiolus, &c. to whom we are oblig'd for the first Essays of Medicine, which is an indispensible Knowledge to all who are concern'd in Composition, especially Apothecaries; for which Reason they ought to begin with this Study, before they undertake Pharmacy, else they can never prepare any Thing with Exactness, which is the Occasion of so many gross Errors that attend the Business, to the great Prejudice of the Patient; for they ought to know as well as the Druggist, from whence every Drugg comes, because different Climates encrease or lessen much their Virtues. They ought to distinguish them by their Names, their Figures, their Substance, their Touch, or Feeling, their Weight or Lightness, their Colour, their Smell, their Taste, and take particular Care that those which come from foreign Countries be not counterfeited or adulterated: For the Merchants, thro' whose Hands they pass, are sometimes too covetous of extravagant Gain, so that they sophisticate and counterfeit so well, that it is a hard Matter to discover the Cheat, if we have not been very conversant, or well acquainted with those Druggs before. Druggists and Grocers themselves are sometimes the first deceiv'd in buying great Quantities of false Druggs for good ones, and selling 'em so again; for which Reason it is very necessary that they should be well skill'd in the Knowledge of the True from the False, which is gain'd by a continued Trade in them, and a Frequency of seeing them. A Druggist ought to apply himself as much as possible to get Druggs at the first Hand, and to know the Places of their Growth, and their true natural History: For most Books that have been writ hitherto have told us nothing but Fables on this Head.

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The Publick will find themselves much indebted to Monsieur Pomet, for the great Number of curious and useful Remarks they will meet with in this General History of Druggs; which is further enrich'd by the Discoveries of a great many Things that were before in the Dark, but since brought to Light, by the Labour and Industry of him, and the more accurate Lemery: But Interest we see prevails upon Curiosity, since we meet with very few Merchants that will employ any Part of their Time to instruct themselves in these Affairs, which they are not persuaded are any ways necessary to their Business.

Besides, this Work is not only useful to those who profess Physick, and who will put nothing in the Composition of Medicines that they prescribe, except choice Druggs; but likewise it is serviceable to Students in Pharmacy, to Druggists and Apothecaries, who may improve themselves by what they will find in this Work, from whence they may learn to make a right Judgment of what is true or false in the Use or Trade of Druggs; since People that compose Medicines ought to know that what they buy will answer the Ends they propose: Besides, there are several Artists and Tradesmen who make use of Druggs, to whom it is necessary, and of great Importance to the Publick, that they should not be cheated or impos'd on, as Surgeons, Goldsmiths, Painters, Dyers, Farriers, &c.

I am persuaded that those who read this Work will be satisfied, that they never saw one Treatise of Druggs so compleat; for here is not only collected what may be found scatter'd in a great many Authors, but a great many Things that were unknown before Pomet's General History of Druggs, or at least very few of them were ever taken Notice of by any former Author; for he acknowledges to have Abundance of Materials given him by Mr. Tournefort, and several others of his Friends, who made it their Business to assist him with all the new Discoveries they could meet with. And tho' this Work is not swell'd into many Volumes, of much larger Size than the two present are, yet they contain twice as much as is in Pomet, besides the Additions that are necessary to the Text from Lemery; and this consider'd, together with the Number of Figures, and the neat Performance of them, which are nothing inferior to the Originals, renders this one of the cheapest Books that has appear'd of latter Years; which has been contriv'd for the Good of the Publick, many of the Figures being brought into one Plate, on purpose to prevent the Book from swelling to too large and too exorbitant a Price, and so destroy the Use, ulnes of the Design, and the Sale of the Book together.

All

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All the Druggs herein mention'd have either their proper Latin Names, or the Names given them by the Country from whence they are brought, with their Etymology where most pertinent, their Description and History taken from Mr. Lemery's Univerfal Treatise of Simple Druggs; the judicious Author whereof has endeavour'd to inform himself both from ancient and modern Authors, and the Relations of several Travellers, of whatever could be known concerning the Substances and Principles of which each Drugg is compos'd, and its Quality, and as succin&t as possible, to give an Idea of the Thing treated of, that might be satisfactory. Now all Druggs are taken from Animals, Vegetables, and Minerals, their Parts and what proceeds from thence; as their Hair, Nails, Horns, Milk, Blood, and Excrements. Under Vegetables are comprehended Trees, Shrubs, and other Plants, with what comes from thence; as Roots, Barks, Flowers, Fruits, Seeds, Mushrooms, Mosses, Gums, Rosins, Pitches, Turpentine and Balsams. Under Minerals are understood Minerals, Metals, Marcasites, Stones, Earths and Bitumens.

All Animals, according to the most probable and most received Opinions come from Eggs, and are there enclos'd, as it were in Abridgment, 'till the Seed of the Male penetrate their Covering, and stretches them sufficiently that they are ready for hatching: There enters into their Vessels a chylous Juice, which being push'd forwards by the Spirits, circulates thro' the whole Habit of the little Body, nourishes and dilates by little and little, which makes what we call Growth. This Circulation, repeated several times, makes the nutritious Juices so refined and attenuated, that they give a red Colour, and are converted into what we call Blood. This natural Operation has a great Resemblance to several chymical Operations, by which, in attenuating and dissolving the sulphureous or oily Substances, we can make a red Colour, which notwithstanding has a great deal of Difference: For example, if we boil in a Matraass one Part of Chyle or Milk, with two Parts of Oil of Tartar, per Deliquium, the white Liquor will become red, because the Salt of Tartar being rarified, dissolves and exalts the unctuous Part of the Milk, and reduces it into a Kind of Blood. If we boil together in Water one Part of common Sulphur, and three Parts of Salt of Tartar, the white or yellowish Liquor that was before acquires a red Colour according to the Quantity of the Sulphur dissolv'd. If we digest upon the Fire Flower of Sulphur in Spirit of Turpentine, the Liquor gains a red Colour.

The Circulations that are made perpetually in Animals, exalt so much their

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their Substances, and render them so dispos'd for Motion, that the Principles which arise from thence are almost wholly volatile: But indeed these Principles are not equally volatile in all Animals. For example, Fish afford less volatile Salts than terrestrial Animals. The Scorpion, the Crab, and the Eel, yield less than the Viper, Earth-worms and Snails afford less than Serpents, Ivory less than Hart's-horn; and so of the rest.

The different Degrees of Volatility that are in Animal Substances give 'em different Virtues one from the other; so those which have very volatile Salts, are usually reckon'd Cephalick and Diaphoretick; as the Viper, Human Skull, Hart's-horn, Goat's-Blood, Elk-Claw, because the Matter being beaten in the Viscera, push forth their Salts into the Brain, and by the Pores of the Body. Those whose Substances are less volatile have an aperitive Virtue, such as is to be met withal in Hog-lice, Craw-fish; because the Salts of these Animals being heavier, are more inclinable to precipitate and open the urinary Passages.

Every Plant arises from its Seed, and is confin'd in Miniature as in an Egg, after the same Manner as Animals; the Earth becomes a Matrix to the Seed, it softens it and extends the Bark, opens the Pores, and by a nitrous Fluid it is penetrated and unsheath'd from the Husk, so that the Parts of the little Plant are stretch'd, that were before wound or lock'd up together confusedly, and then this small Plant begins to appear upon the Surface of the Earth, and the nutritious Juice or Sap circulates in the Fibres that do the Office of the Veins, Arteries and Nerves; they dilate, extend, and grow to a certain determinate Size, limited and appointed by the great Author of Nature.

A Plant draws its principal Nutrition by the Root, because the Pores thereof are better dispos'd than others, for receiving in the Juice from the Earth. It is remarkable, that if the Root of a small Plant is continued in the Seed, it is to be met withal at Top, and the Stalk at the Bottom, as it happens very frequent, that the Juice which enters by the Root, and which is driven by the Heat of the Sun, makes a half Turn from the Stalk, and mounts upwards according to its determinate End. This Juice, in Circulating in the Vessels of the Plant, purifies itself, is rarify'd, exalted, and brought to Perfection after the same Manner as the Chyle and the Blood acquire their Perfection by Circulation. Then the more exalted and spirituous Parts of the Juice, which may be call'd the Animal Spirits of the Plant, are employ'd upon the Flowers and Fruits; the less subtle Parts supply Nourishment for the Stalk, the Branches, and the Leaves; the grosser Parts still congeal or coagulate into Gums, Rosins and Balsams: Those that are the grossest of all, produce an external

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nal Bark, Moss, and several Excreescences. Tho' all the Plants of the Earth receive their Nutrition from one and the same Spring, they notwithstanding every one of them acquire different Qualities, occasion'd from the Diversity of Fermentations and other natural Elaborations, that are produc'd by the Texture or Disposition of their different Fibres. We may distinguish Resins from Gums, in that Resins are much fatter, and that they dissolve consequently much easier in Oil.

The Origine of Minerals is different from those of Vegetables and Animals; this proceeds from the Congelation of acid or saline Waters charg'd with such Matters as will dissolve in the Earth. Metals are produc'd from a greater Degree of Concoction, a longer Digestion and closer Union of the Minerals, which are separated or divided from the grosser Parts in the Mines, after the same manner as Gold and Silver separate themselves from their Metals in the Cupel. All Mines are not in a State or Condition of producing Metals, for it is necessary there shou'd be a Disposition and natural Heat capable of raising extraordinary Fermentations and Elaborations; and high Mountains are usually the properest Places for these Productions, because the Heat therein contain'd is more regular and exact than others.

It is not Chance only that conducts us to the Discovery of metallick Mines, but those who apply themselves that Way observe or take Notice of several Circumstances which direct them to the Places where they may be found. For Example, When on a Mountain, or in the Clifts and Breaches of Rocks they meet with Marchasites, and small heavy Stones of a Mineral Kind, or that they perceive on the Surface of the Earth several Mineral Veins, these are Signs that there is something to be found that is likely to answer their Expectations, and that they may be assured of Success.

When in certain Streams or Rivulets there is seen a sort of Sand of little Pieces of Marchasite of some Mineral, this is a Sign that there is some Metallick Mine near the Place; for these Metallick Bits being wash'd off, and convey'd by the Current of the Water that flows usually from the Bottom of some Hill; so that it runs back again towards the Fountain Head, insomuch that if you pursue these small Pieces of Marchasite, they will bring you to the Place where the Mine is.

*When the Aspect or Figure of a Mountain is rough and wild, the Earth is barren, naked, and without any kind of Plants, or that only some particular Kinds are produced, which are almost wither'd and dry; these are signs that there are Mines in this Mountain, because the great Barrenness of the Surface was occasion'd by nothing else but the Mineral
Vapours,*

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Vapours, which consume the Roots of the Plants; tho' it does not always happen that Mineral Places are barren, there being very many that are cover'd with great Variety of Herbs. When we see a very clear Water flow from a Mountain that has a Mineral Taste, it is a sign that the Place abounds with some kind of Metal or Mineral; for those sort of Places are usually supply'd with a great deal of Water, which give great Disturbance to the Workmen, it being necessary to drain off the Water before you can search for the Metal.

When we are very certain, by several Signs or Observations, that any Hill or Mountain contains in it some Mine of Metal, we begin to sink or dig a Pit at the lower Part or Foot of the Hill, in order as the Miners call it to carry the Level, whereby the Waters may run off of their own accord, and without the Assistance of Engines, and thereby they may be able to come at the Deep, where the largest and richest Part of the Metal lies. We must take Notice, that the Metallick Matter being as yet Flint in the Mine, divides itself into several Veins or Channels, that represent the several Branches of Trees, or the Arms of a River. Metals differ from other Minerals in being more malleable, whereof there are seven, to wit, Gold, Silver, Iron, Tin, Copper, Lead and Quicksilver; the last is not malleable, but will amalgamate with any of the others, and therefore is by some call'd a half Metal, tho' others believe it to be the Seed of all Metals.

The Astrologers and Alchymists join in their Opinions herein, and affirm this as an uncontestable Truth, that there is a great Correspondence between the seven Metals and the seven Planets in their Influences, which flow the one from the other, and serve reciprocally for their Nutrition. And tho' this Opinion is without any Foundation, it has nevertheless many Followers, notwithstanding their finest Reasonings are but gratis dicta; for excepting the Sun and Moon, there is not the least Shadow of a Probability, how any of the rest should communicate any Influence to any thing that grows upon this terraqueous Globe, especially subterraneous Bodies, where neither the Sun nor Moon seems to have any Dominion.

A great many Physicians and Apothecaries think it sufficient to answer the Ends of their Profession, that they know the most common Druggs in Use, without giving themselves any further Trouble: But nothing is a greater Obstruction to the Progress and Advancement of Medicine than such a lazy Notion, which gives a Check to all Enquiries into the Secrets of Nature, and prevents the Discovery of an infinite Number of excellent Medicines that are unknown to us. We see that every Age has brought to light some new Druggs, and we had never known the chief Part of the

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best Medicines in Use amongst us at this Day, if the Chymists had not brought them out of the Fire, from such Metals and Minerals as the Ancients believed not only useles; in Physick, but pernicious to Health. How should we have met with the Bark, Ipecacuana, &c. which produce such extraordinary Effects, if the Botanists had not carried their Enquiries into the New World? And the Materia Medica had never been so copious as it is now, if those who have made so many valuable Discoveries had contented themselves with such Druggs only as served their Predecessors. We likewise see that such Physicians as practice Physick with the most Success, are such as have applied themselves most to the Knowledge of Druggs; as we have an eminent Instance in Monsieur Fagon, first Physician to the French King; and some of our own Nation, who are, and have been, the greatest Ornaments to the Profession of Physick, as well as the Study of Botany, as Dr. Morison, Dr. Grew, Dr. Sloan, Dr. Woodward, Mr. Petiver, and others: Therefore all those who apply themselves to the Composition of Medicine, ought seriously to enquire into the Knowledge of Druggs, and to penetrate into their secret Virtues; it being certain there is not one of them that has not in it some specifick Quality for the Cure of Diseases. 'Tis pity there are few Persons whose Leisure and Fortune will give 'em an Opportunity of applying all their Time to this Business; but I am persuaded that any Physician or Apothecary that would use a little Industry this Way, might in the Course of his Life, discover the particular Virtues of one Drugg; and this would, in Time, enrich the Practice of Physick with a great many more Simple Medicines that are surer, safer, and more efficacious than those we use at this Day.

An ACCOUNT of the Names of the AUTHORS quoted in this WORK.

A COSTA, (*Christopher*) an African Physician and Surgeon, who made a Treatise of Druggs and Medicines in the Year 1582, which was translated into *Latin*, then into *French*, and printed at *Lyons* in *Octavo*.

Adversariorum Opus, done by *Peter Pena* and *Matibew Lobel*, both Physicians. This Book was printed at *London* 1570, at *Antwerp* 1576, and reprinted at *London* 1605, in *Folio*.

Agricola (*George*) of the Rise and Causes of subterraneous Productions. Book the Fifth, of the Nature of those Things which spring from the Earth. Book the Fourth, of the Nature of Fossils. Book the Tenth, of old and new Metals. Book the Second, *Bermannus*, or a Dialogue of metallick Affairs, being a *German* Interpretation of metallick Terms.

Aldinus: An exact Description of several scarce Plants, contain'd in the *Farnesian* Garden at *Rome*. Printed there 1625, in *Folio*.

Aldrovandi, (*Ulyssis*) *Dendrologia*, printed at *Bononia* in *Folio*.

Alpinus, see *Prosper Alpinus*.

Amatus Lusitanus, upon the five Books of *Dioscorides*; to which is added the Names of Plants in several Languages; printed at *Strasburgh* 1554, in *Quarto*.

Ambrosinus Hyacinthus, his *Phytologia* of the publick Garden at *Bononia*, or the first Tome of the first Part of Plants; printed at *Bononia* 1666, in *Folio*.

Anguillara, (*Alofius*) third President of the Garden at *Padua*, his Opinion of several Plants; a small Work divided into fourteen Parts; with the Works of *John Marinel* in *Italian*: To which are added two Figures, one of the *Chamaeleon-Thistle*, and the other of *Tree House-Leek*; printed at *Venice* 1691, in *Octavo*.

Apuleius Platonicus, of the Virtues of Herbs, joyn'd with a Demonstration of the Herbs to every single Sign of the *Zodiack*, and also of the erratick Stars, or such as are not fix'd; printed at *Paris* 1528, in *Folio*.

Barbarus (*Hermolaus*) his five Books of Additions upon *Dioscorides*; printed at *Cologne* 1530, in *Folio*.

Bellonius: These Works are translated by *Clusius*, and placed in the second Volume of Plants, printed at *Antwerp*. There are besides printed at *Paris* several Treatises of the same *Belon* of coniferous and ever-green Plants, in *Quarto*. Of the wonderful Excellency of the Works of the Ancients, in *Quarto*. Of Embalming the Dead, in *Quarto*.

Benzonis, (*Hieronymus*) his History of the New World, render'd into *Latin* by *Urbanus Calvatones*; printed at *Geneva* 1600, in *Octavo*.

Boccones, (*Paul*) his Figures and Descriptions of choice Plants; printed 1674.

Boetius de Boot of *Bruges*, Physician to the Emperor *Rodolph* the Second, his History of Gems and Stones; printed at *Leyden*.

Bontius, (*James*) a Physician of *Batavia*, who writ six Books of the Natural History of the *East-Indies*, but being prevented by Death left them unfinish'd: Afterwards *William Piso* reduced them into Order, illustrated and published them together

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together with the Natural History of the *West-Indies*; printed at *Amsterdam* 1658, in *Folio*.

Botanicum Monspeliense, the *Montpellier Botanist*; printed at *Leyden* 1676, in *Octavo*.

Breynius, (*James*) of *Exoticks*, &c.

Brunfelsius, (*Otbo*) his *Latin History of Simples*, with *Cuts*, in three Volumes; the first publish'd 1530, another in 1531, and a *Posthumous Work* in 1536; printed at *Strasburgh*.

Caspar Baubinus's Pinax, or *Store-House of Botanical Rarities*; printed at *Basil* in 1623, and re-printed at the same Place, with some Alterations, in 1671, in *Quarto*.

Cæsalpinus, (*Andreas*) *Aretinus*, Professor in the University of *Pisa*, his sixteen Books of Plants; printed at *Florence*, 1583.

Camerarius upon the *Epitome of Matthiolum*; printed at *Frankfort* 1586, in *Quarto*.

Camerarius on the *Medical and Philosophical Garden*; publish'd at *Frankfort* 1588, in *Quarto*.

Cardanus, (*Hieronimus*) of the *Variety of Things*; seventeen Books, printed at *Basil* 1581, in *Octavo*.

Castor Durante's New Herbal; printed at *Rome* 1585, and at *Venice* 1684, in *Folio*.

Clusius, (*Charles*) his *Appendix of the History of Plants*, or his *Description of several Roots as yet unknown*; printed at *Antwerp* 1611, in *Folio*.

Clusius, of *Exotick Plants*, ten Books, printed at *Antwerp* 1605, in *Folio*.

Clusius's History of scarce Plants; printed at *Antwerp* 1601, in *Folio*.

Clusius's History of several rare Plants observ'd throughout Spain.

Clusius's History of several scarce Roots observ'd throughout Pannonia, Austria, &c.

Columnæ, (*Fabii*) *Phytobasanos*, with *Cuts*; printed at *Naples* 1592.

Two Parts of the same Author of the less known Plants; the first of which contains 161 Figures; printed at *Rome* 1616; the other 44 Figures, printed at the same Place 1616.

Cordus, (*Valerius*) his *Annotations on Dioscorides*.

The *History of Roots* by the same Author, in four Books, with several *Cuts* from *Tragus*, and some new ones added by *Gesner*.

A *Sylva* of *Observations* which were likewise publish'd together by *Gesner* at *Strasburgh* 1561, in *Folio*.

A *Dispensatory* of the same Author.

Cornutus, (*James*) a *Parisian Doctor*, his *History of the Plants of Canada*, and others not known before; printed at *Paris* 1635, in *Quarto*.

Cornarus, (*Janus*) who undertook *Dioscorides*, and added *Cuts* to every Head; printed at *Basil* in 1557, in *Folio*.

Cortufus, (*James*) *Anthony*, a *Senator of Padua*, and *President of the Physick Garden* there, and who publish'd nothing but a *Catalogue of the Padua Garden*, with the *Area* or *Plans* of the same; printed at *Venice* 1591, in *Octavo*.

Costeus, (*John*) concerning the whole Nature of Plants, in two Books, print'ed 1578, in *Quarto*.

quoted in this WORK.

Annotations of the same Author upon the *Museum*, with the Works thereof; printed at *Venice* 1570, in *Folio*.

Créscenius, (*Petér*) of *Bononia*, of the Parts of Agriculture, with the Nature and Usefulness of Plants; printed at *Basil* 1548, with some Cuts.

Dalechamp's History of Plants in two Volumes; printed at *Lyons*, in *Folio*.

De la Duquerie, (*John Baptist*) his *Lexicon Medico-Etymologicum*.

Dioscorides of the *Materia Medica*, five Books in *Greek*, of which there are various Editions extant in *Greek* and *Latin*, with the Interpretation of *Marcellus Virgilius*, *Goupisius Affulanus*, *Jobannes Ruellius*, *Jobannes Cornarius*, *Jobannes Antonius Saracenus*, and others.

Six Books of the said *Dioscorides*, with *Ruellus's* Notes and small Cuts, 350; to each Chapter of which is added compendiary Annotations of the second Edition: Also thirty Figures of Roots not before delineated; by *James Dalechamp*; printed at *Lyons* 1552, in *Octavo*.

Dodonæus, (*Rembertus*) of *Mechlin*, Imperial Physician, his History of Roots in thirty Books; printed at *Antwerp* 1616, in *Folio*.

Dodonæus's French History of the same, by *Clusius*.

The *Belgick* History, by the same Author.

Furicius Cordus's *Botanologicum*, or Discourse of *Botany*, by Way of Dialogue; printed at *Cologn* 1534, in *Folio*.

The Garden of *Eystettensis*, describ'd by *Basilius Beslerus*; printed at *Norimberg* 1613, in *Folio*.

Fracastorius's Works; printed at *Lyons* 1590, in *Octavo*.

Fragosus, (*John*) Physician and Surgeon to the King of *Spain*, his History of Aromaticks, Fruits and Simples, that are brought from both the *Indies* into *Europe*; publish'd by *Israel Spachius*, a Physician of *Strasburgh*, and printed at the same Place 1610, in *Octavo*.

Fuchsius's Commentaries on the History of Roots; printed at *Basil* 1542, in *Folio*.

Galenus, (*Claudius*) of *Pergamus*, the most eminent after *Hippocrates*.

Garzias ab Horto, Physician to the Vice-Roy of the *Indies*, his History of Aromaticks and Simples that have their Growth in *India*, digested into an Alphabetical Order, and found writ in the *Portuguese* Language, by the Way of Dialogue, but contracted by *Clusius*, and render'd into *Latin*. This Book was translated into *French* under the Title of the History of Druggs, Spices, and simple Medicines.

Gerard, (*John*) his History of Plants in *English*; printed at *London* 1597, in *Folio*.

Gerard's History enlarg'd by *Johnson*; printed at *London* 1636.

Gesner, (*Conradus*) of the Gardens of *Germany*.

Gesner, of the Collection of Roots.

Gesner's Catalogue of Plants in four Languages.

Gesner, of the Nature of Fossils, Stones and Gems, with Figures, &c. printed at *Zurick* 1565, in *Octavo*.

Guilandinus, (*Melchior*) fourth President or Governor of the Garden at *Padua*, his Apology against *Matthiolus*; printed at *Padua* 1558, in *Quarto*.

Gulielmus

An Account of the Names of the Authors

Gulielmus Piso, Physician at *Amsterdam*, his Natural and Medicinal Account of both the *Indies*; printed at *Amsterdam* 1658, in *Folio*.

Hariot, (*Thomas*) his Description of *Virginia*; *Clusius* turn'd it into *Latin*, and this is the first Part of the *West-Indies*.

Hermannus. See H. L. B.

Hermander, (*Francis*) his History of Plants, Animals, &c. of *Mexico*, first compil'd by this Author, and afterwards digested into a Volume by *Nardo Antonio Reccho*; printed at *Rome* 1651, in *Folio*.

Hermolaus Barbarus, his five Books of Commentaries on *Hippocrates*; printed at *Cologn* 1530, in *Folio*; and the same Author's Corrections of *Pliny's* Natural History; printed at *Basil* 1534, in *Folio*.

Hieronimus, or *Ferome* of *Brunswick*, his plain *German* Proof; to which is added, *Brunfelsius's* Herbal; printed at *Strasburgh* 1531, in *Folio*.

Hippocrates's Works.

Honorius Bellus Vincentinus, a Physician of *Crete*, his Epistles of Plants, writ to *Clusius*; to which is added the History.

Hortus Medicus Edinburgensis, the Physick Garden at *Edinburgh*, or a Catalogue of Plants there, by *Jacob Sutherland* of *Edinburgh*, 1683, in *Octavo*.

Hermannus's Catalogue of Plants of the Garden at *Leyden*, by *Paul Hermannus*, Professor of Physick and Botany in that University; printed there 1687.

Hortus Malabaricus Indicus.

Hortus Regius Blesensis; printed at *Paris* 1655.

Hortus Regius Parisiensis, the Royal Garden at *Paris* 1665.

Johannes Baubinus's History of Plants, carried on by *Henricus Charlerus*, Doctor of *Basil*, and enlarg'd by *Cabræus* of *Geneva*, 1650, in *Folio*.

Imperatus Ferrantes, a *Neapolitan* Apothecary, publish'd a Natural History in twenty-eight Books, with Figures of Stones, Corals, Spunges, &c. and of Plants and Fruits, thirty-three; printed at *Naples*, 1599, and *Venice* 1672, in *Folio*.

Ten Parts of the History of the *West-Indies*, with an Addition to the ninth Part, in *Folio*.

Ten Parts of the *East-Indies*, in *Folio*.

Johnston's Natural History of Animals, with Copper-Cuts; printed at *Amsterdam*, 1657, in *Folio*.

Lacuna, (*Andrew*) his Commentaries on *Dioscorides*, with Figures; writ in *Spanish*, and printed at *Salamanca*, 1552, in *Folio*.

Lemnius, (*Levinus*) of sacred Plants; printed at *Lyons*, 1595, in *Octavo*.

Lerius, (*Johannes*) writ the History of *Brasil*, first in *French*, then in *Latin*; printed at *Geneva*, 1594.

Linscotus, (*John Hugh*) his Itinerary and Voyage into the *East-Indies*, belonging to the *Portuguese*; with the Annotations of *Bernardus Paludanus*; printed at the *Hague*, 1599, in *Folio*.

Lobellius, (*Matthew*) his Figures of Plants and Roots; printed at *Antwerp*, 1581, in a long Form in *Quarto*.

His Illustrations of Roots, together with the further Care and Diligence of *William How* an *Englishman*, printed at *London* 1655, in *Quarto*.

Lobellius's Observations and History of Plants and Roots; printed at *Antwerp*, 1576, in *Folio*.

quoted in this *WORK*.

Lonicerus, (*Adam*) this was the Herbal of *Eucharius*, writ in *High Dutch*, and afterwards publish'd under the Name of *Adam Lonicerus*, with 833 Cuts about the Year 1582, at *Frankfort*.

Ludovicus Romanus his Voyage into the *East* : Seven Books, with the Notes of *Archangelus Madriguanus* and others, who have describ'd the New World.

A general History of Plants of *Lyons*, by *Gulielmus Revillius*, 1586 ; it is usually call'd *Dalechamp's History* in *French*.

Malpighius (*Marcellus*) his Anatomy of Plants ; printed at *London*, in *Folio*.

Marcgravius (*George*) his eight Books of the Natural History of *Brazil* ; this Work was printed in *Holland* with that of *Piso's*, in the Year 1648, in *Folio*.

Matthiolus his Commentaries on six Books of *Dioscorides*, &c. printed at *Venice*, 1565.

Matthiolus quoted by *Lobellius* in the Book entitled *Icones Lobellii*.

Matthiolus on the *Venice* Edition, 1565.

Mentzelius, chief Physician to the Elector of *Brandenburgh*, his Universal Index of the Names of all the Plants in several Languages ; with a small one of the scarcest Plants, and some Figures cut in Coppet ; printed at *Berlin*, 1682, in *Folio*.

Mesue's Works, of the Chioce of cathartick or purging Medicines, with the Correction and Use of the two Books, whereof the first are the general Canons, and the second treats of Simples ; printed at *Venice*, 1623, in *Folio*.

Monard (*Nicholas*) a Physician of *Seville*, his History of simple Medicines brought from *America* ; writ first in *Spanish*, then done into *Latin* by *Clusius*, and afterwards translated into *French* by *Antony Colin*, Apothecary at *Lyons* : This Work was printed with that of *Garzias ab Horto* and *Acofta*, in the Year 1619, in *Octavo*.

Morison's Universal History of Plants ; the second Part by *Robert Morison* Botanick Professor at *Oxford*, printed there, 1680, in *Folio*.

The *Hortus Regius Blefensis* enlarg'd by *Robert Morison* ; printed at *London*, 1669, in *Octavo*.

Morison's Botanick Preludes.

Norison's New Description, or ranging of umbelliferous Plants ; printed at *Oxford*, 1672, in *Folio*.

Nehemiah Grew's New Anatomy of Plants ; printed a *London* in *Folio*.

Nicander's Treacle and Alexipharmacks, with the *Greek* Readings, or *Scholia* of an uncertain Author ; printed at *Venice*, 1523, *Quarto*.

An Edition of the same Author with the *Greek* and *Latin* Readings of *Gorræus* ; printed at *Paris*, 1557, in *Quarto*.

Oviedus Consalvus Ferdinandus his General History of the *West-Indies* : This Work has been turn'd into *French* by Mr. *Duret* in *Octavo*.

Paludanus Bernardus's Notes on the *Indian History* of *Linscotius*, with the Addition of *Indexes*, &c.

Paul Herman's *Prodromus* of the *Batavian Paradise* ; printed at *Amsterdam* in *Octavo*.

Parkinson's *Terrestrial Paradise*, in which is contain'd a History of all Flowers, Fruit-Trees, &c. that are cultivated in Gardens or Orchards ; printed at *London*, 1629, in *Folio*.

Parkinson's *Theatrum Botanicum* ; printed at *London*, 1640, in *Folio*.

An Account of the Names of the Authors

Petrus Pena : See *Adversariorum Opus*.

Paulus Renealmus Blesensis his *Specimen* of the History of Plants, with Copper Cuts; printed at *Paris*, 1611, in *Quarto*.

Philipp Pigafetta's History of the Kingdom of Congo, &c.

Pilleterius, (*Caspar*) of the Plants growing in *Zeland*, in an Alphabetical Manner; printed at *Middleburgh*, 1610, in *Octavo*.

Piso : See *Gulielmus Piso*.

Pliny's History, in which several Things are extant concerning the Culture and Virtue of Plants. This Work was translated into *French*, by Mr. *Dupinet*, and printed at *Lyons* 1581, in *Folio*.

Pitton Tournefort's Elements of Botany, or the Method of knowing Plants; printed at *Paris* at the King's Charge, 1694, *Octavo*.

Leonard Plunkenet's *Phytographia*; the first Part printed at *London*, 1691, in *Folio*.

Father *Plumier's* Description of *American* Plants; printed at *Paris*, 1693, in *Folio*.

Pona (*John*) Apothecary at *Verona*, his Catalogue of Simples growing in *Montebaldo*, with the Description of several others, and sixteen Figures, adding *Clusius's* History of rare Plants. This Work, after several Editions, was translated into *Italian* by *Francis Pona*, Dr. of Physick, and the Author's Son; printed at *Venice*, 1617, in *Quarto*, at *Basil*, 1608, and at *Antwerp* in *Folio*.

Prosper Alpinus of *Egyptian* Plants; printed at *Venice*, 1633, in *Quarto*.

Prosper Alpinus's two Book of Exotick Plants; printed at *Venice*, 1656, in *Quarto*.

Johannes Baptista Porta a *Neapolitan*; twelve Books printed at *Frankfort*, 1592, in *Quarto*: This Author writ several other Works, especially the Physiognomy, or History of several Plants adorn'd with Figures, in *Octavo*.

Quadranius, a Divine, and Botanist to the Duke of *Ferrara*, writ a Treatise of Treacle and Mithridate; printed at *Ferrara*, 1597, in *Quarto*.

Ray's Catalogue of *English* Plants, and the Isles adjacent; printed at *London*, 1677, in *Octavo*.

Ray's History of Plants; printed at *London*, 1686, in *Folio*.

Ray's Methodical Synopsis of *British* Roots by the same Author, *John Ray* Fellow of the Royal Society; printed at *London*, 1690, in *Octavo*.

Rauwolfius, (*Leonard*) his Description of several Plants in his Travels into the *East-Indies*, and their Cuts; printed, 1583, in *Quarto*.

Renodæus, (*John*) his five Books of Pharmaceutical Institutions; to which are added three of the *Materia Medica*; printed at *Paris*, 1608, in *Quarto*.

Robini Hortus, or the Garden of *John Robin* Royal Botanist to *Henry* the Fourth of *France*, with 214 Figures; printed at *Paris*, 1608, in *Folio*.

Rondeletius of Fish; printed at *Lyons*, 1554.

Ruellius's Translation of three Books of *Dioscorides* into *Latin*, concerning the Nature of Roots; printed at *Basil*, 1557, in *Folio*.

Scaliger, (*Julius Cæsar*) his Animadversions upon six Books of *Theophrastus*, of the Causes of Plants; printed at *Geneva*, 1566, in *Folio* and *Octavo*.

Schola Botanica, printed at *Amsterdam*, 1689, in *Twelves*.

quoted in this WORK.

Schroder's Pharmacopœia Medico-Chymica, whereof there are several Impressions.

Schwenckfeldius's Catalogue of the Roots and Fossils of Silesia; printed at *Leipsick*, 1601, in *Quarto*.

Suvertii Florilegium, in which, besides the many Figures, there are 47 Plants from both the *Indies* not describ'd before; printed at *Frankfort*, 1612, in *Folio*.

Sylvatici (Matthæi) Opus Pandectarum; printed at *Venice*, 1499, in *Folio*.

Tabernaemontanus his *German History*, publish'd in three Parts, with 2087 Figures, printed at *Frankfort*, 1588, in *Folio*.

The same enlarg'd with the Description of Plants, Cuts, and several Medicines, by *Caspar Baubinus*, in the Year, 1613, in *Folio*.

The Figures, or Prints of the same, with the bare Names in *Latin* and *High Dutch*; printed at *Frankfort*, 1590.

Tbalius, Sylva Hercynia, or a Catalogue of Plants, growing naturally on the Mountains and Parts adjacent to *Hercynia*; printed at *Frankfort*, 1588. This Catalogue is usually joyn'd to and adorn'd with the Medicinal Garden of *Camerarius*.

Theophrastus's History of Plants; the *Greek Edition* printed at *Venice*, 1552, in *Octavo*; at *Basil*, 1541, in *Quarto*; and *Gaza's Version* at *Lyons*, 1552, in *Octavo*, with *Jordan's Correction*.

Theophrastus Eresius's ten Books of the History of Plants which *Bodæus* illustrated; printed at *Amsterdam*, 1644, in *Folio*.

Thevet's Cosmography in *French*, publish'd with several Figures of Plants and Animals. The same Author has writ in *French*, a History of what is singularly remarkable in *New France* in *America*; whereunto is added twelve Figures of Plants; printed at *Paris*, 1557, in *Quarto*.

Tragus his History, which was often publish'd at *Strasburgh* in the *German Language* in *Folio*; but now is translated into *Latin* with 567 Cuts, tho' they are describ'd to 800; printed at *Strasburgh*, 1522, in *Quarto*.

Turner, (William) his History of Plants in *English*, with some Figures; printed at *London* in *Folio*.

Veslingius's Observations upon Prosper Alpinus, concerning *Egyptian Plants*; printed at *Padua*, 1638, in *Quarto*.

Virgilius Marcellus's Interpretation of Dioscorides, with Commentaries of the same; printed at *Cologn*, 1529, in *Folio*.

Giacomo Zanoni's Herbal, taken from the publick Physick Garden at *Bologna*; printed there in 1675, in *Folio*.

A
C A T A L O G U E
O F T H E
S E E D S
O F

Several scarce and curious P L A N T S lately brought from the
American Islands; communicated to Monsieur *Lemery's* Bookseller,
and published with *Lemery's* Consent, by *Joseph Donatus* of *Surian*,
a Physician of *Marfeilles*, a Lover of Botany, and also Professor in
America, being sent thither by the *French* King to promote Botanick
Knowledge.

A COUOUA, the first sort, being another Kind of Boxthorn, with feather'd or wing'd
Branches, bearing Fruit of a red Blush, a round Flower, yellow and scented.
Aconoua, a second *Indian* Kind; a wing'd Bramble first codded, with an *Acacia*
Leaf, and a white sweet Flower.
Abrus of *Alpinus*, *Piso's* scarlet Berry, which *Baubin* has delineated with a black Spot.
Axe-Kepa, with the Sharpness of Pellitory, and the Likeness of it.
Anouagou, the first sort, a Sea-Pulse, purple spik'd, with a Stone-Fruit not eatable, of
a brown Colour, streak'd with white Spots.
Anouagou, the second sort, a Sea-Pulse or Pea, without purple Spikes, and with a less
stony Fruit.
Anouagou, the third sort, a stony Sea-Pulse, with a white spik'd Flower, and narrower
Leaves.
Anouagou, the fourth sort, with square, black, long Cods, and a white Flower.
Acacia, the first crown'd sort, with flat, blackish, purple, Pods; the Flower of a golden-
scarlet Colour.
Another crown'd *Acacia*, with narrower Leaves, podded, and that grows in the Woods,
with a sweet Flower.
Anacocco, a Kind of *Indian* Tree that bears an Apple, with a golden Fruit that is eatable,
call'd a *Bastard Mammon*.

Acantha

A Catalogue of SEEDS.

Acantha and *Acacia* of *India*, a foetid Pod, with a long and narrower Leaf, and a sweet, golden, round Flower.

Alanalu, a milky Tree that bears a Prune, from which the *Indians* make the best Wine.

Acouaa, and the *Amoroa* of *India*, a Fruit bearing a thorny *Osier*, with broad Pods, and a round, golden, sweet Flower.

Astragalus, the purple colour'd, with the longest Root, and a hairy Seed.

Abucia, the beautiful straight Sort of *Alpinus*, with narrower Leaves, less sweet and purple Flower.

Aipi Indian, a Fruit bearing milky Runner, that produces a sort of scented Aloes, and is of the Size of a Cucumber.

Acaiu, a Tree bearing an Apple, with a very delightful red Fruit, and a Nut hanging down instead of an *Anacardium*.

Affourou, a royal, aromatick, *Indian* Tree, commonly call'd *Indian Wood*.

Bipicaa, a Fruit of *Angola*, with a trefoil Leaf, a yellow Flower, and excellent for eating.

Bamia of *Alpinus*, a hairy Mallow, with a yellow Flower and Nutmeg Seed, as *Baubinus* has delineated.

Boucomibi, with a Periwinkle Fruit, Pods like a Sword's Point, with a golden-colour'd Bell Flower, which the *Indians* call *Guaya*, or *Cancros*.

Bamatu, with five Leaves, a Tree that is crooked, with a Pear-Leaf, and a purple Bell-Flower.

Balati, a low venomous Herb in the Woods, with a pyramidal Grape Fruit, of wonderful Virtues.

Cayouti, the first Sort, a sensible Bramble and chaste Thorn, with short Pods, with a sweet, snowy, round Flower, call'd *Chaste Herb*.

Cayouti, another Sort, bearing a chaste Fruit, and arm'd with terrible Thorns, having a round golden Flower without Smell.

Cariarou the third, a Sea-Bindweed, with large fleshy Leaves, and a purple Flower.

Caachira, the Herb *Anil*, from which *Indigo*, or a Paste, is made, with which they dye Wool and other Things.

Cariarou, a second Sort, a ribb'd Bindweed, variegated with a golden Flower.

Couyarali, with a flaxen Leaf, and white Flower.

Caatia, with the *Germänder* Leaf, that is often us'd by the Poor for Liquorice.

Coucouli, a high Tree, bearing a sweet Fruit, and an Apple that is membranous, resembling a Myrobalan Nut, from whence is drawn a cathartick or purging Oil.

Another Kind of *Couriarou*, or fine Bindweed, with a fleshy Ivy-Berry Flower, a red Fruit, and a spotted Seed.

Caoucia, a Sort of Snake-Weed, with a Pellitory Leaf, that grows in the Woods and Fields, and is very successful in curing the Biting of Snakes and other venomous Creatures, for which Use it yields not Precedence to any other Antidote.

Ceratia, a thorny three-leav'd and Pod-bearing Tree, with a scarlet Leaf. *Clufus* calls it the *Coral-Tree*.

Critbnum, bearing the Berry of the Palm of St. *Christophers*, with Leaves of the Thickness of the largest Purflane, and a little white Flower without Smell.

Cururuape, a Fruit bearing three-leav'd venomous Coralloide, or Shrub-Plant, of the Periwinkle Kind, a famous Creeper, whose Leaves the *Indians* use for venereal Wounds.

Cocao, a *Mexican* Filbert or Nut, from which the fam'd Chocolate is made.

Cocontiba, an *American* Spurge-Laurel, a caustick Tree, with a white Smelling Cluster of Seeds, that are a powerful *Hydragogue*, or the *Indian Cnidium*

Cariarou, the first Kind, a ribb'd Bindweed, with a golden Cluster, and the Seed of *Poly-anthos*.

The third Kind of *Cariarou*, is a Sea-Bindweed, with a white sweet Flower.

The

A Catalogue of SEEDS.

The fourth Kind of *Cariarou* is a Sea Bindweed, with a bloody Flower, and jagged Leaves.

Caratha, an *American* Herb, with longer Leaves than *Aloes*, a *Dactyloides*, with a white acid Fruit, of which is drawn a fine tough Thread.

Calaba, an *Indian Daphnoide* Tree, or Sort of Periwinkle, with a Fruit like a Gall-Nut, from which the *Indians* draw an Oil, and anoint therewith.

Camara the sixth, a Kind of Fruit bearing Penny-royal Herb, with purple Flowers knit together.

Caravicum, a small Kind of the *Ricinus*, or Pine-Nut, with a little Seed, an *American* purging Fruit.

Dolicum, a whitish stony Cotton, or Flaxweed, with short Husks, or Cods, with the small black Berry of *Piso* not eatable.

Datura, a shrubby or stalky *Stricknis*, or Nightshade, with a round prickly Apple, and a great purple Flower.

Eleimou, *Indian* and odorous, a hairy nephritick Herb of wonderful Virtues.

Evonimus, a winding Shrub bearing a quadruple Berry, in Form of an Apple.

Emouionbay, a very small creeping Mallow that is white, with a golden red Flower, with shining Bladders of Silver, the most excellent uterine Herb.

Ereoulibanna, a purple *Cress*, *Dittander*, or *Piperitis*, gently prickly, with a caustick Root; the Smell whereof will stupify Serpents.

An *Indian* reedy Grass, broad leaf'd with Branches, and very winding, with a purple Tail, and Stone-crop Seed.

Guaiacum, an *Indian* Tree, with rounder Leaves than the Box, and a purple Flower, commonly call'd *Holy Wood*.

Jamabeu, the famous *Ricinus*, with Palm Leaves jagged deeply, or indented. *Baubinus* delineates it the *Purging Hazel*, or *Filbert*.

Inimbo, a thorny winding Fruit with stony Kernels. *Clufus* calls it *Lobus spinosus*, the prickly Lobe.

Ichicouliba, that resembles an Ash, with a golden horned Fruit, and Flowers almost like Pimpernel, the Root whereof is diuretick.

Jaboureitica, an *Indian* thorny Tree, with Leaves that smell very near resembling those of Rue, with very small purple Flowers, call'd, in *French*, *Wood of Pian*.

Jynaosa, an *Indian* purging Buckthorn, with a pointed fleshy Leaf, and an odorous red Flower.

Kebecati, a little maritime Tree, with a Fruit very like the Citron Myrobalan, a Specifick in the Bloody-Flux.

Kacouacou Bona, an *Indian* Mallow Tree, shining with a silver colour'd Leaf.

Larani, with the white Flower; the great *American Ricinus*, the black. *Baubinus*, in his *Pinax*, calls them *Pignones de los Infernos*, or the *Devil's purging Nuts*.

Latyrus, the narrow leaf'd, with a large blue Flower, the most beautiful Bindweed.

Lithospermum Gramineum, Grass Stone-Crop, with the broad reedy Leaf, and a particular purplish black Tail.

Mynty, a Dysenterick Tree, with the Pear-Leaf and Olive Fruit, which the Blacks use among their Eatables.

Macenilla, a venomous and milky Tree, with a sweet Fruit like an Apple, which the *Indians* poison their Arrows with.

Monbanitabon, the second Sort, a Kind of *Eupatorium*, that bears golden Clusters on its Stalks.

Manalon, a yellow Bindweed that looks like a Briony, with a sharp Leaf, and a red Olive-like Fruit.

Mentiakeira, a hairy scorching Pulse, with a broad trefoil Leaf, a golden crown'd Flower, commonly called a *Grating Pea*.

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Merucuya, the golden, in Form of an Apple, adorn'd with a large purple Flower, with a spreading Leaf deeply indented.

Meeru, the first of *Brasil*, an *Indian* broad-leaf'd Cane.

Matallon, another lagenatious Tree, with a lesser four-square hollow'd Fruit, like a Tobacco Box.

Another *Mantiakeira*, being a hairy Pulse, with a woolly Pod, and a coronated purple Flower.

Meeru, or another *Indian* Cane, with narrow Leaves, and a yellow Flower.

Mebipi, a black *American* Pea, with a white Tuft on the Top, call'd, *The Pea of good Life*.

Mandubi, an *American* four leav'd Plant, with a yellow Flower.

Moussambey, an *Oleran* Herb of the *Indies*, an erect horny Cinquefoil, with a fine leafy Stem, and blackish purple Flower.

The third *Montochiba*, a fenny Violet-colour'd Almond-Tree, the *Peletwoier Violet*.

Nouloumbue, another Soap-wort, being a Tree that bears a Grape or Berry, which the *Indians* use for Soap.

Nbaloubonou, a maritime Tree, with a red Myrobalan Fruit, and a Leaf broader and more fleshy than the *Pistachia*.

Ovacobiba, an unknown Sort of Almond Fruit, the Tree of which bears thirty four kinds of Gums, with Chesnut Leaves.

Oulabouli, the first Kind, a Fruit bearing a Creeper, with golden Flowers, that fly away in Down.

The second *Oulabouli*, or *Indian* Golden Rod, with a sweet purple Berry.

Onaiboubon, a hoary Fruit bearing Celandine, with the Leaves of Bears-foot, or black Hellebore, and the Flower resembling the Cotton, with a whitish Sky-Colour, whose yellow Juice purges like the Pine-Nuts of *Monardus*.

Orouni, a white Apple, call'd *Acaiu*, of an excellent Taste.

Ovacoliba, the third Sort, with an unknown Almond Fruit, and Walnut Leaves. The Tree bears thirty five fragrant Gums in the highest Woods.

Oucoulibue, a high *Indian* Tree, with a sweet, woody, or dry membranous Apple, near to the Cathartick Myrobalan Nut, with a red Flower.

Ovaraoua, an *Indian* Tree, like the *Frangula* of *Matthiolum*, the Decoction of whose Leaves and Barks purges downwards.

Ovacoutiba, another Kind of the unknown Almond, being a lofty *American* *Pistachia* Tree, with woolly Leaves.

Ouloucouya, the first Sort, an *Indian* Scabious, with a sharp tuberous Root, very beautiful, something like the Sow-Thistle, with a sweet red Flower.

Pisum, the small Bladder Nut, with black Fruit, and a white, as *Baubinus* has delineated it. The *Pisum Cordatum* of *Lobellius*.

Papaver, the white prickly Poppy, with the Hellebore Leaf, whose yellow or golden Juice purges dropical Bodies.

Palmites, the fourth Sort, fair and branching in the Woods, with a long Tail, very sweet and grateful.

Quya, and the round *Indian* Pepper less biting.

Qui Gumbo, the branching Mallow, with the Willow-Leaf and Pine-Fruit, fit for eating.

Quya the third Sort, a small, oblong, biting, *Indian* Pepper, with broader Leaves.

Rbaou, the Wood Tormentil Tree, that looks like a *Phyllirea*, with an Acorn Kind of Fruit, whose Root dyes well, and is commonly call'd *Bastard Isabella Wood*.

Ricinus, the less spreading *American* one, the *Coralloides*, with a Palm Leaf.

Another *Riboulubi*, a whitish *Indian* Bay, appearing with a Poplar Leaf.

The large *Ricinus*, and *Kerua* of the *Arabs*, bearing Fruit in *America*, with the broadest Palm-Leaves.

Rhamnus Antinome, the second Berry-bearer; the Bark receiving a Tincture in cancerous Wounds.

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Another *Riboulitchi*, a sharp *American* Bay, unknown, with a soft broad Leaf and perforate. *Savariaba*, a thorny Tree like a Sloe, containing a black purging Pitch, or Marrow. *Sesamum* and *Sensum*, an *Oleran* Herb, or *Indian* Corn or Grain, from whence is drawn a famous Oil amongst the *Indians*.

Sair of the *Indians*, an Hemp-like branching Sorrel, or four Dock, crown'd with a purple Fruit, or *Guinea* Sorrel.

Solanum Mexicanum, the *Mexican* Nightshade, with the red variegated Flower, or the *Mirabilis Peruviana* of *Clusius*, which the poor People use for *Jalap*.

Tibouecatou, a deadly *American* Nightshade, with a prickly Leaf, and a Gold-coloured Fruit, like a Pear.

Titoulibeu, a small milky Tree, with a Citron Leaf, a jointed Fruit, and a white sweet Flower. 'Tis an excellent Febrifuge.

Toutou, a woolly *Indian* Tree, with a large belly'd Fruit arising out of the Trunk.

Tuboa, another woolly Tree that bears a less Fruit, which the *Indians* make use of instead of the other.

Toulichiti, a small, intoxicating, blackish Berry, that grows in the Woods, with a whitish, rough, jagged Leaf.

Tibouecatou, the second Sort, a branching filky Nightshade, with a white Apple-like Fruit, and a thorny Leaf.

Another Sort of the *Titoulibeu*, which is an high Tree in the Woods, with less Leaves, and a red Flower without Smell.

Tinoulou, a fenny Buckthorn, with Pods like a Crescent, and several Feet; the Flowers whereof are purging.

Tonoloumibi, a spreading purple spik'd Creeper, with a wing'd Seed, that is used to intoxicate Fish.

Another Sort, less beautiful and spreading, with a spik'd Berry, and odoriferous Flowers.

Toulichiba, a Sort of podded wild Campion Tree, with the Mallow Leaf; the Seed whereof is a Sort of purplish black Pulse of the leguminous Kind.

Tobocora, a thorny venomous Sea-Tree, with a double round Leaf, and Berries turn'd up with little Horns, including in 'em a Sort of flat Agat-like Stones.

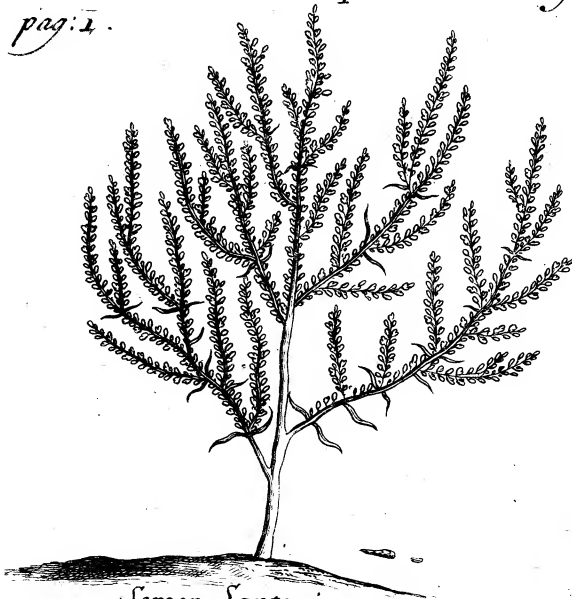
Tapire, great, broad, white Peas, streak'd on the Back with purple Colour, call'd the *Grand Gorgane*, which the Poor make good Food of.

Urucu, an *Indian* Tree, with a hairy Chestnut Kind of Fruit, and a red Flower, with which the *Indians* extract a famous purple Dye, and besmear their Bodies with it instead of Clothes.

Urucu, an *Indian* Tree, bearing a Berry, with a smooth Fruit, and a fleshy Flower.

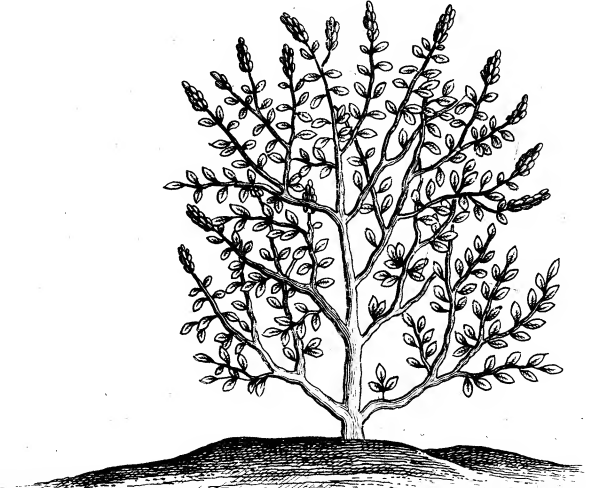
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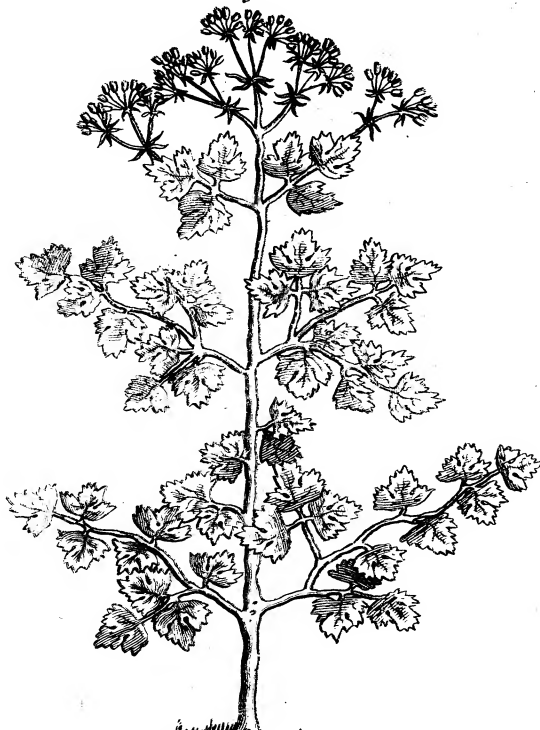
Semen Santonicum.
Wormseed

2



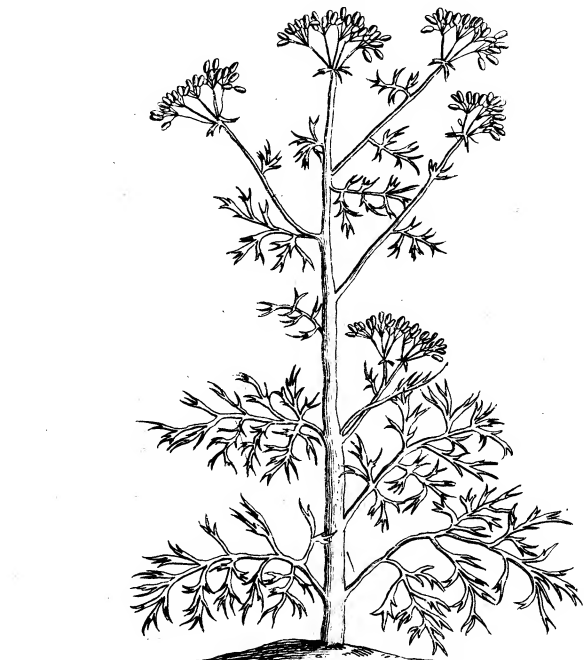
The seed call'd Chouian

3



Petroselinum Macedonicum.
Macedonian Parsley

4



The Siftis, or
Hartwort of Marfeilles

P O M E T's
GENERAL HISTORY
O F
D R U G G S:

With what is farther observ'd by Monsieur *Lemery*,
Turnefort, &c.

B O O K I.

C H A P. I.
O f S E E D S.

1. Of *Wormseed*.

Pomet. **T**HE Name of this Seed be-
speak's its Virtues, which are to
kill and destroy all kinds of
Worms generated in Human
Bodies; and particularly those in Infants or
young Children. It is likewise called *Santo-*
line, or *Xantoline*, *Semen Sanctum*, the Holy
Seed, *Semen Santonicum*, &c. It is a small
Seed, which the *Persians* trade in by their *Car-*
vans from *Aleppo*, *Alexandria*, and *Smyrna*, and
which is afterwards transported to *England*,
Holland, and *France*. The *Caravan* is properly
a Number of Men, in the nature of a Convoy,
to guard the Camels and other Cattle, which
are loaded with all sorts of Merchandize,
that are brought from *Persia* once or twice a
Year for the *Levant-Trade*.

This Plant which bears the *Wormseed* is
compos'd of such small Leaves, that it is dif-
ficult to separate them from the Seed; for
this reason, those of the Kingdom of *Boutan*

have Baskets or Sieves on purpose, which they
use to reduce the Leaves to Powder. Some
Authors affirm this *Wormseed* to be of the same
Species with that sort of Wormwood which
is called *Santonique*, because it grows in *Xain-*
tonge: But this is not worth disputing about,
since what is generally sold, we know grows
in *Persia*, and on the Borders of *Muscovy*, as
Letters which I have received upon several
occasions assure me, and as you may be fatif-
fied from Mr. *Tavernier*, in the second Volume
of his Travels, page 384, in these Words:

As to this *Wormseed* or *Worm-powder*, we
cannot reconcile it to that of other Seeds: 'Tis
an Herb that grows low, and near the Wall,
and yet is worse as it ripens; for then the
Wind shakes the greatest part of the Seed
amongst the Leaves, which is there lost, and
that is the reason it is so dear.

It grows as the *Wormseed* in the Province of
Kerman, which is nothing nigh so good as that
of *Boutan*, neither will it yield the Price to
the Merchant, like what comes from that
Country. This Seed is not only used for

B

killing

killing of Worms in human Bodies, but the *Perfians*, and all the People towards the North, likewise the *English* and *Dutch*, use it like *Caraway-seeds*, for *Confects* and *Sugar-plums*.

To distinguish *Wormseed* aright, so as to know what is true, you ought to chuse that which is well fed or plump, of a greenish Cast, and well tasted, and take care that it be very clean, and have nothing sticking and clinging to the Seed; for that is very deceitful, and will increase the Price considerably. You must take care it be not too green, and that *Southernwood-seed* be not impos'd upon you for this, tho' they are easily to be distinguish'd; for the *Wormseed* is something larger, longer, and of a darker green, than the *Southernwood-seed*, which is lighter, yellower, resembling more a fine clean drest Chaff, than a Seed, and especially *Wormseed*, which is bitterer and more aromatick.

Chuse your *Wormseed* always as *Lemery*. new and fresh as you can, clean and round, of the strongest Taste and most fragrant Smell: It contains a great deal of Oyl with volatile and essential Salt in it: It is very proper for the Destruction of Worms, excites the Courses of Women, suppresses Vapours, strengthens the Stomach, causes a good Digestion, and adds a lively Colour and Complexion to the Face. The Dose, from half a Scruple to a Dram, in Powder, to be taken in the Morning fasting, or in an Infusion in Wine, or made into Confects, to be eat with roasted Apples Evening and Morning. The chymical Oil is excellent to anoint the Stomach or Belly with for the same purposes. A compound Powder may be made thus: Take *Wormseed* two Drams; Powder of *Coraline* one Ounce; *Æthiops Mineral* half an Ounce: Mix them: Dose, from half a Dram to a Dram, fasting.

2. Of the Choïan in French, or Carmine-Seed.

THIS is a little light Seed, of a yellowish green Colour, the Taste something salt and biting, and much resembling the *Wormseed*, except that it is much larger and lighter.

This Plant grows low, and carries its Seed in little Bunches or Clusters on its Top, little different from the *Wormseed*.

It would be almost impossible to get an exact Knowledge of the manner of Growth of this Plant which bears the *Choïan*: All that I know of it is from the Relation of several Persons, and particularly Monsieur de *Guillerague*, Ambassador in *Turky* for the *French King*, who when he return'd to *Paris*, brought a good Quantity along with him.

If you would know how to chuse the best Seed, you must take that which is greenish, the largest, and best clean'd or drest, and least fill'd with Specks, like Holes in rotten Wood.

It is of no other use, that I know of, in *France*, but to make *Carmine*, and for the Feather-Men or Upholsterers, who dye with it, but at present mind it very little.

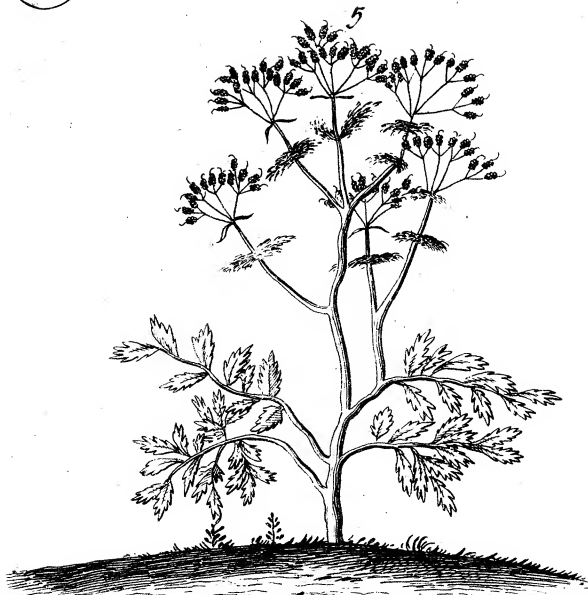
This Author agrees with the former in the Description and Use of *Lemery*. this Exotick; which he says is like *Wormseed*, but in Taste a little salt and pungent; it grows upon a Shrub-Plant, plum'd on the Tops, like a *Nosegay*; it is brought from the *Levant*, and used for *Carmine*.

3. Of Macedonian-Parsley.

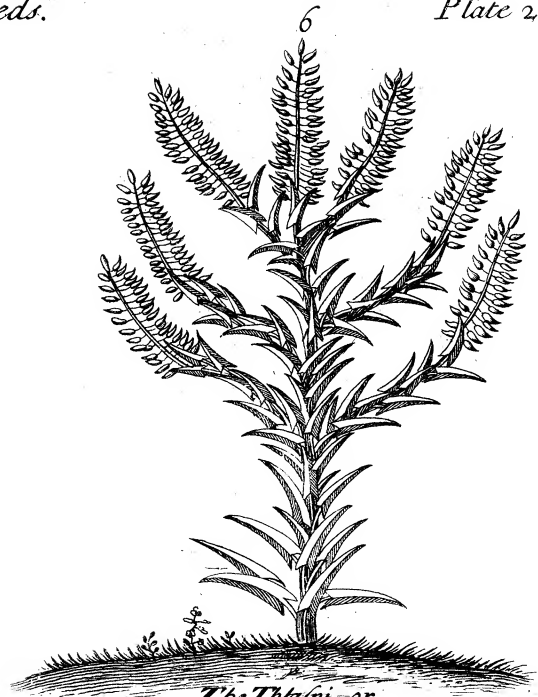
Macedonian-Parsley is a Plant which resembles, in some measure, our Garden-Parsley; but this Seed is a great deal less, much longer and sharper pointed, and grows in Clusters like *Fennel-Seed*. This Plant receives its Name from the Kingdom of *Macedon*, where it grows naturally, and from whence the Seed is transported, which is almost the only part of this Plant that is used in Physick.

Make choice of the newest Seed, which is clean, well fed, longish, and of a brownish green Colour; let it be well-tasted and aromatick, which are the chief Distinctions of the goodness of *Macedonian-Parsley*; because there are some who very improperly use our common Parsley-Seed, and others again a sort of black Seed from the large *Smallage*, which the Gardiners falsely call *Macedonian-Parsley*. *Andromachus*, Physician to *Nero*, General of the Roman Legions in the time of the War betwixt the *Romans* and *Hannibal*, invented a Treacle, which we now call *Venice-Treacle*, in which he put this Seed, by the Name of *Macedonian-Parsley*, as it was a powerful *Alexipharmack*, or Resister of Poyson and Pestilence.

It



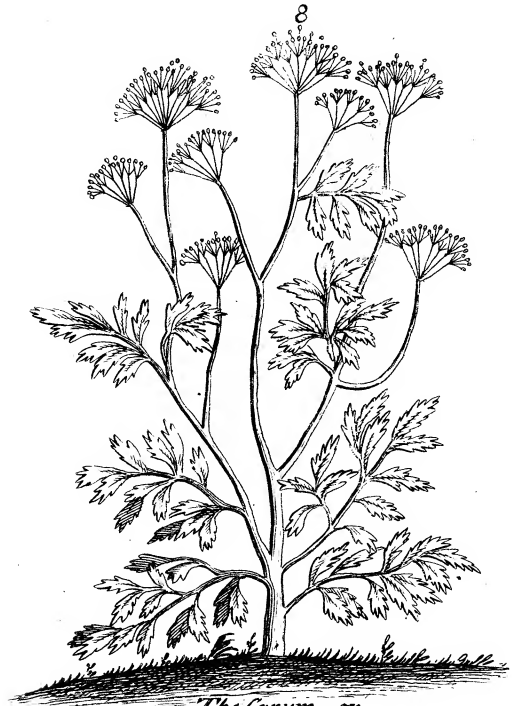
*The Amos, or
Ethiopian Cummin*



*The Thapsi, or
Treacle Mustard*



*The Daucus, or
wild Carrot of Candia*



*The Carum, or
Caraway*

It may be taken early in the Morning, half an Ounce in a Glass of Wine, or other Liquor proper to the Disease.

Says it is of the same species of *Lemery Parsley* with ours; but the Leaves are much larger, and a little more indented; the Seed abundantly smaller, longer, sharper-pointed, and more aromatick. This Plant grows in *Macedon*, from whence the dried Seed is brought hither.

The choice of it ought to be the same as before directed. It contains a great deal of exalted Oil and volatile Salt; it is aperitive, excites to Urine, provokes the Monthly Courfes, resists Poison, and expels Wind; it is Lithontriptick, or a powerful Breaker of the Stone in the Kidneys; and apply'd in the Form of a Cataplasim, eases Pain, and abates the raging of the Gout, especially from a cold Cause. This Seed may be us'd either in Powder, Decoction, Tincture, chymical or expressed Oil, and in the distill'd Water of it, which is opening, cleansing, diuretick, and sudorifick, like Treacle-Water, and therefore is us'd in the Composition of the great Treacle of *Andromachus*.

4. Of Sefeli of Marfeilles.

THIS *Sefeli* or *Siseleos* takes its Denomination from *Marfeilles*, which is its native Climate, tho' it flourishes more in several other Parts of *Provence* and *Languedoc*. It is a Plant, which passes for a kind of *Fennel* and is by many Authors call'd *Fœniculum tortuosum*, or *Crooked Fennel*; but has less Leaves than the common *Fennel*, and those not so long, nor the Stalk so strait or high, but on the contrary more naked, and the Branches less regular, spreading themselves larger on the Sides near the bottom. We use the Seed, which grows by Clusters on the Tops, after the same manner as *Annisced*: When they come to Maturity, they look very much like the wild *Fennel*. This is of a less Size, longer, heavier, clearer, more green, of a good Smell, and of an acrid aromatick Taste.

There are several other sorts of *Sefeli*; as that of *Candy*, *Peloponnesus*, of the *Morea*, *Ethiopia*, &c. but as it is only the Seed of the *Sefeli* of *Marfeilles* that is in use, I shall not mention the others, but refer you to the Authors

that treat of them. Some assign the same Virtues to this *Sefeli* of *Marfeilles*, as was given to the *Parsley* of *Macedon*; and some Botanists call it the *Siler Montanum*, or *Sefeli* of the Mountains.

The *Latin* Authors call it by these Names, *Sefeli Massiliense*, or *Sefeli* of *Lemery*: *Massilia*; *Sefeli Massiliense Fœniculi folio Dioscoridæ censetur*, which was the *Sefeli*, as *Dioscorides* thought, with the *Fennel-Leaf*; *C. B. Fœniculum tortuosum*, according to *Baubin* and *Turnefort*; *Sefeli Massiliense folio Fœniculi crassiore*, *Ad Lobel*, or the *Massilia Sefeli* with the thicker *Fennel-Leaf*; *Fœniculum Petraeum*, or *Rock-Fennel*.

After he has given the same Description of it as *Pomet*, he says, it grows in sandy places in the hot Countries, as in *Languedoc*, *Provence*, and about *Marfeilles*: The Seed is used in Physick, and brought to us dry; it ought to be chose moderately large, fresh and of a grateful Smell; then it affords a great deal of essential Oil and volatile Salt, is hot and dry, incides, opens, discusses; it is cephalick, neurotick, pectoral, and nephritick; good against Epilepsies, Apoplexies, Megrim's, Vertigo's, Lethargies, Cramps, Palsies, Convulsions, Coughs, Colds, Catarrhs, Obstructions of the Lungs, Wheezings, Shortness of Breath, Dropfies, Cholick, Crudities in the Stomach, Wind, Obstruction of the Terms, Pain and Stoppages in the Reins and Bladder; and may be taken in Powder from a Dram to two, or infus'd in Wine, or boil'd in Wine, Ale, or Water; likewise a Tincture may be drawn from the same in Spirits of Wine.

5. Of Ameos, Bishop's-Weed; or the Ethiopian-Cummin.

THE *French* call it *L'Anmi*, and sometimes *D'Ameos*. It is a *Pomet*. Plant which has Leaves like *Dill*, and bears a Stem pretty high, with many Branches, which terminate in Tassels adorn'd with white Flowers, after which comes a little roundish Seed, small, and almost like your Sand-Seed, call'd so from the Plant bearing that Name.

The Seed is the only Part of the Plant that is in use, which ought to be chose fresh or new, greenish, well-fed, of a little bitterish

Taste, and aromattick Smell: That which comes from *Alexandria* or *Crete*, ought to be esteem'd before that which is cultivated in several Gardens in *France*, which is not to be distinguish'd in Taste from *Origanum* and *Thyme*; but it is observable, that of *Alexandria* and *Crete* is abundantly better upon all Occasions. The same Virtues are attributed to this Seed with those aforementioned.

It is called *Semen Ammeos*, or *Lemery*. *Armi ab Arena*; the Name being given to this Plant, because the Seed is very like to grains of Sand: It affords a great deal of essential Oil, and volatile Salt, and is Attenuating, Cutting, Aperitive, Hysterick, Carminative, Cephalick, resists Poyson, and is one of the four lesser hot Seeds; it expels Wind, is good against the Cholick and Pains of the Womb, and provokes the *Menses*; it is used in Powder from half a Dram to a Dram, in a Decoction with Wine or Water, or in a Tincture extracted with Spirit of Wine, from a Dram to two Drams.

6. Of Thlaspi or Treacle-Mustard.

THIS Plant is about a Foot high, *Pomet.* and the Leaves something of a deep green Colour, the length of the little Finger, larger towards the Bottom, and ending by degrees in a point Spiralways; the Stem is charg'd with a great many Branches, bearing white Flowers, after which grow flat Pods, resembling those of the *Lenzil*, which contain two Seeds in each, of a yellow Colour, tending to red, which in course of Time change to a dark red, and the older they are, the darker they grow. This Seed is oblong, and a little pick'd at the Ends.

You ought to chuse that Seed which is clean and fresh, of the reddish Cast, sharp and biting; and to know that it grows in the hot Countries, such as *Languedoc* and *Povence*; but there is another sort of *Treacle-Mustard*, whose Stem, Leaves and Pods are much less, as well as the Seed: This is altogether yellow and smaller, comes up very near to it in Taste, but is abundantly short of it in Virtue, for which reason it ought to be reject'd. I shall pass by other sorts of the *Thlaspi* which are out of use.

This is particularly recommended for the Cure of the *Sciatica Gout*, dissolving of the Stone, and Grumous Blood; given in Powder from half a Scruple to two, in the Morning fasting.

The Root is pretty large and fibrous, woody, white, and a little *Lemery.* acrid or biting. This Plant grows in uncultivated, wild, stony or sandy Places, much expos'd to the Sun; likewise among Corn, on the tops of Houfes, and against the Walls; it affords a great deal of volatile Salt, and essential Oil. We bring the dried Seed from *Languedoc* and *Provence*, where it grows better than in the more temperate Climates.

We chuse the fairest Seed, which is most biting and piquant to the Taste, like Mustard. It is used in the Composition of several Medicines, and is Incisive, Attenuating, Deterfive, Aperitive, proper to provoke Urine, and the Terms, to hasten the Birth, and bring away the After-birth, and is very serviceable to break inward Apoitems.

7. Of Daucus, or Wild-Carrot of Creet or Candia.

THIS *Daucus* is a Plant so very like a *Parsnip*, that any Body *Pomet.* would take it for one of that *Species*; it is a foot and a half high, which bears on its Top several Bunches or Clusters of white Flowers, which when they come to Seed, are of a pale green, hairy and whitish, something long like *Cummin-Seed*, tho' not altogether so long or big, or of so strong a Smell; but on the contrary, their Smell and Taste are both agreeable and aromattick, for which reason you may be able to bear them some time in your Mouth. This Seed is commonly mix'd with a small dust, which ought to be separated from it. Sometimes it is brought from *Germany* and the *Alps*, but this is not so good or useful as that which comes from *Crete*, which is only to be chose.

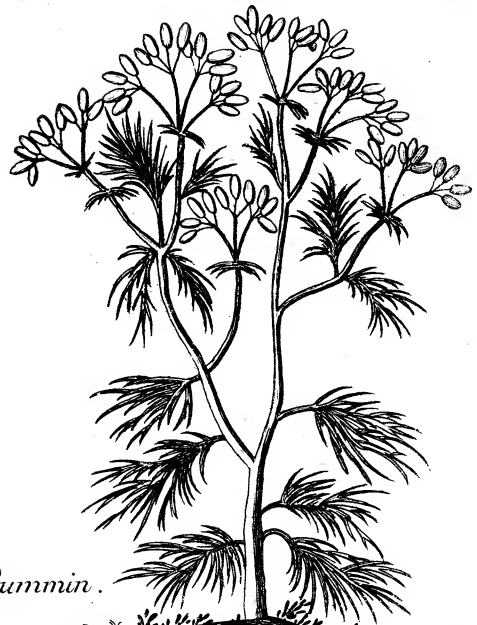
It is singular for the *Stone*, and those who are subject to *Wind-Cholicks*: This is rang'd amongst those Medicines which are call'd *Lithontripticks*, and passes for a powerful *Carminative*, given in *Radish-Water* to a *Scruple*, or in *White-Wine*, against the

Stone

9



Saxifrage.



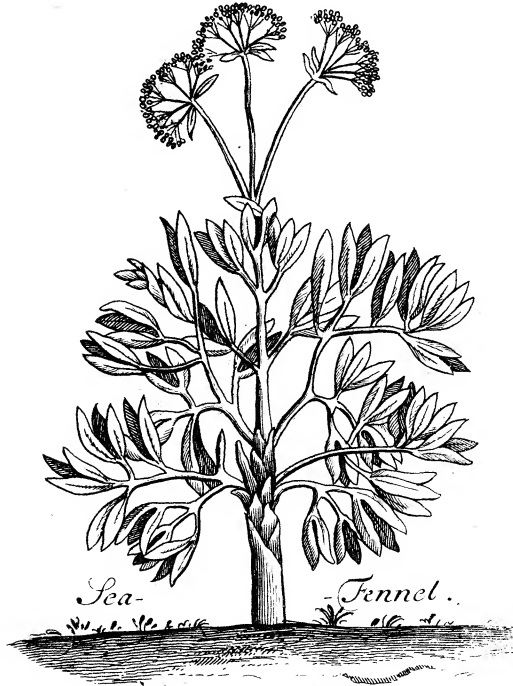
Gummin.

11



Fennel.

11



Sea-Fennel.

Stone or *Gravel* early in the Morning; it may be likewise administred in *Wind-Cholicks* at Bed-time in Anniseed, Fennel, or Rue-Water, and some add to it a scruple of Salt of Wormwood.

The Leaves of this Plant are something like those of Fennel, the Root long, the thickness of a Finger, furnish'd with Fibres, and tastes like a Parsnip: It grows in stony and mountainous Places; the Seed is brought over dry from *Candia*, and other hot Countries, and that which is new, clean, well-tasted, and odoriferous, is the best; it affords a great deal of Oil, and volatile Salt.

Both the Wild-Carrot and that of *Crete*, have one and the same Virtues; but that of *Crete* is much the Strongest, and more Efficacious. They expel Wind, and are good against pains of the Womb and Bowels, vehement Cholicks, Vapours and Hysterick Fits; as also against old Coughs, Cold, Wheezings, Asthma's, Difury, and all sorts of obstructions of Urine, as Sand, Gravel, Stone, and tartarous Mucilage in the Reins, Ureters, and Bladder; they are us'd in Powder, from a Scruple to a Dram or more, in Decoctions, in Tinctures with the Spirits. Dose from a Dram to three or four. An oily Tincture is made from them with Oil of Turpentine, against Cramps, Convulsions, Palsies, Pains and Aches from Cold.

8. Of Carui, or Caraways.

Carui, which the *Latins* call *Carum*, *Careum*, *Caros*, and the *Greeks*, *Caron*, is a Plant that approaches abundantly nearest to the Wild-Parsnip; the Leaves are large, indented and divided into many small Parts, among which arise several square Stalks about a Foot high, on the Tops of which grow Bunches, cover'd at first with white Flowers, which are afterwards turn'd into Seed, much like that of *Garden-Parsley*, but that this is of a darker Colour, flatter, and of a more biting and piquant Taste.

This Plant grows generally in most Gardens, but as the hot Countries are most agreeable and productive of Aromatick Plants, the *Caraways* that the People of *Paris* buy

out of the Shops, are those brought from *Provence* and *Languedoc*.

We ought to chuse such Seed as comes from the best Soil, well fed, fresh, greenish, of a warm acrid Taste, and aromatick Smell, and that you may hold it in your Mouth agreeably; for which it is esteem'd proper to make the Breath sweet, and very good to promote Digestion, to allay or expel Wind, to strengthen the Stomach, and excite or provoke Urine. The *Germans* have such a regard for it, that they always put it into their Pye-Crust, mix it in their Bread, and in a great measure in all their Sauces. There are several who use the Leaves as a Pot-Herb.

The Root is long, fleshy, pretty thick, white, sometimes yellowish, but rarely of a Parsnip Taste. This Plant grows in the fittest Land in the Gardens, but prospers much the best in warm Soils; therefore contains in it a good deal of volatile Salt and Oil: It is Incisive, Aperitive and Carminative, moderately binding, comforts the Stomach, helps Digestion, stops Vomiting, and operates much like *Anniseed*. *Caraways* are good against all cold disaffections of Stomach, Bowels or Head, Falling-sickness, and the most inveterate Cholicks, strengthens the Womb, and quickens the Eye-sight. They are used in *Confects* to break Wind, &c. in Powder to provoke Urine, and in the chymical Oil to all the Intentions aforesaid; besides which they are very serviceable to bring away both Birth and After-Birth. Dose from 12 to 16 Drops of the chymical Oil.

9. Of Saxifrage.

Saxifrage is a Plant so like *Thyme*, that it is difficult to distinguish it.

This grows plentifully in *Dauphiny*, *Provence* and *Languedoc*, so much among Stones and Rocks, that it has obtain'd the Name of *Saxifrage*, and by a great many that of *Break-Stone*.

You must chuse the newest Seed you can get, which is of a warm piquant Taste, and an agreeable Smell; the virtue of breaking the Stone, is attributed to it, given in Powder in a Morning early in a Glass of the distill'd Water from the Plant, or any other *Diuretick* Water. Dose half a Dram.

There

There are a great many other kinds of *Saxifrage*, which several Authors take notice of; but as this Seed is that which is commonly in use among us, and which is generally sold in the Shops, I shall speak no further concerning the rest, which are treated of in Books at large, among which some will needs have it, that all Plants which grow among Stones and Rocks, are to be call'd *Saxifrages*.

Saxifrage, or in Latin *Saxifraga*, *Lemery*. is a Plant whose Leaves are almost round, indented on the Sides, being something like *Ground-Ivy*, but a little thicker and whiter, and on the hinder-part a little longer and smaller; it is rais'd upon small Stalks of about a Foot high, bearing on their Tops little Flowers of five Leaves, dispos'd like a Rose, of a white colour. When the Flower is off, it produces a Fruit almost round, which contains in two Partitions a very small sort of Seed. The Root has abundance of Fibres, the Tops are surrounded with little Tubercles, about the size of *Coriander-Seed*, or something bigger, of a colour partly red and purple, and partly white, with a bitterish Taste; these Tubercles are commonly call'd the *Saxifrage-Seed*. This Plant grows in Places where Herbs are not propagated, as upon the Mountains, and in the Valleys; it flourishes in the Month of *May*, and is a little viscus. The Leaves are larger, and the Stalks grow higher in some Places than others, but they are generally small, allowing a good deal of essential Oil and Salt.

It is very Aperitive, proper in Stone and Gravel, and to open Obstructions, to provoke Urine and Womens Courses, cut the tartarous Mucilage, and expel it; and is chiefly us'd in Powder from half a Dram to two, or in an Infusion with White or Rhenish Wine.

10. Of Cummin.

Pomet. *Cummin* is the Seed of a Plant which is like *Fennel*, and grows plentifully in the Isle of *Malta*, where they sow it as they do Corn there. In the choice of it, take that which is new, well fed, greenish, of a strong disagreeable Smell; some use this Seed for Dropfical Tympanies, because it is Carminative: There is a great deal

us'd to refresh and invigorate Horses, Oxen, and other domestick Cattle: They make an Oil of it by Expression, as of *Anniseed*, which is very good for the Rheumatism, tho' it yields but little in quantity.

There are many Persons make use of *Cummin-Seed* to replenish their Dove-Houses, because Pigeons are very dainty in their feed, tho' it is not us'd just as we sell it in the Shops; but when it is incorporated with a little Salt and Earth, such as the Pigeons are apt to pick up in the Fields, or else loam Earth moisten'd with Urine, and the like.

Cummin, *Cuminum* or *Cyminum*, is a sort of a *Caraway*, which bears a *Lemery*. Stem about a Foot high, divided into several Branches; the Leaves are cut small like those of *Fennel*, but a great deal less, rang'd by Pairs lengthways on the sides. The Flowers grow in Umbrello's on the Tops of the thick Branches of a white colour; after them come the Seed join'd by two and two, oblong and furrow'd as the *Fennel*, but less, and pointed or sharp at both Ends.

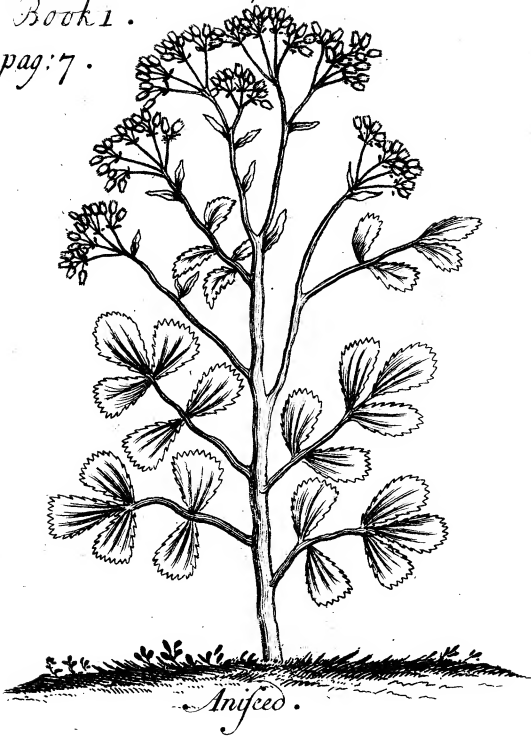
The Root is small and longish, and perishes when the Seed is gone: They call this Seed in *Malta* where it is propagated, *Annis-Acre*, or *Cummin-Acre*, sharp *Anniseed*, or sharp *Cumminseed*. To distinguish it from the same *Anniseed* that is cultivated there, and call'd by the Name of sweet *Annise*, or sweet *Cummin* by the *Maltois*; which Circumstance makes several Botanists equivocate, who believe this to be the same sort of *Cummin* with the sweet Seed. This contains a great deal of volatile Salt, and essential Oil; it is Digestive, Dissolving, Attenuating, Carminative, expels Wind, cures the Cholick, eases Pain, is profitable against Diseases of the Nerves: The chymical Oil is good against all obstructions of Urine, Stone, Gravel, &c.

11. Of Fennel.

Pomet. **T**HIS is the Seed of a Plant which is known throughout all the World, and therefore needs no Description: I shall content myself to say, that the *Fennel* which we now sell, is brought from *Languedoc* about *Nismes*, where that Plant is cultivated with great care, by reason of the great.

Book 1.
pag: 7.

12



Aniseo.

of Seeds.

13

Plate 4.



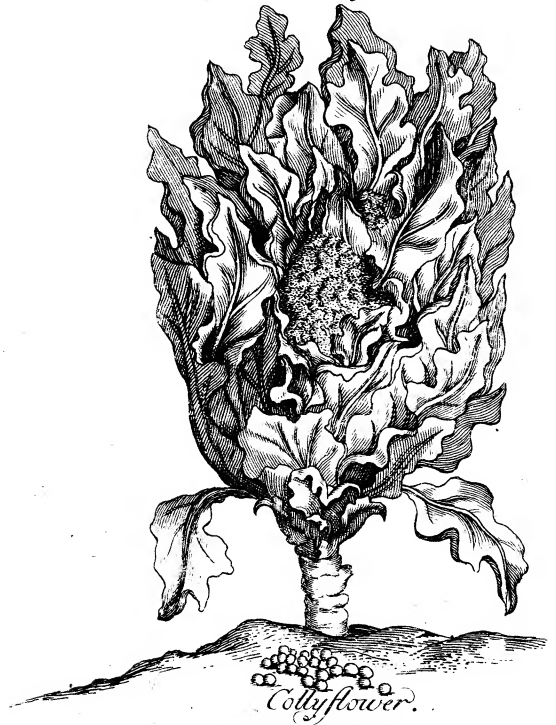
Coriander.

14



Naven.

15



Collyflower.

great quantity of *Fennel* which is carry'd into *France*, and chiefly to *Paris*.

Make choice of the newest Seed, longish, of a green Cast, sweet Taste, luscious and agreeable, and which is freest from Mixture.

This is of no great use in Physick, only to expel Wind, for which it may be us'd instead of Anniseed; but it is much more us'd by the Confectioners, who cover the Seeds with Sugar. They take the clusters of the green *Fennel*, which when cover'd with Sugar, they sell to make the Breath sweet, for the green is reckon'd to be of the greatest Virtue. The Apothecaries make the distill'd Water from the green *Fennel* fresh gather'd, which is esteem'd excellent for taking away Inflammations of the Eyes; and they make after the same manner a white Oil of a strong aromack Smell; yet if there is but a small quantity, it is not worth the trouble to make it. The dryness of *Fennel* makes it so, that it is very troublesome to make a green Oil by Expression, as is done of Anniseed. There are some who lay this Seed amongst their Olives, to give the Oil that comes from thence a fine Taste.

There is yet another sort of *Fennel* which is wild, and which grows every where in the Fields, and upon Walls, without any Sowing; but this is almost round, less, flatter, more acrid in Taste, and not so green as that we have been speaking of; but it is scarce of any use by reason of its sharp pungent Taste, because the other *Fennel* is very common, especially that cultivated in *Languedoc*; but at such times as we have not that from *Italy*, which is call'd the *Florence Fennel*, the wild *Fennel* may be a little in use.

There is another kind of *Fennel* which bears the Name of *Sea-Fennel*, which the *Latins* call *Critbnum*, or *Creta Marina*, which we make Vinegar of to sell in Winter with Girkins or little Cucumbers, which are made after the same way.

Feniculum or *Fennel*, is a Plant, *Lemery*. of which there are various Sorts;

I shall only mention two which are us'd in Physick. The first is call'd *Feniculum vulgare minus acriore & nigriore semine*; or common lesser *Fennel*, with the sharp black Seed. It shoots forth a Stalk of five or six Foot high, hollow, of a brownish green Colour, fill'd with a spongy Pith. The Leaves

are cut as it were into long Threads, of a dark green, and agreeable Smell, a sweet and aromack Taste. On the Tops are large Clusters or Bunches, yellow and fragrant. The Flower is compos'd of five Leaves, in the extremity terminating like the Cup of the Rose. After the Flower is gone, the Cup bears in it two oblong Seeds, swallow-tail'd, hollow on the Back, flat on the other side, blackish, and of a sharp Taste. The Root is thick as a Finger or Thumb, long, strait, white, odoriferous, and of a sweet aromack Relish.

The Second kind is call'd *Feniculum dulce, majore & albo semine*; sweet *Fennel*, with the larger white Seed. It differs from the former, in that the Stalk is usually much less, the Leaves not so big, and the Seed thicker, white, sweet, and less acrid. They cultivate both sorts in dry Sandy places, chiefly from the nature of their Seeds: This of the latter kind, which is call'd sweet *Fennel*, is more us'd in Physick, and is brought dry from *Languedoc*, where it is husbanded with great care: It is the same sort as that which is sometimes brought from *Italy*, which is call'd *Florence Fennel*. Your choice of it ought to be the same as before directed. It yields largely essential Oil and volatile Salt; the Leaves, Branches and Root afford much Flegm, Oil, and fix'd Salt. The Leaves are good for Diseases of the Eyes, which they cleanse and strengthen; they clear the Sight, encrease Milk in Nurses, sweeten the Acrimony in the Guts, and fortify the Stomach. The Root is Aperitive, and us'd to purify the Blood, as one of the five opening Roots. The Seed is Carminative, proper to expel Wind, to assist Digestion, ease old Coughs, open Obstructions of the Lungs, and cause free-Breathing.

12. Of Anniseed.

Anniseed comes from a Plant that *Pomet*. we know, as well as *Fennel*; but that which is sold in the Shops, comes from several different Places, as *Malta*, *Alicant*, &c. but that is far better which comes from the Eastern Countries, as *China*, &c. because it is abundantly sweeter, larger, and of a more fragrant and aromack Taste and Smell, and

and less Green than that which is produc'd in France.

Make choice of *Anniseed* that is of the same Years growth, large, clean, of a good Smell, and piquant Taste; and beware of that which is any thing bitterish, which you can't distinguish but by your Taste, especially that of *China*.

The Use of the *Green Anniseed* is too common to admit of a long Discourse; and the more, because there are few Persons who do not understand that it is proper to expel and allay Wind, and that it is a Corrector of *Scammony*. The Confectioners make use of great Quantities of the dried Seed, which they cover with Sugar for Confects.

They draw from this Seed by Distillation, a Water, and a white Oil, which upon the least Cold congeals, and liquifies or flows again upon the smallest Heat; this has a strong penetrating Scent, and abounds with a great many Virtues, but it is too prevalent to use unless with Moderation; the Apothecaries and Perfumers use it frequently in their *Pomatus*, instead of the Seed, as well to maintain the Colour, as to save Charges; for half an Ounce of the Oil will do more Service every way than two Pound of the Seed.

The Perfumers keep it by them to scent their Paste, and to mix among a variety of other aromatics, which is what we properly call a *Medley*. Every-body makes use of this Oil indifferently for the Seed, to make their *Anniseed-Waters*, and the like. This Oil has a great many Virtues, and is an excellent Remedy to ease or allay the Gripes, especially in Infants, by rubbing the Navel therewith, or putting a small Drop or two among their Food. In a Word, it has all the same Virtues, and may be us'd to the same Intention, with the Seed. There is likewise a green Oil drawn by Expression, of a strong Smell, and has the same Virtues with the white, with this difference, that it is not so powerful; but you may draw a great deal more in Quantity, according to *Monf. Charras*, to whom we are indebted for this Invention, and who describes the making of it thus, in his *Pharmacopœia*, or *Royal Dispensatory*.

Put *Green Anniseeds* bruised into Rain-Water, distill'd from *Anniseeds* in a Glass Cucurbit, which cover with its Moor-Head, and lute, digest in Horse-Dung, or a gentle Heat

in Sand, for 15 Days or three Weeks, so will they putrefy, by means of which Putrefaction, the oily Parts will be the easier, and more in quantity, separated, and you will have a considerable quantity of Oil more this way, than any other. After this manner, you may distil the Seeds of *Fennel*, *Dill*, *Caraways*, *Parsley*, *Smallage*, *Cumin*, *Bishops-Weed*, &c.

Anisum, in English *Anniseed*, is a very common Plant in our Gardens; *Lemery*. the Stem or Stalk is about three Foot high, round, hairy, hollow, and full of Branches; the Leaves are long, cut deep, whitish, odoriferous, and something like those of *Parsley*; the Tops bear large Bunches, supplied with little white Flowers, much resembling those of *Burnet Saxifrage*: It has a little Seed, of a greenish grey Colour, scented, and sweet in Taste, with a pretty agreeable Acrimony. The Root is small, and this Plant is cultivated in fat Land: The Seed is only used in Physick: The largest and best is brought from *Malta* and *Alicant*; it is much browner than that of *France*, because it is a great deal drier.

This Seed yields a great deal of essential Oil and volatile Salt: It is cordial, stomachick, pectoral, carminative, digestive, produces Milk in Nurses, and gives Ease in the Cholick; it provokes Urine, warms the Breast, opens Obstructions of the Lungs, is prevalent against Coughs, Hoarseness, and Shortness of Breath. This Seed is us'd to make common *Aqua Vitæ* with *Irish Usquebaugh*, *Daffy's Elixir Salutis*, and in the *Laxative Electuary*, or Confection with Sugar and *Amomum*, wherein the Seeds are steep'd in Water, in which *Scammony* is dissolv'd, and sometimes in an Infusion of *Crocus Metallorum*. One Pound of *Anniseed* will yield about an Ounce of chymical Oil by Distillation, two or three Drops of which are specific in windy cases, Gripes in Infants, to take away Pains and Noise in the Ears; outwardly the Stomach or Navel may be anointed therewith, and it may be dropt into the Ears, mix'd with a little Oil of bitter Almonds.

Le Febur is of Opinion, these Seeds ought to be distill'd, being green, without any previous Digestion or Putrefaction, because this kind of Seed (saith he) abounds much with volatile Salt, of a middle nature, so that the Water will not attract it to its self by length of Digestion; which will happen otherwise,

if the Distillation be begun immediately after the Seed and Water are mix'd together. 'Tis true, saith he, that if Digestion precedes, the Water will be all spirituous, and of much more Efficacy than without, but without Digestion the Seed will yield much more essential Oil.

13. Of Coriander.

Pomet. **C**oriander is the Seed of a Plant which is very common amongst us, and which grows plentifully about Paris, especially at *Auber-ville*, from whence all that we sell in the Shops, is brought to us.

We ought to chuse such Seed as is new or fresh, fair, dry, well fed, the largest, and cleanest we can get: It is but little us'd in Physick, but the Brewers employ it considerably all over *Holland*, and in some Parts of *England*, to give their strong Beer a good Relish. The Confectioners, after they have prepar'd the Seeds with Vinegar, cover 'em over with Sugar, which they call *Coriander-Confects*.

There are three Kinds of *Coriander*, the greater, the less, and the wild; but the Seed of the first is only us'd, being brought to us out of the *Streights*; the first, which is call'd *Coriandrum majus*, or *Coriandrum vulgare*, bears a Stalk about a Foot and a half or two Foot high, round, slender, and full of Pith: The Leaves grow low, like those of Parsley, but those which put forth near the Top of the Stalk, are much less, and abundantly more cut in; the Flowers are small, dispos'd in Bunches or Clusters on the Tops of the Branches, of a whitish Flesh-colour, each Flower is compos'd of five Leaves; when the Flower drops off, the Cups bears a Fruit made up of two round hollow Seeds: The Root is small, strait, single, furnish'd with fibres; and the whole Plant (except the Seed) has a very disagreeable Smell, like that of a Bug.

The second Kind of *Coriander* is call'd the *Coriandrum Inodorum*, or *Coriandrum minus odorum*, the less-smelling *Coriander*. This differs from the other Sort mention'd before, by reason it is much less, and its Branches more crooked. The Smell is nothing near so great, and the Fruit is compos'd each of two Balls, which in some measure look like small Testicles or Stones.

Both this and the former kind are propagated in our Gardens, but we only preserve the Seed for Physical Uses, which has the Virtue of the Plant, and is us'd in Confects, pleasant Liquors, and stout Beer. The greatest Part of the *Coriander-Seed* in use comes from *Auber-ville* and other Places about *Paris*: It produces a good deal of essential Oil and Salt, corroborates the Stomach, helps Digestion, makes the Breath sweet, corrects Wind and flatulent Vapours, closes the Mouth of the Stomach, and resists Infection.

14. Of Navew, Bunias, or Napus.

THIS *Bunias* or *Navew* is the Seed of a Kind of *Wild-Radish*, which *Pomet.* grows frequently amongst Corn. The *Wild Navew* is almost entirely compos'd of Branches, and the Flowers are yellow, every one of which are intermix'd with white: the Leaves are all very near alike, larger or smaller, according to the Fertility or Barrenness of the Soil that produces them. They likewise produce their Seed alike, in Husks of an Inch or an Inch and an half long, more or less so, according to the size of the Seed which they bear. As for this of the *Bunias* or *Sweet-Navew*, the Seeds of which we sell, they are twice as large as the other Sort, because the Seed is bigger. This Seed is round, of a purplish Colour, acrid and biting to the Taste, and in all things comes nearest to the Domestic *Navew*, excepting only its Alexipharmack Virtue, which is peculiar to it. The Species of this Plant, which grows plentifully almost every-where, has a yellow Seed, which is less by half than the *Bunias* or *Sweet Navew*, yet may be taken for it. The greatest Use of this Seed is for Treacle, tho' you can scarce engage your Druggist to afford you a Quantity of it. You must desire your Merchant to deal sincerely by you, and take care, lest instead of the true Seed, he do not impose upon you the false, the Difference betwixt which is not so easily to be known, because the Taste of the *Wild-Navew* is more remarkable than that of the *Sweet*. Some Persons assure me, that the true *Wild-Navew* is the *Briony*.

The *Napus*, *Bunias*, or in *French*, *Navet*, scarcely differs any thing from the *Radish*, but by a certain Bearing

which the Gardiners and Labourers distinguish it by, and by the Figure of the Root, which all the World knows. There are two Kinds of it, one cultivated and the other wild, the first is call'd *Napus* by *J. B.* and *Ray*; *Napus sativâ* by *Turnesfort*; and *Bunias* or *Napus* by *Ad. Lob. Ger.* The Stalk rises about a Foot and half or two Foot high, and spreads itself into Branches: The Leaves are oblong, deeply cut, rough and green: The Flowers are compos'd of four yellow Leaves, form'd like a Cross, which are succeeded by a long Pod of about an Inch, divided into two Apartments filled with Seed, thick and round, of a reddish, or something purplish Colour, sharp and biting in Taste: The Root is oblong, round, thicker at the Top, fleshy, and much less towards the Bottom, of a white or yellowish Colour, sometimes blackish on the outside, and white within, of a sweetish Taste, and agreeably piquant: It is cultivated in moist Grounds for the use of the Kitchen.

The second Kind is call'd *Napus Sylvestris* by *Turnesfort*, and the *Baubins*, *Bunias sive Napus Sylvestris nostras*, *Park.* *Bunium* and *Napus Sylvestris Ad. Bunias Sylvestris Lobelii, Ger.* in *French, Wild-Narveu.* It resembles the cultivated *Narveu*, except the Root, that is much less: The Flower is yellow, and sometimes white: It grows among the Corn: The Seed is prefer'd in Physick to that of the domestick *Narveu*: Both one and the other Sort yields a great deal of Flegm, Salt, and essential Oil.

The *Narveu-Seed* is deterfive, aperitive, digestive, incisive; it resists Poyson, and carries off the peccant Humours by Perspiration; it provokes Urine, is proper in the Jaundice, in malignant Fevers, small Pox, and is employ'd in making of Treacle. The Root is excellent for inveterate Coughs, Asthma's, and Phthisick, taken hot by way of Decoction; and is externally applied to digest, resolve, or allay Pains, apply'd in Form of a Poultis. The Seed which is call'd *Navette* is none of the *Narveu-Seed*, as a great many believe, but is the Seed of a kind of wild *Colly-Flower*, which they call in *Flanders Colsa* or Rape-seed, cultivated in *Normandy, Britanny, Holland,* and *Flanders.* They make of this Seed, by Expressing, an Oil, which they call Oil of *Navette*: The Colour is yellow, the Smell not offensive,

and the Taste is sweet. It is commonly used for *Burns*, and serves the *Cap-makers.*

15. Of Colliflower and Rape-Seed.

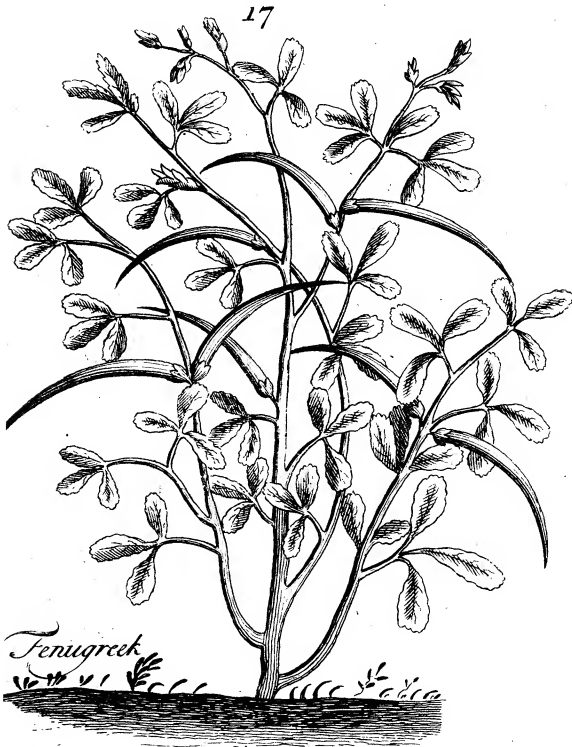
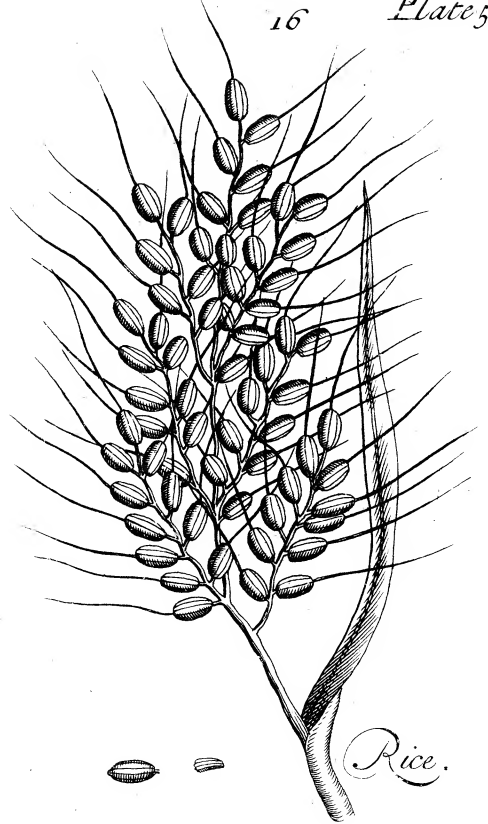
THIS is a little round Seed, something like the *Navette*; and is *Pomet.* brought to us by the way of *Mar-seilles* from *Cyprus*; there is likewise some that they bring from *Genoa*, but it is much inferior to that of *Cyprus*, and the more so, according as it is so much the lighter.

The newest Seed ought to be chose, and that which is true *Cyprus*, without any Mixture, of which the Importer should shew Certificates that it is true Seed, and of that Years Growth, by reason it is of no little consequence to the Gardiner and others that sow it, to be disappointed of a whole Year's Production by the Badness of the Seed; therefore it ought not to be brought in above four or five Months before it be sold.

The *Colliflower* gives me an Opportunity of speaking of another Species, which some Authors call *Wild-Colliflower*, and which is propagated with great Industry in *Holland, Flanders, Normandy, &c.* for the sake of the Seed, which they make Oil of by Expression; and this is what is call'd *Navette-Oil*, and by the *Flemings Colsa*, or *Rape-Oil*: This Oil is of great use to the woollen Manufacture in *France*, especially in the Time of War, when Whale or Train Oil is scarce and dear. The Goodness of this Oil is known to a great many Persons, whose occasions oblige them to understand it; nevertheless I advise them to chuse such as is pure and unmix'd with other Oils; which may be easily done by the Gold-Colour and Goodness of the Scent; for the true *Rape-Oil* is sweet, and on the contrary the *Linseed* bitter.

16. Of Rice.

RICE is the Product of a Plant which grows very common in *Pomet.* many Places of *Europe*; but more particularly, that which is now sold in *Paris* is brought from *Spain* and *Piedmont.* This is a Seed of so great Use and Profit, that it is called the *Manna of the Poor*, and throughout several



several entire Countries, they have scarce any thing else to subsist on.

Chuse the newest Rice, well cleans'd, large, that is to say, plump or well fed, white, not dusty, lest it smell rancid: Those who take notice of the Rice of *Piedmont*, esteem it much more than that of *Spain*, which is commonly reddish and of a saltish Taste. The Use of *Rice*, chiefly at *Paris*, is for the *Lent-Season*, when they boil it in Water, then in Milk, and sometimes reduce it to Powder, that is to say, Flower, which they use instead of Wheat-Flower to thicken their Milk with, as at *Lent*.

To reduce *Rice* into Powder; pour boiling Water upon it, and then wash it with cold Water, so often, till the Water remains clear; after this put it in a Mortar to pound, and when it is powdered, set it to dry, and reserve it for use: Then you may searce it fine, because when it is moist, *Rice* will not be so easily sifted.

Besides this, we sell other Pulse, as *Pearl* or *French Barley*, which ought to be chosen new, dry, plump, and well fed, white, but not blanch'd: It is prepar'd at *Charenton* near *Paris*, but the best is that of *Vitry*. We likewise sell *Rice* that is brought from several particular Parts of the Country, but chiefly to make a Sort of Coffee of, which it tastes very like when burnt. The poor buy what we call in *England Groats*, which is made from Oats, and when ground at the Mill is call'd *Oatmeal*. There is *Millet*, which when shell'd and pick'd, they prepare in the Forest of *Orleans*: Besides other Pulse, as the green and yellow *Pease*, which come from *Normandy*; and the *Beans* of *Picardy* and other Places. There are other Sorts of Pulse sold in the Shops, which are made of Wheat-Flower, as *Vermicelli*, both the white and yellow sort, and *Starch*.

The *Vermicelli*, which the *Italians* invented, and call *Vermicelli*, is a Paste made out of the finest Part of the Wheat-Flower and Water, which is afterwards drove thro' small Pipes like Syringes, to what length or Thickness they please, so that from the Resemblance of its Figure to small Worms it is call'd *Vermicelli*. They colour this Paste as they fancy, with Saffron or other things, and sometimes make it up with the Yolk of an Egg and Sugar; of late years this is made at *Paris*, and us'd in Soups and Broth, as in *Italy*, *Provence*, and *Languedoc*.

Starch which the *Latins* call *Amylum*, is made of Wheat-Flower and Water, which the *Starch-makers* form into Bread, and dry in an Oven, or by the Heat of the Sun. This used to be brought into *France* from *Flanders* and other Countries, but at present that which is made at *Paris* surpasses all other Places; and they transport from thence great Quantities into other Parts of *France*, and several neighbouring Countries.

We ought to chuse *Starch* for being white, soft and moist subject to crumble, likewise such as has been dry'd in the Sun, and not in an Oven, which makes it of a greyish white; its use is so generally known, it needs no Description.

Rice in *English*, is call'd *Ris* in *French*, and *Oryza* in *Latin*: This *Lemery*. Plant bears its Stalk about three or four foot high, much thicker and stronger than that of Wheat or other Corn: The Leaves are long like the Reed, and fleshy; the Flowers blow on the Top like Barley, but the Seed which follows is dispos'd in Clusters, each of which is enclos'd in a yellow Husk, ending in a spiral Thread. This Seed is oblong, or rather oval, and white: The Plant is cultivated in moist or low Grounds in *Italy*, and the Seed brought dry from *Piedmont*, *Spain*, and several other Places: Its chief use is for Food, but is sometimes made use of in Phylick: It nourishes well, and stops Fluxes, therefore is good in Armies, Camps, and Sieges, because it is of light Carriage and excellent Sustainance, and easily prepar'd: It encreases Blood, and restores in Consumptions: It is made into *Fruментy* by boiling in Milk, or for want thereof, in Water; or into Cakes with Water or Milk, and so baked dry; and is excellent good in Broth, with any kind of Flesh.

17. Of Fenugreek.

Fenugreek, which some call improperly *Senegrè*, and others *Bucera* *Pomet*. or *Aigoceros*, because the Pods which enclose the Seed, resemble in some manner a Goat's Horn, is a Plant which grows in several Parts of *France*. Its Stalks are round, hollow, of a darkish Colour, the Leaves small, half round, compos'd of three and three together

ther, something after the nature of the Trefoil; the Flowers small and white, bearing a large Pod, which is long and sharp, representing, as said before, a Bull's or rather a wild Goat's Horn. The Seed carries the Name of the Plant, and is the only Part of it which is sold by the Name of *Fenugreek*. This Seed ought to be fresh, of a lively yellow, towards a Gold Colour, but it becomes reddish and changes brown if long kept: It is about half as big as a grain of Wheat, hard and solid, and is of a triangular Shape, but the Smell and Taste of it are both offensive. The Farmers about *Auberwilliers* sow and cultivate this as they do *Coriander-Seed*, which is sent to *Paris*, and from thence to *Holland* and other Parts. The Ancients, and some *Germans* at this Time, make a Decoction of this Seed, and eat it as they do other Pulse, to remove and expel Wind; but I believe few or none will imitate them in this Practice, which is so disagreeable to the Nose and Palate: It is much better for Cattle, and especially Horses to mix with their Oats to fatten them. It is of greater Use externally than internally, and needs no further Description, being so well known.

There are two Sorts of this Plant, *Lemery*. but their Difference only consists in that the second is something less than the first, but the Virtues are equal, both of them being emollient, discussing, and anodyne, so that all Cataplasms for those purposes consist in a part of the Mucilage. They are also used in emollient Clysters, for that they blunt the Sharpness and Acrimony of the Humours, especially in the Bowels.

18. Of Luzerne, Burgundian Hay, or Trefoil.

THIS is a Species of Trefoil, or *Pomet*. *Saintfoin*, to which some have given the Name of *Medica* or *Median Hay*, because the *Greeks*, after the War with *Darius*, carried this Seed into *Greece*, and gave it the Name of its native Country, which was *Media*. This is a Domestick Plant, and very common in *Languedoc*, *Provence*, and *Dauphiné*, all along the Banks of the *Rhone*, and in *Normandy*, from which Places the Seed is brought to *Paris*. This is a

very luxuriant Plant, and produces abundantly, especially in the warm Countries; the Branches do not run along the Ground, as in several other Trefoils, but has a round Stalk, reasonably thick, strait, and strong, adorn'd with several Shoots; over the whole towards the Top, spring a Quantity of Leaves rang'd by three and three; and it grows about the height of a Foot and a half, and sometimes two Foot. From among the Leaves a purple Violet Flower rises, like that of the Mallow, and after that the Seed: This is almost round, a little longish, and something pointed, of a pale yellow Colour when it is new, afterwards it turns red, and almost brown when it grows old.

Horses, Mules, Oxen, and other domestick Cattle, love this exceedingly, but above all when it is green, if you wou'd permit them to feed on it; and especially the black Cattle, which will feed very kindly upon the dry Plant, the excess of which is very dangerous.

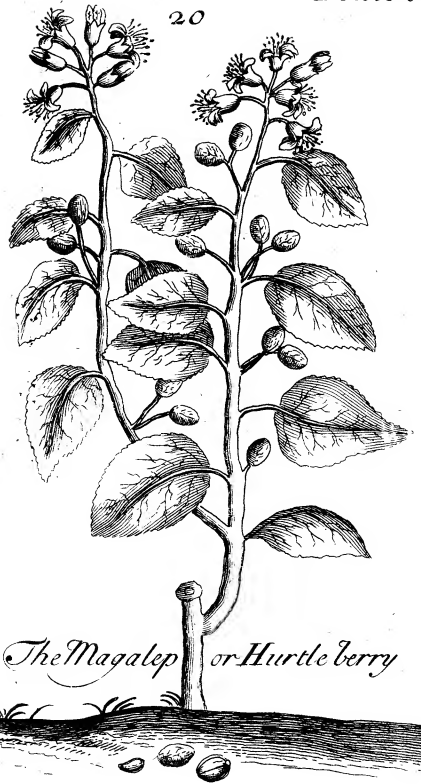
Parker calls this *Fœnum Burgundiacum*, sive *Medica legitima*, Ger. *Lemery*. *Trifolium Burgundiacum*, in *French* it is *Luzerne*, and bears its Leaves dispos'd three and three, like *Trefoil*, according to *Mr. Turnefort*: Its Root is very long, woody, moderately thick and strait, and will bear the Frost: It is not only cultivated in the warm Countries, as *Languedoc* or *Provence*, &c. but in the moderate Parts, about *Paris* and in *Normandy*. This Plant delights in a fat watery Soil, and may be mowed five or six times a Year: It is extraordinary to make Cattle fat, and Cows spring with Milk; contains a considerable deal of Oil, and a moderate Share of essential Salt; and is of some Service in Physick, to temper the Heat of the Blood, and other Fluids, and to provoke Urine, us'd as Tea, or in a Decoction with Water.

19. Of Agnus Castus, or the Chaste Willow.

THIS *Agnus Castus*, which some call by the Name of *Vitex*, or the Willow, is a Plant which grows in Form of a Shrub, along by the Sides of Rivers and Gardens, and its Flowers are like those of the *Olive-Tree*, but that they are something longer: Its Trunk



Agnus Castus.



The Magalep or Hurtle berry



The French berry of Avignon.



True Myrtle.

Trunk and Branches are woody, which end in several long Boughs, fine, pliable, and intermix'd with Leaves, Flowers and Fruit in its Season, which appear white at first, but become insensibly red. Some People call these Little Berries, Small Pepper, or Wild Pepper, as well because their round Figure renders them like that sort of Pepper, as because their Taste is a little biting and aromack.

This Plant bears the Name of the *Vitex*, because its Branches are pliable, like that of the Ozier or Willow: And the Name of *Agnus Castus*, because the *Athenian* Ladies who were willing to preserve their Chastity, when there were Places consecrated to the Goddess *Ceres*, made their Beds of the Leaves of this Shrub, on which they lay: But it is by way of Ridicule that the Name of *Agnus Castus* is now given to this Seed, since it is commonly made use of in the Cure of venereal Cafes, or to assist those who have violated, instead of preserv'd their Chastity.

The Seed of this Shrub is round *Lemery.* and grey, almost like Pepper, having something of the Taste and Smell, and therefore is often call'd by the Name: It delights in wild uncultivated Places, near the Banks of Rivers, Ponds, and Brooks in the hot Countries, where it prospers best, and from whence the Seed ought to be chose, as much better than what grows in the Northern Parts: Take that which is fresh, large, and well fed; it is hot, attenuating, and discussing, provokes to Urine, and excites the Monthly Courses; it softens the Hardness of the Spleen, expels Wind, and may be given in Powder, or a Decoction; and is likewise us'd externally by way of Poultis, &c.

20. Of the Wild Cherry, call'd Mahalep.

THIS Fruit, which some have named *Mahalep*, is the Kernel of a small Berry, almost like a Cherry-stone, which grows upon a kind of a Shrub. Some Authors believe it to be a kind of a *Phyllirea*. The Leaves are large, ending in a Point, and something resembling the Nettle; betwixt two Sprigs, the Fruit arises, cover'd with a small green Coat, extremely thin.

This is brought to us from several Parts, but especially *England*; and the best Choice to be made of it, is, by taking the freshest, largest, and which is least fill'd with little Shells that are rotten. The Use of it, is for the Perfumers, who, after they have broke 'em, mix them with common Water, Rose, or other distill'd Water, to wash their Soap with, in order to make Wash-balls.

Mr. *Turnefort* calls this *Mahalep* *Cerasus sylvestris amara*: By others, *Lemery.* it is call'd *Chamæcerasus*, and *Vaccinium Plinii*. It is a kind of Wild Cherry, or a small Tree almost like the common Cherry: The Wood is of a greyish Cast, inclinable to red, agreeable to the Eye, firm, and of a sweet Flavour, cover'd with a brown Bark, or a blackish blue: The Leaves are like the black *Poplar*, but much less: The Flowers resemble the ordinary Cherry, white, and each compos'd of five Leaves, in Form of a Rose, of a good Smell. When the Flower falls, the Fruit succeeds, which is round, black, and of the same Shape with the Cherry, containing a Nut, or Stone in it, which yields a Kernel like the bitter Almond. Some People call this Fruit *Vaccinium*, and pretend it is that which *Virgil* speaks of in this Verse

Alba ligustra cadunt, Vaccinia nigra leguntur.

The Root is long, thick, and spreads itself into a great many Branches: It grows in watry Places, on River-Sides; and the Fruit yields a good deal of Oil and volatile Salt: It attenuates, is emollient, sudorifick, and drying. The Use of it is for external Applications, but is little in Practice.

21. Of the Avignon, or French Berry for dying, call'd Box-Thorn.

THE *Avignon*, which some call the *Yellow Berry*, is the Fruit of a Shrub which Authors call *Lycium* from *Lycia*, where it grows plentifully, as it does likewise in *Cappadocia*: And it is sometimes call'd *Pyracantha*, a *Greek* Name, which signifies the prickly Box-Tree.

The Shrub which bears this Berry, grows in large Quantities about *Avignon*, and all the

the stony Places in the Country of *Venaisſen*, and likewise in several Parts of *Dauphiny*, *Provence* and *Languedoc*. 'Tis a thorny Shrub, whose Branches are about two or three Foot long, the Bark grey, and the Root yellow and woody, the Leaves small, thick and disposed like the Myrtle, but of the Size of the Box; the Berry is about the Bigness of a Wheat Grain, sometimes consisting of three, sometimes of four Angles, and sometimes made into the Form of a Heart. The Colour is green, turning towards a yellow, of an astringent and very bitter Taste.

The Use of it is chiefly for the Dyers to stain a yellow Colour with: But the *Dutch* boil this in Water with *Roman* or *English* Allum, and with a kind of Chalk or Marl, they adulterate ceruſſe or white *Lead*. They likewise make a fine golden yellow of it, which is a sort of Pink for painting in Oil and Miniature.

By some this is call'd *Lycium Lemery*. *Buxi folio*, by others, *Lycium Alpinum*, and *Pixacantha*, or the yellow Berry, which is always transported dry, for the Use of the Dyers, who ought to chuse the freshest, largest, and best dried. All the Parts of this Plant are astringent, digestive and resolving. *Dioscorides* recommends an Extract made of the Roots and Branches of this which he calls *Catè* or *Lycium*: He assigns to this an astringent detensive Quality, proper to dry up a gleet, or watering of the Eyes, to disperse and waste away Cataracts, for curing Ulcers in the Gums, for the Bloody-flux and Hemorrhages, whether internally, or externally applied.

22. Of Myrtle Berries.

THE *Myrtle Berries* are Seeds of certain Shrubs call'd *Myrtles*, which Authors have divided into several kinds, but I shall confine myself to two Sorts, which are commonly known and cultivated about *Paris*; the one is the Male, and the other the Female: The first is much larger and thicker, and the Leaves of a pale Green, terminating in a point, smooth, fragrant, and three or four Times as big as that of the Female Myrtle, whose Leaves are of a dark green, and known by their being

rang'd just one before the other; besides, the Smell is much stronger and finer than that of the Male, and the Branches more yielding: The Flowers of both kinds hang in Bells of a white Colour, tending a little to the red, and arising directly in the middle betwixt the two Leaves, from which the Berries afterwards succeed, which at first are green, but grow insensibly black, juicy, smooth, and are filled with a whitish Seed, enclosed with a Coat almost round.

These Berries are made use of internally and externally in all Diseases where they are proper. The Apothecaries make a Syrup and Oil from them, but they are little used in *France*. The *Germans* dye Blue with them, as the *French Berry* is us'd for yellow; but the *English* employ the Myrtle Leaves and Branches to the same, as they do the *Sumach*, for colouring their Leather, Skins, &c. what are now sold, are of a black Colour, first well dried in the Sun, and then kept carefully for use.

The *Myrtle* is a small Tree or Shrub that is always green and fragrant, of which there are a great many Sorts which are known by the Size of the Leaf, and the Colour of the Fruit. Mr. *Turnefort* says, that when the Flower is gone the Berry comes in the Cup, of an oblong, oval form, representing a sort of a Crown when the Mouth of the Cup is turned downwards. This Plant is cultivated in our Gardens and Green-houses here, but is an Inhabitant of the hot Countries, where the Smell is much encreas'd; it contains a great deal of exalted Oil, Flegm, and some small Salt. The Leaves and Flowers have an astringent Quality, and are us'd for cleansing the Skin, for contracting the Flesh, strengthening the Fibres, &c. from thence a Water is made for the Ladies to wash with. The Berries have a binding detensive Power, and the chymical Oil from thence is excellent for the Hair, and used in Pomatums, and most other external Beautifiers of the Face and Skin.

23. Of Stavescare.

THIS is the Seed of a Plant which grows commonly in many Parts of *Provence* and *Languedoc*.

Pomet.

The



Myrtle of y Shops.



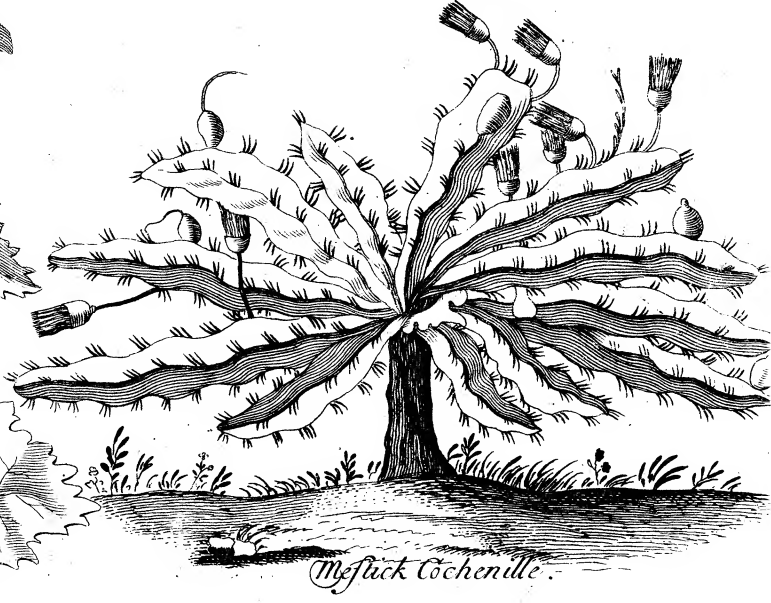
Staves-acre.

24



Milk Seed.

25



Meslack Cochenille.

The Leaves of the *Stavesacre* are large and green, deeply indented and thick; the Flower is of a Sky-blue, and grows in a Husk, which afterwards contains the Seed, and is of a blackish Colour at Top, of a Sad-colour below, and of a whitish yellow within; the Taste biting bitter, and very disagreeable. Chuse such Seed as is new, clean, and come off of good Ground. The Use of it is chiefly to destroy Vermin, especially those of little Children, to raise Blisters, or allay the Anguish of the Tooth-ach; but it is a dangerous thing to tamper with, and I would advise such as don't throughly understand it, to let it alone.

It is call'd *Staphisagria*, *Herba Lemery*. *Pedicularis*, or by Mr. *Turnefort*, *Delphinium Platani Folio*, *Staphis agria dictum*, or in *Englisb* Louse-Herb. It raises its Stalk about a Foot and a half, or two Foot high, upright, round and blackish. Mr. *Turnefort* says, the Flowers are composed of many unequal Leaves, and is a kind of rough three-corner'd Seed: If taken inwardly, which is but seldom, it purges and vomits: It is used in its Powder, tho' rarely. *2dly*, As a Masticatory for the Tooth-ach. *3dly*, A Gargarism to purge Flegm. *4thly*, An Errhine to bring forth Flegm and Water by the Nostrils. *5thly*, To mix it with an Ointment with Lard to cleanse Wounds. *6thly*, A Mixture with Oil of Almonds, to kill Lice in Childrens Heads, which is its chief Use: So also with Vinegar. It is of a churlish Nature, and not fit to take inwardly.

24. Of Amber, or Musk-Seed.

THIS is a small Seed, of the Size of a Pin's-head, of a greyish fad brown Colour, in form of a Kidney, of a Musk or Amber Smell, especially when it is new, which gives it the Name. This Plant which grows frait is adorn'd with a green Velvet Leaf, like that of the Marsh-Mallow, whence it is call'd *Alcea Indica Villosa*, which signifies an *Indian Velvet Mallow*: It bears yellow Flowers in form of Bells, compos'd of triangular Husks, brown on the outside, and white within, of a Finger's Length, in which the Seed is enclos'd. Chuse that which is fresh, clean, dry, and

of a good Scent: such as comes from *Martinitico*, is abundantly more fragrant than that which grows in any other of the *Caribe* Islands. This Plant grows likewise in *Ægypt*, where it is called Musk-feed and *Abel-musk*. The Perfumers use this all over *Italy*, and the Bed-makers in the making their Beds.

This Seed is something like the *Millet*, of a bitterish Taste, and is *Lemery*. brought dry to us from *Martinico* and *Ægypt*; it comes from a kind of *Kernya*, and is call'd by *Turnefort*, *Kernia Ægyptiaca Semine Moschato*. This Plant carries its Stalk a Foot and a half high; the Leaves are of an unequal Size, but cut and indented very deep. The *Ægyptians* use this internally as a Cordial, to fortify the Heart, Stomach and Head, and to provoke Luft: It gives a grateful Scent to the Breath after Eating, but is not proper for such as are subject to the Vapours.

25. Of Cochenille.

THE *Cochenille*, call'd *Mestich*, is the Seed of a Plant about two or three Foot high, adorn'd with Leaves two Fingers thick, of a beautiful Green, and very prickly; after which grow Buds or Husks in form of a Heart, of a green, tending to a yellow Colour, in which are enclosed a Quantity of small Seeds of the Size of a great Pin's Head, partly of a flat Figure, almost triangular, of a greyish silver Colour to the Eye, and as red as Blood within.

We bring this Seed from *Peru* and other Places of *New-Spain*, as the Salt-Sea, and *Mexico*, from whence it is brought by the *Spanisb Galeons*, or Plate-Fleet to *Cadiz*; as *Ipecacuana*, the *Cortex*, *Sarsa Parilla*, and other Druggs are; and from thence transported to *England*, *Holland*, or *France*.

The *Mestich Cochenille* is a thing of that prodigious Consequence to the *Spaniards*, that they would undergo any Punishment, rather than yield that it should be propagated in *France*.

There are very few Persons but what believe that this *Cochenille* is a little Animal or Insect; and I was of the same Opinion, 'till convinc'd of the Truth of the contrary, by two Letters of the *Sieur Francis Roussicans*,
a Na-

a Native of *Auxerra*, dwelling at *Leoganna* near *St. Domingo*, who writes to me thus.

“ The *Cochenille*, Monsieur, which you are desirous to know by the Plant, grows about two or three Foot high, furnish’d with Leaves of two Fingers Thickness, of a fine green Colour, full of Thorns on all sides; the Seed is small, and contain’d in Husks form’d like Hearts, turning to a yellow when they grow ripe. What is brought to *Spain*, comes from all those Parts call’d the *Salt-Sea*, for the little we have about *Leoganna*, is not worth speaking of.

We may see this is quite contrary to what is reported by Monsieur *de Furetiere*, who confounds the scarlet Grain, which is *Kermes*, with the *Cochenille*; and, at the End of his Discourse, observes that it is a greivish Worm, or Insect, which comes from the *Indies*, and which they traffick considerably in; so that from *Tlascala*, a City in *Mexico*, they deal for more than two hundred thousand Crowns a Year. And, after him, the Reverend Father *Plumier*, a Minime Friar, told me, the 15th of *September* 1692, from his own Mouth, and certify’d under his Hand, as follows,

“ The *Cochenille*, says he, surnamed *Meslich*, is a small Insect like a Bug, which is found upon many different sorts of Plants, as well in *New Spain* as the *American Isles*: These little Animals are so common in the Countries thereabout, that they make a fort of Crop of them, when they are dry’d.

All kinds of Plants are not equally proper to supply these little Animals with Aliment capable to produce a thorough redness, therefore the Inhabitants of those Parts feed their small Cattle upon the *Opontium*, which is void of the red Juice that contributes so considerably to strike the Colour deep, which the Dyers seek after; and, as the Ants delight exceedingly in these little Insects, the *Spaniards* take care to fill those Places full of Water, by Ditches, where the Plants grow, whereof we have been speaking, to engage the Ants to go thither.

The chief Plant where we find the *Cochenille*, is that which the *Americans* call *Raquette*, or *Cardasse*; and the Botanists *Opontium majus spinosum fructu sanguineo*, which signifies a large *Indian* prickly Fig, whose Fruit is as red as Blood.

This Plant is wonderful in its Kind, as

well from its large, thick Leaves which are of an Oval Figure, a glorious green cover’d with long Thorns, very sharp, of a yellow Colour; and at the End of the Leaves grow large Flowers, of a pale Rose Complexion, follow’d with a fine red Fruit. These little Insects, of which they make the *Cochenille* brought to us, are of a silver grey, but of that particular Kind, that they multiply after a prodigious manner, so that a hundred will produce millions.

On the 30th of *January* 1693, the said Father *Plumier* brought me a Letter writ by himself, to this purpose.

*Father Plumier’s Declaration concerning
Cochenille.*

“ The *Cochenille* which is brought from *New Spain*, or the Continent of *America*, is an Insect of the Size and Form of a Bug, which clings to several sorts of Trees, but more particularly to the *Acacia*, which is a sort of wild Cherry in the *French* Islands of *America*. It is a very fruitful Animal, and carries between the Thigh and the Body an infinite number of Eggs, which are almost invisible, yet produce an innumerable quantity of very small red Insects, which, like the Ant, are very greedy. When the old ones are crush’d, they yield a red Juice inclinable to scarlet, mix’d however throughout with a little Tinge of yellow; in like manner, those which are bred upon the Trees, do not produce so fine and lively a Colour: But the *Indians*, to render the Juice of a beautiful Colour, breed these Insects upon certain Plants, which are call’d in Latin *Opontium*, and which the *French* call *Raquettes*. These produce a thick Fruit, just like our Figs, full of an admirable fine red Juice, of which the *Cochenilles* feed; and these are much more bright and lively than those which are bred on other Plants. When I discover’d these Insects in the Isle of *St. Domingo*, I shew’d them to two *Indian* Slaves, that were Natives of the Country where they breed, and they assur’d me both that these were those they made *Cochenille* of.

“ Besides what I met with in my Voyage to *St. Domingo*, I would satisfy you concerning this Insect, from the Authors who
“ have

“ have writ of *America*, and particularly from
 “ the *Sieur de Laet*, in his Description of the
 “ *West-Indies*. Book V. Chap. 3.

“ The *Cochineal* Grain comes from several
 “ Provinces of *New-Spain*, taken from
 “ the Tree call'd *Tuna*, which bears very
 “ thick Leaves, as it grows in Places more
 “ expos'd to the Sun, or cover'd from the
 “ *North-East* Wind. It is a very little Ani-
 “ mal, living as an Insect much like a Bugg;
 “ for when it first clings to the Tree, it is
 “ less than a Flea, and comes from an Egg
 “ or Seed the Size of a Mite, call'd in *Latin*
 “ *Acarus*; this fills the whole Tree, and
 “ spreads over the Garden: They hoard up
 “ their Treasure or Stock like the Ant, once
 “ or twice a Year. These Plants are dif-
 “ pos'd in order, as they do the Vines in a
 “ Vine-Yard; and the younger they are, the
 “ more plentifully they bear, and afford a
 “ better Grain; but it is necessary to preserve
 “ them from being over-run with other In-
 “ sects, and no less from Pullen, which will
 “ eat the Seed.

Note, This *Tuna* is nothing else but the
 said *Oponium*, of which I spoke before;
 there are several sorts of it, but the Choice
 for cultivating *Cochineal* ought to be made of
 such whose Fruit produces the finest red
 Juice.

But not agreeing to what Mr. *De Furetiere*,
 the Reverend Father *Plumier* and *Laet* have
 writ, I find myself more and more oblig'd
 to believe that *Cochineal* is the Seed or Grain
 of a Plant, because the *Sieur Rousseau* takes
 notice to me at the End of his first Letter, in
 order to justify what he says, That he wou'd
 send me the Plant, which he hoped to do
 with God's Assistance: And in his second
 Letter, dated the 25th of *May*, in the same
 Year, he writes thus:

‘ S I R,

“ I N relation to the *Cochineal*, about which
 “ I have been speaking, I'll tell you a
 “ pleasant Story of the *Minim* Father, who
 “ is a pretended Provincial, and calls him-
 “ self a Botanist. He is about 45 or 50 Years
 “ old, of a blackish Complexion, and fan-
 “ cies himself very expert. He seldom speaks
 “ but it is very unhappy for him, if he talks
 “ of any thing of Consequence. He raised

“ several *Acacia's*, which are very prickly or
 “ thorny Shrubs, and what they call *Car-*
 “ *dasses*, which are a sort of Plant that bears
 “ Leaves of two Fingers Thickness, made
 “ a little like the *Raquettes*, which produces
 “ Fruit of the Shape of a Fig, of a Taste a
 “ little acrid, and which makes the Urine
 “ red: Certain Animals that frequent these
 “ Trees he was put upon to affirm were the
 “ *Cochineal*; and that all the Inhabitants of
 “ *St. Domingo*, who knew the Plant, and
 “ understood its Growth, had confirm'd the
 “ fame: This lost the Credit the good Fa-
 “ ther had there, especially with Mr. *De*
 “ *Cussi*, who play'd his part among the rest
 “ of them who deceiv'd the *Minim*. He
 “ parted for *France* sometime after, where I
 “ know he arriv'd with the same Error con-
 “ cerning *Cochineal*, that he had been in at
 “ *St. Domingo*.

The *Sieur Rousseau* inform'd me again,
 that he had found upon these *Acacia's*, a Spe-
 cies of little Creatures of the Size of a
 Bugg, which they call'd *Vermillion*; these
 are a little thicker, but they are of no use,
 because they cannot dry them; 'tis apparent,
 as we may rationally conjecture, that this
 was the pretended *Cochinelle* of Father *Plu-*
mier.

Besides the Letters of the *Sieur Rousseau*,
 there are other things which deserve our Cre-
 dit, as that we cannot discover the Feet,
 Wings, Head, or any other Part of an Ani-
 mal in the *Cochineal*, which we have, or in
 all those Observations that are made of the
 true Grain. And if these Proofs are not suf-
 ficient, we may look into the Judgment of
Ximenes and *William Piso*, in his History of
 the Plants of *Brazil*; where, after he has given
 a long Description of the Species of the *In-*
dian Fig, which is call'd *Jamacan*, he says it
 is the same Plant that in *New-Spain* produces
 and bears the *Cochineal*.

The *Mesteck Cochineal* is the best sort to
 make choice of; that is, such as is plump,
 large, well fed, clean, dry, of a Silver shi-
 ning Colour on the outside, and when it
 is chew'd in the Mouth, that tinges the
 Spittle of a bright red Colour; and reject
 that which is meagre, salt and light; and
 take particular care, lest there be small
 Stones on the Inside which will inance the
 Price.

The *Cochineal*, when dry, is of good Use in Medicine; but is abundantly more used by the Dyers, as their principal Basis for the Scarlet Colour. Some People use it for to colour Sugar, Cream of Tartar or other Acids.

Of Carmine.

Carmine is a very precious and rich Commodity, which is made of *Mestick Cochineal*. 'Tis a Flower or Powder of a most beautiful red Gloſs, and that feels like Velvet, which is made by the Assistance of Water, together with the *Chouan* Seed, which is well prepared and dried, that we call *Carmine*. To make it in a Condition requisite for Use, it ought to be reduced to a moist impalpable Powder, of a high Colour, and prepared as exactly and faithfully as is possible; for the great Price of it is the Reason that several wicked Persons sophisticate it: Upon that account, that the Merchant may not buy it too dear, or be cheated with the second Sort for the first; I must inform him it is nothing near so fine. Some are for *Carmine* of *Rocou*, but it gives a Tinge more of an Orange Colour. The Use of *Carmine* is for Miniature, and making the finest red Draperies.

Of fine Lac, and other Sorts.

The fine *Lac* is that which takes its Name from *Venice*, because what has been sold among us hitherto, is brought from thence: But at present several Persons in *Paris* make it to answer effectually; so that a great many Painters prefer it to that of *Venice*. This *Lac* is a hard Paste, made from the Bone of the *Cuttle Fish*, which is colour'd with a Tincture drawn from *Mestick Cochineal*; that of *Brazil*, or *Fernambourg*, with burnt Allum from *England*; *Arsenick*, and a Lye of *Egyptian* Nitre, or white Tartar; and by means of Cloth strain it, and proceed as in the making of Indigo: From thence reduce it into a Paste, of which make Troches, and dry them for Service. The Use of this *Lac* is both for Miniature and Painting in Oil.

Of the Dove-colour'd Lac.

This is made likewise with *English* Allum,

and form'd into Pastiles of the Thickness of one's Finger, and so dry'd. That of *Venice* is abundantly finer than that of *Holland* or *Paris*, because the white that the *Venetians* use, is much finer and properer to give a lively Colour than the white of *Holland* or *France*. The Use of this *Lac* is likewise for Painting. There is a third Sort call'd *Liquid-Lac*; of which I shall speak in the Chapter of *Fernambourg-Brazil*.

Of fine Turnefol in Linen.

The fine *Turnefol* of *Constantinople* is made of *Holland*, or fine *Cambrick*, which has been died with *Cochineal*, by means of some Acids. This is us'd for tinging of Liquors, as Spirit of Wine, Cordial Waters, or the like. The *Turks* and others, in the *Levant*, call this *Turnefol* for *Linen*, the red *Bizevère*.

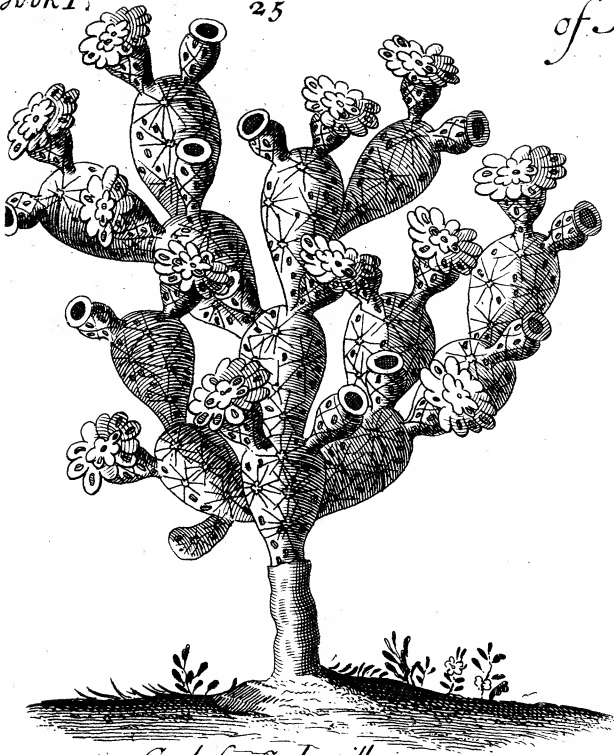
Of Turnefol in Cotton, or that of Portugal, vulgarly called Spanish-Wool.

The *Portuguese* bring this to us in Cotton, which is of the Figure, Thickness and Size of a Crown-piece; they use it to colour their Gellies, but it is much less us'd than the *Turnefol* in Linen, which is made entirely of the *Mestick Cochineal*. The other Sorts of *Cochineal*, are the *Campechy*, the *Tetrachalle* and the Wood.

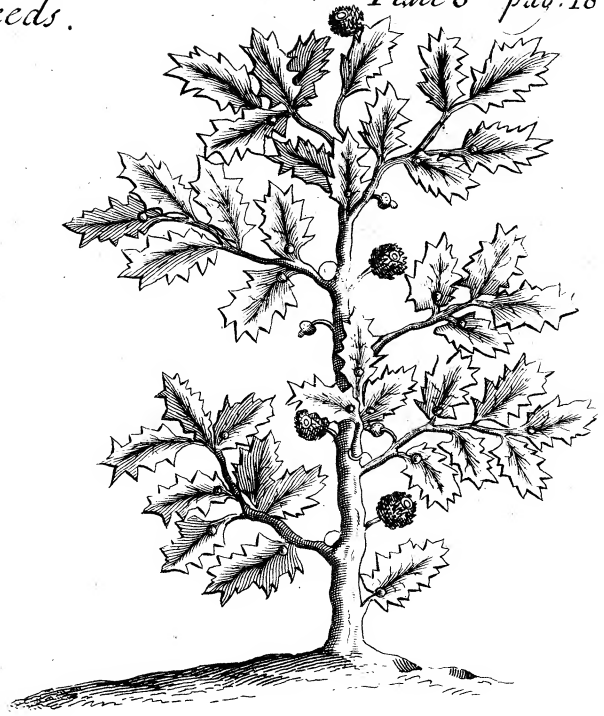
The *Campechy-Cochineal* is no other than the Siftings of the *Mestick*; the *Tetrachalle* nothing but the earthy, or drossy Part of the *Campechy*; and the Wood or Seed *Cochineal*, that which we find upon the Roots of the great *Pimpernel*, call'd by the *Botanists*, *Pimpinella Sanguisorba*.

26. Of the Scarlet Grain, or Alkermes.

THE Scarlet Grain, which the *Pomet.* *Latins* call *Grana Tinctorum*, the *Greeks*, *Coccus Infectorius*, and the *Arabs*, *Kermen* or *Kermes*, is the Seed, or rather Excrement of a little Shrub, whose Leaves are prickly, almost like those of Holy-Oak: They are found in great Quantities in *Portugal*, *Spain*, *Provence* and *Languedoc*.



Cardafse Cochenille.



The Kermes or Scarlet-Berry



The Raisin Amomum.



Rose of Jericho.

I shall not stay to describe the Shrub which bears this Grain, all sorts of Authors having made mention of it; I shall only say it is one of the principal Riches of the Countries where it grows, especially for the poor People, throughout all *Provence* and *Languedoc*, where the People gather it, and sell it by the Pound to the Apothecaries; who, from the Pulp, make a Syrup they call *Alkermes*, and the Remainder which is left in the Sieve or Strainer, after it is cleans'd, they sell again to the Dyers. Those which they wou'd transport, or send to other Places, they dry, as well for physical Use as the Dyers, who use great Quantities of it; for which Purpose they chuse the largest and most weighty, and that which is new, that is to say, of that Year; for when the Seed grows old, it engenders an Insect, which will eat it up, and makes Holes in the Seed, so that it grows light and loses all its Virtue. That of *Languedoc* pass'es for the best, being commonly large, and of a very lively red, which is contrary to that of *Portugal*, which is less esteem'd, as being smaller, leaner, and of a blackish red.

The *Alkermes*, or *Scarlet Grain*, is reckon'd very cordial, and proper to comfort Women in Child-bed, giving half a dram of it in Powder in an Egg, without *Cochineal*, which a great many Persons advise, who believe two Grains of that will effect the same thing.

Of the Scarlet Creon.

As to the *Scarlet Creon*, which is made of the Powder of the Grain when new, it is a very fine red, and ought not to be made up with Vinegar at all, as that commonly is which comes from *Portugal*, which is done to encrease its Weight, as well as to give it a fine Colour. This Cheat is easy to discover, because it will be moist, and yield a strong and very disagreeable Smell. This *Creon*, which is the most noble Part of the Seed, is never us'd at all in Physick, for want of Knowledge, but very much by the Dyers for their high Colour.

Of Syrup of Alkermes.

The Syrup of *Alkermes* is the Pulp of the fresh *Kermes*, and the Powder Sugar of Bra-

sil, or the small Loaf-Sugar reduc'd to Powder, and mix'd together; afterwards melt it over a gentle Fire, then put it into little Barrels made of white Wood, such as we receive it in. Great Quantities of it are made, as well at *Nismes* as *Montpellier*, which they send to most Parts of *Europe*.

Of the Confection of Alkermes.

The Syrup of *Kermes* is very little us'd in Physick, but that which is compos'd of the Juice, together with the Juice of the Rennet Apple, Rose-Water, raw Silk, and white Sugar, Powder of oriental Pearl prepar'd, yellow Sanders, fine Cinnamon, Azure Stone prepar'd, Leaf Gold, of which is made a thin Electuary, which we call Confection of *Alkermes*. Every body now rejects *Musk* and *Ambergreece*; for, according to the Advice of Physicians, these Perfumes are prejudicial to the Women. As to the Preparation, those that are desirous to make it, may consult the Dispensatories that treat of it; but we have it ready made from *Montpellier*, as the best, because of the Newness of the Juice, which they have there at Command, and which they transport to other distant Parts. But there are a great many Frauds impos'd upon the World, particularly in *France*, under the specious Name of *Confection of Alkermes from Montpellier*; therefore 'tis better for all Druggists, Apothecaries, and the like, to buy the Juice or Syrup uncompound'd, to prevent their being otherwise deceiv'd.

Monfieur *Charas*, in his Dispensatory, p. 314, attributes mighty Virtues to the true Confection of *Alkermes*, and says, that the said Confection is, without doubt, one of the best Cordials that was ever discover'd in the *Galenical* Physick, for it recruits and refreshes the vital and animal Spirits, allays the Palpitation of the Heart and Syncope, very much strengthens the Brain, and other noble Parts, and is an Enemy to Corruption, preserves the natural Heat, drives away Melancholy and Sadness, and maintains the Body and Spirits in a good Condition. It may be taken by itself, or in any other Liquor, from a Scruple to a Dram or two.

The *Kermes*, *Coccum Insectorium*, *Gratum* & *Coccus Baphica*, has a Lemery. thick Shell or Husk, like the Juni-

per-Berry is round, smooth, shining, of a fine red, fill'd with a Juice of the same Colour, of a vinous smell, the Taste a little bitter, but agreeable. 'Tis a little Shrub, whose Leaves are like the Holy-Oak, but less, and more indented on their Sides with prickly Thorns: The Branches bear Abundance of Shells adorn'd with Flowers, which afterwards turn into Fruit, which grows in separate Places. The Kernels are oval, and thick cover'd at the Top with a black Cap: The Skin of the Kernel is of the Nature almost of Leather; it contains an Almond, which is divided into two halves. This Shrub grows in the hot Countries, as was said before.

The Origin of the *Kermes*, proceeds from a Kind of little Worm in the *Holme*, or green Oak, on which they feed; it produces a Cod or Vetch, which is fill'd with Juice, and which is very red when it is brought to us. This little Insect is inclos'd in the Cod. We have had a very curious Discovery of this, from Mr. *Fagon*, chief Physician to the King; and it is confirm'd by a Circumstance, which is apparent when the *Kermes* is dry'd, for then it is fill'd with a vast Quantity of Worms and Flies, almost imperceptible, which convert all the internal Substance of the Berry into little Insects, and leave nothing but a light Husk or Skin behind. 'Tis easy to apprehend that these little Worms, &c. come from the Eggs which the first Worms which enter'd the Cod produc'd. To remedy this Accident, which so much concerns the good Effect of the *Kermes*, every one ought to let the Cods lie some time in Vinegar before they are dry'd, by which means the acid Liquor will destroy those little Worms.

28. Of *Amomum* in Berry, and the Rose of Jericho.

THE *Amomum Racemosum*, or *Pomet*. that in Clusters, or the Raisin *Amomum*, is a Kind of Fruit we receive by the way of *Holland* or *Marseilles*, growing in several Parts of the *East-Indies*, rarely in Bunches, but much oftner in the Clove.

It grows upon a Shrub, whose Leaves are of a pale Green, longish and straight; it is, in some sort, like a Muscat Raisin in Colour, Size and Figure, but it is much fuller of Seed,

and less Juice in it; and in particular, all the Cloves or Grains are without Tails, or any Stalks, but stick close together on Heaps or Clusters, like Pepper: It is commonly divided into Cells.

The Cloves are fill'd with a purple Seed, sticking to one another like Glue, making altogether a round Figure, conformable to that of the Clove, and which are cover'd with a white Film very delicate, and divided into great Heaps by equal Membranes, but in such a manner as makes it easy to separate them: Their Taste is sharp and biting, and their Smell extremely piercing and aromatick.

Chuse the freshest Seed you can get, with the roundest Husk, and of the most lively fair Colour, heavy, and well fill'd. Cast away what is light and open, containing a black wither'd Seed: But esteem those that are well fill'd with Seed, large, plump; of a warm picquant Taste, very aromatick, and the most resembling the *Cardamoms*.

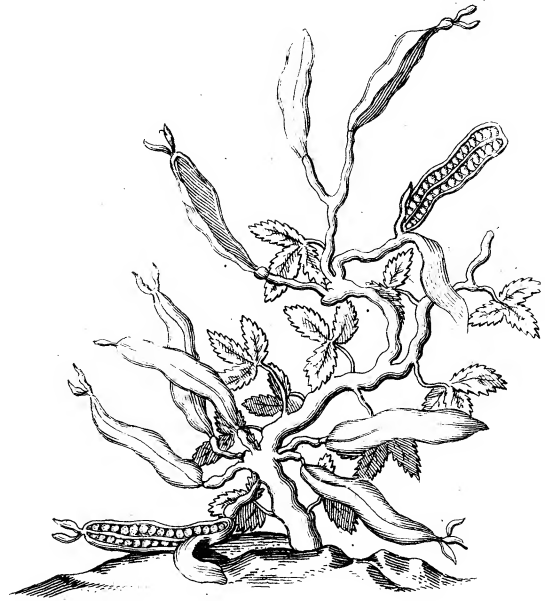
The chief Use of the *Amomum* is for Treacle, such as that of *Venice*, *London*, &c. for which make use of the cleanest and best seed.

Several Persons do not know this Drug from the great *Cardamome*, which is no other but the *Maniguette* in *French*, of which I shall take notice in the following Chapter. There are other Seeds which carry the Name of the *Amomum*, as that of *Pliny*, which is a red Fruit, and altogether like the *Alkekenge*, or Winter Cherry, which is very common. There is another sort which the *Dutch* and *English* call *Amomi*, and we *Jamaica-Pepper*. I must advertise you, that when you meet with the Name of *Amomum*, or *Amomi*, in Authors, you need use no other than this cluster'd *Amomum*.

All Persons that deliver any Receipts concerning *Amomum*, mean *Lemery*. the *Amomum Racemosum*, or cluster'd *Amomum*, which the Description before is given of; but there are several other little Seeds call'd by that Name, as the *Amomum falsum*, seu *Pseudoamomum*, or the bastard *Amomum*: It is a little black Fruit, of the Nature of the Gooseberry or the Juniper Berry, which grows upon a Gooseberry Bush, call'd *Grossularia non spinosa, fructu nigro*, or the Gooseberry without Prickles, with black Fruit,



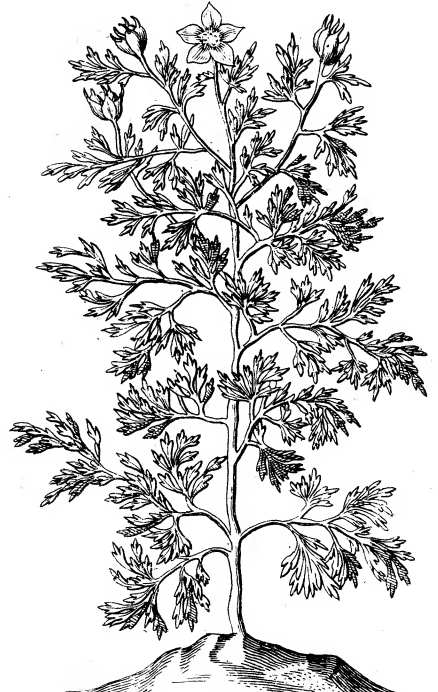
The great Cardamom.



The Lesser Sort.



The Small Cardamom.



Black Cummin Seed.

of the black Gooseberry. 'Tis of little or no Use in Physick, any more than the *Amomum* of *Pliny*.

The small Spice which the *Dutch* and *Portuguese* call *Amomum*, and the *French*, *Pepper* of *Thevet*, is round, and as big, or bigger, than *Pepper*, of a reddish Colour, appearing at one end like a small *Crown*, of a Taste and Smell like a *Clove*, a little pungent and aromattick; it has likewise the Virtue of the *Clove*, but is scarcer. Some call it the small round *Clove*, as is describ'd by *Baubin*, p. 194, with the Name of *Amomum quorundam odore Caryophylli*. The Tree or Plant that bears this, is represented here by *Pomet*.

28. Of the Great Cardamome.

THE great *Cardamome*, which the *Pomet*. *French* call *Maniguette*, or Grains of Paradise, is a triangular Seed of a reddish Colour without, and white within, of an acrid picquant Taste, like that of *Pepper*; which is the Reason that the *Hawkers* frequently sell it for *Pepper*.

The Plant which bears this Seed, has green Leaves, first, after which comes a Fruit, or rather a Husk, of the Size and Figure of a Fig, of a fine red Colour, in which are enclos'd these Grains of Paradise: It is called *Maniguette*, or *Melaguette*, from a City of *Africk*, call'd *Melega*, from whence they us'd to bring it into *France*; but at present it is brought from several Countries, by the way of *St. Malo's* and other Places. This Drug is very little us'd in Physick, but by the Distillers, and those of whom I have been speaking, who buy it to mix with *Pepper*.

29. Of the lesser and the smallest Cardamome.

THE lesser *Cardamome* is enclos'd in a Pod of the Length of a Child's Finger, made triangular; it grows upon a Plant, which some have assur'd me is very luxuriant, and whose Leaves are like those of the *Trefoil*, ending in a Point, and much indented; it grows in several Parts of *India*. These Pods are very rarely brought into *France*, and are of very little Use, because the

little or smallest *Cardamome* is more enquired for, as well by Foreigners as ourselves, as having much more Virtue in it than the less or middle sort.

The small *Cardamome*, which is what is most common among us, and brought from *Holland*, is a little Husk or Pod of a triangular Figure, on the outside of a light grey, stript and adorn'd with a small Tail of the same Colour. When open'd, you'll find a Quantity of small Seed in it of the Figure and Taste of the *Amomum*, of which I have been speaking before.

The Plant which bears the small *Cardamome* is as yet unknown, notwithstanding the diligent Enquiries I have made; but in all Appearance, it is like the middle sort, and has no other Difference, but what the Diversity of Places where it grows gives it. It is brought to us by the *Dutch* and *English*, from the Kingdom of *Visapour*, where it is very scarce. Chuse the freshest, well fed, weighty and least fill'd with Husks and little Straws, but well dried and sound: This is what we chiefly use in Medicine, but the *Dutch* use it much for chewing.

His Description of the great and lesser *Cardamome* differs nothing *Lemery*. from *Pomet*: But the third or least sort is call'd the simple *Cardamome* for its Excellence, because it is better and most us'd of any of the three. It is brought to us in little triangular Husks or Pods, of an Ash-Colour, tending to white; they stick or adhere together by little Fibres, but are easily divided from their curious Fibres; the Seed is then of a purplish Colour, and of an acrid, biting aromattick Taste. All the *Cardamomes* contain in them a great deal of volatile Salt, and essential Oil.

They are proper, particularly the least, to attenuate and refine the gross Humours, to expell Wind, fortify the Head and Stomach, assist Digestion, excite Seed, provoke Urine and the Terms, resist malignant Vapours, and to chew in the Mouth to procure Spittle. It is call'd *Cardamome*, or sweet *Nasturtium*, because it has a smell much like the *Nasturtium*, or *Cresse*, from whence it is deriv'd.

They are us'd from half a Dram to a Dram in Powder, or you may make a Decoction of them in Wine or Water. *Cardamome-Water* is made of them, being

sweetned

sweetned with double refin'd Sugar; 'tis a very good Stomachick Water, helps Digestion, and is an Antidote against the Plague, or any malignant Disease. A Tincture drawn from it in Tincture of Salt of Tartar, is excellent against the Stone, Strangury or Stoppage of Urine. Dose from two Drams to half an Ounce.

30. Of the Black Cumin-seed.

Pomet. THE *Black Cumin*, is the Seed of a Plant, about two Foot high, having little green Leaves indented and snip'd deep; after which they bear white blewish Flowers, and then Husks or Pods, in which are contain'd a longish Seed of a grey Colour, piquant Taste, a strong and aromattick Smell.

Chuse the newest, plumpest Seed of a fine bright yellow, of the most aromattick Smell, as well as Taste, that you can possibly meet with: That which comes from *Italy* is the best, and more esteem'd than that which grows among our Corn. The Use of this Seed is to kill Worms, correct Wind; and some Persons affirm it to be a very good Antidote; they reckon it likewise very useful to create Milk in Nurseries.

There are several other Sorts of this Seed, which I shall forbear to mention; some of which the *Indians* use in the Plant to feed their Horses with, and the Seed in Physick to cure Fevers, as we may see in the *Indian History*; there is another Sort as yet very scarce, which the *Turks* use, as several Persons of Quality in *France* do, to clean their Teeth. Another kind there is, call'd *China Anise*, which serves the Eastern People, in

Imitation of the *Chinese*, to prepare their *Thea* and their *Sorbec*.

This Seed is entirely like that of the *Coloquintida*, as well because it is of a dun Colour, as that it shines and is of an agreeable Smell: It is contain'd in small Pods, thick and hard. 'Tis with this Seed, and the Root *Nisi*, that the *Dutch* make their Drink of *Thea* and *Sorbec* more agreeable than in *France*: The Quantity is two Drams of *Nisi*, four Ounces of boiling Water, half an Ounce of *Tea*, and a Dram of *China Anniseed*. There are a great many other Seeds worth the Druggist's Knowledge, as well as others; but they being so common, it wou'd be counted superfluous to name them, as Lettuce, Violet, Succory, Poppy, Mallows, Turnip, Radish, Holly-oak, Fleabane, &c.

There are other Seeds commonly in Use, and as commonly known, as the four cold Seeds, *Citruls*, or *Water-Melons*, *Gourd*, *Melons*, and *Cucumber*, which are chiefly us'd for Emulsions, and sometimes to express a cooling Oil from them for the Skin, and other Things of the like Nature, that tend to the Ornament of the Complexion, &c. The Method of making all sorts of Oil by Expression, is so universally known, it would be lost Labour to expatiate upon the Method, there being no more in it than blanching the Seed, beating in a Mortar, and pressing the Oil from it cold: After the same way is made the Oil of Ben, White Pine, Poppy, sweet or bitter Almonds, Pistacia Nuts, &c.

Authors have given the Name of a Seed to a sort of Plant which has neither Leaves or Root, which is what we call *Dodder of Thyme*, whose Description you will find in the Chapter of *Epithymum*.

The End of the first Book of SEEDS.

BOOK the Second.

Of ROOTS.

P R E F A C E.

I Understand, by the Root, that Part of the Plant which is in the Earth, and which draws in the Nutrition, and communicates it to other Parts produc'd from thence, as the Stalk, the Leaves, the Seed, &c. The Roots which we commonly sell, are not only many in Number, but very different in Figure and Virtue. Our Herbarists supply us with many Roots, which require no other Preparation than to be cleans'd and dry'd, which is sometimes well, and sometimes ill, according to the Capacities of the Herb-Dealers; such as Enula Campana Roots, Marsh-mallows, Lilly Roots, and the like. We have others brought from foreign Countries, Part of which are very fibrous or stringy, hard and useles, as Turbith, bastard Turbith, white Dictamny, &c. which are separated from the Root, as is practis'd upon several Roots in France, as Cinquefoil, &c. We have others brought to us cut into Fillets, as Jalap, Mechoacan; in little Bits, as the lesser Galingal; in larger Sticks, as Rhubarb, Rhapontic; the entire Root, as Angelica; some adorn'd with their Leaves, as the Virginia Snake-Root; others are brought in long stringy Fibres, as Sarsaparilla: And, last of all, some are wash'd and cleans'd from their outward Skins, as Squills, Florentine Orris, and the like.

There is no less Difficulty in the Knowledge of Roots than of Seeds, as well by reason of their different Kinds, as the many Distinctions which are common among one another. 'Tis for this Reason we ought to be very circumspect in our Choice, and know the main Distinctions of every one, to make an exact Judgment of them, which is difficult to be done without Practice, and where a Man does not make it his continual Business: Those who want Roots, ought not to go about hunting for the best Bargains, but apply themselves to such Merchants in whose Probity they can put their Confidence, tho', upon the whole Matter, the Price is a very considerable thing.

Those Persons who value not their Conscience, make no Scruple at all to sell one thing for another, and ask as much for an Ounce of what is demanded of them, as they would sell a Pound of the same Drug for; as some People sell Tormentil for Contrayerva. Is it not likewise as profitable to charge the several Sorts of dry'd Drugs at an higher Price, because most sorts of Roots are subject to be worm-eaten, as Angelica, the Acorus Verus, &c. and to waste and be spoil'd, as Rhubarb, and the like?

I. Of Ipecacuanha, or Ipecacuana.

THE *Ipecacuana*, call'd *Beququilla*, likewise *Specacuanha Cagofanga*, *Beculo*, *Beloculo*, or the Golden Mine, is a little Root, which the *Dutch* and *Portuguese* bring us from the Coast of *Brazil*, call'd *Rio de Genecyro*, which is a River on the south side of that Country, where their Golden Mines are, which gives this Name to it. This is gather'd together by those that are condemn'd to the Mines; and that which makes it the scarcer is, that there is not above a dozen Pounds gather'd in a Year, and if they won't exchange that against other Merchandises, it will yet make it much dearer. The *Dutch* and others bring us three sorts of *Ipecacuana*, to wit, the brown, which is the first and best Sort, and consequently the dearest; the second, which is grey, is less strong than the brown; the third is white, of which I shall speak afterwards.

These Plants call'd *Ipecacuana*, as well the brown as the grey are of a small Height, partly creeping, partly rising about half a Foot high; the Leaves of them are like those of the *Pellitory of the Wall*, in the middle of 'em grow white Flowers of five Leaves apiece, supported by little Heads with a sort of brown Berries, which when they are ripe, are of a reddish brown Colour, the Size of a wild Cherry: These Berries contain a white Pulp full of Juice, in which are inclos'd two Seeds hard and yellowish, approaching to the Figure of a *Lentile*.

This Root ought to be chose fresh, new and well fed, hard to be broke, resinous in its Substance, and having a Nerve or Pith in the middle; but take care that it be not mix'd with the Stalk, and Filaments, or Threads, which those that sell it oftentimes throw amongst it, and which give it an acid, bitter and disagreeable Taste. Some Friends that I have at *Lisbon*, in *Holland*, and at *Marseilles*, have assured me, that the best *Ipecacuana* is the brown, which is chiefly that which comes from the Gold Mines, and the other two sorts are brought from the lowermost Parts of the Mountains thereabouts and other moist Places.

The Use of the said Root, is for the Cure

of *Dysenteries*; several People will have it that this Root is alexiterial: But notwithstanding that, I would not advise any Body to make use of it that Way, but with great Precautions, this acting with too great Violence when given in Infusion or Substance. The common Dose is about half a Dram to a Dram in Powder, taken in any proper Liquid Morning and Evening: This Dose is too large for most Constitutions, and it will act very well from 20 Grains to 30, plying it with green Tea, sage Tea, or plain Posset drink.

Of the White Ipecacuana.

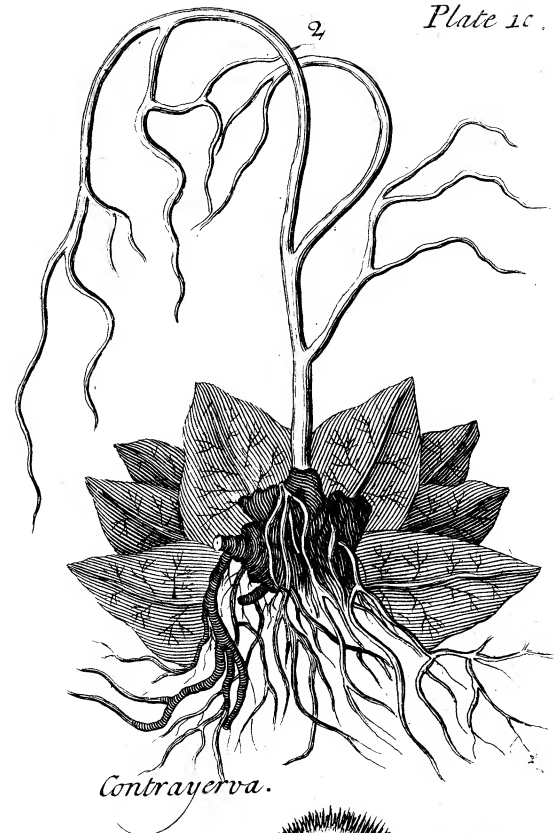
The white *Ipecacuana* differs from the other two, in that the Root is white, and altogether made like the white *Beben*, or the white *Distamny* Root, and the Leaves resemble those of the round Garden-forrel. The *Spaniards* and *Portuguese* prefer this white *Ipecacuana* before the two foregoing Sorts, especially for their Women with Child, and little Infants, by reason it works with less Violence, and is commonly given in Substance from half a Dram to a Dram, and in Infusion to two Drams.

In the Month of *January* 1690, this was made a Thesis in the Physick Schools of *Paris*, concerning the *Brazil* Root, or *Ipecacuana*; in which Places it was observ'd that the *Americans* had it in very great Esteem, as well because they pretended it was a very powerful Antidote, as because it was very useful for the Cure of many tedious and troublesome Diseases; but, above all, for the Cure of *Dysenteries*, and other Fluxes of the lower Belly.

Some will have it, that Mr. *Helvetius*, a *Dutch* Physician, brought the *Ipecacuana* first into Use among the *French* about five or six Years ago; but I can assure you to the contrary, because it is above twenty Years ago since I saw it at *Paris*; for a Proof of which, I remember there was a Quantity in the Shop of Mr. *Clauquenne*, Apothecary, which fell into the Hands of Mr. *Poulain*, his Son in law, who was likewise an Apothecary, and introduc'd it into Practice, by the Direction of *Helvetius*.



Ipecacuanha.



Contrayerva.



Virginia Snakeroot.



Levantine Rubarb.

The *Ipecacuanba*, or *Specacuanba*, *Lemery*. is a small Root, of the Thickness of a Quill of a moderate Size, which is brought to us dry from several Parts of *America*. There are three Species or Sorts of it, the brown, the grey, and the white. The brown is the strongest and most valued of all; it is the compactest, crooked, wrinkled in Curls, stringy in the middle, difficult to break, of a smart Taste, and bitter: It grows in *Brazil*, &c. as said before by *Pomet*.

The Root of the grey *Ipecacuanba* differs from the former both in Colour and Virtue, for it has less Efficacy. This is brought from *Peru*, by the way of *Cadiz*, and the *Spaniards* call it *Bexugillo*.

The third or white sort is different from the two others, not only in Colour, but in Figure; for it is neither crooked nor uneven. Some Authors say it is small as *Penny-royal*, and that the Leaf is soft and woolly, and that the Flower is white: Others will have the Leaf like round *Sorrel*. It grows low, and in moist Places. The way to chuse any of the three Kinds, is to take the largest and best grown.

This Root is both Purgative and Astringent; it works upwards and downwards, according as the Humours are more or less soluble; strengthens and corroborates the Fibres of the *Viscera*, by means of its earthy Parts. It is one of the best Remedies, and most certain, for the Cure of the *Dysentery* or *Bloody-Flux*: It stops likewise other Scourings of the Guts, but not with that equal Success. The Dose beaten into fine Powder, is from 20 to 30 Grains of the brown, from 30 to 40 Grains of the grey, and so to a Dram of the white Root. The first who brought this into Use in *France*, was *Monsieur Le Gras*, a Physician, who had made three Voyages to *America* in the Year 1672. It was shown afterwards by the Abbot *Bourdelot*; and, in one of my Courses of Chymistry, I had some given me by a *Druggist*, but without any Knowledge or Instruction into its Qualities at that Time.

2. Of the *Contrayerva* Root.

THE *Contrayerva* is the Root of a Plant which has green creeping Leaves, full of little small Fi-

bres round about them, of the Figure of a Heart, in the middle of which arises a Stalk wholly naked, about a Finger's Thickness. It is brought to us from *New Spain*.

Chuse such Roots as are fresh, well fed, adorn'd with long Filaments, or fibrous Strings, that are knotty and ponderous, of a yellowish red on the Outside, and of an Ash-colour'd white within, and a sweet aromack Taste.

It is an *Alexipharmack*, very powerful for resisting several sorts of Poisons; and is therefore call'd by the *Spaniards* *Contrayerva*, which signifies in their Language a Counter-Poison.

There grows now in *Peru* a Root very like it, which is call'd *Radix Drakena*, from *Sir Francis Drake*, who brought it first into *England*. But as the Roots of the *Contrayerva* are an Antidote; so, on the other hand, the Leaves are a mortal Poison.

Several People, at this Time, make use of this Root reduc'd to Powder, and mix'd with double the Quantity of Jesuits Powder, or the Bark, to turn off the Fits of an Ague or intermitting Fever; and others again, mix the same with *Ipecacuanba*, to cure a Loosness or *Bloody-Flux*.

We sell the Root of a Plant which grows plentifully throughout all *France*, for white *Contrayerva*: It likewise grows in every Garden, and is known every where by the Name of *Hirundinaria*, or *Celandine* the greater. This is very white and delicious, and is called, by every body in *France*, *White Contrayerva*, because it is pretended this has the same Virtues. There is a Composition of several Druggs in *Mr. Clearas's* Dispensatory, which is call'd the *Contrayerva Stone*, by reason this Root is the Basis of the whole.

Baubin makes the *Contrayerva* a Species of *Cypress*, and calls it *Long Lemery*. *Cypress sweet Root*. You ought to chuse that which is found, new, aromack, and sharp in Taste. It is an excellent *Alexipharmack*, resists Poison, and cures the biting of *Vipers*, other *Serpents*, or any venomous Beast; and is good against *Caletures*, *Measles*, *Small-pox*, *Spotted Fever*, *Plague*, or any malignant and pestilential Disease. *Schroder* says it is good in the *Plague*, even when the Tokens appear: It resists *Melancholy*, cheers the *Spirits*, and makes the *Heart* merry. It

may be given either in Powder, from half a Dram to a Dram, or in any cordial Draught or Bole.

3. Of Virginia Snake-Root.

THIS *Snake-Root*, which is called by some *Dittany*, by others, *Contrayerva* of *Virginia*, &c. is a Plant which grows there, and in several other Parts of the *Northern America*, and which is us'd successfully by the *English* against all Sorts of Poisons, and the biting of venomous Creatures; and is also very proper against all epidemical Diseases. Monsieur *D'Aquin*, first Physician, made choice of this Root, as one of the principal Ingredients in the new Reformation of *Venice-Treacle*, set down in Monsieur *Charas's* Royal Galenical and Chymical *Pharmacopœia*. As to the Goodness of this, you ought to chuse such as is fresh and new, the Root thick and well fed, of a strong Smell, very much like *Spike* or *Lavender*.

There are several Kinds of this *Lemery*. Root, as the greatest, the less, and the least, together with *Parkinson's Polyrhizos Virginiana*: The least only is that which is sold in our Shops, which is a small fibrous or stringy Root, of a Kind of Ash-Colour, with a spicy or aromatical Smell, and a strong, hot, bitter Taste, and is brought to us from *Virginia*, *Maryland*, *New Jersey*, *Pensylvania*, and *Carolina*; but that which comes from *Carolina*, *St. Augustines*, and other the most southern Places of the *Floridan* Continent, is much the better, inasmuch as those Climes are hotter: That which is clear in Colour, clean and free from Dust and Sand, and very strong in the Scent, is the best. It is one of the greatest *Alexitericks* in the World: It is known to cure the Biting of the Rattle-Snake upon the Spot, which, without this Remedy, is, for the most part, present Death. The Power, Malignity, and Volatility of the Poison, is not so swift and great, but the Subtily, piercing Qualities, and *Alexipharmack* Virtues of this Medicine yet exceeds it, disappointing all the ill Effects of the viperine Poison, if given in due Time. And, without doubt, if it will cure the Biting of the Rattle-Snake, the most malignant and dangerous of all Serpents, it will cure the Bi-

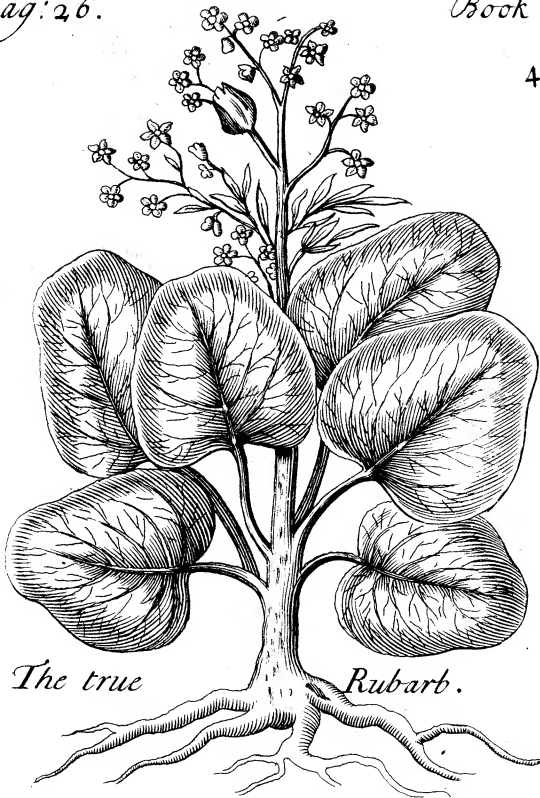
tings of all other Serpents, as well as other poisonous and venomous Beasts whatsoever, and also the Biting of mad Dogs, and Wounds made with poison'd Arrows; for which Things 'tis to be esteem'd as one of the most valuable Drugs yet discover'd.

It is a known, and often approv'd Remedy against the Malignity of the *Measles*, *Small-Pox*, *Spotted-Fever*, and the very *Plague* itself; as also against all manner of *Burning* and *Pesifential Fevers*, not only preventing the Infection before it has spread itself, but curing the Disease after the Infection has seiz'd; for which Purpose, there is no Vegetable, or any other Remedy that I know of, equal to it, in the whole Course of Medicine. The Experience of this Part of the World may justly recommend the Virtues of this Simple every where, as good against Faintings, Swoonings, Sickness, and all Disaffections from the Heart. It is us'd in a Decoction by the *Indians*. We commonly give it in Powder from six Grains to a Scruple; in an Infusion as strong as Wine, Brandy, or Water, will extract, from a spoonful to four, &c.

4. Of the several Sorts of Rhubarb.

THE *Rhubarb* of the *Levant* is the Root of a Plant, of which I *Pomet*. know not positively the true Place where it grows, any more than the Figure of the Plant: For this Reason I was oblig'd to take the Impression which is represented by *Dodonæus*, it not being possible otherwise to get the true Figure of the Leaves, and the Manner how they are dispos'd. For the Flowers, I have had a good Quantity of them presented to me by a Friend.

Dalechamp, in the 558th Page of his Second Volume of the *History of Plants*, makes a large Discourse of this *Rhubarb*, and of the Place from whence it is brought to us; but he, and other Authors that write about it, speak so variously there is nothing to be depended on: But I shall give you an Account of what was writ to me from *Marseilles* the 25th of *July* 1692. "The *Rhubarb* that comes from *Persia*, some say grows there; others will have it that it comes from the Side of *Muscovy*; but the most common
" *Opi-*



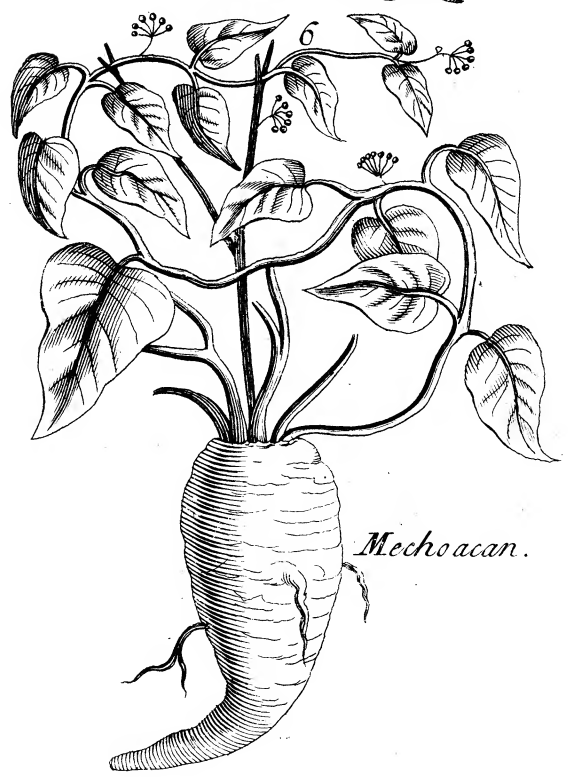
The true Rubarb.



Mountain Rubarb.



Ialap.



Mechoacan.

“ Opinion is, that it grows in *Persia*. Mr. *Tavernier*, on the other hand, assures us, in his Book of Travels, that the best *Rhubarb* grows in, and is brought from the Kingdom of *Boutan*.

This Root, newly drawn from the Earth, is thick, fibrous, blackish on the Outside, and of a reddish Colour marbled within: It bears large and woolley Leaves, from whence arise little Carnation Flowers, resembling Stars; after which follow the Seed. Chuse your *Rhubarb* new, and that which is in small Pieces sticking together, pretty firm and ponderous, of an astringent Taste, and bitter, the Smell not disgustful, but rather aromack, and of a yellow Colour, bright on the Outside, and something darker within; but such as, when infus'd in Water, will produce a Tincture like that of *Saffron*, and, when bruise'd in a Mortar, that the Colour within be of a lively reddish Cast.

Great Virtues are assign'd to this *Rhubarb*, especially for strengthening the Stomach, and purging the Gall with Pleasure, principally if assist'd with any other Purgative. It is esteem'd likewise very serviceable for stopping of Bloody-Fluxes, and other Loosnesses, either chew'd in the Mouth, or grossly bruise'd, and infus'd in any proper Vehicle: It is also given to Children to destroy Worms; and, in short, is an admirable kindly and salubrious Medicine, as well in Age as Youth, and the full Vigour of Years; in all which Difference of Age or Circumstance, duly proportion'd and apply'd, it works friendly to Nature, and efficacious to the Disease.

Of the American Rhubarb.

Within these few Years we have had several Sorts of *Rhubarbs* introduc'd into our Gardens, which Monsieur de *Töisy*, Vice-Roy of the Islands, brought from the *West-Indies* into *France*. It is from those Places this *Rhubarb* comes so large, that it approaches nearest to the true *Rhubarb* of *Persia*: And I have been inform'd they draw such a Sort of *Rhubarb* from the Lands lying along the River *Rhone*, near *Lyons*: Several Roots of the same I have seen when cleans'd and dry'd, differing little or nothing from the true *Rhubarb*.

Several Persons take this *Rhubarb* for the

Pontick, by reason of their great Likeness; among others, *Prosper Alpin* brought it from the *Indies* to *Padua*, tho' there is a good deal of Difference. Upon the whole Matter, this *Rhubarb* is commonly in Pieces that are almost round; and, on the contrary, the *Pontick* is in long Pieces. And whereas this Distinction is known but to very few Persons, those who bring this Sort of *Rhubarb*, would impose it for the *Pontick*.

Monks Rhubarb, or that of the Mountains.

The Scarceness of *Pontick Rhubarb* from the *Levant*, hath given leave to some to substitute in its room among those who have not a perfect Knowledge of the other, the Roots of the *Hippolapathum* or *Bastard Rhubarb*, like the great common round Dock, which many People cultivate in their Gardens; or there's another Kind of *Bastard Rhubarb*, which has great Leaves, but less round. The Difference of these *Rhubarbs* is very considerable, for the *Pontick* from the *Levant* is yellow on the Inside, and streaked with red on the Outside, and the *Bastard Rhubarb* is black and jagged on the Sides, and yellow on the Outside without any Marbling.

Rhabarbarum, Rheum, in English

Rhubarb, is a thick fungous Root, *Lemery* which is brought to us dry'd from *Persia* and *China*, where it grows, and sometimes from *Turkey*, which last is thought by the *English* Merchants to be the best of all, being a sort of middle-siz'd Pieces, smooth, fresh colour'd, and of a mix'd yellow Oaker, of a lively strong Smell, firm in cutting, but not very hard, or crusty, being chew'd, 'tis of a bitterish subastringent Taste, giving the Spittle a fresh yellowish Colour, and a good Flavour, not very heavy, nor yet spongy, or hollow, or rotten within. The next Sort of *Rhubarb* is that which is suppos'd to be brought from *Tartary*, *Muscovy*, and *Russia*, which is generally large and heavy, and more crusty, though many times very fresh and well scented, but nothing near so good as that brought from the *Levant*.

There are several Kinds of *Rhubarb*, as the *True*, the *Pontick*, and the *Bastard*: The *True* is that we have already described by the Name of *Rhabarbarum*; the Word *Rha* some will have to come from the Name of a

River in *Pontus* now call'd *Volga*; others from the *Arabian* Word *Rairwand*; others say it came from *Barbarum*, a City of *India*, above the River *Indus*, and that *Rba Indicum* and *Barbaricum* were all one. It is brought from *China* to *Turkey*, and so to *Venice* by Land, this lasts longer than what our Merchants bring by Sea, which corrupts sooner. It is a most admirable Purge, expelling sharp, griping, clammy, and tartarous Humours from the Stomach and Bowels, it cures the griping of the Guts, Cholick and sharp Fluxes to a Miracle, so that it may be allowed to be one of the best Specificks in the World: It cures all sorts of Fluxes whatever by carrying off the Cause, and therefore is good against the Bloody-Flux, Dropsy, Jaundice, green Sickness, Rickets, Melancholy, and other the like Diseases. It is given in Powder from a Scruple or two to a Dram, and a Dram and half, or in an Infusion from a Dram to two Drams, corrected with Cinnamon, and other Aromaticks, which may be quicken'd with *Scammony*, *Jalap*, &c. *Schroder* makes an *Extract* of it with Endive, Succory or Agrimony Water, acuated with some Drops of Oil of *Tartar per Deliquium*. Dose of this from a Scruple to a Dram. Likewise you have a Syrup of *Succory* with *Rhubarb*; *Schroder* says, *Rhubarb* is the most us'd of all Purges, and without Danger in all Ages, it may be safely given to Children, and Women with Child, and is best without Correctors, only two or three Drops of any of the essential Oils, as *Anniseed*, or the like.

Of Pontick Rhubarb.

Some Authors will have this to be the same with the former, saying only the Climate and Place of Growth, which may something change its Form and Goodness; others will have it to be the longer and slender Part and Branches of the *Indian* Plant, because it is very like in Colour, Form and Virtue to the true *Rhubarb*; others that it is the same Plant, but growing in *Pontus*, and that this has the longer and lesser Pieces, being not of so solid and firm a Substance as the true, which is bitter in Taste, and of an aromatick Smell, being astringent and corroborating after Purgings. It comes from *Russia* and *Muscovy*; as also from the *Straights* out of *Pontus* and *Turkey*.

It is of a fresh Colour, inclining to yellow and red, but that is the best which comes nearest to the true *Rhubarb*, which is the Mark of Distinction you ought to chuse it by. The Virtues and Preparations are the same as the former, only this will admit of near a double Dose to the other.

Of Bastard Rhubarb.

There are four several Kinds of this; 1st, *Hippolapathum rotundifolium*, or *Bastard Rhubarb*, which is the great common round leafed Dock, whose Root is greater than the *Patience* or *Monks Rhubarb*, and without many Branches or Fibres thereat, yellow on the Outside, and somewhat a pale yellow within, with some discolour'd Veins therein, like to the true *Rhubarb*, but much less than it, especially when dry, it then quite losing its fresh Colour, which the true always holdeth. 2dly, *Rhabarbarum Monachorum*, *Patientia*, *Monks Rhubarb*, or *Patience*; this is the great Garden Dock, bearing the Name of *Rhubarb* for some purging Quality therein; this Root is long, large and yellow, like the wild Dock, but a little redder, and when dried, shews a lesser Stock of discolour'd Veins than the former.

3dly, *Rhabarbarum Americanum*, or *Rhamericanum*, *West Indian Rhubarb*. This is called by them *Rhubarb*, being very like to the *East Indian* Kind, as 'tis roundish, brownish on the Outside, and reddish within, which being broke, has some Whiteness mix'd with it; and being chew'd colours the Spittle yellow, like Saffron, and is bitterish withal. The *Bastard Rhubarb* has almost worn out the Use of the *Monks Rhubarb*, it is now grown so common and plentiful; and it is indeed much the better of the two, though their Natures and Properties are much the same; the *Bastard Rhubarb* works more effectually, a Decoction thereof, or Infusion in Vinegar, eases Pains in the Ear, gargling with it relieves the Tooth-ach, and the internal Use of it is good in the Jaundice, King's-Evil, to provoke Urine, expel Sand and Gravel, open Obstructions of the Spleen and Liver, and cure Fluxes of all sorts. Note, this *Rhubarb* is to be us'd in double the Quantity to the true *Indian*. 4thly, *Rhabarbarum Album*

or

I

or *Mechoacan*, of which I shall treat in its proper Place.

5. Of Jalap.

Pomet. **J**alap is the Root of a Plant of four or five Foot high, according to what the Sieur *Roufféau* and Father *Plumier* has said of it : The *Jalap* we now sell is brought to us from *New Spain*, to which Monsieur *Tournefort* has not long since given the Name of *Solanum Mexicanum magno Flore, Semine rugoso, Jalap existimatum*, which signifies the *Nightshade* of *America*, with the large Flower, and wrinkled Seed, which is believ'd to be a *Species* of the *Jalap*.

Father *Plumier* will have the said *Nightshade* to be the *Belle de Nuit*, because it entirely resembles that which we call in Latin *Mirabilis Peruviana*. This Plant is very common in our Gardens, and describ'd by Mr. *Evelyn* by the same Name, and because it only flowers in the Night, it is call'd *Belle de Nuit*, or the Beauty of the Night.

The *Jalap* sold in the Shops is brought from the *West Indies*, but great Quantities of it come from the *Maderas*, where it grows very common, without Culture. It is reckon'd an excellent Purger of ferous and watry Humours, but must be given with Caution, according to the Age and Strength of the Patient, because it works very vigorously, if given in Substance ; the ordinary Dose is from a Scruple to a Dram ; but that is too large a Quantity for *English* Constitutions ; for if it be good, it will operate sufficiently from half a Scruple to two Scruples, which will answer in the strongest Constitutions.

The Refin or Magistery of *Jalap* is made with Spirit of Wine, and precipitated with Water, from whence proceeds a liquid Refin, white and gluey, almost like Turpentine, which after it is dried in the Shade, looks like common Refin. It has a fine Smell, like *Scammony*, and if rightly prepared, when thoroughly dry, is transparent and so brittle, that it will crumble betwixt the Fingers. This is more valuable than the *Jalap* itself ; by reason it is much more efficacious, and can be easier administer'd. The Dose is about five or six Grains, either by itself taken in the Yolk of an Egg, or added in Bolus, Pills, or the like, to make other Physick work quick-

er and brisker. After the Refin, you may make an Extract by pouring on fresh Spirits of Wine, which will be of a brown Colour, and of the Consistence of Honey ; this has the same Effects with the former, but in a less Degree.

Jalap, Jalapium, Gialapa, Gelemery. *lapo*, &c. is a grey Root, full of Refin, which is brought from the *West Indies*, cut into thin Slices and dried. The Plant which grows from it when in the Ground, is according to Father *Plumier* and Monsieur *Tournefort*, a *Species* of the *Belle de Nuit*, which the latter calls *Jalap officinarum fructu rugoso*, the *Jalap* of the Shops with the wrinkled Fruit. The Stalk grows four or five Foot high ; the Leaves are very like those of *Ground Ivy*, but they are not so thick ; the Flower is red as Scarlet, and sometimes changes to yellow and white, very agreeable to the Eye. This Flower blows in the Night, and closes again at the Approach of the Sun, and therefore is call'd *Belle de Nuit*, or the Night Beauty. Chuse such *Jalaps* as is in the thickest Pieces, streak'd with resinous Veins, hard to be broke with the Hands, but easy to pound in the Mortar ; of a grey Colour, the Taste a little acrid ; it contains a great deal of Oil and Salt in it : Purges all Humours very well, but chiefly the watry, and therefore is useful in Dropsies, Gout, Rheumatisms, and for Obstructions. All the Names belonging to this Root are taken from the *Indians*. There are two Sorts of this *Jalap*, to wit, a whitish, and a blackish or dark brown, which being broke shines a little. This blackish sort is much to be prefer'd, being resinous, and heavier than the other ; the whitish has little Refin in it, and therefore not so good, and still less so, if Worm-eaten. It was unknown to the Ancients, not being long since we had it from the *West Indies*.

6. Of Mechoacan.

Mechoacan, likewise call'd *white Rhubarb*, *Scammony*, or *Briony of America*, is a light white Root, as well within as without, which is brought to us but in Pieces, from the Province of *Mechoacan* in *New Spain*, from which the said Root takes its Name. There is likewise a great deal of *Mechoacan*, according to the Sieur *Roufféau*, in the Island

of *St. Domingo*. This Root stands in the Earth, sending forth Stalks that bear thin slender Leaves like a Heart, of a whitish green, after which grow little Berries, which are green at first, and turn red by degrees as they ripen. The *Mechoacan* is a winding Creeper, and differs little from *Briony*, only in the Figure of the Leaves and in Taste, for the Root cut and dry'd cannot be distinguish'd from that of the *Briony*, but that the *Mechoacan* is of a Taste and Smell that is almost insipid, whereas the *Briony* has an intolerable Bitterness. We chuse the fairest Pieces of the *Mechoacan* that are white within and without, dry and ponderous, of an almost insipid Taste, and throw aside that which is dirty, lean, thin and parch'd, and take Care there be no *Briony* mix'd among it.

The *Mechoacan* being powder'd fine, is a gentle Purgative, and may be given in double the Quantity to *Jalap*, because it acts not with that Violence, and therefore may be administered both to Old and Young with Safety in Cachexia's, Scurvies, Jaundice or obstructions, in Powder with any proper Liquor, or infus'd in Wine. It is a good Hydragogue, purging watry Humours from all Parts of the Body, chiefly from the Head, Nerves, Breast and Lungs; it prevails against Catarrhs, and the Venereal Disease, purges Slime from the Stomach, and is good to be given to Children against the Rickets, Kings-Evil, running Scabs and Scald Heads. You may make a compound Extract of it thus: Take *Mechoacan* three Ounces, Ginger two, white Turbith one, Polypody of the Oak half an Ounce, make an Extract of Spirit of Wine, after due Digestion, decant or strain it off clear, and add two Drams of Manna, Spirit of Vitriol five Drops, Oil of Cinnamon three, mix and make an Extract, whereof from half a Scruple to a Scruple, is a good Dose.

Of Briony, or the wild Vine.

The *Briony*, or wild Vine, is a Plant, which if it had been sufficiently known, it would have been fruitless to have spoke of; but many Authors make mention of it, as plentiful in every Hedge in the Country, but rarely to be found in our Gardens. The Root of this Plant is so violent, that the Peasants call

it the *Mad Nip*; which, if they happen to eat thro' Inadvertence, it makes them frantick, and sometimes they run the Risque of Death itself: But being dry'd, it is of some Use in Physick, especially in the great Compositions.

The Sieur *Mulburin Sebille*, one of the most famous Herbalists at *Paris* for many Years, assur'd me that the true wild Turnip was the *Briony*, and that the Seed which was contained in the little dry Berries, was what was put into the Composition of the *Venice-Treacle*. Some will have it that the *Briony* was an excellent Remedy to cure the Biting of Serpents, and other venomous Creatures. This may be reduc'd into a Flower or Meal, when dry'd, as Almond Powder.

Of Briony, or the black Vine.

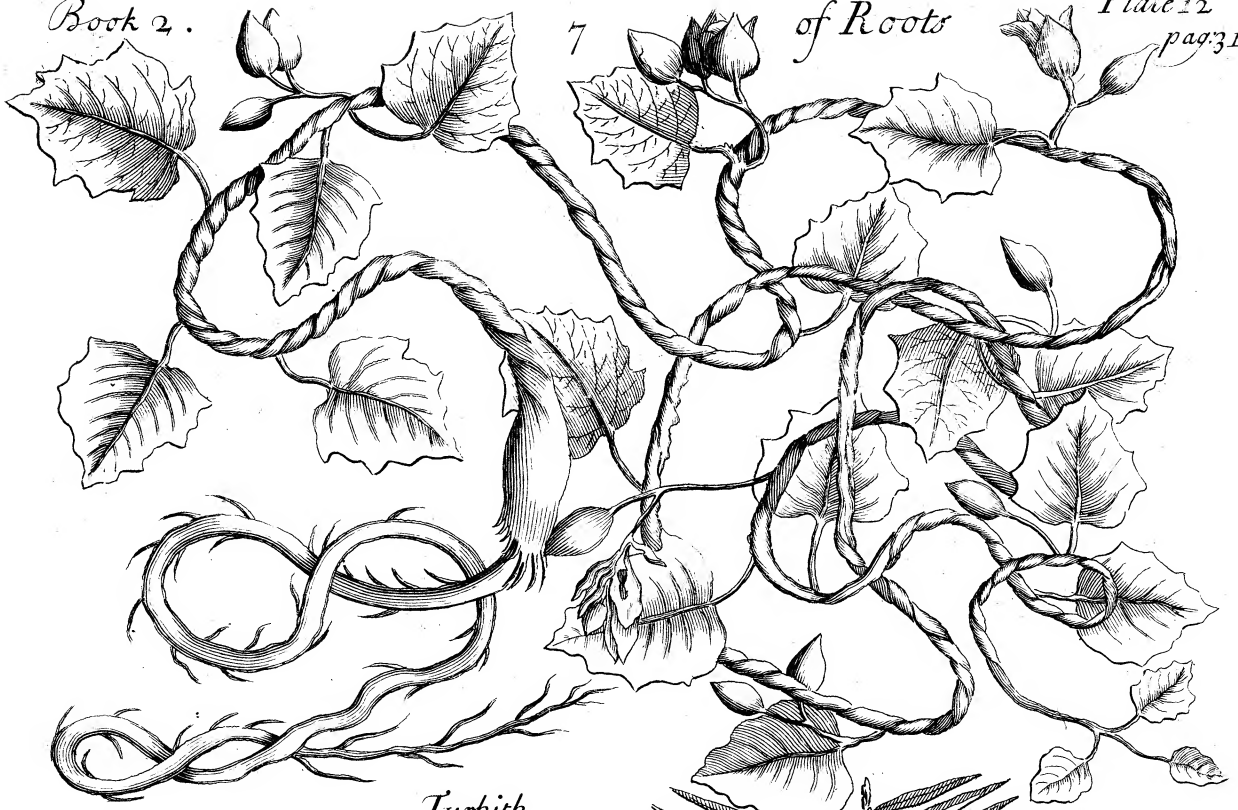
There is yet another kind of *Briony*, call'd the *black Vine*, which some have given the Name of our *Lady's Seal*. But as we never fell either of these two Sorts of Roots, I did not think it requisite to give you the Figures of them, and make a long Discourse upon them: But I shall inform you that the Root of this *black Briony*, apply'd fresh upon Contusions or Wounds, stops the Bleeding, and heals the Part; so that it has obtain'd the Name of the *Wound-Root*.

Mechoacan, or *Rhabbarbarum Album Indicum*, is a white light Root, *Lemery*. which we have brought to us cut in Pieces, and dry'd, from *New Spain*, and other Parts of *America*. This Plant is a Species of the winding *Briony*, which Mr. *Tournefort* calls *Brionia Americana repens folio anguloso*, the creeping *Briony* of *America*, with a pointed Leaf, which is large, thin, and whitish. The Flowers produce no Fruit, but some small green Berries, which grow redder as they ripen; they contain in them a sharp-pointed Seed, but are of no Use in Physick, nor any other Part but the Root.

7. Of Turbith.

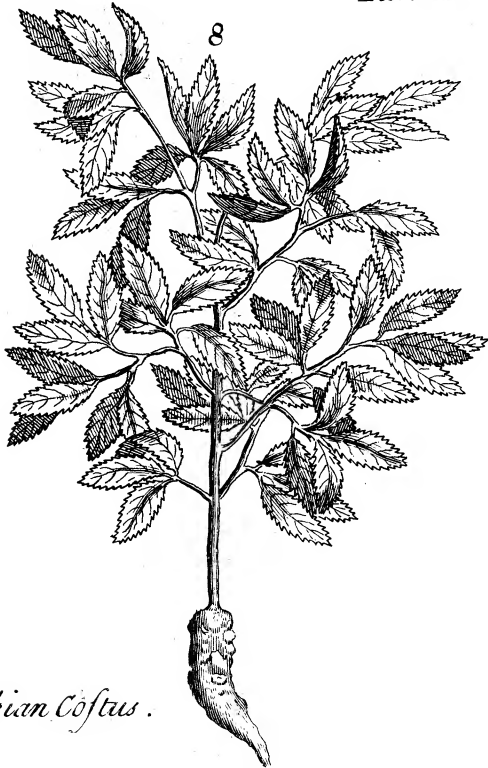
THE *Turbith*, which the *Latins* call *Turpetum*, is the Root of *Pomet*, a Plant creeping the length of other Trees: The Leaves and Flowers of it are like those of *Marsh-mallows*; it runs upon
the

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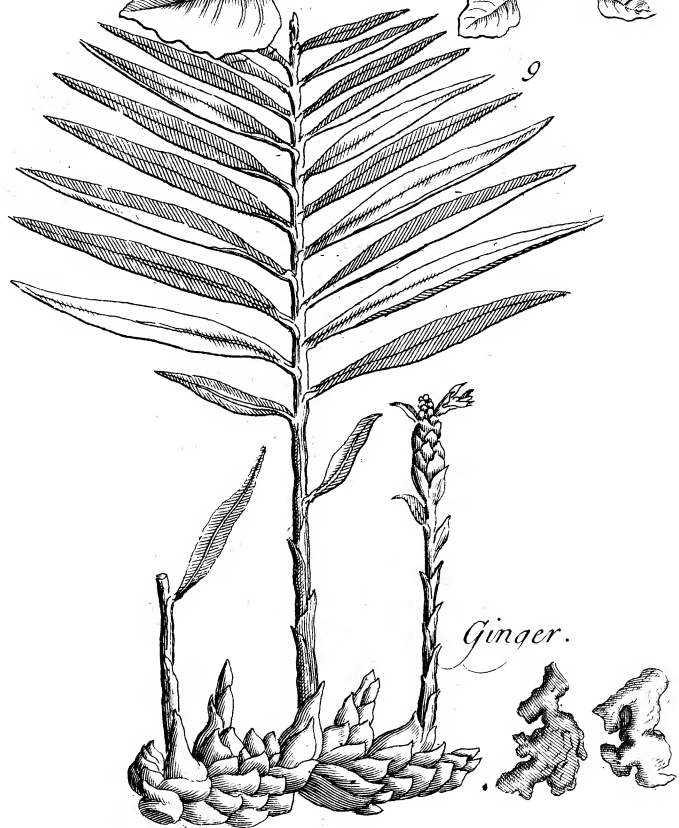
Turbith.

8



Arabian Costus.

9



Ginger.

the Ground, after the manner of Ground Ivy, grows near the Sea-Coast about *Surat*, and other Parts in the *East-Indies*. This Plant is a Creeper, and twines or lasses itself round any Tree that is near it; bears a Carnation-colour'd Flower, like that of the Bind-Weed, from whence it is call'd by Mr. *Paul Hermans*, and in Mr. *Ray's* History, *Convolvulus Indicus alatus maximus folio ibisco nonnihil simile, Turbith officinarum*; which signifies, the *Indian Bind Weed*, with great Leaves like *Marshmallows*, which is call'd *Turbith* in the Shops. When the Flowers are fallen off, there remains a Pod, in which is contain'd four black Seeds, half round, of the Bigness of a Pepper.

The *Sieur Hermans* says, that this Plant loves moist Ground adjacent to the Sea, and that he had this Account from Persons of Probity, in whom he might confide. We ought to chuse such as is well clean'd, difficult to break, grey on the Outside, and greyish within, ponderous, and not hollow, but full of Refin; and reject such as is white, subject to break, and Worm-eaten. Many People mistake, and use the *Thapsia* for the *Turbith*, which will be easily enough distinguish'd by what I shall say afterwards. The Refin of this is made after the same manner as that of *Jalap*.

Of the white Thapsia Turbith.

The white *Thapsia*, or grey *Turbith*, is the Root of a Plant mention'd by several Authors, which has Leaves like the *Fennel*; after which grow Clusters of Flowers, like those of *Dill*, which are yellow, and the Seed large, approaching near to the Seed of *Fennel-Giant*.

This Plant is very little in Use, by reason of its violent Operation; and the Juice or Milk is so sharp, that it will take the Skin off the Face. The Root is seldom us'd, except by some Apothecaries, who make an ill Use of it instead of the true *Turbith*, tho' the Difference betwixt them is very considerable, for the *Turbith* is of a grey inclinable to red without, of a white greyish Cast within, very heavy, and hard to break; on the contrary, the *Thapsia* is lighr, wrinkled, of a Silver Grey on the Outside, and of a Taste so biting and hot, that it will blister the Mouth to touch it when new.

Of black Thapsia.

There yet remains another Kind of *Thapsia*, which is call'd the black *Thapsia*; which is of no Use in Physick, by reason of its great Acrimony, and therefore ought to be ranged among the violent and dangerous Medicines, on purpose that Apothecaries, and other Persons, may take Care how they use either of the two last nam'd Roots instead of the true *Turbith*.

There are several Sorts of *Turbith*; as, first, the true *Turbith* call'd *Turpetum Alexandrinum*, and *Verum*, also *Turpetum Arabum*, being the Places where it grows. This is the best Kind, and is brought to us out of *Turkey*, being large and gummy. In the Shops are the Bark and Root without the Pith, which is sticky. In the next Place, there is the *Indian*, of which *Pomet* speaks, which is a creeping Kind, and nothing near so good as the former. Thirdly, the *Pseudo-Turpetum*, or false *Turbith*, which is the Root of *Scammony*, and by some Men sold for it. Lastly, the *Thapsia Turbith* call'd *Radix Thapsia*, which is a little whitish, and not much unlike the white *Dittany* Roots, or smallest *Winter's Bark*, brought to us out of the *East-Indies*, and the *Straights*.

The true *Turbith* purges Flegm, and gross clammy Humours, and therefore is profitable in all chronick Diseases, as Gout, Dropsy, Jaundice, Leprosy, and the like: Being given alone, it is apt to cause loathing and vomiting, and therefore is corrected with Ginger, Cardamoms, Grains of Paradise, &c. It is given in Powder from two Scruples to four, but not to Children, or Child-bearing Women: In Infusion from a Dram to three for a Dose, and the Extract may be made like that of *Jalap*. The *Indian Turbith* purges a little, but nothing to be compar'd to the former, and therefore it is but little in Use. The *Pseudo-Turpetum*, or *Scammony Turbith* is a great Root, and in Bigness equal to the great Briony, as also in Tenderness; the outward Bark is of a dusky Colour, and it is white within; and the inner Pith being taken out, it seems in all Mens Judgments to be the same and the best allow'd *Turbith* of the Shops, but herein it differs from the true *Turbith*, for
that

that it is more brittle, and will more easily be broken; the Pith also in this Scammony Root is no less gummy, and full of milky Juice than the true *Turpeth*.

The *Thapsia Turbith*, or *Radix Thapsiæ* is a thick Root, black without, white within, and full of a milky Juice, of a most bitter, sharp and loathsome Taste and Smell; so that it seems to be possess'd of a poisonous Quality: The *French* take this Root for a kind of *Turbith*, calling it *Turpethum Cineritium*, but 'tis said that some of them have now left the Use thereof, for that in purging it mightily hurts the principal Parts, causing often cruel Gripings in the Bowels, with Convulsions, and other ill Symptoms. It grows in *Sicilia*, *Apulia*, and in the Island *Thapsia*, whence, as some think, came the Name.

8. Of the Arabian Costus.

THE *Arabian Costus* is the Root *Pomet*. of a Shrub very like an Elder-tree, which grows plentifully in the happy *Arabia*, from whence it takes its Sur-name. Choose the fairest heavy Roots of an Athen grey without, and inclinable to red within, not easy to break, of a strong Smell, aromattick Taste, together with a little Bitterness. The chief use of this Root at present is in the Composition of *Venice Treacle*, and others of that kind.

There are two Sorts of this *Costus*, the sweet and the bitter: The sweet *Costus* is a small Root, very like in Colour, Size and Figure, to the *Turmeric*. But since this at present is such a Rarity, and so little among us, I shall pass it by, and only speak of the bitter, which is here represented by the Figure.

The bitter *Costus*, which some call by the Name of *Costus Indicus*, is a thick Root, very hard, of one Piece, shining, and rather looks like a Piece of solid Oak than a Root. This *Costus* is not so scarce as the other aforementioned; for the Mountaineers furnish us with it from *Italy* and several other Parts. Some will have this *Costus* to be the Costmary of the Garden, which the *Botanists* call *Mentha Hortensis Corymbifera*, which signifies the Garden-Mint that bears Clusters on its Tops; others will have it to be Ditany, and

some *Enula Campana*; but, in short, this *Costus* grows in several Parts of the World, and in several Parts of the same Country, from whence it receives a different Figure, Colour and Smell, according to the different Sorts of Soil by which it is nourish'd, as we may observe in Corn, Vines, and other Plants, which change their very Taste and Virtue according to the Nature of the Soil in which they are brought up and cultivated, whether moist, dry, rich, barren, mountainous or plain.

Some are of Opinion there are not two several Species but only *Lemery*. one of this *Costus*, the newest being sweet, and is call'd *Costus dulcis*; the same, when it grows old grows bitter, and then is call'd *Costus Amarus*; that which is good, is outwardly of an Ash-colour, inwardly white; and it is fresh, thick, well scented, aromattick in Smell and Taste, and not rotten: It is stomachick, hepatick, hysteric, attenuating, aperitive, and discutting, good against the Cholick and Palsy, and most Diseases of the Nerves and Womb. Dose in Powder from half a Dram to a Dram, in Tincture from a Dram to two Drams. There is an Electuary made of it call'd *Caryocostinum*, useful for the Intentions aforesaid, and a chymical Oil which is profitable to be given in Clysters, in all uterine Cases.

9. Of Ginger.

GINGER is the Root of a Plant which the *Botanists* call *Arun- Pomet*. *do humilis clavata radice acris*, which is to say, the small Club Reed with the sharp Root: It represents in Shape a sort of Foot at the end of every Root, for which Reason the Inhabitants of *St. Christophers*, and the other Leeward Islands have call'd this *Pate* in *French*, or *Gingembre*, which signifies a Paw or Foot. This produces several Reeds, bearing large long green Leaves, and afterwards a reddish Flower, mix'd with a little green, the whole Head of the Flower resembling a Club; from whence it is call'd *Ginger with the Club Flower*.

This Root is brought to us sometimes from the *East Indies*, but that which is cultivated in the *Western Islands* is more us'd, and much

much better, because they dry it with more Care, so that it is not parch'd and wither'd; therefore chuse such as is new, dry, well-fed, not easy to break, of a greyish Colour, resinous within, and of a hot piquant Taste, and reject that which is soft, spongy, white within and without, and that which is subject to be worm-eaten. *Ginger* is very little us'd in Physick, but instead of that, great Quantities of it are us'd by the Hawkers and Chandlers in the Country, who mix it with Pepper; they reduce it to Powder, and then call it *white Spice*, which in *France* serves for several Uses.

Of Candied Ginger.

The *West Indians* candy their *Ginger* when it is taken from the Earth, and likewise they make a Preserve of it green, as the *East Indians* do: From whence we have great Quantities of green *Ginger*. The *English*, *Dutch*, and most of the northern People make use of this to warm the Stomach, as well as to assist Digestion, to correct the Scurvy, or any ill Tastes in the Mouth, to which those Nations are very often subject.

Of Zerumbeth and Zedoary.

These are two Roots of different Colour and Figure, which come notwithstanding from the same Plant, and the Leaves are the very same with that of *Ginger*, for which Reason some call it *wild Ginger*. Both these Roots are brought us from the *East Indies*, and the Isle of *St. Lawrence*, where they grow in abundance.

The *Zerumbeth* is the round Part of the Root, which we receive cut in Pieces like *Jalap*, grey without and white within, hard to break, not carious, of a warm aromatick Taste. The *Zedoary*, the long Part of the Plant, serving as a Root to the *Zerumbeth*; it is about the Length and Thickness of one's little Finger, of a whitish red Cast without, and white within, well fed, heavy, and not apt to break, without worm-eating, of a warm aromatick Taste, like that of *Rosemary*. The *Zerumbeth* is of little Use in Physick; on the other hand, the *Zedoary* is esteem'd a good Cordial, and of great Efficacy against all Venom and Contagion.

There are two kinds of *Ginger*, the white or mealy, and the hard *Lemery*. black; but the first is reckon'd by much the best. It grows both in the *East* and *West Indies*, and is very much cultivated at present in the Isles of the *Antilles*; but the greatest Quantities come from the Leeward Islands, *Barbadoes*, *Nevis*, *St. Christophers*, &c. as likewise from *Jamaica* and other Places thereabouts. We have now little out of the *East-Indies*, but what is brought thence in a Confection, call'd *green Ginger*: It is very warm, attenuating, inciding, aperitive, and highly stomachick and alexipharmack; gives Ease in the Colick, expels Wind, and is an excellent antiasthmatick, made into an Electuary with Honey, or its own Syrup: It creates an Appetite, resists Putrefaction, expels the Plague, Poison, and all manner of malignant and pestilential Diseases. It may be used in Powder grated or pounded, from half a Dram to a Dram, or candied to an Ounce. Green *Ginger* which they prepare in *India*, is likewise made in *England* and other Parts, after this manner: Let the fresh Root soak two or three Days in warm Water, keeping it in a *Balneo* all that time; so it will grow soft and swell; then boil it up either slit or whole with refin'd Sugar to a Syrup. The *Candied Ginger* is made by steeping the Roots in warm Water, then cutting them into long Pieces, dry them, after which candy them.

A laxative Confection of *Ginger*, useful for cold Constitutions, to purge off watry and phlegmatick Humours is made thus. Take *Ginger* two Drams, *Cinnamon*, *Cloves*, of each a Dram, *Nutmeg*, *Saffron*, *Galingal*, of each a Scruple, *Turbith* half a Dram, *Diagrium* three Drams, *Sugar* four Ounces, mix and make a Confect. Dose from two Drams to half an Ounce. Another Confection to revive and fortify a weak and cold Stomach: Take *Ginger* in Powder six Drams, *Cinnamon* two Drams, *Nutmegs*, *Cloves*, *Mace*, *Saffron*, of each a Dram, *Pistachia Nuts* one Ounce, fine *Sugar* a Pound, dissolv'd in *Rose-water*; then mix all, and beat it up to a Consistence, of which take the Quantity of a *Walnut* twice a Day.

10. Of Florentine Orrice.

Pomet. **F**Lorentine Orrice is the Root of a Plant, whose Leaves are long, erect, and of a fine beautiful Green; after which grow white Flowers, as I have been assur'd by Mr. *Morin*, Physician to Madam the Duchess of *Guise*, a Man of great Probiety, and large Experience in Simples.

This Plant is known in *France* by the Name of Blue-flower flag, Flower *de Lys*, &c. which grows almost every where by the Walls, Water-sides, and in the Gardens, and of which there are several Sorts, which several Authors have taken notice of. As to the *Orrice*, or in Latin *Iris*, they say there are Flowers of it of various Colours, which resemble in some kind the *Rainbow*, which is called *Iris*. Chuse such of this Root as is large, well fed, of a Piece, clean, white within and without, difficult to break, of a sweet Smell like the *Violet*; but cast by such as is bad, being lean, dry, and of no Smell; likewise such as is soft or worm-eaten.

The Dyers, Perfumers, and Confectioners use this in their several Trades to give a grateful Scent, to their several Cloths, Perfumes, Comfits, and the like. It has a great many other good Qualities, and is of some small use in Medicine, being employ'd in several *Galenical* Compositions, and is a mighty Favourite with the Fair Sex. There is a green Colour made of it, to which they give the Name of *Verditer*, which is us'd by the Painters in Miniature. This *Verditer* is made several Ways, as is describ'd in a little Treatise of Miniature, which those who desire to make, as well as *Carminé*, and other fine Paints, may have recourse to.

This *Orrice*, call'd *Iris Alba Flo-Lemery. rentina*, or *Iris major Alba, Illyrica vulgo, vel potius Florentina*, is a white Root, the Thickness of a Thumb, oblong, which is brought to us from *Florence*, where it grows without Culture; the Stalk is like that of the Flower-de-Luce, but the Leaves grow erect, and the Flowers are white. This Root, when in the Ground, is deck'd with several Fibres, which are cut off with the Outside, which is reddish, and then it is dried.

The *Illyrick* Sort of *Orrice* is reckon'd the best, but the Roots of both are us'd. That brought from *Florence* is plump, round, and of a delicate fragrant Smell, like *Raspberries*. It is pectoral, and very good against Stoppages in the Brest and Lungs, prevails against Coughs, Asthma's, Obstructions of the Terms, Gripings of the Belly, Pain in the Stomach, Wind, stinking Breath. It is us'd outwardly in sweet Powder for the Hair, and in *Damask* Powder, and *Cypres* Powder. It may be given in Powder, Tincture, Extract, Species, or the like Form, from a Dram to two Drams.

11. Of Great Galingal.

THE great or large *Galingal*, which some call amidst the *Pomet. Acorus verus*, or true *Acorus*, is the Root of a Plant or Reed, whose Leaves are like the *Orrice*, which grow plentifully in the Isle of *Fava* and in *China*. Make choice of the largest, heaviest Root, reddish without, and whitish within, of a warm, piquant Taste, and afterwards a little bitter, but throw away that which is almost insipid, or very old. This Root is of no other Use when dried, than for the Vinegar-makers, who use it instead of the less Sort for the making of Vinegar.

Of the Small Galingal.

The small *Galingal* is a reddish Root within and without, of a piquant Taste, and very aromatick, which comes to us cut in Pieces from the *Indies* and *China*. This Root bears its Branches almost like a Shrub, and the Leaves much resemble those of *Myrtle*. Chuse such Roots as are best fed, of the highest Colour, and when chew'd of a biting, aromatick Taste; and take care there be no large Pieces mix'd, which is easily known, because the small *Galingal* is no thicker than a Man's little Finger, of a more lively Colour, and hotter Taste than the larger *Galingal*. The smaller Sort is much more used in Physick than the greater, because it abounds with more Virtue.

There are two sorts of *Galingal*, brought to us from the *Indies*; the first is called the Great, and is a *Lemery.*

solid,



Wild Ginger.



Florentine Orrice.

11



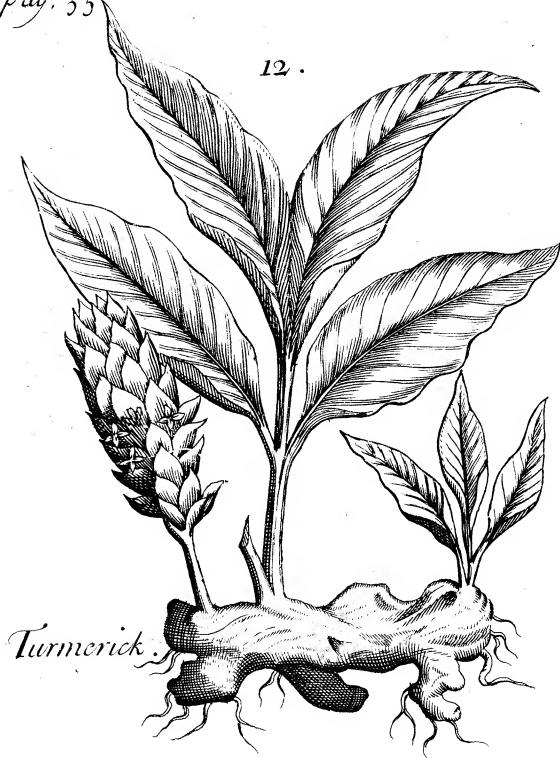
Large Galingal.



Small Galingal.

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12.



Turmeric.

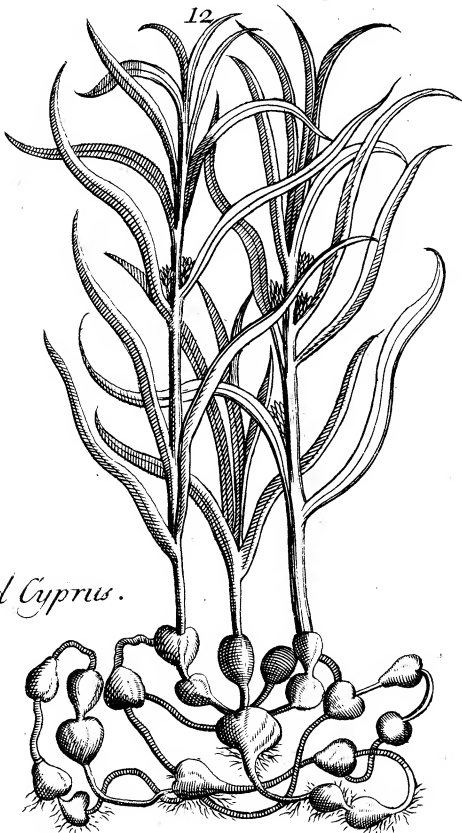
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Long

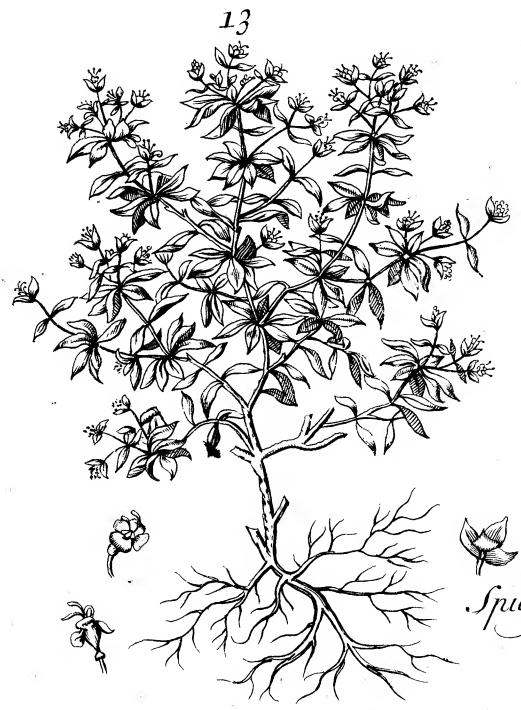
Cypru

12



Round Cyprus.

13



Spurge.

solid, heavy Root, cover'd with a reddish Bark, white within, of an acrid, and something bitter Taste. 'Tis a sort of *Species* of the Reed, the Leaves like *Orrice*, the Flower white, without Smell, the Seed small, and the whole of little or no Use in Physick.

The second sort is the Little *Galingal*, whose Root is about the Thickness of a Finger, cut in Pieces on Purpose to dry, that it may be fitted for Sale. It is hard, reddish without, and white within, and of a Taste and Smell much stronger and more aromack than the large *Galingal*. It is cephalick, stomachick, neurotick, hysterick, and antispasmatick, sharp tasted, attenuating, opening, discussive and prevalent against most Diseases of the Head, Brain, Nerves, Womb, Stomach and Bowels. It is good against Megrin, Head-ach, Palsy, Cramps, Convulsions, Obstructions, Colick, indigestions, want of Appetite, Cachexia, Scurvy, &c. You may use it in Powder, Tincture, Extract, or candied like Ginger. Dose two Drams, or half an Ounce.

12. Of Turmeric.

Pomet. **T**urmeric, which some call *Curcuma*, and others *Saffron*, or *Cypress* of *India*, *Malabar*, or *Babylon*, is a Root which is yellow quite through, and produces very large green Leaves; the said Root sends forth Flowers, which grow like Ears of Corn, as may be seen by the engrav'd Figure which is in Mr. *Herman's* Book. This little Root is almost like *Ginger*: It is brought to us from several Parts of *India*, by the Company of Merchants trading thither, and likewise great Quantities of it come from the Isle of *St. Laurence*.

Chuse your *Turmeric* large, fresh, resinous, hard to break, and rather heavy than such as is worm-eaten, or inclinable to be rotten. There are a great many Persons about *Paris* who ask for the *Red Turmeric*, as believing there are two sorts, when in reality it is nothing but the Age of it that turns it brown, which when it is powder'd shews more red, according as it is older or newer. This Root is chiefly us'd by the Dyers, Glovers, and Perfumers: The Founders employ it to tinge their Metals, and the Button-makers to rub their Wood with, when they would make an Imitation

of Gold. The *Indians* use it to tinge and give a yellow Colour to their Bread, or other things, as we do *Saffron*.

Of Round Cypress.

This *Cypress*, commonly call'd *Round Cypress*, or *English*, or *Flemish Cypress*, is a Root full of little Knots or Specks, of a brown Colour without, and grey within, of a little Sharpness in Taste, and almost without Smell when it is newly taken out of the Ground. This Root grows in the Water, and along Banks and River sides, bearing triangular Stalks, solid, smooth, and full of a thousand long upright Leaves; the Flowers are small, reddish, and come by Ears or Tassels on the Top of the Stalks. Make a Decoction of this Root bruised in white Wine, and after it is strain'd, drink the Wine as hot as possible. 'Tis an approv'd Remedy to cure the Colick.

Of Long Cypress.

Long Cypress, call'd by some wild *Galingal*, is a knotty Root, wrapt round with fibrous Strings, not easy to break, of a brown Colour without, and grey within, of a pleasant Scent, especially when fresh, and well dried. This Root grows by Rivulets, and other watry Places, as Ditches and the like; it bears green Leaves which are like those of the Leek; the Stalk and Flower very much resemble the round Cypress: It is of some Use in Physick, but much more to the Perfumers and Glovers.

Terra Merita, or the *Curcumna* of *Lemery*. the Shops is a small Root, about the Size of that of *Ginger*, hard, as if it was putrefied, yellow without and within; it grows in many Parts of the *East-Indies*, from whence it is brought to us dried. The Plant is call'd *Cyperus Indicus*, and *Crocus Indicus*, or *Indian Saffron*. The Leaves are like the white *Hellebore*, but not so much strip'd, but smooth. The Flower is of a fine beautiful Purple, which is succeeded by a Fruit which is hairy like the *green Chestnut*, and which contains a Seed made round like a Pea, which is very good to eat, when it is boil'd with Meat. The Root is yellow like *Saffron*, and the *Indians* use it to colour their Rice; and several other

forts of Provisions: It contains a good deal of Oil in it, as well as fix'd and essential Salt. This *Turmerick* is aperitive, detersive, proper to relieve Obstructions of the Liver and Spleen, to provoke Urine, and Womens Courses, and good in the yellow Jaundice, Stone and Gravel, either in Powder or Decoction.

Cyperus, in French *Souchet*, in English *wild Galingal*, is a Plant whereof there are several kinds, but I shall only speak of two; and first of Mr. *Tournefort's* *Cyperus rotundus vulgaris*, or the common sort, which is call'd the round sort, whose Leaves are long, with the three corner'd Stalk, and Flowers on the Top like a Plume or Nofegay; after the Flowers are gone, on the Head of every Stem, comes a triangular, hard, black Seed: The Root is as thick as an Olive, of an oblong Figure, grey Colour, weak Smell, sweet Taste, and a little astringent.

The second kind is by Mr. *Tournefort*, call'd *Cyperus odoratus radice longa, sive Cyperus officinarum*. The sweet-scented *Cyperus* with the long Root, or that of the Shops: It bears Leaves like those of the Reed, and resembles in some manner the Leek, but much longer, much slenderer, much harder; the Stalk grows two Foot high, strait without Knots, triangular, full of white Pith, bearing on their Tops large reddish Clusters, with a Seed like the former Sort, as the Virtues are in like manner: Both long and round, being us'd to one and the same End and Intentions; the round is esteem'd the best, but some think the long to be full as good. They cure a stinking Breath, being chewed in the Mouth; boil'd in Oil, and bruised, laid to the Reins or Groin, they provoke Urine; they are stomachick, hepatick, uterine, and nephritick; help a weak Stomach, cause a good Appetite and Digestion, expel Wind in the Bowels, and corroborate all the internal Parts; may be given in Powder, Tincture or Decoction. Dose from half a Dram to a Dram.

13. Of Spurge.

Pomet. **E**SULA or *Spurge* is a small red Root, which produces very narrow green Leaves, full of Milk. This Plant grows every where in *France* neglected, and

the Roots which are sold come from *Provence* or *Languedoc*. Chuse such as is new, the fairest red Root without and within; which being held in the Mouth, affords a very disagreeable Taste, attended with great Acrimony. This small Root is very little us'd in Physick, but there is an Extract made in all our Dispensatories, which is appropriated to hydropick Cafes.

The *Esula* or *Spurge* is a kind of *Tithymal*, or a Plant which bears many Stems, of about a Foot high, carrying straight narrow Leaves, like those of the Pine, fill'd with Milk; the Flowers are small and grassy, the Root little and red. This grows in Fields, Lanes or Gardens, and abounds with an essential, fix'd, acrid Salt, as well as Oil. 'Tis rarely us'd in Medicine, because it purges violently, except in some desperate Cafes, as Dropfies, Lethargies, Phrenfies, &c. There are several sorts of this Plant, all which have the like Qualities, but that which bears Leaves like the Pine is esteem'd the best. It is a sharp, fiery, corroding Medicine, and reckon'd so dangerous as not to be us'd without correcting, which is chiefly done by steeping it in Vinegar, or by adding *Bdellium*, *Tragacanth*, or Mucilage of Fleabane-Seed to it. There is the greater and less sort, both which grow in most Parts of *Europe*. They purge Phlegm downwards, for which they have been accounted wonderful Secrets in some deplorable and suppos'd incurable Cafes. There is an Extract to be made of it, which some have us'd as a kind of *Panchymagogon*, or general Purger.

Of Cinquefoil, or Fiveleav'd-Grass.

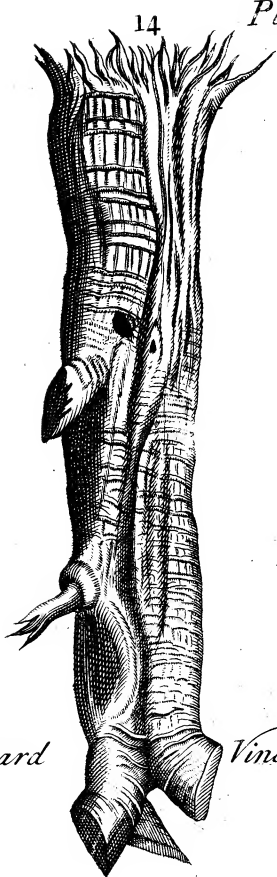
The Root foregoing has given me an occasion to mention another Root in Figure and Colour very like the *Spurge*, which the *Greeks* call *Pentaphyllum*, the *Latins*, *Quinquefolium*, and we *Cinquefoil*, by reason this small Root produces its Leaves by five and five on a Stem, or Wire, by which they run like Strawberries, and are very common in every Field. The Leaf is more abundantly in use than the Root of this Plant, only that it is us'd in the great *Treacle*.

Cinquefoil is so well known it needs no Description. It grows in sandy Places, in the Fields and Hedges, and flowers in

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Cinquefoil.



Bastard Vine.



Tithymal.



White Hellebore.

in *May* and *June*. The Root which is dry binding and antifebrifick is used in the Shops, and given from a Dram to two Drams in Powder, in all Respects just as you give the *Cortex* to cure Quotidian, Tertian and Quartan Agues. It stops Fluxes of the Bowels, Catarrhs, or Defluctions upon the Lungs, Coughs, Colds, Gout, Whites or Gonorrhœa in Men and Women, Sharpness of Urine, &c. An Infusion of it in white Wine, is profitable for the Rickets in Children, Obstructions in young People, either of the Spleen, Liver, or Menfes, and to cure the Jaundice. Dose four or six Ounces; it may be likewise taken like an Infusion of the Bark, and to the same Purposes.

14. Of Tithymal.

Pomet. **T**HE *Tithymal*, which the *Latins* call *Thymelæa*, because this Plant has small Leaves like *Thyme*, is a light Root, of a different Thickness and Length, reddish without, and whitish within, woody and fibrous; of a sweet Taste in the beginning, but after it has been chew'd in the Mouth a little Time it is caustick, and burns like Fire, especially, when it is fresh.

This Plant produces green Leaves, thick and clammy, like those of the Olive, with Fruit of the Size of Pepper, green at first, and of a beautiful Red when ripe, which the *Latins* call *Coccus Gnidius*, or *Granum Gnidium*, the *Scarlet Berry*. The whole Plant is very little in use except sometimes that it is applied to the Head, to draw off sharp Humours that fall upon the Eyes, and a little Piece of it put into the Ear, serves for the same Purpose; that which comes from *Languedoc* is to be preferr'd to that brought from *Burgundy*.

The *Thymelæa foliis lini*, of Monsieur *Tournefort*, or *Tithymal* with Linseed Leaves, is a little Shrub whose Trunk is not above the Thickness of a Thumb, divided into several Twigs or Branches of about a Foot and a half, with fine small Leaves, like those of Linseed, but larger, greener, and more viscous; the Flowers grow on the Tops of the Branches, collected together in several little white Clusters: After that comes a round fleshy Berry, like

that of Myrtle, full of Juice which is red when ripe, and call'd *Granum Gnidium*. This Fruit contains an oblong Seed cover'd with a black shining Skin, very brittle, having a white Pith, of a hot fiery Taste. The Root is long, thick, hard, woody, grey, or reddish on the Outside, white within, sweetish at first tasting, but very caustick and biting afterwards, abounding with a great deal of acrid Salt, and fix'd Oil.

Of the Wild, or Bastard Vine.

'Tis but a few Years ago since this Root so nearly resembling that of the *Pomet. Tithymal*, only that it is blacker and harder, was known at *Paris*: The first who introduc'd it there, was Monsieur *Amelot*, Ambassador in *Portugal*, and after him Mr. *Tournefort*, who gave me a piece, the Figure whereof is here represented: And some Persons have assur'd me that the said Root, as it grows in the Ground, shoots forth Branches charg'd with Leaves, altogether like the Vine which creeps along Walls, and upon Trees.

'Tis upon this Account that the *Portuguese*, who first brought it from *Mexico*, gave it the Name of the *Pareira Brava*, which signifies *Wild, or Bastard Vine*. Mr. *Amelot*, Mr. *Thevard*, of the Faculty of Physick, and some others have recommended it as a Specifick for the cure of the Stone, to be taken in Powder in a Morning fasting in white Wine. For Choice of this, Mr. *Thevard* thinks that of *Mexico* to be much better than that which comes from *Portugal*: And by a Letter, which I received from *Lisbon* the 16th of *October*, 1692, it is observ'd, " that the *Pareira Brava*, which comes from " the *Indies* and *Brasil*, is a Root as commonly " known as the *Ipecacuana*, and almost as " much us'd by the Apothecaries of that " Country, but the Quantity is not so great: " It is sold at ten Testons, which is about five " Livres French Money, a Pound.

15. Of White Hellebore.

WHITE Hellebore, call'd in *Latin* *Pomet. Veratrum Album*, is a Plant which grows on the Mountains of *Dauphine* and *Burgundy*, whose Root is white, with many long fibrous Strings of the same Colour;

four, the Leaves of the Plant are large, green at first, and of a yellowish Red afterwards, the Stalks which are hollow, bear a great many little Flowers like Stars. We ought to chuse such Roots as are fairest, full of Filaments, or Fibres, yellow without, and white within, of an acrid, ungrateful Taste; some value those Roots which are free from Strings, but I cannot be of their Opinion, especially if it be to be reduc'd into Powder.

Of Black Hellebore.

This is a dark, brown Root, full of small Fibres, black on the Surface, and grey within, from whence arise green Stalks, adorn'd with Leaves of the same Colour, indented and Carnation Flowers like a Rose. Make your Choice as before directed: This is of much greater Use for internal Medicine than the last.

The *Veratrum flore subviridi*, of *Lemery*. *Tournefort*, or the *white Hellebore*, rises on a Stalk of two or three Feet high, round, straight, hollow, surrounded at the Bottom with abundance of Leaves like *Gentian*, but much larger, more stringy, strip'd and plaited lengthways, soft and a little hairy; the Leaves which arise pretty high on the Stalk, are at great Distance from one another. The Flowers grow on the Top, rang'd like long Ears of a whitish green Colour, each of which is compos'd of several Leaves, dispos'd like a Rose, from whence a Fruit succeeds, in which are contain'd longish, white Seeds, almost like Corn. The Root is a thick, white Head, furnish'd with a great many long Fibres of the same Colour.

The other Sort is the *black Hellebore*, call'd by Mr. *Tournefort* *Veratrum flore atro rubente*, it differs from the former, in that the Leaves are much narrower, folding about the Stalks, and that the Flowers are of a brown, or dark red Colour. Both one and the other kind grow in mountainous and wild Places, especially in the hot Countries. No Part is us'd in Physick but the Root which is brought dried from *Dauphine* or *Burgundy*; it contains a deal of volatile Salt and essential Oil in it.

The *Black* as well as *white Hellebore* purges upwards and downwards, and is said to cure

all Diseases proceeding from Melancholy, as Disaffections from the *Hypochondria*, *Elephantiasis*, *Herpes*, *Cancers*, *Quartans*, and all Diseases of the Head and Brain, as Epilepsies, Apoplexies, Lethargies and Madnes, for which all Authors have held it a *Specifick*: It enters into the Composition of *Mattheus's* excellent Pill, and may be given in Powder alone to a Scruple: It likewise mixes well with the larger purgative Compositions.

16. Roman Wolfsbane.

THE *Doronicum Romanum* we call *Pomet*. *Wolfsbane* is a little yellow Root without, and white within, of a sweetish astringent Taste, attended with a little Viscosity. We have this Root brought to us cleans'd from its Strings, from the Mountains of *Switzerland*, *Germany*, *Provence*, and *Languedoc*. This Root when it grows is of the Figure of the Scorpion's Tail, from whence arise large Leaves, something resembling wild Cucumber, or *Plantain*; this is the Reason why it is call'd *Aconitum pardalianches Plantaginis folio*, or *Pantbersbane* with the *Plantain*-leave. Chuse the fairest Root, and not such as is inclinable to be Worm-eaten, well tasted without, and when bruised, of a good white Colour: It is believed that this being chew'd in the Mouth, becomes an Antidote for Men, which on the contrary is a mortal poison to all Quadrupeds. It is Cephalick, Cordial, and Alexipharmack, resists Poison, is good against the biting of venomous Creatures, and cures the Palpitation of the Heart.

The *Doronicum Romanum* of *Gesner*, or that which *Tournefort* calls the *Doronicum radice Scorpii*, the *Wolfsbane* with the *Scorpion* Root, is a Plant which bears large Leaves, Swallow-tail'd, green, woolly, and very like the Cucumber, but much less and softer; the Stalk is above a Foot high, something lanuginous, round, divided at the Top into several small Branches, which bear yellow radiant Flowers, like those of the *Chrysanthemum*, or *Sun-flower*; those are succeeded by little, thin, black Seeds, each one having a spiral Head; every Root resembling a *Scorpion*. This Plant grows on the Mountains of *Switzerland*,

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Black Hellebore.



Roman Wolfsbane.



Thora or Panther's-bane.



Anthora or Healing Wolfsbane.

Switzerland, near *Geneva*, and several other Parts of *France*, *Germany*, &c. from whence these Roots are brought dried to us. It is a proper Counter-poison, good to fortify the Spirits, and drive away malignant Diseases by Perspiration, and to expel Wind, in hypochondriack, cholicky Disaffections.

17. Of the Greater Thora, or Panthers-Bane.

Pomet. THIS is a kind of Plant which grows no where but on the high Mountains, and is called *Aconitum Pardalichanthes*, seu *Thora major*, *Wolf* or *Panthers-bane*; it is a Root divided by Lumps or Clods, like the *Ranunculus*. The Leaves are almost round, closed, indented about, and neatly supported by their Stalks, which are not above seven or eight Fingers Height, branching out to the Tops, and adorn'd with certain yellow Flowers compos'd of four Leaves, by which they produce a small Bud, like the *Ranunculus*, and the Flower brings forth flat Seeds as that does. The Juice of this Plant is used to poison Flesh with, for the Destruction of the Wolf, the Fox, and other ravenous Beasts.

This Plant is call'd *Thora*, which *Lemery*. signifies Corruption, because it is venomous: According to *Tournefort*, it is the *Ranunculus Cyclaminis Folio, Asphodeli radice*. This is a kind of *Ranunculus*, or a Plant which from the Root produces two or three Leaves that are almost round, like those of the *Cyclamen*, but near as big again, indented on the Sides, fibrous, tied by Stalks, which bear them about half a Foot high, or more: The Flowers grow on the Top like a Rose: The Seed is swallow-tail'd and flat, the Root is like the *Asphodel*, and yields a great deal of acrid, corrolive Salt and Oil.

Of the Anthora, or Healing Wolfsbane.

Pomet. The *Anthora*, according to *Monfieur Turnefort*, is a Plant something scarcer than *Gentian*, and is a Species of the *Aconite*, though this is a Counter-poison to such as eat the Root of the *Aconite*, or deadly *Wolfsbane*. It is for this Reason *Baubinus*

calls it *Aconitum Salutiferum*, the *healing Aconite*, or *Anthora*. This is compos'd of two short wedge-like Roots, very bitter, white and fleshy within, but brown on the Outside, and deck'd with abundance of Fibres. The Stalk arises about two Foot high, surrounded with many long Leaves; the Flowers grow about the Stalk like an Ear of Corn, they are yellowish, and like a Head cover'd with a Helmet; the Seeds are black, wrinkled, and grow in Sheaths, or membranous Cells, five or six of them join'd together. The Root of this is a good Antidote: The Peasants who gather this on the *Alps* and *Pyrenees*, use it with Success against the biting of mad Dogs, and to cure the Colick; they take it for a sovereign Remedy for those who have eat the *Thora*, or deadly *Aconite*.

The *Aconitum Salutiferum*, or *Anthora, quasi Antithora*, because *Lemery*. this is reckon'd a Counter-poison, to that call'd the *Thora*, which is a Sort of *Ranunculus*, or *Crowfoot*. This *Anthora* is of the Species of the *Aconite*, or deadly *Wolfsbane*, as describ'd fully before by *Pomet*. The Root is useful in Physick, as being Alexipharmack, Cardiack, Stomachick, and good against the Wind Colick: It contains a great deal of volatile Salt, and essential Oil.

18. Of Angelica.

Angelica is a Plant which grows *Pomet.* plentifully in *Bohemia*, *Spain*, *Italy*, *France*, *England*, and most Parts of *Europe*, and is so well known, it would be needless to describe the Plant. The Seed is us'd much to make *Angelica Comfits*, and the Stalk makes a very good Sweetmeat candied. The Root is seven or eight Inches long, of an odoriferous Smell, and aromattick Taste, flexible, and if new and fresh, breaks white within. It grows in all our *English* Gardens, yet notwithstanding some is brought us from *Spain* and *Germany*. Sometimes this Root is deceitfully mixed with *Meum*, or *Spignel*, which break of a brownish Yellow within. It is Cordial, Bezoartick, and Alexipharmack, heats, dries, opens, attenuates, and causes Sweat, resists Poison, and cures the Bitings of venomous Creatures. A Spirit of
it

it cheers the Heart, and revives the Spirits to a Miracle. The chymical Oil operates more powerfully than any of the former, to all Intentions. Besides which, it provokes the Terms, expels the Birth, resists Poison, helps Suffocation of the Womb, cures Palsies, Apoplexies, Convulsions, Cramps, and Rheumatisms.

This Root, whose Plant is so vulgarly known, grows best in a fat Soil, where the Ground is full of Moisture. It is brought ready dried to us from several Parts, but the best is that from *Bohemia*, and then what is brought from *England*; of a sweet Smell, and aromack Taste, that overcomes the bitter, being loaded with a highly exalted Oil and volatile Salt. It is cordial, stomachick, cephalick, aperitive, sudorifick, vulnerary, resists Poison, is us'd in the Plague and malignant Fevers, and for the biting of mad Dogs.

19. Of Masterwort.

Pomet. *Imperatoria, Magiftrantia, or Masterwort* in *English*, is the Root of a Plant which has large, green, indented Leaves, after which grow Clusters of white Flowers, succeeded by a Sort of small Seed, which is said to be like the *Sesely* of *Marseilles*. Chuse such Roots as are fair and fresh, hard to break, of a brown Colour outwardly, and greenish within, of a strong Smell, and aromack Taste: Those that grow in *Auvergn* and other mountainous Parts are prefer'd to those of the Garden. The same Virtues are ascrib'd to this as were to *Angelica*, which gained it, as some pretend, the Name of *Imperial Wort*, not because of its rare Qualities, so much as because an Emperor was the first who discover'd it.

Master Wort, Imperial Wort, or *Lemery.* the *Imperatoria major* of *Tournefort*, is a Plant whose Leaves are large, rang'd three and three along the Side of the Stalk, ending in a single Leaf; they are stiff, hard, and divided each into three Parts, indented on one Part lightly, on the other deep. They rise among the Branches all along, which mount about two Foot high, dividing themselves into Wings, which carry upon their Tops Clusters of Flowers of five Leaves form'd into a Rose, succeeded by little Seeds,

which are flat and almost oval, little larger than those of *Dill*; streak'd lightly behind, and of a white Colour. The Root is sometimes of the Thickness of one's Thumb, wrinkled, hard, and entangled in Fibres, filled with a white, aromack Substance of an acrid piquant Taste, hot in the Mouth, and a little bitter.

This Root being hot and dry, attenuates, opens, digests, strengthens, is sudorifick and alexipharmack, is used against Poisons, malignant and pestilential Diseases; causes Expectoration, cures a stinking Breath; relieves Diseases of the Head, as Vertigoes, Apoplexies, Palsies. A Decoction of it in Wine us'd as a Gargle, cures the Toothach, dries up Rheum and Catarrhs, and is good to bath with in the Gout: A Saline Tincture is much better than the Decoction to cure the Itch, and dry up scabby and scald Heads: An Ointment made with Hogs Lard and Turpentine, heals old Sores, Ulcers, and all foul leprous and malignant Scabs.

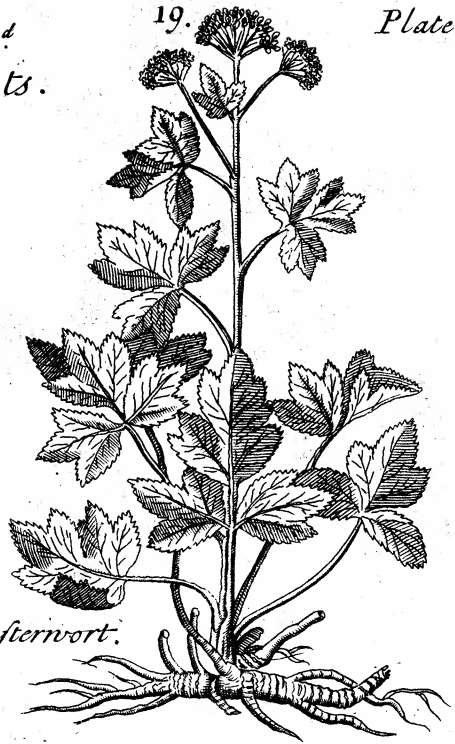
20. Of Gentian.

Gentian is a Plant so called from *Pomet.* King *Gentius*, who first discovered its Virtues. It grows plentifully about *Chabli* in *Burgundy*, and other moist Places in several Parts of *France*, especially about the *Pyrenees* and *Alps*.

The Root which is the only Part of the Plant that is sold, is sometimes as thick as one's Arms, divided into several Roots, of a Thumb, or Finger's thickness, yellowish, and of an intolerable Bitterness; the Leaves in some manner resemble those of Plantain, and grow two and two upon every joint of the Stalk; they are smooth, green, pale, and bend to and again at their Tops to one another, by means of the Fibres that assist them underneath. The Stalks are strait, strong, of two or three Feet high, decked with yellow Flowers in *June*, which are disposed in Rings by Degrees, in the junctures or setting together of the Leaves. Each Flower is of a Piece, divided into five Parts, very strait, and sharp pointed: The Tract which is in the middle produces a Capsula, in which are enclosed several round Seeds, but very flat, which are ripe in *July*.



Angelica.



Masterwort.



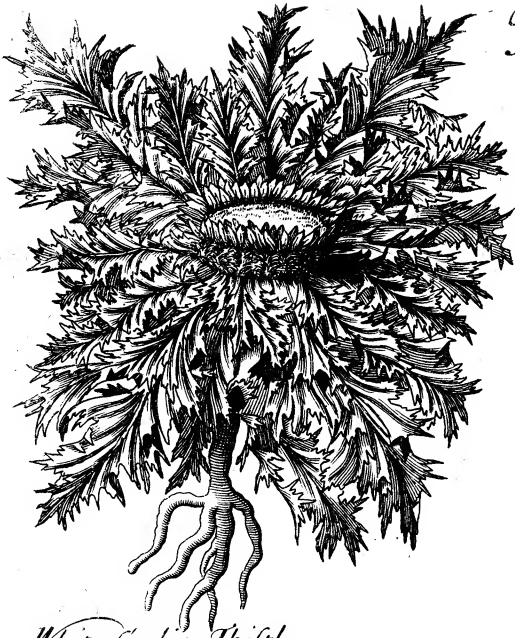
Genlian



white Dittanny.

Book 2^d
of Roots.

22



White Carline Thistle.

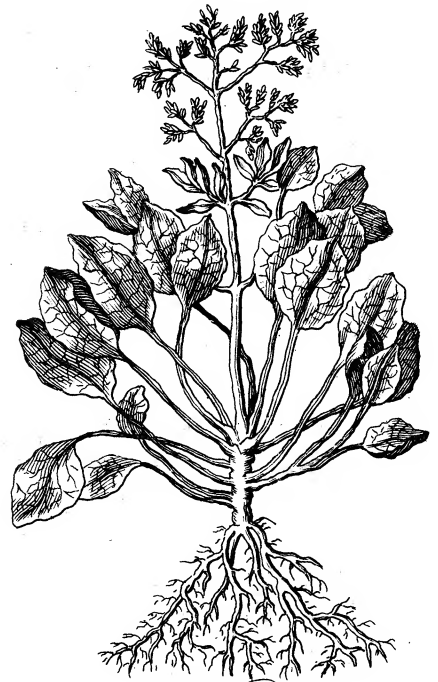


Black Carline Thistle.

23



Great Valerian.



Small Valerian.

Chuse the leaft Sort that is fresh, well dried, becaufe it wafes considerably in drying, and that which is freeft from fmall stringy Roots and Dirt that decays it. Take Care alfo that it be not dried in an Oven, which you may eafily diftinguifh, becaufe fuch will be black within; but on the contrary, that which is dried in the Air, will be of a Gold colour'd yellow. This Root is reckon'd ufe- ful to refift Poifons and the Plague; and therefore is properly mix'd in the great Com- pofitions of Treacle, and others of the like Nature: It is fudorifick, and given with Suc- cefs in intermitting Fevers; for which it has received the Name of the *European Kinquina*, the fame Name as is given to the *Peruvian* or *Jefuits Bark*.

This is the *Gentian* describ'd by *Lemery*. *Ray* in his *History of Plants*, call'd *Gentiana vulgaris major Ellebori albi Folio*. The larger common *Gentian*, with the white *Heliebore Leaf*. The Plant is fuf- ficiently describ'd before, the Root is wrin- kled when dry'd, and fhunk much from its former Size. It grows generally every where in the warm Countries, but more particular- ly on the Mountains of the *Alps*, the *Pyrenees*, and in *Burgundy*, abounding considerably in Oil and effential Salt. The whole Root is ef- teem'd better than that which is flit; and it is likewise brought in good Quantities out of *Germany*. It is hot and dry, pectoral alexi- pharmick, antiferbutick, opens Obftructions of the Lungs, refifts Poifon, and is good a- gainft all Difcafes proceeding from Putrefac- tion, as Meafles, Small-pox, Plague or Pe- ftilence: It cures the Scurvy, and is benefi- cial againft Cachexies, Dropfies, Jaundice, Ul- cers of the Bladder, Sharpnefs of Urine, &c. May be given either in Tincture, Infufion, Decoction, or Powder. Dofe, a Dram of the Powder.

Top like an Ear of Corn, with large Grate- lin Flowers mix'd with Purple, compos'd of five Leaves, fharp pointed, and with long crooked Strings or Filaments: In the Mid- dle of which Flower is produc'd a Head di- vided into five Kernels, or Berries, in which grow black fhining oval Seeds, pointed at the Ends. Chufe the plumpeft Root, white with- in and without, and leaft burden'd with fmall Fibres, and the cleareft from Decay. This Plant flourifhes in the Forests of *Provence* and *Languedoc*. The Root is brought to us fometimes from *Crete*, and is reckon'd alexi- terial, uterine, and diuretick: It kills Worms, cures malignant Difcafes and Calentures. *Swel- fer*, *Charas*, and moft of the modern Authors, have given particular Recommendations of this Root, and introduced it into their Com- pofitions.

This Plant, according to Mr. *Tournefort*, is a kind of *Origanum Lemery*. as he names it, *Origanum Creticum latifolium, feu Dictamnus Creticus*. 'Tis a fine white Plant, very agreeable to the Eye. The Stalks are about two Foot high, hairy, and a little purplifh in the Branches: The Leaves are of the Size of the Nails upon the Thumb, round and pointed, fmall at the Top, cover'd on both Sides with a white Cotton, of a fweet Smell and fharp Tafte: The Flowers grow in a Clufter upon the Top of the Branches of a Purple or Violet Colour: The Roots are fmall and numerous, and grow up- on Mount *Ida* in *Candia*; they abound with effential Oil and volatile Salt. It is call'd *Dictamnus*, from the *Greek*, which fignifies to bring forth, this being reckoned excellent to haften the Birth; befides which, it is a fingular Cordial, and very good for the Head and Nerves, given in Powder from half a Dram to a Dram, or two or three Drams in Tin- cture.

21. Of *White Dittany*, or *Dittany of Crete*.

Pomet. **W**HITE *Dittany*, or *Fraxinella*, is a Plant whose Roots are white, fmall than the little Finger, fome- thing bitterifh, of a pretty ftrong Smell: The Stalks are two Foot high, reddifh, follow'd with Leaves like the Oak, and charg'd at the

22. Of the *white Carline Thistle*.

THE white *Carline*, and by fome the white *Chamæleon*, or little *Chardon*, is a Plant; the Roots whereof are not much thicker than a Man's Thumb, brown on the Outside, and white within, from one to two Foot long, of a ftrong Scent, and agreeable Tafte enough. The Leaves hang quite round

it, lying to the Ground, of a pale green, wav'd and deeply indented, on each Side furnish'd with Prickles or little Thorns. The Flower grows like the Leaves, close to the Root, without Stalk, five or six Inches large, flat, and like a little Basin, edged with some narrow pointed Leaves. The Seeds come after the Flowers; they are long, and bear a white Topping. Chuse your Root new, well fed, and dry, of a sweet Taste, and aromatick Smell, and take care that no other Root be impos'd upon you instead of this, because it is dear. It is one of the best Medicines against the Plague, because it is commonly received in the Catholick Countries that it was discover'd by an Angel to the Emperor *Charlemain*, for the Cure of his Soldiers, who were seiz'd with the Plague in their Camp; from which it took the Name of *Carline*.

The black *Carline* is very like that we have describ'd, but the Stalk of this is more rais'd, and the Leaves are of a more obfcure green: It is what *Mathiolus* says of another Species, whose Flowers are purple, but that is a Plant very scarce, and of no Use at all. The Virtues of the ordinary *Carline* are to resist Poison, provoke Sweat, to pass by Urine, and to open Obstructions; they are likewise serviceable in the Plague, Dropsy, Hypochondriack Passions, and the like. This Plant grows in the *Alps* and *Pyrenees*, and the Hills of *Auvergne*. Both the kinds are so common, that the Peasants eat the Roots as the Artichoke when they are young and tender.

Carlina, in French *Carline*, or *Lemery*. white *Chamaleon*, is a Plant, whereof there are two Sorts: The first is called *Carlina acaulos magno flore*, the prickly *Carline* with the large Flower: This bears from the Root large jagged Leaves, hanging to the Ground, &c. as before describ'd. When the Flower is past, there succeed oblong Seeds, each of which are furnish'd with a Quantity of white Hairs, which represent a Brush: These Seeds are separated from one another by Leaves folded into a Gutter. The Root shoots direct into the Ground, sometimes two Foot deep, the Thickness of an Inch, of a dark Colour without, white within, of a strong aromatick Smell, and agreeable Taste.

The second Sort of *Carline Thistle* is the

Chamaleon niger vulgaris, the common black *Carline*. This differs from the former, in that the Head is not so large, nor so much spread. It grows for the most Part only at the Top of the Stalk, which is rais'd among the Leaves about a Foot high. The Flower is commonly white, very rarely red. The Root is not so big, or half so well fed as the white *Carline*; and both of them grow in the hilly Countries, as aforesaid. They take the Roots out of the Earth in Spring-time, to dry for keeping, which are afterwards us'd in Physick. The first Kind is to be preferred for that Use, as being fuller of volatile and essential Parts.

23. Of the large Valerian.

THE great or large *Valerian*, which *Baubinus* calls *Valeriana major odorata Radice*, the great *Valerian* with the scented Root, is a Plant, the Roots of which are about an Inch thick, brown on the Out-side, wrinkled in Rings deck'd with Fibres on the Sides, of a strong aromatick Smell and very disagreeable: It is three Foot high, hollow, straight, and attended at each Joint with two Leaves, opposite to each other; the first are whole, the others cut on each Side. The Flowers are white, and scented like *Jasmine*; they grow in Clusters: On the Tops of the Branches are small Stalks or Pipes, divided again into five Parts, which leave behind them flat long Seeds, charg'd with a white hairy Tuft.

The little *Valerian* has small Roots, of a good Smell: The Leaves, which grow almost oval, are Sharp at the End; the Stalk is a Foot and some Inches high, charg'd at each Joint with two Leaves, slenderly cut in at the Side: The Flowers are purple, and resemble those of the great *Valerian*, but they are thrice as small: Their Seed is the same. In Relation to the Choice of these two Roots, take the newest and best dry'd, and least charg'd with Fibres that is possible. They are both us'd as Counter-Poisons, against the Plague, for Cure of the *Asthma*, *Dropsy*, &c.

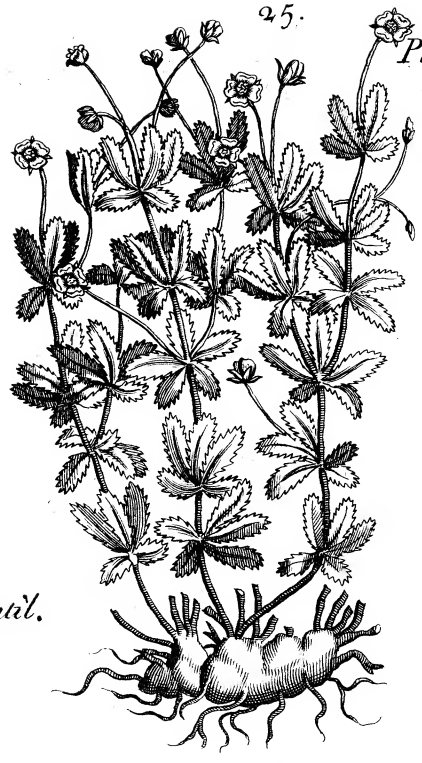
Valeriana, or *Valerian* is a Plant, of which there are three Sorts us'd *Lemery*. in Physick: The first is call'd *Valeriana kortensis*, or *Valeriana major odorata Radice*

24.



Spignel.

25.



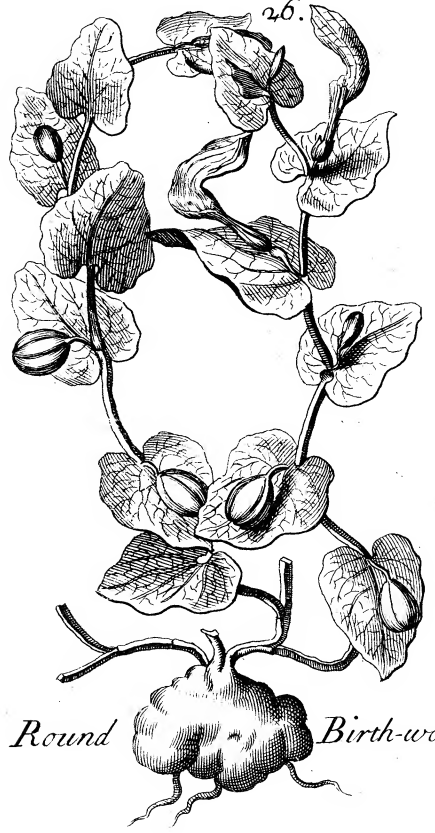
Tormentil.

25.



Biftort.

26.



Round Birth-wort.

Radice, by *Baubinus* and *Ray*; by *Tournefort*, *Valeriana bortenſis*, *Pbu folio olufatri*. This bears the Stalk three Foot high, ſlender, round, hollow, and full of Branches, adorn'd from Joint to Joint with two Leaves oppoſite to each other, as before in *Pomet*. The Flowers are white, inclinable to purple, and ſweet ſcented. This Plant, which grows in our Gardens, is the beſt, and moſt to be valu'd of any of the *Valerians*.

The ſecond Sort is call'd *Valeriana vulgaris*, or *Valeriana ſylveſtris major* by *Tournefort*, the great wild *Valerian*; and by *Ray*, *Valeriana ſylveſtris magna aquatica*, the great watry wild *Valerian*. This bears the Stalks a Man's Height, ſtraight, ſlender, and hollow like a Reed, a little hairy. The Leaves are like thoſe of the foregoing Kind, but more divided, greener, indented on their Edges, a little hairy without: The Flowers are diſpoſed as the great *Valerian*, of a whitish Colour, tending to Purple, which are ſucceeded by Seeds garniſh'd with Plumes. The Root is fibrous, white, creeping, of an aromatick Taſte and Smell. This Plant grows in wet and woody Grounds.

The third Sort is called *Valeriana ſylveſtris minor*, or *Valeriana minor pratensis ſive aquatica*, the ſmall, wild, or water *Valerian*. This bears a Stalk above a Foot high, angular, ſlender, branch'd, hollow, carrying the Leaves by two and two, jagged towards their Edges. The Flowers and Seed are like the former, but much leſs; the Roots ſlender, crawling, and white, having a great many Fibres, of an agreeable aromatick Taſte. Theſe are dry'd in the Sun, to be made fit for Uſe, and are cardiack, ſudorifick, vulnerary, aperitive, proper to reſiſt Poiſon, to fortify the Brain and Stomach, to deſtroy Worms, provoke the monthly Courſes, aſſiſt Perſpiration, and expel Wind.

24. Of Spignel.

Pomet. **M**EURM or *Spignel*, which the Antients furnam'd *Athamanticum*, either from *Athamas*, the Son of *Æolus*, the ſuppos'd firſt Diſcoverer, or from the Hill *Athamas* in *Itheſſaly*, where the beſt was ſaid to grow. This Root is the thickneſs of a little Finger, black without, white within, long,

and accompany'd with a few ſmall Roots, acrid, a little bitter, and of an aromatick Smell. The Leaves are like thoſe of *Fennel*, but much leſs, more divided, and abundantly finer. The Stalks are a Foot high, charg'd with ſome Cluſters of white Flowers, compos'd of five ſmall Leaves; after which come two brown Seeds, bigger than *Fennil*-Seeds, and more furrow'd; which has made ſome believe that *Spignel* was a Species of *Fennil* or *Dill*, and ſo call it crooked *Dill* or *Fennel*. This Root is very alexiterial, for which reaſon it enters into the Compoſition of *Verice Treacle*. It is likewiſe ſudorifick and diuretick. It is brought to us from the Mountains of *Auvergne*, *Burgundy*, the *Alps* and *Pyrenees*.

Meum Foliis Anethi, or the *Feniculum Alpinum perenne capillaceo folio*, *Lemery*. *odore medicato* of *Mr. Tournefort*, is a Plant which raiſes its Stalk a Foot high, hollow within, and full of Branches: The Leaves are like *Fennil*, but much leſs, more ſlaſh'd, and almoſt as fine as Hair: The Flowers grow in Bunches on the Tops of the Branches, like *Dill*; and when the Flowers are gone, a Swallow-tail'd furrow'd Seed ſucceeds. The Head of this Root is full of long Threads, like *Eryngo*. You ought to chuſe the longeſt, roundeſt, well fed and entire, of a blackiſh Colour, outwardly, and white within, the Smell aromatick, and the Taſte ſharp and a little bitter, containing an exalted Oil, and a volatile or eſſential Salt.

25. Of Tormentil and Biſfort.

THE *Tormentil* us'd in Phyſick, which *C. Baubinus* calls *Tormentilla ſylveſtris*, wild *Tormentil*, *Pomet*, is a Plant, whereof the Root is lumpiſh, of an Inch thick, brown or reddiſh without, aſtringent and fibrous. The Leaves are like *Cinquefoil*, ſmooth, ſhining, fix or ſeven ſupported on a Stalk. The Stalks are low, ſhort, branch'd, charg'd with ſeveral Flowers, of four yellow Leaves; after which comes a Bud, in which ſeveral Seeds are contain'd.

The beſt *Tormentil* Roots come from graſſy, wet Places about the *Alps* and *Pyrenees*. They uſe theſe in alexipharmick Compoſitions, as ſudorifick. They are likewiſe appropriated for the Bloody-Flux. Chuſe

the newest, and best dry'd, from the hot Countries, which is better than what grows in our Gardens.

Bistort is a Plant that has a Root an Inch thick, crooked, and roll'd upon itself, with annular Foldings, brown without, and flesh-colour'd within, trim'd with many hairy Fibres, of an astringent Taste. The Leaves are like enough those of wild *Patience*, of a lively green without, and a Sea-green on the inside. This Plant is in Flower towards the End of *May*, adorn'd with several long Leaves, which are white at first. The Flowers are of a Flesh Colour, crowded together like an Ear of Corn, but very little, and very thick; after which they bear a three-corner'd Seed sharp pointed enough. This Species is call'd, by *C. Bauhinus*, *Bistorta major radice magis intorta*, the larger *Bistort* with the winding or more crook'd Root.

Tormentil is a Plant of two Kinds. *Lemery*. The first is call'd *Tormentilla*, by *Ray*; *Tormentilla sylvestris*, by *Tournefort*; *Heptaphyllum*, by *Euchfus*, by reason it bears seven Leaves on a Stalk, as the *Cinquefoil* does five. The Flowers are compos'd each of four yellow Leaves, in Form of a Rose, supported by a Cup cut and divided into eight Parts, four larger and four smaller placed interchangeably. The Root is knotty and unequal, and delights to grow in Woods and shady Places, or others well supply'd with Moisture.

The second Sort is call'd *Tormentilla Alpina Major*, or *Tormentilla Alpina vulgaris major*, by *Tournefort*, the common larger *Alpine Tormentil*: This differs from the former, in that the Leaves are larger, and the Root thicker, more plump, redder, and fuller of Virtue. We have this brought to us ready dry'd from the *Alps*, &c. The Way to chuse it, is to take the newest, best fed, about an Inch thick, clean, of one Piece, free from the Strings, well dry'd, of a brown Colour, reddish within, and of an astringent Taste. It is binding, vulnerary, proper to stop Loosenesses of the Belly, Hemorrhages, Vomiting, Whites or Reds in Women, and to resist Infection: It is mix'd with cardiack and alexipharmick Medicines.

Bistort, as if you should say twice distorted, because the Root of this Plant is commonly turn'd and wound about itself: They give it

the Name of *Bistort*, from *Colubrina*, *Serpentaria*, and *Dracunculus*, by reason that this Root is twist'd like a Serpent: 'Tis also call'd *Britannica*, from growing so frequently in *England*. There grow, towards the Bottom of the Flower of some *Bistorts*, several Knots or Excrecencies, which some Authors have call'd *Fungi Bistortæ*; but there are a sort of little Roots, which produce each of them a Plant like what these bear. It is cold, dry, astringent, and stops Fluxes of the Bowels, vomiting, and Abortion, and dries up Catarrhs. It is given in Powder, Infusion, or Decoction in Wine and Water, and is good in a Gonorrhœa, or Whites in Women.

26. Of the Aristolochia's, or Birthworts.

THERE are three Sorts of *Birthwort* generally sold, viz. the long, *Pomet*. the round, the light or small; and there is a fourth Sort, which is the *Satacen's Birthwort*; but as we make little or no Use of that, we shall not speak much of it.

The round *Birthwort* is a tuberous, fleshy Root, of different Sizes, to two or three Inches Diameter. They are very uneven and irregular, that is to say, commonly much larger at the Bottom than at the Top. This Root is of an intolerable Bitterness, yellow within, brown without, but not disagreeable in Smell, and furnish'd with some short Fibres: Several Stalks arise from the upper Part, which spring above a Foot high, accompany'd interchangeably with almost round Leaves, sticking to and embracing the Stalk at the Bottom, cut into two Ears, Swallow-tail'd: The Flowers grow at the very setting on of the Leaves: The Stalks are yellow, and stretch an Inch and half long, divided in the middle and flat like an Ox's Tongue, of a very deep red, which almost comes up to a Soot-Colour; they are without Smell. And the Seeds are black, very thin and flat, almost triangular, and are enclos'd in a small membranous Fruit, green in the beginning, brown when ripe, and divided lengthways into six Cells.

The long *Birthwort* is a Root like a *Radish*, but a great deal thicker and longer, fleshy, brittle, brown without, yellow within, very bitter, and something fibrous: The Stalks

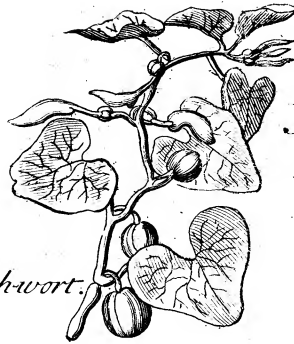
26



Long Birth-wort



Small Birth-wort.



Clematite Birth-wort.

27



Pellitory of Wall.



Another Pellitory.

Stalks are longer than those of the round, bending to the Ground; hang interchangeably, with Leaves not altogether so round as the former, and which are supported by a small Stem. The Flowers are a little closer than the round, but the Fruit are of the Figure of a small Pear, which likewise contain in their Cells very flat, black Seeds.

The *Birthe wort*, which *J. Bauhinus* call'd *Aristolochia Polyrrhizos*; and *C. Bauhinus*, *Aristolochia Pifolochia dicta*, is the least of all the Roots: They are compos'd of an infinite Number of very small yellow Fibres, sticking to the same Head, hairy, very bitter, and of a good strong Smell. The Stalks are weak, slender, bending to the Ground, interchangeably deck'd with very small Leaves, which are paler than those of others, in Form of a Heart revers'd, and supported by very fine Stalks, bearing flowers like the round Kind, but much less, yellowish, mix'd with a sooty Colour. This is the *Birthe wort* we sell for the small Sort.

The *Clematite*, or *Saracen Birthe wort*, has fibrous Roots running along its Sides, very bitter, and of a Smell agreeable enough: The Stalks are two or three Foot high, straight, firm, and stronger than the former, furnish'd interchangeably with very large Leaves, of the Figure of a Heart, of a pale green Colour, hanging upon long Stalks. The Flowers grow upon the Neck of the Leaves, after the same manner as the other Kinds, but much less. Their Fruit, on the contrary, larger, oval, and divided into six Cells full of very flat Seed, which is triangular. *Bauhinus* calls this Species *Aristolochia Clematitis recta*.

All these Kinds grow in the Fields and Vineyards of *Provence* and *Languedoc*, except the small *Birthe wort*, which loves the Woods, the Oliveyards, the dry and rocky Hills of the same Countries, so they are more aromatick and stronger. Messieurs *Rondelet* and *Charas*, with good Reason, prefer'd this *Birthe wort* to the *Saracen* Kind, for Treacle. All the Sorts open Obstructions, and are purgative. They are us'd every Day with Success, in Decoctions, Injections, Lotions, detensive and vulnerary Draughts, and the like.

Aristolochia, or *Birthe wort*, is a *Lemery*. Plant, of which there are four Sorts generally us'd in Physick. The first is call'd *Round Birthe wort*, which is distin-

guish'd into two Sorts, one call'd *Aristolochia rotunda vera*, or *Aristolochia rotunda flore ex purpura nigro*, the *Birthe wort* with the black purple Flower. It bears several Stalks, weak and pliant like the Vine Branch, about a Foot and a half high. The Root is tuberous, round, pretty thick, fleshy, fibrous, grey on the Outside, and yellow within, disagreeable to the Smell, and of a bitter Taste.

The second Kind of *Birthe wort*, called round, is the *Aristolochia rotunda flore ex albo purpurascente*, the round *Birthe wort* with the white purplish Flower. This differs from the other, in that the Stalks are more numerous, but shorter; and the Leaves much larger, oblong, and hanging upon longer Stalks; that the Flower is of a white Colour, inclining to purple, brown on the Inside; and that the Fruit is longer, more like a Pear; the Seed less, of a red Colour; and the Bark of the Root yellow. This Plant grows among the Corn in the Fields.

The next Sort of *Birthe wort*, call'd Long, is of two Kinds; the first call'd *Aristolochia longa vera*; or *Aristolochia altera, radice pollicis crassitudine*, or the other Kind of *Birthe wort*, with a Root the Thickness of one's Thumb. It bears several winding Stalks about a Foot and a half high, leaning to the Earth, carrying soft Leaves, less Swallow-tail'd than those of the round, terminating in a Point, and hanging upon their Stalks. The Flowers are like the round; the Fruit in Form of a small Pear, producing a flat Seed: The Root is near a Foot long, sometimes the Thickness of a Man's Wrist, and sometimes an Inch. The Colour, Smell and Taste like the others. This grows in the Fields among Corn, in the Hedges and Vineyards.

The second Kind of long *Birthe wort* is call'd *Aristolochia longa altera*, or *Hispanica*, the other, or long *Spanish Birthe wort*. This differs from the former only in that the Flower is not so purplish within, and the Root is much shorter. This grows plentifully in *Spain*, in the Kingdom of *Valencia*, and other warm Places among the Vines. Both the round and long contain a great deal of essential Salt, Oil and Phlegm. They all resist Poison, Pestilence and the Gangrene. Both Root and Leaf are useful in external Remedies.

The third Sort, or Species of *Biribwort*, is call'd the *Saracen Biribwort*, or *Clematite*, of which there are two Kinds. First, the *Aristolochia Clematidis recta*: This bears straight, firm Stalks of two Foot high, where there interchangeably hang, upon long Stalks or Tails, Leaves of the Figure of Ivy, but of a pale green: The Flowers grow in great Numbers upon the very Necks of the Leaves, like the former Kinds, but less, and of a pale yellow Colour: The Fruit, on the other Hand, is larger, fill'd with a black flat Seed: The Root is little, fibrous, winding on all Sides, grey, of an agreeable Smell enough, bitter in Taste, and pungent. This Plant grows in the Fields, Woods, Hedges, or Lanes, in the hot Countries.

The second Sort is call'd *Aristolochia Clematidis Serpens*, or *Altera Hispanica*: It bears a small Vine-like Stem, of three or four Foot high, hollow, winding, and clinging to other Shrubs, or neighbouring Plants, like the *Hop* or *Bindweed*: The Leaves are large, pointed, green, and united above, and purple and white underneath, join'd by long Stalks: The Flower and Fruit are like the other *Clematite*; but the Flower is yellow, or of dark purple, lin'd within with a fine Wool: The Root is longish, and compos'd of many serpentine Fibres, of a pale Colour, acrid Taste, a little astringent, but not grateful. The whole Plant is sweet, and grows chiefly in *Spain*, in Bushes in the Olive-Grounds.

The fourth is call'd the small *Biribwort*, of which there are two Sorts; the first, *Aristolochia tenuis*, or *Aristolochia Polyrhizos*, five *Pistolochia Plinii*, it being the best Purgative to assist the Birth, or bring away the After-Birth, *Dioscorides* representing it to be the properest for that Purpose. This is the least of all the *Biribworts*: It produces several small Stalks, or Boughs, which spread themselves upon the Ground. The Leaves are form'd like the Ivy, but little and pale, fasten'd by slender Tails or Stalks. The Flowers are like those of the other Kinds, but a great deal smaller, sometimes black, sometimes of a yellowish green: The Fruit like a small Pear. The Roots are very fine, stringy, join'd together by a little Head, in-Shape of a Beard, or Head of Hair.

The second Sort of this is call'd *Aristolochia*,

or *Pistolochia altera*: It bears Vine-like Stalks, of a Foot in Height, that have corner'd, hollow, pliant Branches, lying on the Ground, hard to climb, of a dark green Colour: The Leaves like the other Sort, but sharper at the Ends, ty'd to long Stalks: The Flower and Fruit like the long *Biribwort*; but the Flower is not of such a brownish red, and the Fruit much less: The Roots are fine, with slender Fibres, sweet smelling, like the former Species, and grow in the hot Countries. All the Kinds of *Biribwort* are detensive and vulnerary, good to provoke Urine and Sweat, to attenuate the gross Humours, and assist Perspiration.

27. Of Pellitory.

Pellitory is a Root of a moderate Length, the Thickness of a little *Pomet*. Finger, greyish without, white within, furnish'd with some small Fibres, of an acrid burning Taste. It produces little green Leaves, and the Flowers of a Carnation Colour, like our Daïses. Chuse such as is new, well fed, dry, difficult to break, and of a Taste and Colour as said before.

The *Pellitory* we have, is brought by *Mar-seilles*, from *Tunis*, where it grows common: It is much in use for easing the Tooth-ach, being held in the Mouth; and is of several Uses in Physick. The Name of *Pyrethrum* is taken from its burning Quality. Some will have it to come from *Pyrrhus*, King of *Epire*, who first discover'd its Use, and from whom it derives its Name.

There is still another Sort of *Pellitory*, which the *French* call *Alexander's Foot*, and is the tufted *Pellitory*: This is a little Root half a Foot long, of a brownish grey without, and white within, something fibrous, the Tops of which are a Sort of *Spizel*, of an acrid biting Taste, approaching to that of *Pellitory*; upon which Account it is call'd *Wild Pellitory*, and some use to fell it for true *Pellitory*; but it is easy to distinguish, this being smaller, longer, and carry'd about in Bundles. The Plant and Leaves are very little, of a greenish Yellow; and the Flowers which grow in Clusters are of a pale red. This is brought to us from *Holland* and other Parts. They use this, as well

28.



White Behn.



Red Behn.

29.



Common Orchanette.



Orchanette of y'Levant.

as the other Kind, to make Vinegar of in France.

Pyrethrum, in English *Pellitory*, or *Lemery*. the Spitting Root, is brought dry'd to us from foreign Countries; but we have two Sorts. The first, and the best, is in long Pieces, about the Thickness of one's little Finger, round and wrinkled, of a greyish Colour without, and white within, deck'd with a few Fibres, of an acrid, burning Taste, and grows in the Kingdom of *Tunis*.

The Plant which bears this, is call'd *Pyrethrum Flore Bellidis*, the *Pellitory*, with the Daisy Flower. These Leaves are slash'd like those of the *Fennil*, but much less, and green, resembling those of the *Carrot*: They rise from small Stalks, which, on their Tops, support large radiant Flowers, of a Carnation Colour like the Daisy: After them succeed small oblong Seeds.

The second Sort is a long Root about half a Foot high, much less than the former, of a brownish grey without, white within, furnish'd with Fibres. This Root has an acrid, burning Taste like the former, and is brought to us in Bundles from *Holland*. Some call it wild *Pellitory*. The Plant which it bears, is call'd *Pyrethrum Umbelliferum*, and by the *French* *Alexander's Foot*. It grows a Foot high. The Leaves are small, cut fine as the other *Pellitory*, but of a yellowish green. The Flowers grow on the Tops, dispos'd in Clusters, of a pale red. Both the Sorts of *Pellitory* contain a great deal of acrid Salt and Oil, but the first is more powerful than the second. There is also a *Pseudopyrethrum*, which is called *Ptarmica*, or *Sneefewort*, which grows in Meadows, or untill'd Grounds, whose Roots are chiefly kept in the Shops: Being hot and dry, it is inciding, attenuating, and violently sudorifick; us'd chiefly against viscid Flegm in the Lungs, which it expels by Spitting and Urine: It is good against most Diseases of the Brain and Nerves; expels Wind, and prevails against Apoplexies, Lethargies, Vertigo's, Palsies, benum'd Members, Colicks: It stimulates the Fibres, and is said to cure Quartan Agues. A Gargle of it cures the Thrush, and cold Rheum in the Teeth or Gums.

28. Of white and red Behen, or Ben.

THE *white Ben* is a Root like the *Pomet*. *Pellitory*, grey without, and something whiter within; the Taste almost insipid, but being held long in the Mouth, it leaves a Bitterness disagreeable enough. This Root is brought to us from the same Places that the *red Ben*; and the Leaves are much the same, except that this has, at the Bottom of each Leaf, four small ones of the same Form and Colour, that grow opposite to each; in the middle of which rises a high Stalk, adorn'd with some few Leaves, and a budding Flower full of Scales, which, when blown, produces a little yellow Flower. Chuse your Root plump, not rotten, or easy to break, but the freshest you can possibly get. It is appropriated to the same Intentions with the *red Ben*.

The *red Ben* is a Root brought to us cut in Pieces like *Falap*, from Mount *Libanus*, and other Places of *Syria*, which, standing in the Ground, is of the Shape of a large Parsnip, deck'd with Fibres, of a brown Colour outwardly, and red within; from whence arise green long Leaves, like those of the *Beet* or *Winter-green*. For this Reason, some will have it, that there is another Species, from the midst of which grow Stalks adorn'd with red Flowers, which are rang'd two and two together, after the manner of *Jamaica Pepper*. Chuse such as is dry, of a high Colour, astringent, aromack, and new as it can be. There are some use it in Physick; but those do it more for its Scarceness than any Service, the Roots of *Angelica*, *Zedoary*, *Borage*, and *Buglos*, supplying its Place. It is reckon'd cordial, and a resister of Poison.

29. Of Orcanette.

ORCANETTE is a Root of a moderate Size and Length, of a deep red *Pomet* Colour on the outside, and white within, which produces green rough Leaves, like the *Buglos*: For this Reason some call it wild *Buglos*: In the middle of which arises a straight Stalk, adorn'd with little Leaves, and the Flowers, by Buds, in Form of a Star,

Star of a faint pale Blue. Chuse your *Orcanette* new, pliant, but yet of a deep red without, white within, with little blue Heads, and which, being rubb'd a little, wet or dry, upon the Nail, or on the Hand, makes a beautiful *Vermilion*.

As the Colour of the said Root lies in the Superficies, those who use it for colouring of their Wax, Ointment or Oils, prefer the small to the gross; and if it is clean, it produces a very fine red. The *Orcanette* grows in *Provence*: From thence it is brought to us, by the way of *Marseilles*, and *Nismes* in *Languedoc*. This Root is very useful in Physick, as well as for the Purposes aforesaid.

There is another *Orcanette* of the *Levant*, or *Constantinople*, which is a Root of a surprizing Nature, as well from its Size and Thickness, which grows sometimes larger than the Arm, which looks, in Appearance, to be nothing but a Mass of large long Leaves, twisted like a Roll of *Tobacco*; which, by the Variety of its Colours, at the first being of an obscure red, which is succeeded, in time, with a very fine Violet Colour; at the Top of which is produc'd a kind of Rottenness or Decay, white and bluish, which is, as it were, its Flower. In the middle of the said Root is found a Heart, which is a little Bark, thin and long, like Cinnamon, of a very fine red without, and white within. This *Orcanette* is of very little Use, but yet gives a better Colour than the common.

Anchusa puniceis floribus, or *Bu-Lemery. glossum radice rubra, sive Anchusa vulgarior*, by *Tournefort*; in *French*, *Orcanette*, is a Species of *Bugloss*, or a Plant which bears several Stalks above a Foot high bending to the Ground. The Leaves are like those of the wild *Bugloss*. The Flowers grow on the Top of the Branches; and, when they fall, are succeeded by Cups, which contain Seeds sharp'd like a Viper's Head, of an Ash-Colour: The Root is an Inch thick: The Bark is red, and whitish towards the Heart. This Plant grows in sandy Places in *Languedoc* and *Provence*. The Root is dried in the Sun, to be fit for the Druggist's Use. It makes a good Dye for Pomatums, and the like; and yields a great deal of Oil, with a little Salt: It is astringent, stops Fluxes of the Belly, being made into a Decoction. They use it out-

wardly for deterging, and drying up of old Ulcers.

We have brought to us oftentimes from the *Levant*, a kind of *Orcanette*, call'd *Orcanette* of *Constantinople*. This is a Sort of Root as thick and large as a Man's Arm, but of a particular Shape; for it produces a Mass of large Leaves twisted like a *Tobacco* Roll. In Appearance the whole looks as if it was artificial.

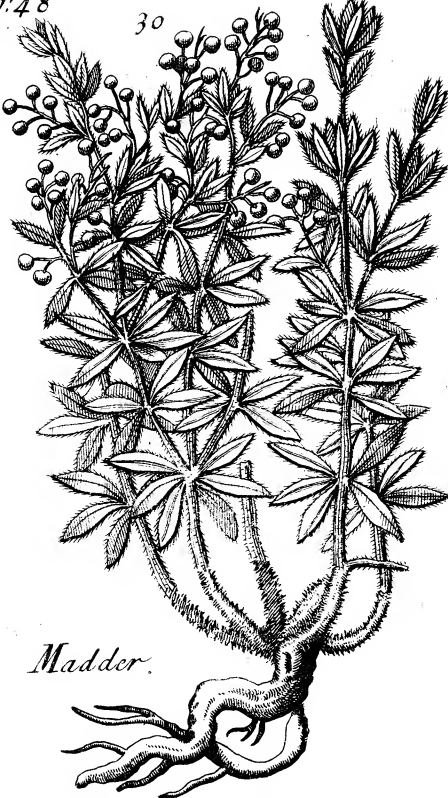
30. Of Madder.

THE *Madder*, which is call'd *Rubia tinctorum*, is the Root of *Pomet*. a Plant well known. 'Tis of this Root the *Dutch* make such great Advantages, by the Quantity of *Madder* they sell in different Countries, and throughout *France*.

The *Madder* comes to us after three manner of Ways, which we distinguish by the Names, *Madder* in the Branch, *Madder* in the Bundle, and *Madder* unbundled. The first Sort is brought to us in the Root just as it comes out of the Ground, without any other Preparation than that of being dry'd. The second Sort is that of the *Bunch Madder*, or such as is made into Bundles; which is *Madder* in Branch first freed from the Bark and the Heart, and ground by a Mill into a gross Powder, as we buy it. The third Sort is the *Madder* unbundled, that is to say, the branch'd *Madder* ground to Powder. But the bunch'd *Madder*, or that in Bundles, is the best; which, for its Excellency, when it is fresh, is made into Bales, or put up in Casks; of a pale red, but as it grows older, encreases its Colour to a fine red. That of *Zealand* is esteem'd the best for the Dyer's Use.

Madder is a Plant whereof there are two Sorts; one call'd *Rubia tin-Lemery. forum sativa*, according to *Tournefort*; sive *hortensis*, according to *Parkinson*, that is, the Garden or cultivated *Madder*. The other is *Rubia sylvestris* or *Erratica*. The first Kind bears long four-squar'd Stalks, knotty and rough, from whence shoot out at every Joint five or six oblong narrow Leaves, which surround the Stalk in the Shape of a Star or Wheel. The Flowers

Book 2^d.
of Roots.



Madder.



Spanish

Salsaparilla.



Bastard Salsaparilla.



China Root.

Flowers grow on the Tops of the Branches, fasten'd by little Stems: They are in small Cups cut into five or six Parts, dispos'd like a Star, of a yellow greenish Colour; and when the Flower is gone, the Cup brings forth a Fruit of two black Berries, ty'd together full of Juice; each of which contains a Seed almost round, enclos'd in a Membrane or Pellicle. The Roots are numerous, long, and divided into several Branches; about the Thickness of a Goose-Quill, red throughout, woody, and of an astringent Taste. They cultivate this Plant in rich Ground, in many Parts of *Europe*, and gather the Root in *May* and *June*, to dry it for keeping and Transportation.

The second Sort, call'd *Rubia Erratica*, or *Wild Madder*, is much less, and rougher than the former: The Flowers are small and yellow: It bears the Fruit in Summer and Autumn, which lasts the same in Winter. It grows in the Hedges about *Montpelier*; and the Root is only us'd in Physick, especially the Garden Kind: It contains a good deal of essential Salt and Oil. Both the Sorts are aperitive by Urine, and a little astringent for the Belly: They provoke the Terms, open Obstructions, and are us'd successfully in the *Faundice*, and may be given in Powder, Tincture, or Decoction, to the Purposes aforesaid.

31. Of Salsaparilla.

Pomet. *Salsaparilla* is the long Filaments, or fibrous Parts of a Root, the Plant whereof runs upon Walls, Hedges, Trees, &c. with long, strait, pointed Leaves, of a green Colour, fill'd with cross Strings or Fibres: At the Bottom of the Leaves grow little Filaments, like Hands to catch hold of Trees, just as the Virgin Vine does: On the Tops of the Branches arise little white Flowers like Stars, from whence comes a small red Fruit, of a sharpish Taste. This Plant grows plentifully in *New Spain*, and in *Peru*, the *East-Indies* as well as the *West*, and delights exceedingly in wet and marshy Grounds.

Some will needs have it, that this *Salsaparilla*, is the same Plant which is very common in *France*, and call'd *Smilax aspera major*, the

large prickly *Bindweed*, or *Smilax*, as it is called sometimes, from the Name of a Child, which *Ovid*, in his *Metamorphoses*, says was chang'd into this Plant. There are two Sorts of *Salsaparilla* sold, viz. the *Indian Salsaparilla* of *Spain*, and the bigger *Salsaparilla* of *Marignan*, or *Maraban*. The finest and best of the two, is that of *Spain*, which has long stringy Roots, the Thickness of a Goose-Quill, greyish without, and white within, attended with two Streaks, reddish within, easy to break in two, and when it is broke, is free from being worm-eaten; and being boil'd, tinges the Water of a reddish Colour. Reject such as is moist, extremely small, full of Fibres; and likewise a Sort of *Salsaparilla*, from *Holland*, in little Bunches, cut at both Ends. Some will have it that the *Salsaparilla*, reddish on the Outside, and ty'd up in long Bunches, which comes by the Way of *Marseilles*, is not so good as the other; but, for my Part, I can affirm, I never could find any Difference betwixt that and the true *Spanish Salsaparilla*: Yet the large *Bastard Salsaparilla*, or that of *Marignan*, ought absolutely to be rejected, which some call falsely *Muscovy Salsaparilla*, which is fitter for lighting of Fires than to be us'd in Physick. The Use of this Root is much for *Prisans*, or Diet-drinks, for curing the *Veneral Disease*, and making such lean as are too fat.

Sarsaparilla, or *Salsaparilla*, is a *Lemery*. very long Root, like a small Cord, which is brought from new *Spain* in Collars, or long Bundles of fibrous Branches, the Thickness of a writing Quill. This is the *Smilax*, or *Bindweed*, call'd *Smilax Aspera Peruana*, *sive Salsaparilla*. The Stalk is long, serpentine, woody, prickly, yielding, and climbing like the Vine upon every Shrub or Tree. The Flowers, which are of a white Colour, at last produce Berries, which are round and fleshy like small Cherries, green at first, a little reddish, and at last black, which contain in them one or two stony Nuts, of a whitish yellow, in which is a Seed, or white hard Almond. The best *Salsaparilla*, is that which is round, full, apt to break, when beat together, mealy, and white within; that which is shrivell'd, lean, tough, and not mealy, being nothing near so good. There is some which comes from *Jamaica*, and other Parts, but

H

that

that is tough, not mealy, and so not of equal Value with the *Spanish*. Our Merchants bring another Sort, which they call *Marignan Salsaparilla*, which is larger and groffer than that of *Peru*, and nothing nigh so good. It is called *Salsaparilla*, which is as much as to say, in the *Indian* Tongue, a Plant made up of the *Vine* and *Bramble*. This Root is fudorifick, alexipharmick, and a great Alkali. Its chief Use is against the *French* Pox and its Symptoms, the King's-Evil, Rheumatifms, Catarrhs, Gouths, and all Diseases proceeding from them, taken in a Powder from a Dram to two Drams.

32. Of Squills.

Pomet. **T**HE *Squill*, which is very commonly call'd the *Sea-Onion*, or *Sea-Leek*, is a knotty crumpled Root, reddish without and within; which, from the Ground, sends forth climbing Stalks, the Length of other Shrubs, from whence grow large green Leaves, in the Shape of a Heart; and the Stalk is furnish'd all along with little Prickles like Thorns.

The *Squill* which we sell, is brought to us from several Parts of the *East-Indies* and *China*, both by the Way of *Holland*, *England*, and *Marseilles*, just as it is taken out of the Ground, but only freeing it from the first Skin, cleaning and picking off the Extremities, to make it sell the better.

Chuse such as is plump, sound, fresh, and full of Juice; this being a bulbous Root, take Care it be clean, free from Worms, cleans'd from the outward Skin, and of a red Colour. The *Squill*, is much in Use to make fudorifick Ptifans, and is employ'd to that Purpose with *Salsaparilla*; and, 'tis said by some, the one is usefess without the other.

There grows in the Islands of the *Antilles*, a large Root, which some affirm to be the true *Squill*; but as that is not yet confirm'd, I shall refer the Reader to a Book of the Reverend Father *du Tertre*, who has made a fine and large Description thereof; but as that Account has no Relation to our Business, I do not think it proper to say more of it.

Scilla, in *English* the *Squill*, is a *Lemery*. Kind of *Ornithogalum*, Dog's-Onion, or a Plant whereof there are two Species: The first is call'd, by *Baubin*,

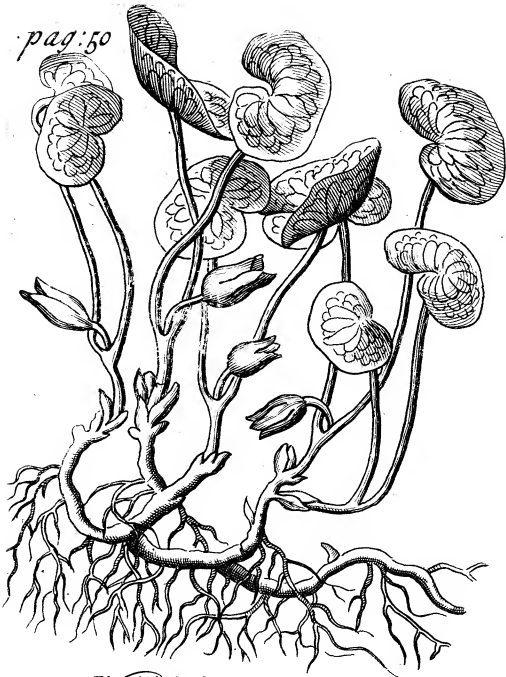
Scilla rubra magna vulgaris, the great common red *Squill*; and, by Mr. *Tournefort*, *Ornithogalum maritimum*, seu *Scilla radice rubra*, the *Sea-Onion*, or *Squill* with the red Root. It bears Leaves above a Foot long, a Hand's breadth, fleshy, very green, filled with a clammy bitter Juice, which rises in the Middle of the Stalk, which is a Foot and half high, bearing on the Top round Flowers, compos'd of six white Leaves; which, when drop'd are succeeded by Fruit made up of three Corners, and divided within into three Apartments, fill'd with black Seeds. The Root is an Onion, or large Bulb, as big as a Child's Head, compos'd of thick *Laminae*, which are red, succulent, and viscus.

The second Sort is call'd the *Scilla minor*, or *Ornithogalum maritimum*, seu *Scilla radice alba*, by *Tournefort*. This differs from the former, in that the Leaves are not so large, and the Root is much less, of a white Colour, and not so common. The *Squills* grow in sandy Places near the Sea, in *Spain*, *Portugal*, *Sicily* and *Normandy*: They are brought to us of all Sizes. We chuse the newest, of a moderate Size, well cured, well fed, gather'd in the Month of *June*, plump, sound, and full of a bitter, acrid, clammy, Juice, which yields a great deal of essential Salt, Oil, and Flegm, with some Earth. They are incisive, attenuating, deterfive, aperitive; resist Putrefaction, provoke Urine and the Terms. Internally, they are us'd in Decoctions, or Substance; and, externally, to Scabs, Boils, and the like.

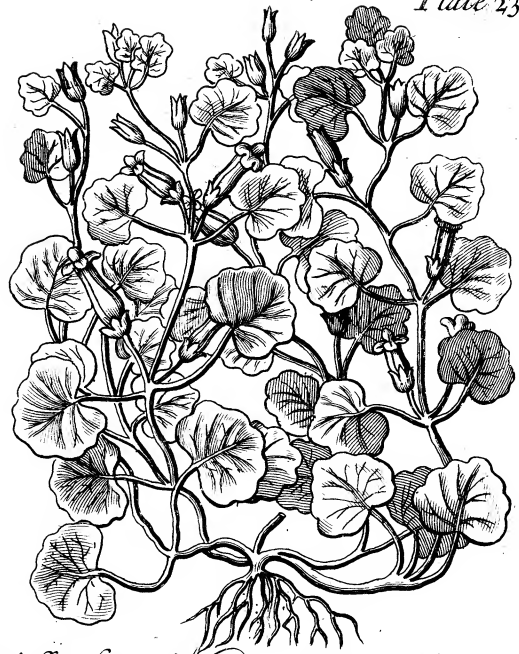
33. Of Azarum, or Wild Spiknard.

THIS Root commonly call'd *Cabaret*, or *Wild Spiknard*, grows *Pomet.* very frequently in most Parts of the *Levant*, in *Canada*, and likewise in *France* all about *Lyon*, from whence comes almost all we sell now. This Root when in the Earth, sends forth Stalks, on the Tops of which grow green thick Leaves, like a Man's Ear, and the Flower in Buds, as the *Rose*, and of a reddish Colour.

Chuse the true *Spiknard* from the *Levant*, if you can possibly get it, and such Roots as are the most beautiful, not fibrous or broken, but of a grey Colour on the Outside, and white

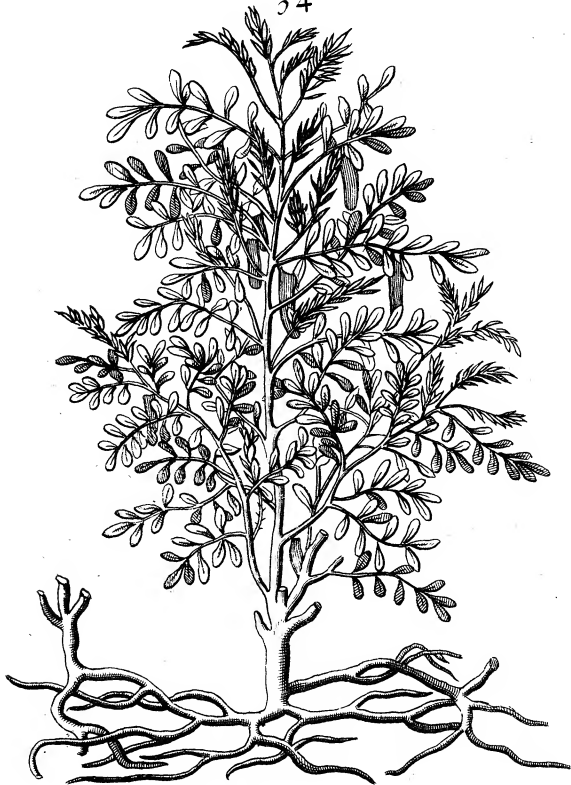


Wild Spicknard.



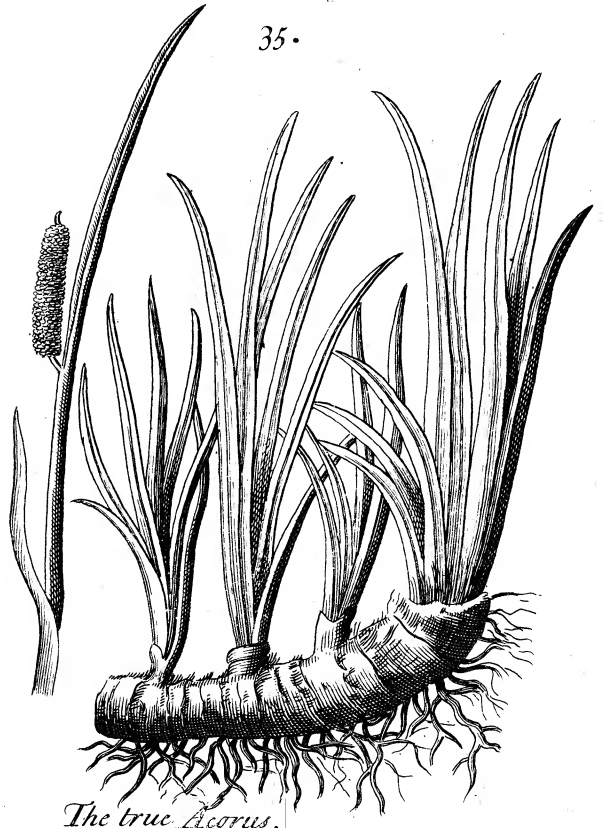
A lesser sort of Wild Spicknard.

34



Liquorice.

35.



The true Acorus.

white within, of a penetrating quick Smell, and of an acrid Taste, attended with a little Bitterness. Take care that you do not take the *Azarina*, or small *Spiknard* for it, which is brought to us from *Burgundy*, and may be easily distinguish'd, in that the *Azarum* has grey Roots of the Thickness of a writing-Pen; and the *Azarina* has many little black dry'd Roots, full of Strings or Filaments, which is sufficient enough to know it from the other.

The *Spiknard* is very little us'd in Physick; but the most considerable Importance this is of, is to mix with Starch, and the like, in order to make Powder for the Hair, about one Ounce of this being put to two; and the same is very proper for the Cure of the *Farcy*, and other Diseases of that Kind. It is observable that the *Azarum* is a Plant whose Root is almost cut close by the Ground, that is to say, it enters it very shallow; but the Root spreads about a Foot in the Earth, after the Nature of round *Sowbread*, of a yellow Colour without, and white within; which, if squeeze'd, affords a Milk, which burns like Fire. I was willing to take Notice of this Thing, because some People will have it that Nobody knows this Plant, or have ever writ about it.

Azarum, or *Afarum*, wild *Spik-Lemery*. is a small Plant which bears its Leaves like those of the Ground-Ivy, but smaller, rounder, tenderer, smooth, and of a shining green, fasten'd upon long Stalks. The Flowers grow near the Root, supported upon short Stems, which arise at the bottom of the Stalks of the Leaves: Each of the Flowers has five or six purple Supporters, which raise up the Hollow of the Cup, that is divided commonly into three Parts. When the Flower is gone, a Fruit follows in the Cup, which is cut into six Parts, and divided each lengthway into six Lodgings, which contain in them little, longish brown Seeds, full of a white Substance, whose Taste is something acrid. The Roots are close by the Ground, small corner'd, creeping, knotty, crooked, and stringy. This Plant grows upon the Mountains, and in the Gardens or shady Places; and the Leaves continue green all the Year. It purges sweetly upwards and downwards; is aperitive, and opens Obstructions. The Dose is from about

half a Dram to two in Infusion, and about half a Scruple to a Dram in Powder. It is likewise us'd in several Compositions, where it does not vomit at all, because it is mix'd but in small Quantities, with abundance of other Ingredients.

34. Of Liquorice.

THE *Liquorice*, which the *Latins* have call'd *Glycyrriza*, *Liquiri-Pometia*, *Radix dulcis*, is a Plant which has clammy Leaves, that are green, shining, and half round; the Flowers like those of *Hycinth*, of a purple Colour; from whence come the Husks, which make, in some measure, a round Ball, wherein the Seed is contain'd.

The *Liquorice* sold at *Paris*, is brought thither by Bales, from several Parts of *Spain*, but chiefly from *Bayonne* and *Saragossa* Side of the Country, where that Plant grows in abundance. Chuse your *Liquorice* fresh, of about two Inches thick, reddish without, of a Gold-Colour within, easy to cut, and of a sweet agreeable Taste. That of *Saragossa* is the best, and is to be prefer'd to that of *Bayonne*, which is greyish without, less, earthy, and of little Esteem. As to dry or powder'd *Liquorice*, chuse such as is yellow and dry, and take care to avoid that which comes loose, and is not brought in Bags or Bales, which is commonly black, spoil'd, and of no Virtue. The Use of *Liquorice* is too well known to be particular in. I shall only give you a Receipt, which is excellent for Horses, that are stuff'd up, and have a Difficulty of Respiration. Take Powder of *Liquorice*, and Flower of Brimstone, of each equal Parts; mix them, and give from two Ounces to four, according to the Size of the Horse, twice a Day. This is a good Medicine to cure broken-winded Horses, taken at the beginning; or for short winded or purfy Horses, when the Malady is confirm'd.

Of Black Liquorice Juice.

Make of *Liquorice* and warm Water, a strong yellow Tincture, which afterwards is to be evaporated over the Fire, to a solid Consistence, till it becomes black, and is

what we call black *Liquorish Juice*, which comes to us ready made from *Holland*, *Spain*, and *Marfeilles*, in Cakes of different Sizes, which sometimes weigh four Ounces, or half a Pound. The *Liquorish Juice* which has the most Virtue, is black without, and of a shining Blackness within, easy to break, and of a grateful Taste enough; but reject such as is soft, reddish, and, when broke, is stony, and has a burnt Taste. The Juice is very useful to cure those who are afflicted with Fluxes of Rheum, Coughs, Asthma's, &c. chewing it in the Mouth like *Tobacco*, and dissolving it in any convenient Liqueur. We sell besides, other Kinds of *Liquorish Juices*, as those of *Blois*, both white and yellow, and those of *Rheims* or of *Paris*, which are cut into flat Pastiles. The Juice of white *Liquorish* made at *Paris*, is a Composition of *Liquorish Powder*, Sugar, Almonds, and *Orrice Powder*; but as there are various Methods of making up these Kinds of Lozenges, either with Gums, Sugars and Variety of Drugs, I shall pass them by, and only say, that I think the black Juice, singly, to have more Virtue than any of the Compositions.

There are several other Roots sold in the Shops, besides what I have mention'd, which grow in the Gardens, and other Places about *Paris*, as the *Enula Campana*; the *Paeony*, male and female; the greater and lesser *Arum*, or *Wake Robin*; the large and small *Dragonwort*; the *Cyclamen*, or *Sow-bread*; the *Dog-grass*, or *Quick-grass*; and several others, which the Herb-sellers furnish us with, as we have Occasion.

Glycyrrhiza vulgaris, or, according to *Lemery*. ing to *Tournefort*, the *Glycyrrhiza siliquosa*, vel *Germanica*. This is a Plant which bears several Stalks three or four Foot high: The Leaves are longish, viscous, green, shining, dispos'd into Wings like the Oak, or the *Acacia*, ranged in Pairs along the Side, terminating in a single Leaf, of a smart Taste, tending to an acid. The Flowers are of the leguminous Kind, and purple-colour'd, succeeded by short Husks, which enclose Seeds that are ordinarily of the Shape of a little Kidney. The Roots are large and long, dividing themselves into several Branches, some as thick as one's Thumb, and others as the Finger.

There is another Sort of *Liquorish* which

is call'd, *Glycyrrhiza Echinata*, or *Glycyrrhiza capite Echinato*, the prickly *Liquorish*, or that with the *Chestnut Head*: It bears its Branches a Man's Height, carrying long Leaves, sharp at the Ends, and made like the *Mastick Tree*, green, a little glutinous, and dispos'd as the former Species. The Flowers are small, bluish; after which grows Fruit compos'd of several Husks, which are longish and bristled at the Points, standing one against another, and join'd together almost at the Bottom. The Roots are long, and as thick as an Arm, growing straight in the Ground, without any Division at all. This grows chiefly in *Italy*, and is of no kind of Use, because the other Sort is so much the better both in Taste and Virtue.

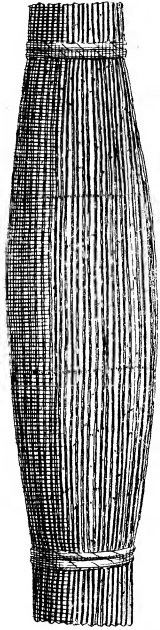
Liquorish is brought to us out of *Spain*, and many other Countries of *Europe*, but the best is that which grows in *England*. The best is large, thick, substantial, and of a good Length, being of a brightish yellow within. The *Spanish* is much like the *English*, save that it dries faster, and is more wrinkled in its Bark. That which comes from *Brandenburgh* is a good Kind, and being dried will keep good two Years. It is one of the best Pectorals in the World, opens Obstructions of the Breast and Lungs; easeth griping of the Bowels and Collick, and is good to mix with Catharticks. It cures Ulcers of Kidneys and Bladder, allays Sharpness of Urine, and pissing of Blood; is singularly useful against Coughs, Colds, Asthma's, Wheezing, Difficulty of Breathing, and other Diseases of those Parts.

35. Of the true Aromatick Reed.

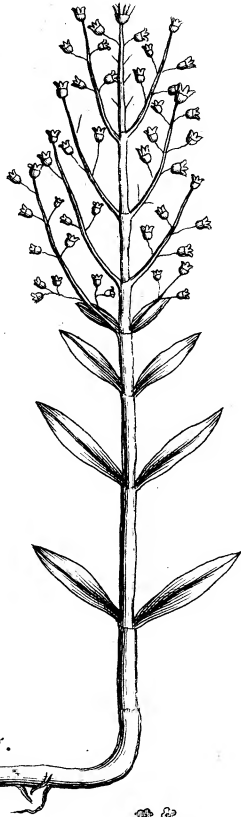
Pomet. THE true *Acorus*, which is improperly call'd *Calamus Aromaticus*, is a Reed or knotty Root, reddish without, and white within, adorn'd with long Filaments, or fibrous Strings, of a light Substance, and easily subject to be worm-eaten. There comes from the said Root green Leaves, long and straight; and the Fruit about three Inches long, of the Size and Shape of long Pepper.

Chuse your *Acorus* new, well-fed, clean'd from the Fibres, hard to break, of an acid Taste, accompanied with an agreeable Bitterness,

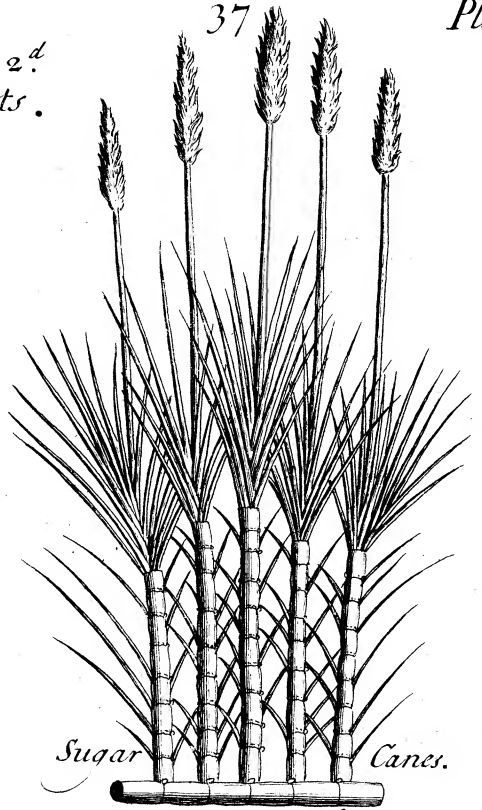
36



Calamus aromaticus.

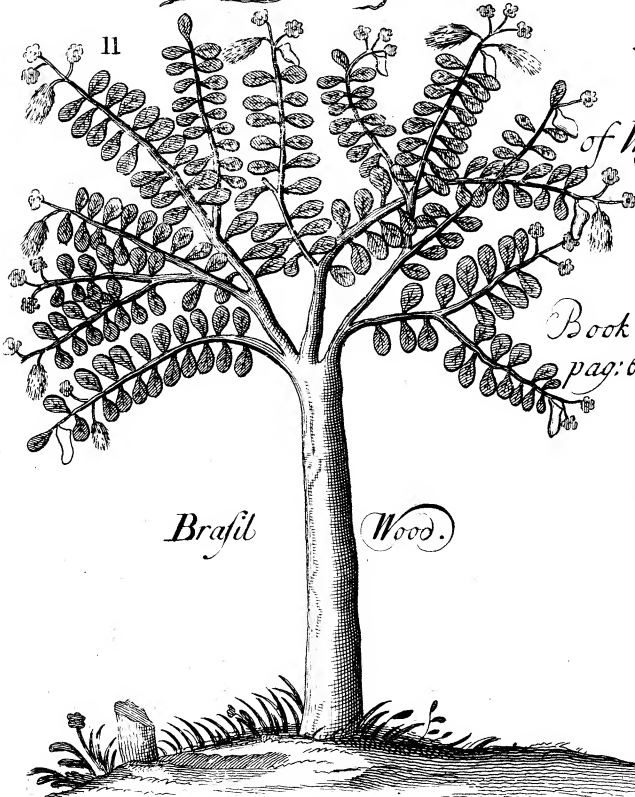


37



Sugar Canes.

11



Brazil

Wood.

Book 3^d
pag:68

of Woods

12



Log

Wood

terness, of a sweet Smell, and very aromatick; 'tis for this Reason it is more known by the Name of *Calamus Aromaticus*, tho' altogether improper, than that of the *Acorus*. This Root, which is commonly of the Thickness of a little Finger, and about half a Foot long, is brought to us from several Parts of *Poland* and of *Tartary*; and likewise from the Isle of *Java*, where it is call'd *Diringo*. The *Acorus* is of some small Use in Physick, and is one of the Ingredients of the Treacle, without any other Preparation but being well pick'd and clean'd, and freed from Dirt, or any thing else that may stick to the Root, which is much us'd by the Perfumers.

The true *Acorus*, or the *Calamus Lemery*. *Aromaticus* of the Shops, is a Root the Length of one's Hand, a Finger's Thickness, full of little Knots and Strings, of a fine light Substance, reddish without, and white within, scented, acrid, and commonly call'd, but falsely, *Calamus Aromaticus*. It is brought from *Lithuania*, *Tartary*, &c. The Leaves of the Root are long, almost like the *Orrice*. There is a false *Acorus*, which is call'd, in *Latin*, *Acorus adulterinus*, seu *gladiolus luteis liliis*, which is a Species of the Lily or Flag, with the yellow Flower; these grow in marshy and other watry Places. Sometimes this Root is us'd in Physick, but rarely. Both Sorts contain in them a good deal of exalted Oil, mix'd with volatile Salt. The true Sort is bitter, and of a sharp Taste, stomatick, heating and drying, of thin and subtil Parts, attenuating, inciding, and aperitive; it opens Obstructions of the Liver, Spleen, and Womb, relieves in the Colick, and provokes the Terms. It may be given in Powder, the candied Root, Oil or Extract, from a Scruple to half a Dram: or in the *Electuary Diacorum*, which you may see in the *London Dispensatory*.

36. Of the true Reed, or Calamus Aromaticus.

Pomet. THE true *Calamus*, or rather the bitter *Calamus*, is a Reed the Thickness of a Quill, of two or three Foot high, compos'd of Joints, from whence grow green Leves, and little Clusters of yellow

Flowers. This little Reed grows in several Parts of the *Levant*, from whence it is convey'd to *Marfeilles*, sometimes whole, but generally in small Bags of about half a Foot long. Chuse the largest which is fresh, clean'd from the small Root and the Branches, and made up in Bags; 'tis of a brownish red without, and whitish within, furnish'd with a white Pith; which when it is stale the said Pith will turn yellow; and after the Reed is broke, and you put it into your Mouth, it has an intolerable Bitterness. It is chiefly us'd for *Venice Treacle*.

Calamus verus, seu *amarus*, the true or bitter *Calamus*, is a Kind of *Lemery*. Reed which we bring dry from the *East-Indies* in little Bales. It grows about three Foot high; the Stalk is reddish without, and full of a white Pith within; it is divided by Joints, on each of which grow two long green Leaves, sharp at the Ends; the Flowers rise on the Tops, dispos'd in Clusters or yellow Plumes. It is a sweet-scented Root, and fragrant, but somewhat bitterish in Taste, breaks white, and is a little knotty. This is us'd against Diseases of the Head, Brain, Nerves, Womb, and Joints. There is prepared from it as from the *Acorus*, the candied Root, the Confect, the Spirit, the Oil, the Extract, and the *Electuary Diacorum*, as in the Chapter before.

37. Of the Sugar-Cane.

Sugar-Canes are Reeds which grow plentifully in several Parts of the *Pomet*. *West-Indies*, in *Brazil* and the *Antilles* Isles. These Canes or Reeds, when in the Ground, shoot out from every Joint, another Cane of five or six Foot high, which is furnish'd with long, green, straight, sharp Leaves. In the Midway of the Height of every Cane, is a kind of Beam which terminates itself in a Point; the Height or Top of which is in the Nature of a silver-colour'd Flower, resembling a Plume of Feathers.

The *Indians* prepare the Ground, by digging about half a Foot deep, with their Spades, after the manner of trenching, in which they put a Cane of about three Foot high, and then make a Rider of a Foot at each

End.

End for two other Canes, and so continue to plant, 'till the Ground is full. At the End of six or seven Months, which is the Time that they begin to raise their Beams, you must take care to cut for the Preservation of your Sugar, otherwifè there wou'd be a great deal lost. These Sort of Beams is what the Savages very much use to make their Bows of.

38. How to make Sugar from the Canes.

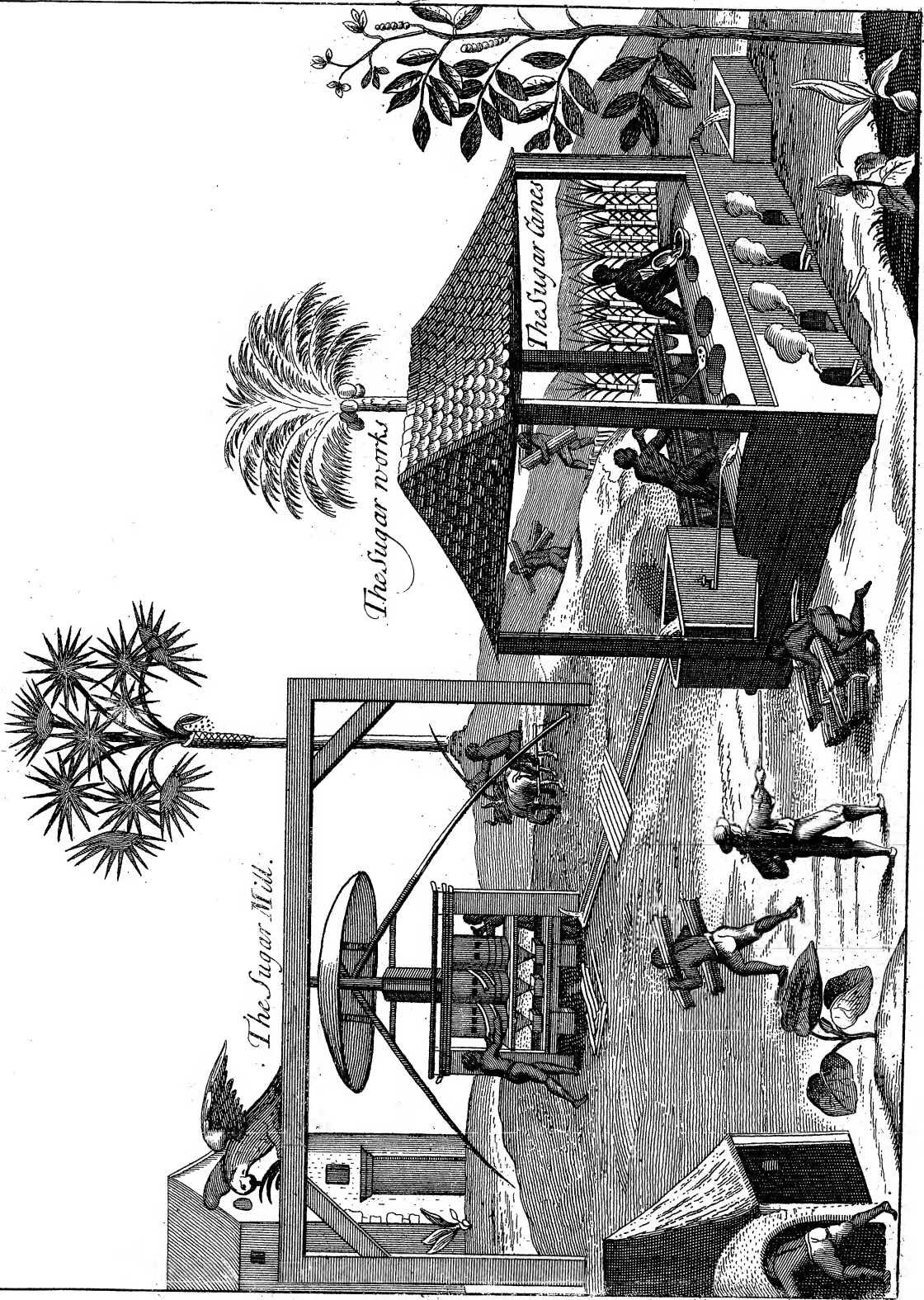
THE *Americans* having cut their *Pomet.* Canes above the first Joint and freed them from their Leaves make 'em in Bundles, and carry them to the Mill, which is compos'd of three Rollers of an equal Size, and equally arm'd with Plates of Iron, where the Canes are to pass thro' them. The Roller in the middle is raised much higher than the rest, to the end that the two Poles, which are affixed cross-ways at the Top; and likewise the Beasts which are yoked to them, may turn about freely, without being hindred by the Machine. The great Roller in the middle is surrounded with a Cog, full of Teeth, which bite upon the Sides of the two other Rollers adjoining to it, which makes them turn about, grind and bruise the Canes, which pass quite round the great Roller and come out dry, and squeez'd from all their Juice. If by Accident the *Indians*, or whoever feeds the Mill with Canes, shou'd happen to have his Fingers catch'd in the Mill, they must immediately cut off his Arm, lest the whole Body shou'd be drawn in and ground to Pieces: Therefore as soon as they see any one have his Finger or Hand catch'd, the Person standing by cuts off his Arm with a Hanger, and sends Word presently to have him cured. The Juice falling into a Vessel which is below the Mill, and being drawn off, runs by a little Channel into the first Boiler, which holds about two Hogsheds, where it is heated by a small Fire, and set a boiling, in order to make a very thick Scum arise: The *West-Indians* keep this Scum to feed their Cattle with. This Liquor being well scum'd is put into a second Boiler, where it is set to work again, by throwing on, from time to time, hot Water, in which they have beat up some

Eggs; having been thus purified, they pass this Sugar thro' Strainers; and after it has done running put it into a third Boiler, which is of Brass or Copper, and then again upon another refining into a fourth Boiler; and when it begins to cool, and you find it rises to a grain, pass your Scimmer, or wooden *Spathula* underneath it, from the right to the left to see what Quality your Graining is of: The Sugar being thus ready, and while it remains hot, cast it into the Moulds, or Earthen-Pots, with Holes in their Bottoms, yet shut: At the End of twenty-four Hours, which is the ordinary Time the Sugar takes to incorporate, the *Negroes* carry the Pots into their Ware-Houses; and after they have opened the Holes, and pierced the Sugar, they set the Moulds upon little Pots or Jars, in order to receive the Syrup or *Moloffes* which runs from it. And when the Syrup is run from the Sugar in the Moulds; you may afterwards cut it with a Knife; which being so done from the Pots is call'd the greyish *Muscavado* Sugar; which as such is very little in Use, but is the Basis and Foundation of all the other Sugars sold among us.

Of Cassonade, or Powder Sugar.

The *Cassonade*, or Sugar of the *Leeward-Islands*, is made from the Grey *Muscavado* run again; and after it has been clarify'd, strain'd and bak'd, is cast into the Moulds, and so prepared for Use, as we have been speaking before: After which they divide the Loaves, when taken out of the Moulds, into three Sorts, the Top, the Middle and the Bottom, which they dry separately according to their Fineness: The finest Powder Sugar is that of *Brasil*, which is extremely white, dry, and well grained, of a violet Taste and Flavour. The *Cassonade*, or Powder-Sugar, is much in use among the Confectioners; above all that of *Brasil*, by reason that it is less subject to candy, upon which Account the Confectioners value it the more.

The Sugar, which we improperly call Sugar of seven Pound Weight, because it as often weighs ten or twelve, is made of the Grey *Muscavado* form'd into Loaves, as we have



The Sugar Mill.

The Sugar works

The Sugar Cane

described before. The Sugar of seven Pounds is distinguish'd into three Sorts; to wit, the white, the second, and the last, which is of a brown Colour at the Top of the Loaf; the whiter the Sugar is, the better stov'd, grain'd and dry'd, the more it is esteem'd. The less the Moulds are, that is, the less the Loaf is made, and the whiter it is, so much the dearer: The Use of which is to make choice Syrups, white Confects, and preserve *Abricots*, and the like, or make Presents of.

Of Sugar-Royal, and Demy-Royal.

The Sugar call'd *Royal*, from its extraordinary Whiteness, is from the small white Sugar, or Powder-Sugar, of *Brazil*, melted and cast into a Loaf as the former. This *Sugar-Royal* is extremely white throughout the whole, that is to say, as fine at the Top as the Bottom, of a clear, compact, shining Grain, notwithstanding easy to break, which is the general Observation of Sugars, that they are well bak'd, and of a kindly Sort. We sell besides, another Sort we call *Demy-Royal*, which is a small Sugar-Loaf, very white, and wrap'd in a blue Paper which comes from *Holland*.

The *Dutch* formerly brought us Sugars of eighteen and twenty Pounds, wrap'd in Paper, made of Palm-Leaves; for which Reason it was call'd Palm-Sugar; which was a white fat Sugar of a good Sort, and a Violet Taste. We have, besides, another Sugar from the *Maderas*, but we shall say nothing of that, because we have it from several other Islands much better.

Of Brown Sugar.

This brown Sugar is one Sort of the *Muscavado*; which they turn to Powder-Sugar, and is made of the Syrup of the Seven-Pound Sugar, after the same Manner as the others are made. The Use of the brown-Sugar was formerly very considerable, in that it serv'd to put in Clysters, instead of Crystal Mineral. At present several Apothecaries, very improperly, employ it to make many of their Syrups with, which must be very disgustful

to the Body, by reason of its nauseous Taste, and its near Alliance to the *Molosses* themselves, which some call the Syrup of Sugar, and which is of no manner of Use in Physick; great Quantities of it are used in *Holland* to temper with their Snuff, and to sell to poor People instead of Sugar; I have been assured that *Molosses* are better for distilling their Rum than the *Muscavado* Sugar.

Of white and red Sugar-Candy.

The white Sugar-Candy, is made of the white *Lisbon* Sugar, and white Sugar melted together, and boiled to a Candy thus. Dissolve your Sugar in pure Water, then boil it to the Consistency of a Syrup, which pour into Pots or Vessels, wherein little Sticks have been laid in order; let it be put into a cool, quiet Place, four or five Days without stirring; so will the Crystal, or Sugar-Candy, stick close to the Sticks. Chuse your Sugar white, dry, clear and transparent. The very finest Candy we have comes from *Holland*, and it is sold for Four-Pence or Five-Pence a Pound dearer than that of *Tours*, *Orleans*, *Paris*, and other Places. The red Sugar-Candy is made the same Way with the white, except that this is made with Brown *Muscavado*. Both Sorts are better for *Rheumes*, *Coughs*, *Colds*, *Catarrhs*, *Asthma's*, *Wheezings*, &c. than common Sugar; because being harder, they take longer Time to melt in the Mouth; and withal keep the Throat and Stomach moister than Sugar does. Put into the Eyes in fine Powder, they take away their Dimness, and heal them being Blood-shot, as they cleanse old Sores, being strew'd gently upon them.

Of Barley Sugar, white and Amber-colour'd, Sugar of Roses, Pastiles of Portugal, &c.

Barley-Sugar is made either of white Sugar or brown: The first Sort, which is often call'd *Sugar-Penids*, is boil'd till the Sugar becomes brittle, and will easily break after it be cold. When it is boil'd to a height, cast it upon a Marble, that is first lubricated with Oil of sweet Almonds; and afterwards work it to a PASTE, in any Figure you fancy. The other Sort, improperly call'd *Barley*.

ley-Sugar, is made of your *Cassonade*, or coarse Powder-Sugar, clarify'd and boil'd to a Toughness that will work with your Hands to any Shape; and is commonly made up in little twisted Sticks. This Kind of Sugar is more difficult to make than the other, because of hitting the exact Proportion of boiling it to such a Height that they may work it as they please. *Sugar of Roses*, is made of white Sugar clarify'd, and boil'd to the Consistence of Tablets, or little Cakes, in Rose-water, and fo cast into what Form you like best. The *Pastiles*, or *Portugal Lozenges*, are made the same Way, of the finest Sugar that can be had, to which is added some *Ambergrise*, or any other Perfume, most grateful to the Maker's Fancy.

Of Sugar-Plums.

There are infinite Variety of Flowers, Seeds, Berries, Kernels, Plums, and the like, which are, by the Confectioners, cover'd with Sugar, and carry the Name of *Sugar-Plums*, which would be endless to set down, and are too frivolous for a Work of this Nature: The most common of the Shops are *Carraway-Confects*, *Coriander*, and *Nonpareille*, which is nothing but Orrice-Powder cover'd with Sugar; and what is much in Vogue at *Paris* is your green *Anise*: Besides these, we have Almond Confects, Chocolate, Coffee, Barberries, *Pistachia* Nuts, &c. Orange Chips and Flowers, Lemon-peel, Cinnamon, Cloves, and many other Roots, Barks, Fruits, Flowers, &c. too numerous to speak of, together with Pastes, liquid Confections, and the like; many of which are useful in the Apothecaries Shops, as green Ginger, Oranges, Jelly of Barberries, &c.

Of Spirit and Oil of Sugar.

This Spirit is made by the Assistance of Spirit of *Sal Armoniack*, and Chymical Glasses, Furnaces, &c. and becomes an acrid Spirit; which after Rectification, is a powerful Aperitive, and proper for many Diseases, as the Gravel, Dropsy, and Dysentery. The Dose is as much as is sufficient to make an agreeable Acidity in any convenient Liquor proper to the Distemper. As the Oil of Sugar that remains after Rectification, is a black stink-

ing Oil, I shall direct you to another Sort, which, strictly speaking, is not an Oil, but rather a Liquor of Sugar, or an Oil *per Deliquium*. This is made by putting your Sugar into a hard Egg, and setting it in a cold Place, to run into a Liquor, the same Way that Oil of Myrrh is made; and is us'd to beautify the Face, or inwardly to remove Pains in the Stomach.

Sugar, in Latin *Saccharum*, or *Saccharum*, *Zaccarum*, or *Zuccharum*, *Lemery*. is an essential Salt, of a Kind of Reed call'd *Arundo Saccharifera*, or the Sugar-Cane, which grows plentifully in many Parts of the *Indies*, as in *Brazil*, and other Places. This Plant bears on each Joint a Cane of five or six Foot high, adorn'd with long, straight, green Leaves, and carries on its Top a Silver-colour'd Flower, like a Plume of Feathers.

The Juice of the Canes is made by pressing them thro' the Rowlers of a Mill, from whence there runs a great Quantity of sweet pleasant Juice, which being put into Boilers, the watry Part is, by the Force of the Fire, evaporated, till it comes to a Consistency; after which they cast it into a Mixture made of certain Ingredients, fit to cleanse and prepare it for graining. All the Time it is boiling, with large Copper Scummers they take off the Scum, which constantly rises in great Quantities, until it be fit to empty into Coolers, *viz.* till it arrives to its just Body: From the Coolers, it is again shifted into Earthen Pots, with Holes in their Bottoms, and other Pots they call Drips, under them, for receiving the *Molasses*; which, in about a Months Time, will be separated from that which afterwards is called *Muscavado Sugar*, being of a pale yellowish Colour: This is then knock'd out of the Pots, and put into Casks, or Hogheads, for Transportation.

The first Kind of *Molasses* is either boil'd up again to draw from it a Sort of duskyish, pale-grey Sugar, call'd *Paneels*, or sent in Casks for *England*. From this Sugar there drips a second Sort of *Molasses*; which, with the Scum that arises in all the Boilings, together with the Washings of the Boilers, Coolers, Pots, and other Instruments, is preserved in great Cisterns, where it ferments; from which they distil that famous Spirit call'd *Rum*, a noble Liquor, not at all inferior in Strength to *French Brandy*, nor yet in Goodness

Goodness or medical Virtues, the Flavour or Palatableness being set aside, having an *Empyreuma*, from a foetid Oil it acquires in the Distillation.

The next Thing to be considered is, the Refining of Sugar, to wit, the *Muscavado Sugar*; which is thus: They put it into refining Coppers, mix'd with Lime-Water, where as it boils over a gentle Fire, much Scum will arise, which is taken off constantly till it comes to a sufficient Consistency for mixing it with the whites of Eggs well beaten up in order to clarify it; this being done, it is boiled up to a proper Height for refin'd Sugar, and so turn'd off into Coolers, from whence it is put into such draining-Pots as aforementioned, with their Drips: When those Pots have stood draining or dripping eight or ten Days, then Clay, properly temper'd, is put upon the Pots, which is renew'd as often as Occasion requires: This forces down all the *Molasses*, so that in seven or eight Weeks Time these Sugars will be fit for Casking.

These *Molasses*, thus proceeding from refin'd Sugar, are boil'd up again, and all the former Work repeated; from whence comes another Sort of white Sugar, call'd *Bastard White*: From this Sugar there drips a second Sort of *Molasses*, fit for nothing but the Still to make Rum of; it is also to be observ'd, that little or nothing is wasted in the refining, but you have it some Way or another, for as much as the refin'd Sugar wants of its first Weight, you have it in the Scum and the *Molasses*, or Recrement running from it. After this Elaboration of Sugar for refining it is over, they put up in Casks or Hogsheds that which is call'd Powder-Sugar, or make into Loaves what they call *Loaf-Sugar*; both of which is esteem'd in Goodness, according to the Number of Times they have been refin'd.

When Sugar has been but once refin'd, it is a little fat or oily: Now to refine it farther, it is dissolv'd again in Lime-Water, and boil'd as before directed, taking off the Scum all the while, &c. The Sweetness Sugar has, is thought to proceed from an essential, acid Salt, mixed with some oily Particles of which it consists; for if by Distillation, we separate the oily Parts from the saline, neither of them will be sweet, but the saline will be acid, and the Oil infi-

pid upon the Tongue, because it makes little or no Impression upon the Nerve of Tasting; but when the acid is entirely mix'd with it, the Edges or Points of the Acid penetrate the Pores of the gustatory Nerve, and, by opening them, carry in the oily Particles, and make them also penetrate and irritate the Nerve, whereby the Sweetness of the Taste is produc'd.

The *Powder-Sugar*, or that which is less refin'd, makes a sweeter Impression upon the Tongue than the *Loaf-Sugar*, or that which is more refin'd, because it contains more oily or fat Particles, whereby it remains the longer upon the Taste: This makes some prefer the coarser before the finer, for Use and Sweetening. Sugar was first known or produc'd in the *East-Indies*, afterwards in *Barbary* and the *African Islands*, as the *Maderas*, *Canaries*, &c. then in the *West-Indies*, as *Jamaica*, *Barbadoes*, *Nevis*, *Antegoa*, *Montserrat*, as also in the *Spanish Indies*; lastly, in *Europe*, as *Spain* and *Portugal*, but not in that Plenty as it is produc'd in the *West-Indies*. If you make choice of it from the Place, that from the *Maderas* was formerly accounted the best; that from the *Canaries* next, and that from *St. Thomas's* last; but now our fine *Jamaica* and *Barbadoes* Sugar is inferior to none; and next to them is reckon'd the *Lisbon* Sugar, which is the fatter, and not so white. If you chuse it for Colour, the whitest is the best; then the next to white, is that of the Cream-Colour, or pale Yellow; and lastly, the red. If you chuse it from the making, the treble refin'd is the best, and that which is form'd into the Loaf, the whitest of which will look like the driven Snow.

It is good for the Breaſt and Lungs, to smoothe their Roughness, take away Asthma's, Hoarseness, ease Coughing, and to attenuate and cut tough Flegm, afflicting the Fibres of those Parts: It is very profitable for the Kidneys and Bladder, and in all the Cases aforementioned; but is reputed bad for such as are troubled with Vapours and Hysterick fits, and therefore such Persons ought to avoid the Use of it. Refin'd Sugar is the sharper, and better to attenuate, cut, and cleanse; but the unrefin'd, to levigate and lenify, and so the better for the Lungs; but being constantly us'd, rots and decays the

Teeth, and makes the Gums scorbutick. There are many Preparations, besides Confects and Sweet-Meats, made of Sugar; the chief of which are, first, Sugar of Roses: 2dly, Sugar

of Violets; 3dly, Tincture and Liquor, acid Spirit and Oil, Sugar Penids, Effence of Sugar and the like.

BOOK the Third.

Of WOODS.

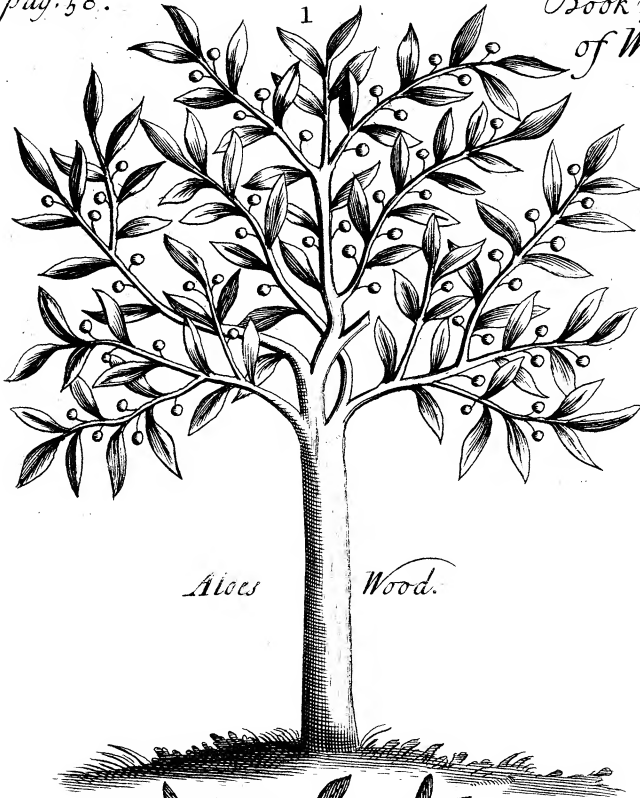
1. Of Wood of Aloes.

Pomet. **O**F all the Woods sold in the Shops, we have none more precious, more valuable and rare, than the true Wood of Aloes, or *Xylaloes*: upon which Account it is very little known, and every one is liable to mistake the Wood, which makes it easy to be counterfeited; so that it is a difficult Matter to know it positively, it being describ'd so differently by different Authors: And I cannot think any more mistaken than those who write like Mr. de Furetiere, who says that Aloes is a large Tree that grows in the Indies ten Foot high, that the Trunk is of the Thickness of a Man's Thigh, on the Head of which is placed a vast Heap of thick indented Leaves, large at the Bottom, which narrow themselves to a Point, and are four Foot long. The Flower is red intermix'd with Yellow, and double like a *Julyflower*; it is supported by the little Branches which arise from the Trunk, with the Leaves, among which they are hid: From the said Flower comes a Fruit, round like a large Weight, white and red: They take the Juice from the Leaves, by flitting them with a Knife; and they gather them with the *Calabasses* or *Gourds*, which, when dry'd in the Sun, are prepar'd to make Rosin

of. This Wood is spotted, scented, and bitter. The Bark is so curious, that it resembles a Skin that is of a changeable Colour.

There are several Sorts of it, but the best is the *Agallochum* of India, which comes from *Calecut*. The finest is the black Kind, of a changeable Colour, full, heavy, solid, and thick, which cannot be whitened, and is difficult to set on Fire. I do not know whether Mr. Furetiere, in his Description before, does not confound the Plant which produces the Aloes, with the Tree which affords us the true Wood of Aloes. There are others which pretend to affirm, we cannot have the true Wood of Aloes, and that it grows not in this terrestrial Paradise, it having been swept away by the Deluge: And others will not allow it us, because it is not produc'd among us, except in Deserts, and upon inaccessible Mountains; not only from their Height, but because of the wild Beasts that inhabit among them, as the Lion, the Tiger, the Panther, and the like; besides a thousand other idle Stories, that are told about this Wood: To confute all which, I shall only tell you, that the Embassadors from the Kingdom of *Siam*, brought of this true Wood to present to the King of *France* now reigning, as well wrought as unwrought; among the rest, a Basin, with its Salver, proper to wash the Hands in, made at *Siam*, after the Mode of that Country. This Basin, tho' of Wood, is

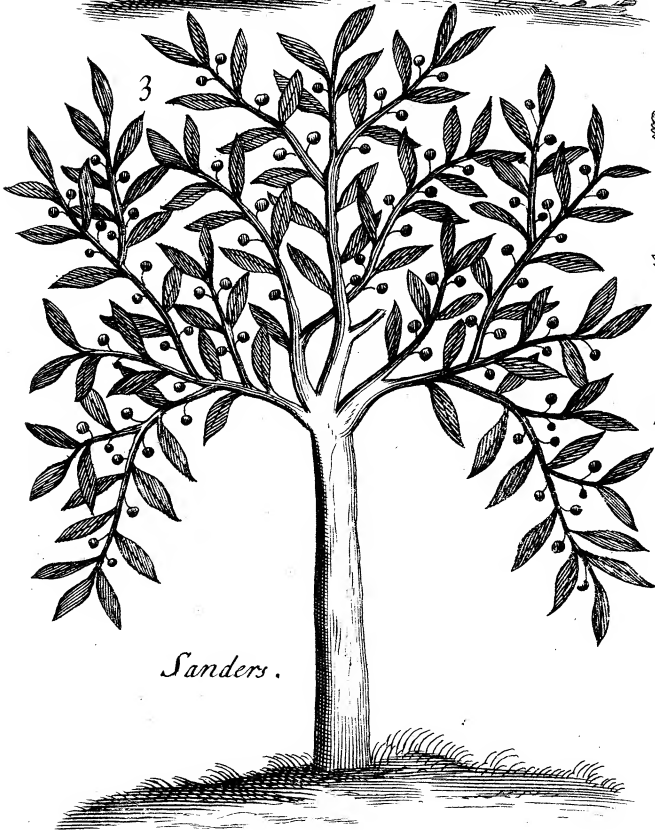
more



Aloes Wood.



Asphaltum.



Sanders.



Nephritick Wood.

more esteem'd than if it had been of maffy Gold, becaufe made of the Tree of the true *Aloes Wood* growing at *Bantam* and in *China*, and which is of the Size and Shape of the Olive-Tree, having Leaves fomewhat after the fame Sort; after which grows a little round Fruit, like our Cherry. They bring a Quantity of it from *Surat*, but the moft refinous of it is moft valu'd, and it is diftinguifh'd into larger and leffer Pieces.

It is obfervable, that the Trunk of this Tree is of three Colours, which are no other than different Parts taken from the Thicknefs of the fame Substance: The firft Wood, which lies immediately under the Bark, is of a black Colour, folid, heavy, and almoft like black Ebony; and by Reafon of its Colour, the *Portuguefe* call it *Eagle-Wood*. The Second, which is a light veiny Wood, like rotten Wood, and of a tann'd Colour, is what we call *Columback*, or the true Wood of *Aloes*. The third Sort, which is the Heart, is a precious Wood of *Tambak*, or *Calambak*; but the great Scarcity, and high Price of it, is the Reafon why I fhall fay no more of it, having never feen any of it.

We ought to chufe the *Columback-Wood* of a fhining Dye, as green without as a Leek, and of a light yellow within, bitter in Tafte, efppecially when it is held fome Time in the Mouth, from whence it takes the Name of *Aloes-Wood*, becaufe it has a Bitternefs like that of the *Aloes*, but is lighter and more porous, like rotten Wood; and when put into the Fire, will burn like Wax and yield a fweet Smell.

This Wood of *Aloes*, when dried, is of no other Ufe in Phyfick, than that it is a ftrong Aromatick: As to the *Eagle-Wood*, it is of no Ufe in *France*, and it ferves the *Indians* only to make their fmall Wares with; befides, it is too fcarce in *France* to make any Thing of it, which is quite contrary to the Notion of thofe who have writ of it, and fay, that it is very common. As to the *Columback-Wood*, or true *Aloes*, we have Quantities enough of other Kinds brought to us, which bear the fame Name; but as it is impoffible for me to difcover all the Differences, I fhall fatisfy myfelf to inform you, that you ought to reject all others whatfoever, that are not the fuppos'd Wood we have been fpeaking of, which is entirely different from others, both

in Shape and Figure, in that the pretended Wood of *Aloes* is in great heavy Pieces, as well red as green, and likewife of feveral other Colours, which make it eafier to know the Difference, in that the true *Columback* is commonly in flat light Pieces. Some People will have it that the *Lignum Vitæ*, which is at *Fountainbleau*, and in the Royal Garden at *Paris*, is the Tree that yields the *Aloes-Wood*; but I have prov'd it otherwife, in letting the Wood lie in the Ground three Years; at the End of which I have taken it out, and after having expos'd it to the Air fome Time, the ftrong Smell and Tafte it had in Life, has been quite loft, and it has become extremely light, of an infipid Tafte, and white without and within.

Aloes, Agallochum, Xyloaloes, or Wood of *Aloes*, is brought from *Lemery. Bantam* in the *Eaft-Indies* where they call it *Columback*. It comes to us in Chips, and is of a moft fragrant Smell, and darkifh Colour; the knotty refinous and blackifh Sort, which is many Times full of black Refin like *Aloes*, is reckon'd the beft; or that which is of blackifh Purple, with Afh-colour'd Veins, of a bitter Tafte and heavy: The chief Sign of its Goodnefs is, that the Chips being put into Water will fwim, and when burning on Fire-Coals, they will fweat or fry, afford a fweet Scent, and leave Bubbles behind them, not eafily vanifhing. It is hot and dry, cephalick, neurotick, ftomachick, cardiac, alexipharmick, ftrengthens the Brain, Heart, Nerves, Spirits and whole Body; is excellent againft Faintings and Swoonings, and kills Worms by its Bitternefs; Dofe in Powder, half a Dram to a Dram. The Chymical Oil is likewife us'd like that of *Rhodium*, and fometimes internally to the fame Purpofes as the Wood.

Of Afpalathum or Rofe-Wood.

THIS *Aspalathum* is a Wood, which was no otherwife known *Pomet.* to the Ancients, but for the true *Aloes-Wood*, and might be taken for the fame, at present, if we had not been inform'd otherwife, from the Accounts and Relations of other Perfons, upon which we have made

Enquiries into the Bottom of the Matter; and it is not without some Diligence we have clear'd up the Truth, upon which I may venture to say, I understand what we sell for *Aspalathum*. There are three Sorts of Wood bear this Name. The first is a blackish Wood, which I believe to be the true *Eagle-Wood*. The second is a Wood something bitter throughout, heavy, oily, full of Veins of different Colours; and all mixed together make it a reddish Wood; it is cover'd with a grey Bark, thick and very rugged. As to the Figure of the said Tree, the Leaves, Flowers, Fruit, and Country where it grows, I know no farther than what I have said, whether this be the false or true *Aspalathum*; but it is what is most receiv'd for such, by those who are suppos'd to know it the best, and which we sell for the same.

The third *Aspalathum*-Wood is known, and common among us, when the two before-mention'd are unknown and scarce. This third Sort is that we call *Rhodium*, or *Rose-Wood*, because it has a Smell altogether resembling that of Roses. The Rose-Wood is of the Colour of the Leaf, which is brought from several Parts of the *Levant*, but chiefly from the Isles of *Rhodes* and *Cyprus*, from whence it takes the Name of *Rose* or *Cyprus-Wood*.

This which we call *Rose-Wood* of *Guadaloupa*, is properly that which the Inhabitants of *Martinico* call *Cyprus-Wood*. It is very certain that there are two Sorts of Rose-Wood which we confound together by that Name, without making use of that of *Cyprus*; for the two Trees so exactly resemble one another in Height, Size, Bark, Leaves, Flowers, and Smell, that most Part of the Inhabitants mistake one for the other: I have, notwithstanding, seen some curious People of *Guadaloupa*, which have call'd this Wood, which the Inhabitants of *Martinico* call Rose-Wood, *Marble-Wood*; because the Heart of the Wood is stain'd like Marble, with white, black, and yellow, which is the only Distinction I could observe. This Tree grows very high and straight, with long Leaves like the Chestnut, but more pliant, hairy, and whiter; it bears large Clusters of small white Flowers, and after them little smooth black Seeds; the Bark of the Wood is whitish, and almost like the young Oak: 'Tis troublesome to bear the

Smell, because it is so sweet, that the Rose cannot compare with it. This Wood loses its Smell in time, but it recovers it again upon being fresh cut, or strongly rub'd one Piece against another. It is likewise very good to build withal.

This Wood is us'd to make Beads of, and is of some small Use in Physick, by reason of its fine Smell, which is serviceable to the Distillers to make Rose-Water, or at least to give their Rose-Water a good Scent. The Surgeons and Barbers use it in Decoctions and Tinctures for their several Purposes. Some People employ this instead of *Citron Sanders*, and after it is reduc'd to Powder, mix it up in Pastiles for burning. The *Dutch* draw a white Oil from it very odoriferous, which they transport abroad for Oil of *Rhodium*, and which we sell upon several Occasions, as to the Perfumers and others. 'Tis observable, that this Oil, when new, is like Oil of Olive; but after some Time, turns of a dark red. By Distillation it yields a red Spirit, and a black fetid Oil, which is proper for curing of Scabs and Tetter.

There are several Sorts of the *Aspalathum* that are not distinguishable, but by the Curious, as the *Aloes-Wood*, that's call'd the Eagle; and the *Lignum Rhodium*, which is so call'd, not that it bears Roses, or is a Rose-Tree, but from the Flavour and Fragrancy of the Wood, and the odoriferous Oil it yields. This is brought from the *Levant*, and some from the *Canaries*; the best is the fattest, or most oily, of a deep yellow Colour, inclining to red, strong-scented, if broken, and of a compact heavy Substance. This Wood contains two profitable Bodies, the one spirituous and watery, the other oily and sulphureous; both which are very subtle and volatile. To make the Oil, chuse the weightiest and best scented Wood rasp'd finely, of which take four Pounds; Salt-Peter one Pound; infuse them in Rain-Water eight or ten Days, and draw off the Oil in proper Vessels. There is at the same Time a Water drawn from thence, which may be used as Rose-Water for Perfumers, and for any Vehicle where proper. The Oil, which is clear, fair, yellowish, and of a fragrant Smell, is us'd inwardly against Obstructions in the Kidneys or Bladder, freeing them from Sand, Gra-

vel and slimy Matter, that load and stop up the Passages. You may make it into an *Eleo-saccharum* with refined Sugar, and then dissolve it in its own Water, or any proper Diuretick; and so it is used with good Success in Gargles, and to cleanse and cure Ulcers in the Mouth, or other Parts of the Body. It is cephalick, neurotick, cardiack, antispasmodick and arthritick, and may be given from three Drops to ten or twelve. This Oil, besides all its internal Uses, is accounted one of the strongest vegetable Perfumes, and holds its Odour the longest.

3. Of Sanders.

THE Sanders are three Sorts of Woods of different Colours, Smell and Figure; all three, as I have been assured, coming from the same Tree, and having no other Difference than from the different Countries, where they grow. This Tree grows about the Height of our Cherry Tree, having Leaves like the Mastich; it bears a small Fruit, the Size of a Cherry, green at first, and black when ripe; after which it easily falls off the Tree, is of an insipid Taste, and no Value.

The yellow Sanders are brought to us from *China* and *Siam* in Billets, freed from the Bark: Hence it was the *French*, when they returned from *Siam* in 1686. brought with them a good Quantity. Chuse the heaviest Wood of a good Scent and yellow, from whence they were call'd *Citron Sanders*, which signifies yellow; but take care, at the same Time, you be not impos'd upon with the *Citron-Wood* from the same Place. The yellow Sanders are most used by the Druggist and the Perfumer.

The *white Sanders* comes nearest to the yellow, but not having the Colour, or the Smell, it makes a vast Difference. This Wood is brought in Billets, divested of its Bark, from the *Indies*: Chuse such as is heaviest, white, and of the best Smell you can get.

The *red Sanders* are brought to us in thick long Billets, from the Maritime Places on the Coast of *Cormandel*. Chuse that which is blackish without, red at the Bottom, brown within, and

hard to cleave; of an insipid Taste, and almost no Smell; and take care you do not get *Coral-Wood* in its place, which I shall mention by and by. This is sometimes used with the two former, and other Uses, according to various Occasions.

There are, besides, a fourth Sort of Sanders, call'd *Taffety Sanders*, or those of *Constantinople*, which serve to give a red Stain, boil'd in Water with any Acids, as the *red Sanders*.

Of the Citron-Wood.

The *Citron-Wood*, which the *Americans* call *Candle-Wood*, because it gives a Lustre or Brightness in cutting, and serves them for Lights; is the Trunk of a large thick Tree, that grows very common in the Leeward Islands. This Tree is very beautiful to the Eye, having many large and long Branches; full of Leaves, like those of Laurel, but bigger, and of a more shining green; the Flowers like the Orange, of a Jassimine Smell; after which grow little black Fruit, of the Size of Pepper. It is the Trunk of this Tree, that the Reverend Father *Du Tertre* falsly imagin'd to be the true *yellow Sanders*, and which afterwards gave Occasion to certain Druggists at *Rouen* to buy of the Company, and sell it boldly again for true *yellow Sanders*, to those who understood it not, or would buy without seeing it, or upon their Words, for the true Wood. Hence it got the Name of *Citron Wood*, or *Counterfeit Sanders*. The Cheat of this is easy to discover, in that the true Sanders tastes and smells sweet and agreeable, being not so gross and refinous; but, on the contrary, the *Citron-Wood*, which is heavy, clouterly, and oily, has a strong Smell like the *Citron*, from whence it derives its Name; and further, the Billets of the true Sanders weigh not above a hundred Pounds; and those of the *Citron* near a thousand. This Wood is of no Use in Physick, but is very useful to work into proper Utensils; for after it has been expos'd some Time in the Air, it will polish like *Cocoa*.

This Wood likewise bears the Name of *Jassimine-Wood*, from its Flowers. There grows, besides, in these Isles, another *Candle-Wood*, which has such Leaves, Flowers.

ers and Fruit as the Citron Wood, except that the Flowers are more oily, much thicker and rounder; but as this Wood comes not to us, I shall say nothing further. Father *Du Tertre* says, that this Tree is scarce, and grows no where but on the Sea-side, and that like a Kind of *Aloes-Wood*. He observes likewise, that this Tree yields a very odoriferous Gum, and that the older the Tree is, the better it smells; and that the Savages make no other Use of it but for Lights; that they use the inner Rind of the Bark, from whence they press a Juice, valued by them as a Sovereign Remedy, for Inflammations of the Eyes.

Of Coral-Wood.

Besides the *Candle-Wood*, we have brought to us, from the *Leeward* Islands, a certain red Wood which they call *Coral-Wood*: 'Tis with this Wood they counterfeit the true red Sanders; but that which makes it not difficult to discover the Difference is, that the *Coral-wood* is of a shining Red, light enough and stringy; but the true Sanders are red thorow, without Threads, and very heavy.

The *Americans* use the *Coral-Wood*, for several Sorts of Work: Besides this, in these Isles there grow two other Kinds of Trees which bear the Name of Coral, because their Fruit are red like that; except that on their right Shoots they have a little black Spot, and the Fruit is what we call, and sell by the Name of the red *American* Pease, which are extremely bitter; and some pretend there comes a Juice from them that has the Quality foldering Gold and Silver like *Borax*.

Father *Du Tertre* says, that the *Red-Wood* of these Isles, every five or six Miles Distance, grows of different Colours; some having more, others less; and that they are very full, heavy, solid, and excellent for making the best Joiners Work; the Wood being, for the most Part, not subject to decay.

Santalum Citrinum, Album vel Lemery. *Rubrum*, the yellow, white or red Sanders are exotick Woods, brought from both the *Indies*, of a very fragrant and sweet Smell. The *Yellow* is to be chose be-

fore the rest, and that which is of the most agreeable Odour, heavy and knotty. Both this and the *White* are used in Faintings, Swoonings, Palpitation of the Heart, Obstructions of the Liver and Spleen; is good against vomiting, and dries up Catarrhs; outwardly the Fume prevails against the Head-ach, stops Fluxes, and Rheums of the Head, with other preternatural Defluxions.

The *Red Sanders* is also brought from the *Indies*, being a red heavy Wood, and commonly sold in the Apothecaries Shops, in Powder: It is cooling and more astringent than any of the rest; is used in Catarrhs to stay thin Rheums falling down upon the Lungs, and to abate the Heat of Fevers, to stop Fluxes, and the *Profluvium seminis*, with the Gonorrhoea in either Sex: But the chief Use of it, this Day, among us, is to colour Medicines with, as *Lucatellus Balsam*, and other Balsams, Tinctures, and the like.

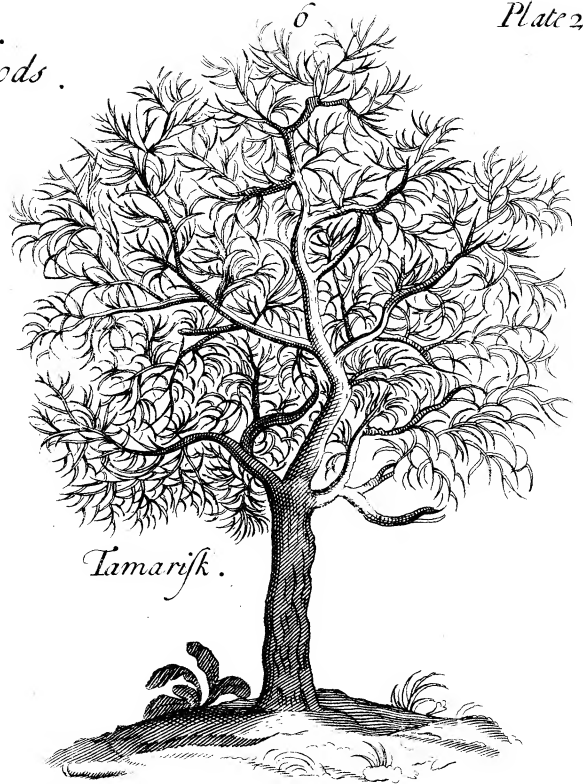
4. Of Nephritick Wood.

THE *Nephritick Wood* is brought to us from *New-Spain*, chiefly *Pomet*, the Kingdom of *Mexico*, whence it is call'd *Coult* and *Tlapalcypatly*, and by us Nephritick, by reason it is a sovereign Remedy in Stone, Gravel, and Difficulty of Urine. 'Tis a Tree as large as our Pear-Tree, having Leaves like Chich-Pease, but much less.

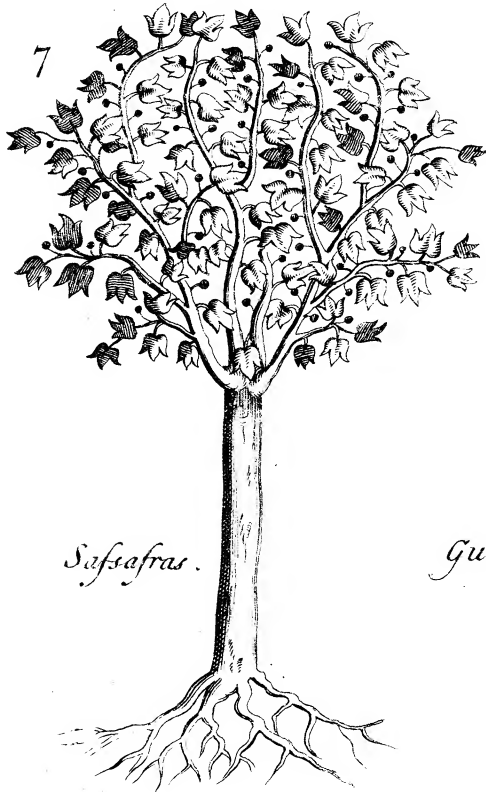
Chuse your Wood well freed from the thick Bark, which is of a bitterish Taste, and yellowish red, and being put into a little cold Water for some Days, strikes a fine Sky-colour'd Blue, which is a certain Sign of its being true. They sell in the Room of this a red *Ebony*, or *Pomegranate*, which is readily distinguish'd from the other, in that, by infusing it in Water, it gives a yellow Colour, like another Wood, we have brought to us from the *Indies* and *Erafil*, the Name of which we have not yet learn'd; besides, you ought to reject all Sorts of Woods that are sold for the true Nephritick, if they will not yield a blue Tincture. This Wood, infused in Water, is frequently us'd for their Drink, and to mix in their Wine, for the Cure of the Stone and Gravel: Those who would add to the Virtue of the Wood, put radish-
Water



Wood of a Mastick Tree.



Tamarisk.



Sassafras.



Guajacum or Holy Wood.

Water thereto with a little Salt of Worm-wood, that is to say, about half a Dram to a Glafs.

The *Nephritic Wood* is thick *Lemery.* without Knots, white without, and blueish within, which, by Infusion, makes a sky-colour'd Liquor; therefore, to avoid being deceiv'd when you buy it, scrape some of the inner Parts of the Wood, put it into Water, and let it stand four or five Hours; if it turns the Water into a blueish Tincture, it is right and good; but if not, and of a yellow Colour, it is false. It grows in *America*, and is brought from *Mexico*, and other Places of the *Spanish West-Indies*. It is called *Nephriticum*, because it is a Specifick in Diseases of the Reins and Bladder. *Schroder* says, it grows like a Pear-Tree, and is a kind of Ash. It is hot and dry, opens Obstructions of the Liver, Spleen, Reins and Womb; cures all Stoppages of Urine, whether in the Kidneys, Ureters, or Bladder, bringing away Sand, Gravel, Slime, or other tartarous Matter generated in those Parts.

5. Of *Lentisk*, or *Mastick-Wood*.

Pomet. THE *Lentisk* is a Tree which has Leaves like *Myrtle*; after which it bears Flowers, which produce small Berries like Bunches of Grapes, green at first, and blackish afterwards as they ripen, and are attended with a little Husk, or Bag, full of Liquor, from which little flying Insects are generated, as from the Scarlet-Grain, or *Kermes Berry*.

These Trees are very common in *Egypt* and the *Indies*, and particularly in the Isle of *Chio*, where they are industriously cultivated and watch'd, lest when they are cut, such as are not the proper Owners should run away with the *Mastick* that flows from them. They plant a great many of these Trees in *Italy*, and the *Italians* make an Oil of the Berries, after the same manner as they do the Oil of Bay-berries. This is us'd to the same Intentions as the Leaf and the Wood; the last of which they work into Tooth-pickers in *Provence* and *Languedoc*.

Chuse your *Lentisk-Wood* heavy, compact, and firm, that is, tough, or hard to break, grey without, and white within, of an astrin-

gent Taste, and adorn'd with Leaves if possible.

Of *Mastick in Tear*.

The *Mastick in Tear*, so distinguish'd from the *Mastick* which is made of Rosin and Brick-Powder mix'd together, is a resinous Gum which drops during the great Heat, without Incision of the large Branches, and the Trunk of the *Lentisk*; and sometimes likewise, after having been cut, the Tears fall from the Tree into a Receiver set for that Purpose.

Chuse such as is in the largest Tears, and which, being chew'd, becomes like white Wax. The best is that of *Chio*, being larger, and of a more balsamick Taste than that which is brought to us from the *Levant*, by the way of *Marseilles*, which is almost the only sort they have in *France*. *Mastick* is much us'd in Physick, and among other things, to ease the Tooth-ach; and is us'd to several other Purposes, as the making of Varnish &c. The People of the *Levant-Trade* deal with us particularly in mixing their *Mastick* so as the worst lies at the bottom, and the best at Top; but they will not sell the one without the other.

Lentiscus, the *Lentisk*, is a Tree full of Branches, sometimes large, *Lemery.* and sometimes small; which are pliant, flexible, and cover'd with an Ash-colour'd Bark. The Leaves are like those of the *Myrtle*, ranged by Pairs on the Side, and at last terminate with a single Leaf, always green, of a strong Smell, but not at all disagreeable; of a smart, astringent Taste: There grow oftentimes upon the Leaves certain little Bags or Bladders, fill'd with a Liquor. The Flowers grow upon Stalks arising from the Leaves like Grapes, reddish in Colour, tending towards a Purple; from whence arises the Fruit, which are small round Berries, black when they are ripe, and of an acid Taste, in each of which is contain'd a little longish Kernel, hard and black, having a white or green Pith in it. The Wood is brought dry to us, and should be chose fresh, difficult to break, heavy, and not subject to be carious or spongy: It contains a great deal of Oil, Flegm, and likewise essential and fix'd Salt; is astringent and cordial.

cordial, resists Poison, and is excellent to strengthen and preserve the Gums.

The *Resina Lentisci*, or *Mastick*, is produced from this Tree, growing in *Syria*, &c. and brought to us, out of *Turky*, from *Smyrna* and *Aleppo*; but the best is from *Chio*, which is of a light Colour, or white yellow, clear, and almost transparent, free from Dross or Filth, in Grains, Tears, or Drops, and sweet-scented, bright, pure, and friable, being easily reduc'd to Powder: It is a Gum-Resin, said, by some, to come from the same Tree with the *Chio Turpentine*. It is sometimes adulterated with *Frankincense*, and *Resin* of the Pine-Tree; but the Smell will easily discover the Cheat. The green-colour'd, blue, and impure, are not good; and the black, like *Bitumen*, is nought. It is hot and dry, subastringent, and strengthens the Stomach and Head, and is chiefly us'd against Vomitings, Loathing, and Fluxes of the Bowels. It corrects sharp Purges, hinders Vapours arising from the Stomach, which hurt the Head; strengthens the Nerves, cures spitting of Blood, Coughs, Colds, Catarrhs, and a stinking Breath. By chewing, it draws away Phlegm from the Brain, and is us'd in a Plaster to the Temples for the Tooth-ach; in a Cataplasm for the Stomach, and as a Dentifrice for the Teeth. Dose, a Dram to two Drams, in Powder, for the *Fluor Albus*, or *Gonorrhœa*.

6. Of Tamarisk.

Pomet. THE *Tamarisk* is a Tree of a moderate Size, which grows plentifully in *Languedoc*, having very small Leaves; the Fruit like Grapes, of a blackish Colour, which the Dyers use instead of Galls.

Chuse the *Tamarisk* Wood, with the Bark white without and within, of almost an insipid Taste, and without any Smell. They use it for Diseases of the Spleen, as well as the Bark, and make little Casks, Cups, and Dishes of it, which are call'd *Tamarisk* Ware. Those who are troubled with the Spleen, use to fill these little Casks with good Wine, and, after it has stood some Time, drink it for their common Liquor; and likewise they use the Cups and Dishes for the same Purpose,

to drink out of. From this Wood is made a white Crystal Salt, call'd *Tamarisk* Salt, which is appropriated to the Cure of the Spleen.

Tamariscus, *Tamarix major*, five *Arborea Narbonensis*, the greater *Tamarisk*, or *Narbone* Shrub. It is a Tree of a middle Size, whose Bark is rough, grey without, and reddish within: The Leaves are small, long, round, slender, very like those of Cypress, of a pale green Colour; the Flowers growing at the Top of the Branches, dispos'd in Clusters, little, white, and purplish, each one being compos'd of five Leaves, which is succeeded by a lanuginous Fruit, that contains blackish Seed. The Root is thick, woody, and divided into several Branches. This Tree grows chiefly in the hot Countries, as *Dauphiny* and *Languedoc*, near Rivers, and other watry Places. It flowers three Times a Year, in Spring, Summer, and Autumn. All the Parts of *Tamarisk* contain a great deal of Salt and Oil. The Bark, Root, Leaves, and Flowers are all us'd in Physick, to open Obstructions of the Spleen and Mesentery, excite Womens Courses, and to attenuate the tartarous and melancholy Humours.

7. Of Sassafras.

THE *Sassafras*, or *Cinnamon Wood*, or *Panaume* by the *Indians*, is a *Pomet*. Tree very beautiful to the Eye, which grows plentifully along the Coasts of *Florida*, where there are entire Forests of it. This Tree has a very straight Trunk, on the Top of which there are several Branches charg'd with green Leaves resembling those of the Fig, which the Inhabitants make use of to cure Wounds withal.

Chuse your *Sassafras* with the Bark on, thick and rough, as being the best Part of the Tree, as well from its acrid Taste, as its strong aromatick Smell, which considerably exceeds that of the Wood, especially when the Tree is standing. Upon this Account it was, that the first Time the *Spaniards* landed in *Florida*, they cut down a good Number of these Trees, because of their very agreeable Scent, which they might smell two Leagues distance.

Several

Several People prefer the Bark of this Tree to the Trunk and the large Branches, and that not unreasonably, because it is much more fragrant than the Wood, and commonly lighter, reddish without and within, easy to break, of a very strong aromack Smell and Taste. The Bark is likewise better than the Root, and the Root better than the Wood. When they cut or rasp this Wood for Use, the Smell is so strong, that it occasions the Head-ach in those that work in it, and likewise in those that use it; which has much lessen'd its Credit.

Sassafras is a yellowish fragrant Wood, of a Taste something acrid and aromack, almost like that of *Fennil*. It is brought to us in large Morfels, from *Florida*, *New Spain*, &c. where it grows, and where the *Indians* call it the *Palm-Tree*; and the *French* give it the Name of *Sassafras*, by which it is call'd by the *Spaniards* to this Day. The Fruit of this Tree is longish, wrinkled, and hangs by a long Footstalk. The Roots are extended along the Ground, bigger or less, according to the Size of the Tree; which is call'd *Sassafras*, by a Corruption from *Saxifrage*, which signifies that it has the same Virtues with *Saxifrage*, that is to say, it is incisive, penetrating, aperitive, sudorifick, and cardiack; it resists Poison, strengthens the Sight and the Brain, and is good in the Sciatica, Gout, Catarrhs, taken in Decoction or Infusion, by way of a Tea, &c. It is the Opinion of some, that the *Sassafras*, call'd the *Ague-Tree*, is rather a Root than a Wood, brought out of the *West-Indies*, as *New-Spain*, &c. It is of a pleasant Smell, and comes in pretty long Logs, as thick as ordinary Billets. The Bark is red without, and cuts of a Flesh-Colour within. Its Taste is a little sharp, but aromack, abounding with much volatile Salt; from whence it is evident, that it has great Virtues. The smallest is to be chosen for Distillation, and must have its Rind about it, for that it possesses more of the ætherial Oil and volatile Salt and Spirit, than the internal Substance of the Wood. It is a most admirable Sudorifick and Diuretick, never missing of its Effects by those two natural Ways of Evacuation; for if the Sick will not yield to Sweating, it often works off by the Urine, being full of Spirit and Salt, and therefore is a

great Specifick in all the aforementioned Cases; besides which, a strong Tincture, or the Chymical Oil, is commonly given to facilitate the Labour of Women in Travail, and to expel both Birth and After-birth; after which, it strengthens the Parts, and invigorates the Instruments of Generation. Dose three Drops, to ten or twelve.

8. Of Guajacum.

THE *Guac*, *Guajacum*, or *Lignum sanctum*, Holy-Wood, grows plentifully in the *West-Indies*, and is brought to us from thence in large long Billets or Logs, some of which weigh four or five hundred Weight. This Tree is about the Height of our Walnut-Tree, bearing Leaves long or round, according to the different Species, which distinguishes the Tree to be Male or Female. After the Leaves, come Tufts of blue Flowers, in the Shape of Stars, furnish'd each with a little brown Bud, of the Size of a Hazel-Nut, in which is contain'd another little Fruit of an Orange-Colour.

It is the best Sort of Wood we have for Turnery-Ware, especially for making Bowls for the Bowling-Green, Mortars, Pestles, Rowling-pins, &c. The Surgeons, and others, who use it in the Venereal Disease, chuse the Shavings or Raspings to make their *Ptisans* and sudorifick Drinks. There is made of this Wood, a Flegm, a Spirit, and black Oil, which is thick and fetid: and that which remains in the Bottom of the Retort, black as a Coal; but being made into a *Lixivium*, or a Lye, there is extracted thence a Salt. They make also a Resin and Extract of it, as they do of *Jalap*.

The Bark of the Tree is likewise of great Use in the Cure of the aforesaid Disease; in which case, chuse the heaviest, hardest to break, grey without, and whitish within, of a bitter and disagreeable Taste. We have brought from the *Indies* large Pieces of Gum, so like to *Colophony*, or dried Pitch, that it is almost impossible to distinguish it, but by the burning it, whereby it will afford a sweet Scent, when burnt; and, on the contrary, the *Colophony* will smell of Turpentine. It is one of the greatest Sudorificks we know at present.

K

Within

Within some Years, the Surgeons thought that the *French Guajacum* had the same Virtues with the *Indian*. The Error arose from hence, because they bought it from the Turners, who us'd to sell 'em the Sweepings of their Shops, which was mix'd with several kinds of Woods; and had advanc'd the Price from a Penny to eighteen Pence a Pound. But this Wood has nothing of the Properties of the *Guajacum*, but is so well known in *France*, that they make several sorts of Work of it. The best comes from *Spain*, and some Parts of *France*, but chiefly *Champaigne*. A Spirit and black Oil is drawn from this by the Retort; and is rectify'd as that of *Guajacum*.

Guajacum, sive Lignum sanctum, Lemery. is a Tree the Size of a common

Walnut-tree; whose Bark is thick and gummous, and easily parts from the Trunk. Its Wood is hard, firm, weighty, and marbled with brown, red and black; of an acrid Taste: The Leaves are longish, or almost round: The Flowers grow in Clusters, of a pale yellow Colour, hanging upon green Stalks. These are succeeded by a Fruit like small Chestnuts, round, solid, and brown; in which is contained another little Fruit, or Seed, of an Orange Colour. This Tree yields, by Incision, a resinous Gum, of a reddish brown, clean, shining, friable, fragrant, and of an acrid Taste, call'd *Gum Guajacum*.

The Wood, Bark, and Gum, are all us'd in Physick; every one of which contains a great deal of essential as well as fix'd Salt, Oil and Gum. They are esteem'd good Sudorificks, and are given in the *Venercal Disease*, Rheumatisms, Catarrhs, Gouts, Scurvy, Dropsy, and other Diseases, which proceed from Weakness, Obstructions, or Diseases of the *Viscera*. It is a Wood which is white without, and of a greenish yellow, or blueish green sometimes within, the heaviest being the best. It is brought from *Jamaica*, and several Places of the *Spanish Indies*, in Pieces so large as to make Bowls of them, which hold three to 20 Quarts.

9. Of Cedar of Lebanon.

Pomet. THE Cedar of *Lebanon* is a Tree which grows to a prodigious Size, and of a pyramidal Figure, whose

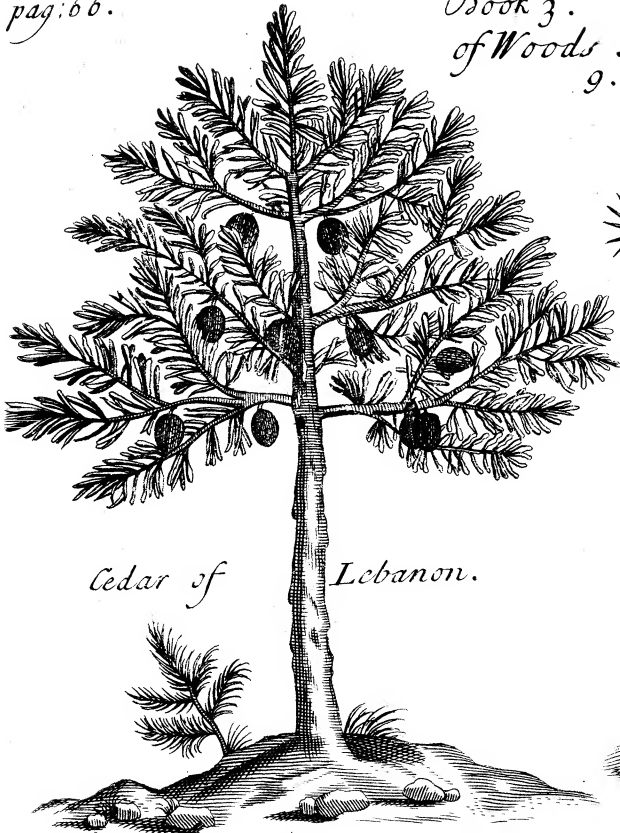
Branches are adorn'd with little, narrow, green Leaves, and the Fruit like our Pine-Apples. It is from the Trunk, and the large Branches of this Tree, that there flows, during the great Heats, without any Incision, a sort of white Refin, very clear and transparent, which we call *Cedar-Gum*, of which the largest Trees yield not less than six Ounces a day. Here are likewise, during the hot Season, little Bladders made by the scorching of the Sun; which being pierc'd, afford a clear white Liquor, like Water, of a strong penetrating Smell, and is of the Turpentine kind: And when the Tree ceases to produce any more of that, being cut, there flows an unctuous Matter, which, drying as it runs down the Tree, is what we call Refin of Cedar, which is very rare in *France*, as well as the other Productions of this Tree. This Refin is of a very fine yellow, bright and transparent, and of a very grateful Odour.

Of the Lesser Cedar.

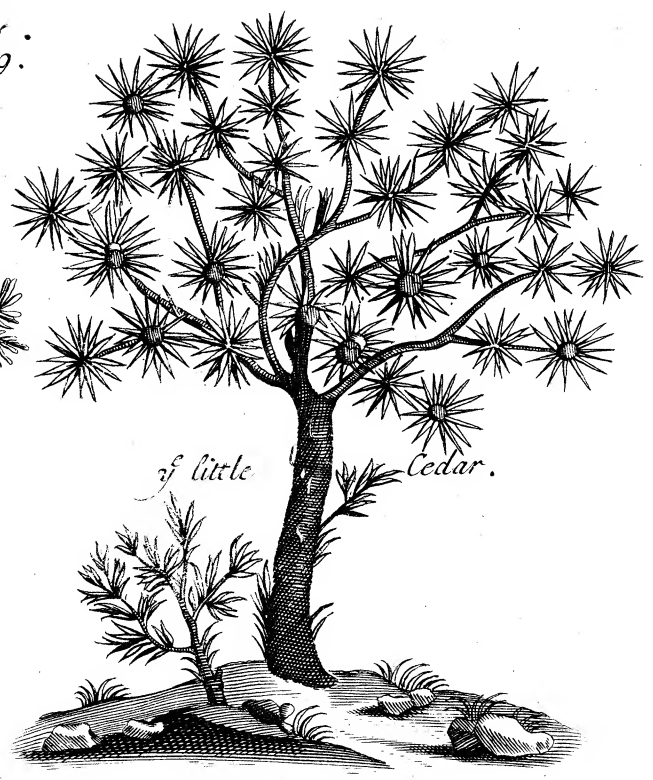
The Lesser Cedar is a Tree of various Sizes, commonly crooked, bearing long sharp-pointed Leaves, always green, especially in Winter; after which come Berries of the Bigness of *Holy-Oak*, or *Knee-Holm*; green at first, but red when they are ripe. The Trunk being cut, there issues forth a very clear transparent Gum, which is the true *Sandarac*; but as we very seldom have it among us, we use the great *Juniper Gum* instead of it, which I shall describe hereafter.

They make of this Wood, by the Assistance of the Retort, a black Oil, which being rectified, is call'd Oil of Cedar; but as these Trees are not very common, we content ourselves with the *great and lesser Juniper*. The true Oil of *Cedar* is admirable for curing Tetter and Scabs in Horses, Cattle, Sheep, and other Beasts: But as these sorts of Oils are too dear, we will institute in their Place clear Oil of Pitch, which, upon that Subject, is call'd Oil of *Cedar*, as you will find in the Chapter of Pitch.

Cedrus Magna, sive Libani Conifera, or, according to *Tournefort*, *Larix Orientalis, fructu rotundiore obtusa*, is a Species of the *Larch Tree*, or a very



Cedar of Lebanon.



of little Cedar.

10.



of Great Juniper.



of Small Juniper.

very large, thick, streight Tree rising Pyramidal, whose Bark is all of a Piece, the Wood very hard and durable, so that it is said never to decay; the Leaves are small, streight and green, dispos'd in Clusters along the Branches, putting forth in Spring-time, and falling at the Approach of Winter; the Flowers and Fruit as before described. There runs a Sort of Gum from the Tree, without Incision, hard, and as it were in Grains like *Mastick*, from whence it frequently is call'd *Mastick-Cedar*: The Wood is us'd in fine Joyners Work, and Turners Ware. The Tear that flows from the Tree, is improperly call'd a Gum, because it is the purest resinous Part of the Tree, and is digestive, detersive, consolidating, strengthening, good against Gangrenes, and proper for Dislocations and Fractures.

There is another Sort of Cedar call'd *Cedrus Baccifera*, the Cedar that bears a Berry, or *Cedrus minor*, the lesser Cedar, of which there are three Kinds; the first is call'd the *Phœnician Cedar*, or *Cedrus Folio Cupressi major fructu flavescente*, the great Cypress-leav'd Cedar, with the yellow Fruit; the Trunk and Branches whereof are crooked and knotty, the Wood reddish, yielding a Smell like the Cypress; the Leaves narrow and sharp-pointed, harder than those of Juniper, and more prickly, green all the Year as the Cypress: The Shells or Husks are made up of several little Scales, at the Bottom of which grow several Bags or membranous Vesicles, full of Dust; the Fruit arises upon the same Foot or Stalks with the Husks, but divided into Cells, which are Berries, that turn yellow when ripe, are a little fleshy, odoriferous and of a grateful Taste; each of them containing three woody Kernels that are hard, hollow on their Backs, and flat on the other Side, each Kernel having an oblong Seed; there comes from the Trunk of the said Tree in the hot Countries, a Gum call'd *Varnish*.

The second Sort is call'd the *Lycian Cedar*, or *Cedrus Folio Cupressi media majoribus baccis*, the middlemost Cypress-leav'd Cedar, with the great Berries; this Tree differs from the former, in that it is lower, and the Berries are much bigger.

The third Sort is call'd, *Cedrus Hispanica procerior Fructu maximo nigro*. The tall Spa-

nish Cedar, with the great black Fruit; it is much higher than the rest, and the Berries a great deal bigger, of a black Colour: These Cedars grow in *Italy, Spain, Provence*, and *Languedoc*; they remain always green and yield Abundance of Oil; the Wood is sudorifick, being used in Decoction: The Berries are proper to strengthen the Stomach, and assist Digestion. The Oil is drawn after the common Method, by a Retort, being black, and passes for the true Oil of Cedar; it is good for all Sorts of Scabs and Deafness, and may be inwardly given in Hysterick Cases. Dose from two Drops to six.

10. Of the great and small Juniper.

THE great Juniper, call'd in *Latin Juniperus*, is a Tree of *Pomet*. different Sizes, according to the different Places where it grows. This Tree is commonly crooked, at a good Height of which spring forth several Branches, furnish'd with little, narrow, prickly Leaves, always green, bearing Berries of the Bigness of a Hazel Nut; which the first Year are green, the second brown, the third black, and which being full ripe, are very Alexipharmick.

By cutting the Trunk, and the largest Branches of this Tree, there flows a Gum call'd *Sandarac*, during the great Heats, which is brought to us from *Africk*, where the Trees grow very high, and in great Quantities. This *Sandarac* is the *Arabian Sandarac* or *Varnish*, which is a great Trade with the *Swedes, Hamburgers* and *Engliss*: This is call'd by some the *Arabian Sandarac*; by others the *Varnish-Gum*, or *Gum Juniper*; and is of more Use to the Artists than in Physick.

Of the small Juniper.

The small Kind of *Juniper* is so common every where, that it needs no Description; but there is made of the fresh and dried Berries, a white and fragrant Oil; as likewise a Water or Spirit, vulgarly known by the Name of *Geneva*, as a Corruption from the *French Word Genevre*: Besides this, there is

a Spirit and Oil drawn from the Wood, by the Retort; which Oil is that mention'd in the preceding Chapter. The Wood is usually burnt as well as the berry, to drive away or expel infectious Air. The *Germans* use the Berry in their *Ragous* and their Treacle; for which Reason an Extract of it is call'd *German Treacle*. This *Juniper* likewise affords some *Sandarac*; but in such small Quantities it is not worth the while to make it.

The great *Juniper* is call'd *Juniper Lemery*. *perus vulgaris celsor & arborefiens*, the common high Juniper-tree, or the *Spanish Juniper*, which is chiefly improv'd in *Africa*. Mr. *Tournefort* distinguishes this Tree from the *Cedar* by its Leaves, which are single and flat, instead of those of the *Cedar*, which more resemble the *Cypress*. It is sudorifick in Decoctions, and fragrant when burnt; to which Purpose it is frequently us'd in the Houses to prevent pettilential Diseases, and other Infections.

The other *Juniper* is a common Shrub, known to every Body, which is full of Oil and essential Salt; it grows plentifully in some Parts of *England*, and in most Parts of *Europe*. The Berries are cephalick, good for the Nerves and Stomach, to provoke Urine and the Terms, to resist Poison, for inveterate Coughs, Wind-Colick, and nephritick Pains, together with the Strangury, Gravel, Sharpness of Urine, and all Obstructions of the urinary Passages, Womb, Liver, or Spleen. In *France* they make Comfits of them, which they call *St. Roch's Comfits*, and carry them in their Pockets, that they may chew two or three of them in a Morning, to prevent Infectious Airs, and make the Breath sweet.

11. Of Brasil Wood.

WE fell to the Dyers several Sorts of red Woods, by Name of *Brasil Wood*. The first that is most esteem'd, and most in Use, is the *Brasil-Wood*, call'd *Farnambuck*, because it is brought from a Place of that Name in *Brasil*. The next is the *Brasil-Wood* of *Japan*, which the *English* and *Dutch* call *Sapan-Wood*, of which there are two Sorts; to wit, the large *Sapan-Wood*, or the great *Brasil-Wood* of *Sapan*, and the less is the *Brasil-Wood* of *Japan*,

or else the *Bimaes* of *Japan*, in that it is much smaller. The third Sort is the *Lamon Brasil*. The fourth is the *Brasil* of *St. Martha*. The fifth, and much the least, is the little *Brasil-Wood* that comes from the *Antilles*. Likewise that which makes so many different Kinds of *Brasil-Wood*, is nothing else but the several Places and Difference of the Soil where the Wood grows.

The Tree from whence this Wood is cut, is very thick and large, having long Branches that bear a vast Quantity of little Leaves, half round at the Top, and which grow more taper towards the Branches, of a fine shining green; at the End of which come Flowers, like the Lilly of the Valley, of a beautiful red, and a sweet Flavour, from whence comes a flat Fruit, in which is enclos'd two flat Almonds, of the same Shape and Figure as the Gourd Seed.

The Natives prepare the Wood, which is brought to us, by cutting it close with the Ground, and branching or lopping of it, and taking away the thickest Parts; so that what remains is only of the Size of a Man's Leg. Chuse the true *Farnambuck-Brasil*, in heavy Billets or Logs, compact, and without Pith, sound and firm; that is to say, without Rottenness; which, after it is shiver'd in Pieces, shews of a reddish Colour, and being chew'd, is of a sweet Taste. But take care that it be not mix'd with other Kinds of *Brasil*; which is easily known, in that all the other Sorts, except the *Japan*, are without Pith; and that of *Lamon* may be distinguish'd from the *Farnambuck*, in that it is in large Billets. Some Persons have assur'd me, that the *Brasil* of *Lamon* comes from *All-Saints-Bay*, where it grows in great Quantities. As to the *Brasil* Chips, the best Account I can give you of it, is to trust to the Honesty of the Merchant with whom you deal. This Wood is us'd among the Dyers, and the Stationers make red Ink thereof. There is a very red Tincture made of the *Farnambuck Brasil*, of which I have been assur'd a *Carmine* is made as from *Cochineal*, but I never try'd it. Likewise there is a liquid Lacker made of this, which the Painters use for Miniature.

This Wood is call'd *Lignum Brasilianum rubrum*. The Tree from *Lemery*, whence it comes, by the *Indians* nam'd *Ibirapitanga*. The Bark is reddish and thorny,

thorny, the Branches are long, and adorn'd with abundance of small Leaves like the Bramble; the Flowers are little and join'd several of them together, very odoriferous, and of a fine red Colour: This Tree grows in the Woods, and the best Kind is the *Farnambuck*, which is brought us from a Town of *Brazil*, of that Name; chuse the heaviest, firmest, foughest, reddest, and that which affords the sweetest Smell.

There are several Sorts of this Wood, the principal Use of all which is for the Dyers; it contains a great deal of Oil, and a little essential Salt, is astringent, and the Tincture proper to strengthen the Stomach, abate a feverish Heat, and remove the Inflammation of the Eyes: The Wood boil'd in Water, with a little Alum, will strike a red Dye into Eggs boil'd with it; and it is us'd to colour Roots of *Althea* to clean the Teeth withal. Some Authors affirm it be of great Use against the *French-Pox*; but I find it seldom or never prescrib'd for that Purpose; for tho' it may be drying, it has nothing of the acrid, hot Quality of the *Guajacum*, neither does it abound with Rosin like that Wood: According to the following Prescription, you will have a Tincture for the dying of Skins, Book-Covers, and the like Things, and to write withal, as red Ink: The Tincture prepared with Water, only serves for dying of Wool, which will not turn Purple, nor suffer an easy Decay. The Tincture is thus made: Take Raspings of *Brazil*, and instead of Water infuse them in Vinegar, or some *Lixivium*, with a little *Gum Arabick* and *Alum*, setting them in a glazed Pot, or Pipkin, for some Hours, you will have a Blood-red Tincture.

12. Of Log-Wood, or Campechy-Wood.

Pomet. **T**HE *Log-Wood*, call'd *Indian-Wood*, *Campechy*, or *Jamaica-Wood*, is the Heart of the Trunk of a large Tree, which grows plentifully in the two Islands aforesaid, and in *Santa Cruce* in *America*, where there are whole Forests of it.

This Tree is bigger or less, according to the Soil that produces it; it rises upon a Trunk,

very thick and straight, cover'd with a thin Bark, that is plain and smooth, of a Silver-grey, or yellowish Colour, of the Height and Figure of the Laurel Tree; the Leaves being held in the Mouth, afford a Scent like the Clove, which has made it oftener been taken for the Tree that bears the Clove, than any other, by reason of the delicate Flavour which has given it the Name of the *Indian* aromatick Laurel. After the Leaves comes a small Fruit, which adheres to the Branch by a little Stalk like the Cubebs, and at the other End a small Crown or Garland; the Fruit is of a dun Colour, the Taste sharp and piquant, notwithstanding it is agreeable enough, tasting like a Clove, which occasions it, for the most Part, to be call'd Clove-Berry; the Fruit being broken, there is found within three small Kernels very near resembling Musk-Seed.

We may observe then that the *Indian-Laurel*, or *Campechy* Tree affords three Sorts of Commodities that are very good and saleable; the first is the Wood, which coming from *Campechy* or *Jamaica*, is carried to *France* by the Way of *England*, and chiefly employs the Dyers, Bed-makers and others, who use it to dye blue and black. The second Commodity this Tree affords is the Leaf, which the *Americans* make use of for Fomentations, to cure the Palsy and other Diseases proceeding from cold Causes. The third is the Fruit which the *French* use in Imitation of the *English*, as being a very strong aromatick, and proper upon several Occasions. As this has been known but of late Years, the *French* have had but little Commerce therein, besides what their Privateers of *St. Maloes* obtain from *England*: The Grocers distinguish it by the Name of Clove-Berry, because of its resemblance to that Spice in Smell and Taste, and therefore it is call'd, with us, All-Spice, as having an Analogy to Cinnamon, Cloves, Mace, and Nutmegs, and is very much used in all Sauces. By the *English* it is call'd *Jamaica-Pepper*, by the *Dutch*, *Amomum*, and by the *French*, the Fruit of the *Indian-Wood*, and vulgarly, tho' improperly, Clove-Berry.

Lignum Indicum, *Campecium*, *Log-Wood* or *Jamaica-Wood*, call'd *Lemery*. also *Braffetto*; comes from *Campechy* and *Jamaica*, where it is chiefly found growing;

found growing; but it grows in several other Parts of the *West-Indies*, in the *Spanish Territories*, the Isles of *Providence*, and the like, where, besides the Wood, the main Produce is the Pepper, or Fruit of the Tree, call'd *Pimento*. What the *English* use comes in great Plenty from *Jamaica*; it is small, round and blackish, almost like common Pepper, but of a more fragrant Smell, and much more aromack Taste; when one chews it in the Mouth it is hot, and the Flavour is as if you had all the other Spices in your Mouth at once, as Cinnamon, Cloves, Mace and Nutmegs, being strong, and of an odoriferous Smell, and without doubt possesses all their several Properties, Qualities and Virtues, though possibly not in so large a Measure, in Respect to its Body; for that it consists of much more earthy Parts than any of them, Cinnamon only excepted; but the Tincture, or Oil of it, being extracted from its terrene or feculent Part, with which it holds but a small Proportion in respect of the four Spices; they are not much inferior to what may be extracted from those generous Druggs: So that in short we must allow this Spice to be stomachick, cephalick, cardiac, uterine, nephritick and arthritick; it is alexipharmick and diuretick, comforts the Brain and nervous Parts; refreshes and strengthens the whole Animal Oeconomy, and restores the natural Functions of Life, where weaken'd or decay'd. It is given in Powder, Decoction or Tincture, against Diseases of the Reins, Liver, Spleen and Womb; and is very profitable in Gout or Stone, eight or ten Drops of the Tincture, made with Spirit of Wine tartariz'd, being taken three or four Times a Day, in any Cordial Water or Wine. The fetid Oil, made by the Retort, is good outwardly applied to Gangrenes, Tooth-Ach, and the like.

13. Of Fustick Wood.

THE Wood we commonly call *Pomet*. by this Name, is the Roots and Trunk of a Shrub, which *Botanists* call *Coggigria* from *Theophrastus*, and *Cotinus* from *Pliny*, which has green Leaves almost round; after which grows a Flower, which at first

is made in the Nature of a Grape, of a dark, green Colour, and which at last opens itself, The Roots and Trunk of this Shrub are what the People of *Provence* and *Italy*, after they have peel'd off the Bark sell for Fustick Wood, which according to its yellow Colour, is suppos'd to be the better Commodity: That of *Provence* excels the *Italian*; but there is a better Sort comes from *Holland* and *England* than either of the other two. The Use of it is for the Dyers, to make a dead Green, and is of some small Account among the Ebonists.

There comes another Sort of yellow Wood from *England* and *Holland*, in thick Billets, which is known by no other Name than that of the yellow Wood, which serves the Dyers and the Ebonists. I know nothing further, touching this yellow Wood, than what I have here related. There comes a certain Wood from *Lorraine* of a greyish Colour, tending something to reddish, hard, and moderately heavy, furnish'd with a Bark that is thin, and a little resembling the Cherry-Tree, which is what we call *Saint Lucy's Wood*; and which, because of its agreeable Scent, is used by the Ebonists. The Choice of this Wood is from its being firm, and without Knots. This Wood is admirable in its own Nature, in that it is not subject to decay; and the older it is, the better it smells. Mr. *Tournefort* assured me, that this Wood was the Stem of the Shrub, which bears the *Mahaleb*, of which I made mention in the first Book of Seeds.

There is brought from the *Indies* a certain greenish Wood in thick Billets, of a very good Smell, by the Name of *Calambourg-Wood*, serving for a great many Sorts of Works, by reason of its sweet Scent, which is proper for several Kinds, as also for inlaying and making of Beds; the Surgeons and Barbers use it as *Rhodium* to boil it in the Water, with which they shave.

The *Dutch* transport two Sorts of Purple or Violet-colour'd Wood in large Billets, which is of no other Use but for Turners Ware. The choice of this Wood is to pick such as is the most veiny, or marbled within and without, the least spotted or decay'd that can be met withal: The largest Violet-Wood is called *Palixandre*-Wood. There is another Sort the *Dutch* transport,

of a reddish Colour, tending to a purple, which the *Dutch* call *Letter-Hout*, and the *French* *China Wood*. - Monsieur *Furetiere* says, that this Wood only comes from the Continent of *Guinea*, which I do not understand, having never seen any. But this is likewise for Turners Ware.

Besides these Sorts of Wood mention'd before, there are three Sorts of *Ebony*, to wit, the black, which the *Dutch* bring from the Island of *St. Maurice*, and the Antients pretend was a Wood of *Aloes*. The second is the red *Ebony*. The third is the green *Ebony*. As to the Tree that produces the black *Ebony*, some pretend that it is the Height and Size of the Oak, and that it is like the Heart of that Wood, except that the Colour is blacker, which is that that gives it the fine Polish or Smoothness, and makes it valued. It is said the Leaves resemble the Laurel, and bear betwixt two Leaves a Fruit like an Acorn, upon a little Stalk. The red *Ebony* is likewise very solid and heavy, being more veined, and of a higher Colour. The green has the same Qualities when freed from the Bark and Sap.

The Use of *Ebony* is for several Kinds of Turners Ware; and because of the great Use it was of formerly, and its Dearness, those who work upon *Ebony* are call'd, at this time, *Ebonists*, who are a very considerable Body of Work-Men. There are those who affirm that the Sap of *Ebony*, infus'd in Water, has a purgative Quality, which will cure the Venereal Disease.

Besides this, there comes from the *Indies* a greyish Wood in large Billets, of an Aniseed Smell; for which Reason it is call'd by the *Ebonists*, or Cabinet-makers, who work in it, *Anise-wood*. There is another Wood fold, with the Seed thereof, named *Anise* of *China*, *Siberia* of the *Philippine* Isles, &c. describ'd under the Head of black Cumin-Seed, and delineated under this of Fustick Wood, by the Name of *China Anise*. There are yet several other Sorts of this Wood, as *Sambarame* Wood, which is a kind of white Sanders. *Molucca-Wood*, which the Natives

of the Country call *Panava*, and many others which I shall forbear to mention, we having little Trade or Sale for them. As to the *Molucca-Wood*, some have assured me that it was the white Cinnamon, which I have no Faith to believe.

This Wood is call'd by Mr. *Tournefort*, *Cotinus Coriaria*, *Coccigria* by *Lemery*. *Theophrastus*, and *Coggigria* by *Pliny*. It is a Shrub of six or seven Foot high, bearing its Branches round, cover'd with a dark red Bark. The Leaves are large, veiny, almost round like the Elm, but much less, smooth, and green. The Flowers grow on the Tops of the Boughs like Grapes, of a dark Colour, inclining to purple. This Shrub grows on the Mountains in *Italy*, *Hungary*, and *Provence*. The Wood is yellow, and us'd by the Dyers and Leather-dressers. The Leaves and Seeds are very astringent, cooling, drying, and vulnerary, and may be us'd in Gargles for Ulcers in the Mouth, Throat, and other Parts, and for the Tooth-Ach. A Salt made of the Ashes of the Wood, makes an excellent Purge with two Drams of Treacle or Mithridate, and ten Grains of the Salt. This may be given three or four Days successively, as the Disease requires; and is said to have such sufficient Virtue to give Relief in the Gout and Rheumatism, as is not to be found in any other Medicine whatsoever, laxative, purgative, or expulsive. Make the Salt thus: Take what Quantity of the Wood you please, burn it to Ashes; and with Fumitory Water, or any other proper Vehicle, make a *Lixivium*, or Lye; filtrate this, and then coagulate it into a Salt, according to the usual Form.

In Surgery you may use the Salt thus: If the Wound or Sore you would dress be open, first cleanse by this Salt, then anoint it twice every Day with the Balsam or Gum of this Wood, made as that of *Guajacum*, till the Cure is perfected. If there be great Pain in any Part of the Body, and nothing to be seen, anoint the Place with this Gum. By this Gum may be cured the Gout, the Palsy, and the *French* Disease.

BOOK the Fourth.

Of BARKS.

BY the Word *Bark* I mean the first, second, or third Covering, or Rind of the Trunk of the Tree which we use, as it is taken naturally from the Vegetable, as the *Cortex*, or *Peruvian Bark*, the Bark of the Mandrake; and such as is cleans'd, or freed from the first or outward Rind, as *Cinnamon*, *Cassia lignea*, and others of the like Nature. But I shall begin my first Chapter with the Tree that bears the Cinnamon, as well because of the great Consumption that is made of that Bark, as from the considerable Virtues with which it is endowed.

I. Of Cinnamon.

WHAT the Antients, as well as the Moderns, call *Cinnamon*, is the middle Bark, or inner Rind of the Branches of a Tree, which grows the Height of a Willow, and whose Leaves are so like the *Folium Indum*, describ'd under the Chapter of Log-Wood, that it is difficult to find the Difference at first Sight, which has given ground to some People to assert, that the *Folium Indum* was the Leaves of a Tree that bore the *Cinnamon*; but if the Leaves are so like, that the Eye cannot readily distinguish, the Palate can do it with Ease, because the Leaves are of so sweet a Taste and Smell, that they surpass, in some Measure, the lesser *Cinnamon*. After the Leaves arise white Flowers, in Form of little Cups, from whence come Berries, of the Figure of an Olive-Stone; each of which adheres to the Branch

by little Stalks, as is represented by the Cut engraved from the Original, which Monsieur *Tournefort* has in his Hands; of which he would have given me, at the same Time, five or six Leaves, of the Shape and Taste here taken notice of.

As to the Place from whence the Cinnamon comes, and the Manner of Barking the Tree, I think it proper to relate what Mr. *Tavernier* has writ of it. The *Cinnamon* comes from the Isle of *Ceylon* in the *East Indies*. The Tree that bears it is very like our Willow, and has three Barks or Rinds; but the second or middlemost Bark is that which is chosen for Use, and the others rejected, as of no Importance. This *Cinnamon* costs the *Dutch* more than can be believed; for the King of *Ceylon*, otherwise call'd King of *Candy*, from the Name of the Capital City, was a sworn Enemy to the *Hollanders*; so that every Year he set a Guard of five or six hundred Men to cover and defend as many Labourers, during the Season, for barking the *Cinnamon-Trees*, and entertain'd these Workmen all the rest of the Year, without reckoning the several Garrisons maintain'd throughout the whole Island. These great Charges enhanc'd much the Price of *Cinnamon*, which grows as before describ'd.

When the Inhabitants of the Island gather their Crop of *Cinnamon*, they free it from the outward Bark, which is brown and rough, then they lay it to dry, and roll it up. By this means it acquires the Figure we see it in, and becomes of a reddish Colour, being

13



of Barks.



being of a sweet Smell, and piquant Taste, aromattick, and very agreeable; therefore chuse such, together with the thinnest Bark, and of the highest or deepest red Colour that you can get, throwing aside such as is thick, or has little Taste or Smell. As to those who buy great Quantities, let them take care that they do not purchase Cinnamon that has had the Oil or Effence drawn from it; which is very difficult to know, unless you taste it Piece by Piece.

Cinnamon is of such great Use, that we have few Drugs which we use so much, as well because of its Virtues, as from its agreeable Taste and Smell. The *Dutch* bring us another Sort of *Cinnamon*, with a large Bark, and very thick, which is that the Antients, from the *Arabs*, call *Drabeni*, and we; unpolish'd, or rough Cinnamon. This Cinnamon is the Bark of the Trunk and large Branches of the Tree bearing the Cinnamon; but as it is a Merchandize, or Commodity of little Value, because there is no Sale for it, being without Taste and Smell, except to the Chandlers and Hawkers; so it is not worth while to speak further of it. The Confectioners, after infusing the fine Cinnamon in warm Water, cover it with Pearl-Sugar, and sell it by the Name of *Milan Cinnamon*. The *French* likewise make little Pastilles of Cinnamon and Sugar, which, with the Mucilage of *Gum-Tragacanth*, they make into a Paste. The *Dutch*, and the Natives of *Ceylon*, make a Confection of fresh Cinnamon taken from the Tree, which is an excellent Sweat-meat to carry to Sea, but very rare to be met withal in these Parts of the World.

2. Of Oil of Cinnamon.

BY means of a proper *Menstruum*, and an *Alembick*, there is made, from fine *Cinnamon* a rich, clear, and reddish Oil, of a very strong piquant Taste, which is almost impossible to bear upon the Tongue; nevertheless, its Taste and agreeable Smell is the Reason that most People covet it. As *Cinnamon* is a Bark, which has very little Oil in it, we are forc'd to have recourse to the *Hollanders*, who deal in this Commodity from the Isle of *Ceylon*, and dispose only of what

they please to the foreign Markets; for which Reason, to avoid being impos'd upon in such a scarce and valuable Commodity, I shall propose a Method to draw the Oil to better Advantage than hitherto has been done. Take what Quantity of *Cinnamon* you please; infuse it twenty four Hours in cold Water, continuing it so long till the Water becomes ting'd of a beautiful red; then put it into a large Copper Alembick, and add thereto a proportionable Quantity of Spirit of Wine, which has the Property to separate the Oil from the Water, and make it rise to the Top of the Vessel; so that one Pound of Cinnamon shall be able to produce near the Quantity of an Ounce of Oil, which is contrary to what Mr. *Lemery* affirms, that four Pounds of good Cinnamon will, with Difficulty, produce six Drams of Oil.

It is rare that the *Hollanders* sell the Oil of *Cinnamon* genuine and natural as it is made, but mix it with Spirit of Wine, well deflegmated, and drawn over upon Salt of Tartar; which has given a Handle to several Chymists and Druggists to do the same; so that those who buy an Ounce of this Oil, have not above half an Ounce for their Money: which is of great Consequence, not only as it is a valuable Commodity, but as it is one of the best Medicines; tho' the Cheat is easy to discover two Ways: The first is, when looking into the Bottle in which it is contain'd, you may observe the Humidity that is within. The second is, by dipping the Point of your Knife in, and, putting it into the Candle; if there is any Mixture of the Spirit of Wine, it will take fire presently; but, on the contrary to that, when it is pure, it will do nothing but smoke. And this pure Oil is what we call, with just Reason, Essence, Quintessence, or Oil of Cinnamon, which is proper to all its Intentions, and excels all other Preparations of the Bark, or the Bark itself, being the greatest Cordial we have; for which Reason, the *Dutch*, the *English*, and the *Germans*, as well as the *French* and *Italians*, use such great Quantities of it.

Besides the Oils at *Montpelier*, there is made a Sort of Cinnamon-Water, in which the Oil plentifully abounds. This is distill'd from white Wine, Rose, or Balm Water, or, instead of Wine, *Aqua Vitæ*, or Spirit of Wine

and Cinnamon; from which, by a Glass Alembick, in a Sand-Heat, or *Balneo*, a muddy Liquor is drawn, like Milk-Water, which, after a little Time, clears up again, and looks like Spring-Water. That which makes the Water look thick when it is new, is the Oil, which is rarify'd in the Water, so that it becomes imperceptible in that Form; but when the Liquor separates, and becomes clear, the Oil precipitates to the Bottom of the Liquor, and remains in Form of a little Ball. This Cinnamon-Water is very useful to give Women in Labour, in that it is an excellent Corroborative, strengthens the Stomach, and assists Evacuations. It is also prevalent in resisting the Malignancy of the Air, and pestilential Vapours, and to re-establish the natural Heat of the animal Life.

Some make Pastilles with Cinnamon-water and Sugar, which formerly were call'd *Oleo-Saccharum*; but those are not so good as what are made with Oil of Cinnamon. At *Montpellier* they make a Syrup of Cinnamon, from a strong Infusion of it and Sugar, brought to a due Consistence, and aromatiz'd with a few Drops of the essential Oil. We sell a Tincture of Cinnamon, whose Virtue is encreas'd by several other Aromatics, as Cloves, Mace, long Pepper, Galangal, Ginger, Coriander, Musk, and Ambergriſe, all grossly powder'd, and put into a Bottle, with Brandy, or Spirit of Wine, and set in the Sun during the hot Days; and this is what we sell by the Name of Essence of red *Hypocras*. There is likewise a white *Hypocras*, made almost the same way, only it is filter'd, to discharge the Colour. They may both of them be sweeten'd, according to the Palate of the Drinker. This is a mighty cordial Dram, in use at *Montpellier*, and the southern Parts of *France*.

3. Of *Cassia lignea*.

THE *Cassia lignea* is also a second Bark of the Trunk and Branches of certain Trees, very like those which produce the Cinnamon. These Trees grow here and there, intermix'd with those Trees that bear the Cinnamon. It is the same as to *Cassia lignea* as it is in Cinnamon, that is, the finer or purer the Bark is, the higher Colour, the sweeter Taste, and the more biting and aro-

matick, the more it is esteem'd; nevertheless there is a great Difference betwixt the one and the other, the *Cassia lignea* leaving a Viscosity in the Mouth, which we do not meet with in the Cinnamon. It is of little or no Use in Physick, only that it enters into the Composition of the great Treacle, and is otherwise impos'd upon the unskilful Buyer for true Cinnamon, tho' a Pound of that be worth more than five of this *Cassia*. There are several Kinds of this Bark; as first, the true or Quill Sort; 2dly, the *Tramboon*, brought from the *East-Indies*. The true is that which is the best for medicinal Uses, and is of the Quill Sort, being of the Thickness of a Goose-Quill, made up into small Bundles, generally ten or fourteen Inches long, of a bright Cinnamon Colour, and much of the Taste, but not so biting upon the Tongue, when chew'd. The *Tramboon* is of three sorts; First, the small, like small Cinnamon, and something of the same Taste, but not so strong, being more earthy and woody, and of a worse Colour. 2dly, The Bundle Sort, bound up in Bundles like Clove-Bark, of a very hot biting Taste, but breaking more blackish within, and, as it were, gummy. 3dly, The thick Sort, almost like the last, in Rolls as thick as a Man's Thigh, which is also strong, but of a very dark Colour. *Cassia lignea* differs from Cinnamon, in that it is weaker, darker colour'd, and, when chew'd in the Mouth, more glutinous, dry, and harsh; whence it appears that the *Cassia lignea* Tree, and that of the Cinnamon, are two different Trees. Tho' the Difference of the Colours in the *Tramboon Cassia* may be suppos'd to arise from its Preparation when taken off the Tree, being dry'd in the Sun; when it is less dry'd than it should be, it is of a paler Colour; and, when too much burnt with the Sun, it grows, as it were, black.

4. Of *White Cinnamon*.

WHITE Cinnamon, to which some give the Name of *White Costus*, *Costus Bark*, *Winter's Bark*, or *Winter's Cinnamon*, because *William Winter* was the first who brought it into *England*; is the Bark of the Trunk and Branches of a Tree, of the Size of a Pear,

Pear-Tree: The Branches are slender, high, straight, and well adorn'd with Leaves like those of the Laurel, but more delicate, softer, of a Sea-Green, and very fine Smell; after which grows a round Fruit, of a beautiful red. This Tree grows plentifully, at St. Domingo in *Guadaloupa*, all about the sandy, mountainous, or rocky Parts; and is met withal in the Isle of St. *Laurence* or *Madagascar*, where it is call'd *Fimpi*.

The white *Costus*, we call white *Cinnamon*, because of the great Conformity it has with the unpolish'd *Cinnamon*, both in Colour and Taste, so as few People can discover the Difference. This is the Bark that some Apothecaries improperly make use of, instead of *Arabian* or *Indian Costus*, of which we made Mention already, and upon that Occasion, give it the Name of *Indian Costus*; which is Nonfense, because the *Indian Costus* is a Root almost unknown to us, and this is a Bark very easy to be known, being of a warm biting Taste, and very aromack, but very little in Use, either in Medicine, or to other Purposes, among any of the *European Nations*. Some have thought this Bark very useful in the Cure of the Scurvy. During the hot Season, there flows from the Trunks of these Trees, a black Gum, fat, and very odouriferous: This is that which some Druggists call *Gum Alouchi*, and oftentimes sell for *Gum Ivy*, or *Bdellium*; which is easy enough to distinguish, in that *Gum Ivy* is very dry, clear, and transparent. *Bdellium* is almost like *Gum-Arabick*, but that it won't dissolve in Water; and this *Gum* is soft and greasy, of different Colours, very dirty and impure.

Cinnamomum Winteranum, rolls up in Pipes like *Cinnamon*, but is much larger and thicker, and of a whitish yellow Colour, very hot, biting, and aromack in Taste, having the Virtues and Relish of most other Spices; and is brought to us out of the *West-Indies*, from *Nevis*, *Antegoa*, *Montserrat*, and other of the adjacent Islands. It is an excellent Cephalick, Stomachick, Cordial, and Hysterick: It attenuates and opens, is sudorifick and alexipharmick, prevails against the Vertigo, Megrim, Head-Ach, Apoplexy, Lethargy, Palsy, and most Diseases of the Head and nervous Parts: It strengthens the Stomach, causes an Appetite and good Digestion, expels Wind, and is singular against the Co-

lick, and griping of the Guts; opens Obstructions of the Bowels, and provokes the Terms: It is a good Cordial, strengthens the Heart, revives the Spirits and fortifies the whole Body, being excellent against Faintings, Swoonings, Sickness at Stomach, Palpitation of the Heart, &c. us'd as the true *Cinnamon*, in Powder, Water, Oil, or Spirit; but in large Quantities, to answer the same Intentions.

5. Of Clove-Cinnamon.

THIS is what we call improperly, *Clove-Wood*: Is the second or inner Bark of the Trunk and Branches of a Tree, whose Leaves come very near those of the Laurel; after which spring round Fruit, of the Size of Gall-Nuts, Chestnut-colour'd, very light, which being broke, you may find within a kind of Kernel: The Fruit has the Smell and Taste of the Clove, which gave Occasion to the antients to call it *Clove* or *Madagascar Nut*, because we meet with great Quantities of those Trees in that Island. The *Clove-Wood*, or rather the Bark, having the Taste and Smell of the Clove, is at present made use of, especially by the Hawkers and Chandlers, who sell it, after it is beat to Powder, for powder'd Cloves, though the Cloves are four or five Times as dear again as this Bark; and so they deceive the ignorant.

As it is the inner Bark that is chiefly in Use, it ought to be pick'd clean from the outward Bark which is usually grey and knotty, and of a dun Colour; which should be thin, of a biting aromack Taste, and as nearly approaching the Clove, both in Smell and Taste, as possible; but take care that what you buy be not mix'd with thick Bark, that has neither Taste nor Smell, as happens too often. This is of little or no Use in Physick; but there are some Persons who make a Tincture of this with *Aqua Vitæ*, or Spirit of Wine, which they sell afterwards, without Punishment, for Tincture or Essence of Cloves: The Confectioners and Perfumers likewise use it instead of Cloves.

Others say, this *Clove-Bark* is brought to us out of *Turkey*, and is almost in the Shape of *Cinnamon*, but comes very near the Co-

lour of Cloves, and has the same Taste and Smell; so that the Fragrancy and Odour of each are scarcely discernible one from the other, except by the Strength, Cloves being much stronger than this Bark. We seldom make Use of it in these Parts of the World; but the Natives of the Country where it grows, esteem it as a Cephalick, and good against the Colick, Wind, Gripings of the Guts, Obstructions of the Courses, &c. taken in Powder from a Dram to two Drams, and in Tincture to an Ounce or two. There is a Water made of it, that the *Hollanders* impose upon us for Clove-Water, tho' at an inconsiderable Price, which is a good Stomachick, and an excellent Vehicle to convey any Cephalick or Anticolick Medicine in.

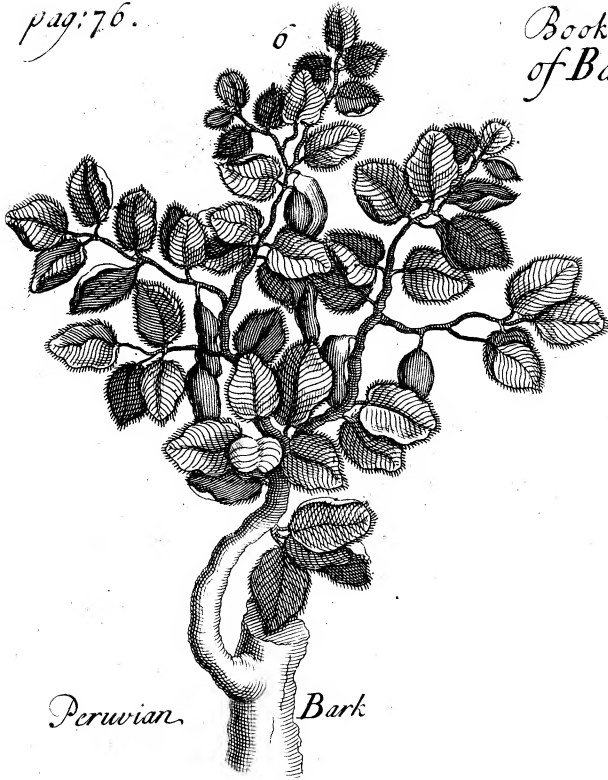
Cinnamomum, seu Cannella, in *Englemery*. Isth *Cinnamon*, is a thin Bark, that is smooth, and roll'd in long Pipes, of a russet Colour, or yellowish, inclining to red; of a sweet Smell and Taste, piquant, fragrant, and very aromack: It is taken from the Branches of a Tree about the Height of our Willow, which bears a Leaf shaped like the *Indian* Leaf we call *Malabathrum*, which smells and tastes like the Cinnamon. The Flowers grow in little Cups, white and odoriferous, succeeded by a Fruit that is of the Shape and Size of a small Olive, green at first, but growing black as it ripens. This Tree grows in the Isle of *Ceylon*, which is in the meridional Part of *India*; and the Wood is without Smell or Taste. The principal Virtue lies in the Bark, which, when fresh, is greyish without, and yellowish within: When it is separated from the Tree, it easily divides into two Barks, and they keep the inner Bark as the most valuable, which they dry in the Sun, and roll it up just as we have it come to us. This has little or no Smell or Taste when taken from the Tree, but acquires both afterwards; therefore take Care of such as has been dry'd in too scorching a Sun, for that will be blackish, a great deal of the volatile and essential Parts being evaporated: On the other Hand, if it has been dry'd in too moist a Season, it will have a grey Colour, and not half its Virtue, because the volatile Salts are not sufficiently exalted: But chuse such as is the finest thin Bark, of the highest Colour, a grateful Smell, and biting Taste. When they

have bark'd the Cinnamon-Tree, if they let it alone for three Years together, it will produce another Bark as good as the former. This Cinnamon yields a great deal of exalted essential Oil and volatile Salt; therefore it is proper for the Head, Brain, and Nerves, to fortify the Vitals, comfort the Heart, assist the Stomach, expel Wind, help Digestion, strengthen the Womb, open Obstructions, and provoke the Terms: It is the greatest Restorative in Nature, and an excellent Antidote against Poison, Plague, and any malignant Diseases. The best Preparation of it is the essential Oil, of which, if genuine, two Drops given upon a Lump of fine Sugar, or in a spirituous Vehicle, will revive the Spirits to a Miracle. It is good in Powder, Decoctions, Tinctures, Cordial-Waters, &c. from half a Dram to a Dram in Powder, and from that to an Ounce or two in Decoction, Tincture, or Water.

That Cinnamon which is ill colour'd, and of no Taste, is worth nothing; therefore in buying it, you ought to bite, chew, and taste every particular Stick, that you be not deceived; for that without Taste, has either been ill got and dry'd, or distill'd in the *Indies*, or elsewhere, and its strong aromack Oil taken from it, which is a great Cheat and Abuse to *European* Buyers. This Cinnamon was the *Cassia lignea* of the *Antients*, and the very same which in some Shops is call'd *Cannella*: The best comes from *Ceylon* aforesaid, and the worst from *Java*. Its Colour it attracts from the Sunbeams; for the Bark being taken off from the Tree, and expos'd to be dry'd in the Sun, that which is not well dry'd is of an Ash Colour, but if too much burnt with the Sun, it is of a blackish, or of a dark brown: If it be well cur'd, it is of a more rosy or pale red, and, by lying together, and Length of Time, changes into the Colour we have it of here.

6. Of the Peruvian Bark.

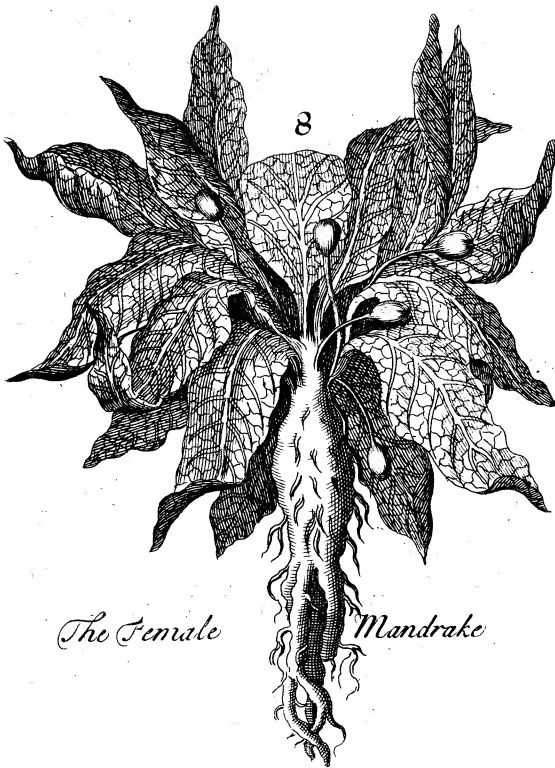
THE *Kinquina*, or *Quina-quina*, *Peruvian* Bark, or the Bark against Fevers, is the external or outward Bark of the Trunk and Branches of several Trees that grow plentifully in *Peru*, from whence this is brought us, by the Way of *Cadix*. But as I have never



Peruvian Bark



The Male Mandrake



The Female Mandrake



The Cork Tree

ver been in *Peru*, to know how to speak exactly of the Trees which produce this Bark, I shall have Recourse to Mr. *Bernard*, Musician in Ordinary to the King, who is a very honest Man, and very curious in the Knowledge of Simples, who had a Description of the *Kinquina* given him from one who liv'd twenty Years in *Portugal*, and had made several Voyages to the *West-Indies*, and to *Peru*.

A true Description of the Peruvian Bark.

The *Kinquina* is the Bark of a Tree that grows in *Peru*, in the Province of *Quitto*, upon the Mountains near the City of *Loxa*. This Tree is almost the Size of a Cherry-Tree; the Leaves round and indented: It bears a long reddish Flower, from whence arises a Kind of Pod, in which is found a Kernel like an Almond, flat and white, cloth'd with a slight Rind: that Bark which comes from the Trees at the Bottom of the Mountains, is thicker, because it receives in more Nourishment from the Earth: It is smooth, of a whitish yellow without, and of a pale brown within. That which comes from Trees on the Top of the Mountains, is abundantly more delicate; it is uneven, browner without, and of an higher Colour within; but the Trees which grow on the Middle of the Mountains, have a Bark yet browner than the other, and more rugged. All these Barks are bitter, but that from the Trees at the Bottom of the Mountains, less than the others.

It follows from hence, that the Bark of the least Virtue, is that which grows in the lowest Places, because it abounds more with earthy and watry Parts, than that which grows high, which for the contrary Reason, is better; but the best of all, is that which grows in the Middle of the Mountains, because it has not too much or too little Nourishment. There is another Kind of this Bark, which comes from the Mountains of *Potosi*, and is browner, more aromack, and bitterer than the former, but abundantly scarcer than any of the rest.

The Conditions or Qualities we ought to observe in the Bark are, that it be heavy, of a firm Substance, sound and dry. Beware of such as is rotten, and will suck in Water presently, and that flies into Dust in break-

ing, or is dirty and unclean, as it happens to be sometimes: But make choice of such as is in little thin Pieces, dark and blackish without, with a little white Moss, or some small Fern-Leaves sticking to it, reddish within, of a bitter and disagreeable Taste; and refuse that which is full of light Chieves when broke, and of a Ruffet Colour; and take care that there be not several Pieces of Wood mix'd with it, which you have more of sometimes than the Bark. This was brought first into *France*, in the Year 1650, by the Cardinal *Lago* a Jesuite, who having brought this from *Peru*, it was had in such Vogue in *France*, as to be sold Weight for Weight at the Price of Gold.

The Use of this Bark is for the Cure of Fevers, especially intermitting, for which Purpose it is given in Substance, Tincture, or Infusion; but as it is a Medicine some People have an utter Aversion to, and as the Use of it is of ill Effect, unless properly applied; it is for this Reason I would advise no Body to make use of it without the Direction of an able Physician. The extraordinary Virtues which the *Spaniards* attribute to this *Kinquina*, for the Cure of Fevers, is the Reason why they give the Tree that bears this Bark, the Name of *Palo de Calenturis*, which signifies the *Fever-Wood*.

Kinakina, Quinquin, Cortex Peruviana. The Peruvian, or Fever- Bark, is call'd so from the Tree that produces it in *Peru*, where it grows, about the Size of our Cherry-Trees; the Leaves are round and indented; the Flower is long, of a reddish Colour, and is succeeded by a Pod, which contains a flat Kind of Kernel that is white, and enclos'd in a very thin Skin. There are two Sorts of it, one cultivated, and the other wild; the cultivated is to be prefer'd much before the other: It contains a great deal of fix'd Salt, and abounds with an Oil; it cures intermitting Fevers best us'd in the Powder, finely sear'd; from a Scruple to two Drams the Dose: There may be likewise an Infusion made of it in Wine or Water for the same Intention. Some say that Bark is best which is of the most lively Colour, and enclining to a dark Cinnamon, most curled up, as coming from the smaller Branches of the Tree, that breaks of a shining

shining Colour, is of a bitter Taste, very astringent; or rough and styptick upon the Tongue, and whitish outwardly: The thick, flat, dark-colour'd, is nothing so good; and if it wants its bitter Taste and Stypticity, it is good for nothing.

It is a Specifick for the curing of all Sorts of intermitting Fevers or Agues; and so certain it is in effecting this Cure, that it seldom fails in a skilful Man's Hand: Besides which, experience tells us, it stops Catarrhs, and all Sorts of Fluxes; but the great Skill of a Physician is to know to whom, when, how to use it, and how long: First, considering the Nature and Quality of this Medicine, it is evident, it ought not to be given to such as have their Courses stopp'd; or to such with whom they seldom flow kindly, but come down pale and sparingly; nor yet to such as are costive in their Bodies, or are commonly troubled with a Constipation of the Bowels; for to such, the Use of this is generally of ill Consequence; nor ought it to be given in continual burning Fevers, because it fixes the morbifick Matter, stops the Pores, and so encreases the Heat, and concentrates it, that it infallibly destroys the Patient. *Secondly*, when it ought to be given, the Persons to whom we allow it to be given, ought to be prepared for the Use of it, by some proper Vomits or Purgatives, such as the *Ipecacuana*, the emetick Wine or Tartar; and purge with *Glauber's Sal Mirabile*, or *Solutivum*, Cream of Tartar, and the like, two or three Times at least, before the Use of the *Cortex*.

Thirdly, You ought to know how it should be given, which is in Powder, from a Scruple, or half a Dram, to a Dram or two; beat it very small and searce it; and about an Hour after the Fit is gone off, put your Quantity of Powder in a Glas of good strong White-Wine or Claret, and drink it off: There are several other Liquors this may be taken in, according to the Fancy of the Patient. In Infusion, take fine Powder of the Bark one Ounce, Claret ten Ounces; infuse four or five Days, shaking it twice a Day, then decant it clear; or two, or sometimes three Days: By which it appears it is given in double the Quantity in Infusion, to that of the Powder, because you take the last in Substance; you may make a Tincture with Bran-

dy, or Spirit of Wine, whereof take half a nounce.

In the fourth Place you ought to consider how long, or often the Bark ought to be taken: Herein you must have regard to the Nature of the Fits, their Strength and Accidents that attend them, as Season, Temperature, Use, &c. In Children, and tender Constitutions, the Dose is to be less, but oftner and longer continued: In *Tertian* Agues, it ought to be used at the End of the Fit, and taken at different Intervals, till the next return. When that is over the Remedy must be repeated in the same Manner, 'till the Expectation of another Fit; what Intervals of Time are to be observed between each Dose, depends on the Quantity of the Powder, or Strength of the Infusion, or Length of the Intermision between each Fit: The stronger the Infusion, the longer Space of Time is to be between each Dose; and if the Intermision of the Fits is long, there is no need of repeating the Doses so often, as if the Intermision was shorter. The whole Quantity, from the first to the last, ought to be about an Ounce and half, or two Ounces; let it be given an Hour or two before Meat, and two or three Hours after; and if it be in Infusion, let the Dose be about four Ounces.

To prevent the return of the Ague, this Method ought to be continued for eight Days, three Times a-Day: First, early in the Morning, then an Hour before Dinner; and at Night, an Hour before Supper; but if the Ague should return again, as it does, if you purge after it, the Use of the Bark must be repeated after the same Manner as before, and it will not fail to produce the desired Effect, which is absolutely to cure the Ague, so that it shall not return any more. But tho' the Ague seems to be perfectly gone, for several Revolutions of Fits, yet it is Necessary to continue the Use of the Remedy, for twelve Days, by which Means you will secure the Patient against any fresh Assault.

It is at the End of the Fit that the Dose is to be given and it must be continued 'till the Cure is perfected; which in a single and double *Tertian*, commonly happens at the second Fit, or at most at the Third: The same is to be understood in a single and double *Quartan*, wherein you have two whole

whole Days to give the Medicine in, without Interruption; in which, as in the Tertian, the Ague is master'd at the third and fourth Fit, if not at the very first, which often happens; and to prevent its Return, the Use of the Bark is to be the longer continued after the Cure; for 'tis the too hasty Discontinuance of it, which causes the Relapse, and puts the Patient to a new trouble of running over the same Course again.

This Medicine ought not to be given at the coming on of the Fit, nor yet during the Time of it; because then, instead of alleviating the Force and Violence of the Ague, it would be apt, by reason of the febrifick Ferment, to excite a fiercer Conflict, and make the Paroxysm the more violent. This Method being observed, the Medicine will intercept the Course of the Disease in its Progress; and being convey'd into the Mass of Blood, by a gentle Motion, it purifies it, and destroys the feverish Ferment, which would produce a new Fit. It ought likewise to be given at several times, to produce, gradually, the wish'd for Effect; and but a small Space of Time ought to be allow'd between each Dose, that the second Dose may begin its Operation, when the Force of the first is over; and the third may begin to act, when the Strength of the second is lost. It is given in like manner two or three Hours before Meals, or two or three Hours after, that thereby its Virtue may the better unite itself with the Chyle in the Stomach, in order to its Entrance into the Mass of Blood, to correct, deurate, and renew it. If this Course is pursued, the cure is in a manner certain and infallible; and it will hardly be possible for the Fit to return again. When the Paroxysm is gentle, in a good Habit, and a good Season of the Year, there is no need of giving it above five or six Days together, once or twice a Day in the Intermission; but when the Paroxysms are strong; oftner, as before directed.

7. Of the Bark of both the Mandrakes, Male and Female.

Pomet. THIS is the Bark of the Root of a Plant that is distinguish'd into two Kinds, Male and Female.

I shall not trouble myself with the useless Accounts that the Antients have given of this Root, but inform you that both sorts are very scarce about *Paris*, so that the Apothecaries are oblig'd to leave out the Leaf of this, as well as that of Navel-wort, in the Composition of the Ointment of Poplar; which is a great Abuse, it being impossible that the Composition can have the Virtues the Author of it design'd; or that are now ascrib'd to it, when the principal Drugs are left out. Besides, the Apothecaries, instead of making this Ointment fresh every Year, keep it two or three, which is contrary to the Opinion of those Authors who treat of this, and say that the cooling Quality of the Ointment *Populeon* holds not above a Year. Those Apothecaries, about *Paris*, who will have this Composition true, are forced to send for it from *Montpellier*; by which means they discharge their Consciences, and serve the Publick faithfully.

The Mandrake, as it grows, bears large green Leaves, trailing or hanging upon the Ground, and the Fruit is very like that of the *Coloquintida*; but I think it needless to speak of the Distinctions betwixt the Male and Female Mandrake, these being treated of by so many Authors; 'tis enough to say we sell nothing but the Bark of the Root, freed from it as clean as possibly we can get it. 'Tis of an Ash-Colour within, and a little more reddish without, of some small Use in Physick, as it is put into some of the *Galenical* Compositions. With the Bark we have sometimes some of the Root brought us cut into Pieces like Jalap, but 'tis of little Use, the Heart of it having no more Virtue than a Chip.

8. Of the Female Mandrake.

THE Bark of this very much resembles, in Size and Colour, the large or gross Cinnamon, except that it is more decay'd on the Out-side, and of the Colour of a broken Nutmeg within, distinguish'd with many little Sparkles. It is very light and spongy, of an almost insipid Taste, and without Smell. They bring it from the *Levant* to *Marseilles*, from whence it comes to us. This is of no other use, than as the *Chouan*, to add
to

to the Perfection of Carmine Colour. A Person assur'd me that it grew about *Paris*, and gave me a Piece of the Bark, which is something like it, but of a bitter Taste, and an earthy Colour, without any Sparkles.

The *Mandrake* is a Plant without a Stem, of which there are two

Lemery. Kinds: First, the *Mandragoras Mas fructu rotundo* of *Tournefort*. The Leaves rise directly from the Root, above a Foot long, broader than a Man's Hand in the Middle, and narrow at both Ends, smooth, of a brownish green Colour, and a disagreeable Smell. Among these rise short Stalks, each of which bear a Flower made like a Bell, divided commonly into five Parts, a little hairy, of a white Colour, inclining to Purple. When the Flower is gone, it is succeeded by a little round Apple as big as a Medlar, fleshy, and of a yellow green Colour: It contains some white Seeds, which bear the Figure of a small Kidney. The Root is long, thick, whitish, slit, or divided into two considerable Branches, set about with short Filaments, slender almost as Hairs; representing, when it is whole, the lower Parts of a Man; from whence it is call'd *Anthropomorpha*, which signifies the Figure of a Man.

The second Sort is call'd the Female *Mandrake*, *Mandragora Fœmina*, or *Mandragora flore subcœruleo purpurascente*, according to *Tournefort*, the *Mandrake* with a bluish purple Flower. It differs from the former, in that the Leaves are smaller, narrower, more folded, blacker, trailing on the Ground, of a strong stinking Smell; and that the Flowers are bluish, inclining to purple; the Fruit less and paler, not form'd like a Pear, as some Authors will have it, but round, scented, full of Juice, and containing very small black Seeds. The Root is about a Foot long, divided into two Branches, brown without, white within, and furnish'd with some Fibres, but nothing like the former. Both Sorts grow in the hot Countries, in the Plains, or mountainous Places; but the last much rarer. They contain in them a great deal of Oil and Flegm, but little Salt. They are narcotick, cooling, stupefying, &c. applied outwardly, and likewise relieve Inflammations of the Eyes, Erysipela's, scrophulous Tumours, and the like. The Apples are cold and moist, but not

so cold as the Root. Being smell'd to, they cause Sleep; so also their Juice taken inwardly, in little Quantities, in a good generous Wine. Some pick them, and so eat them: others eat them with Pepper and hot Spices. The Antidote against their Poison is Worm-wood, Rue, Scordium, Mustard, Origanum, Castor, &c. with Wine and Vinegar. The Antients, by *Mandrake*, intended another Plant, quite different from this.

8. Of the Cork-Tree.

CORK, which the *Latins* call *Suber*, is the outward Bark of the *Pomet*. Trunk of several Trees, which grow plentifully in *Spain*, *Italy*, and *France*, chiefly in *Gascony*, and upon the *Pyrenees*. The Leaves of these Trees are of a moderate Size, green without, and whitish within, indented all round; it bears Acorns like those of the Oak.

When the Inhabitants of those Parts would make a Crop of this Commodity, they take off the Bark of these Trees from the Top to the Bottom, and after put one Piece upon another, to a reasonable Height, in a Pit or Ditch that is full of Water; and having loaded it with Weights to keep it down, they leave it in this Condition for some Time, and when it is swell'd, soak'd and laid straight, they remove it to another Ditch, and so a third and fourth; and after that take it out of the Water to dry: Which being done, it is transported in Bales to different Parts of the World.

Chuse your Cork in fine Boards, all of a Piece, not full of Knots or Chinks, of a moderate Thickness, yellowish without and within, and when it is cut entire. We commonly call this Cork, white Cork of *France*, because this Sort is made in *Guienne*, chiefly about *Bayonne*, from whence almost all that is used in *France* comes. We bring from the same Parts another Kind of Cork, we call *Spanish* Cork, which is likewise according to its usual Quality, light, plain, blackish without, as if it had been burned, yellowish within, and easy to cut, not rotten; but take the thickest Sort you can get, that being much more esteem'd, and dearer than the thin. A Friend of mine assur'd me, that the

Black-

Blackness of the Cork proceeded from nothing else, but that it was steep'd in Sea-Water instead of fresh Water.

The Use of this is too well known to need any farther Account of it; I shall only tell you it is of some small Use in Medicine, as to stop Bleeding, being reduc'd to Powder, or thrown into some astringent Liquor, or to hang about the Neck to dry up Milk in Nurfs Breasts, and the same burn'd, and mix'd with a little fresh Butter and Sugar of Lead, is very proper for the Piles. The Spaniards burn Cork into an extraordinary Black, which is what we call *Spanish-Black*, and us'd for several Sorts of Work.

There are besides a great many Sorts of Barks, in which we have no Trade; as the Bark of the Root and Trunk of the Tree call'd *Macer*, the *Corn*, *Hivorabe*, and others, which we have but little of, and nevertheless are reckon'd good Medicines, as may be seen in *Costus* and other Authors, who have wrote Histories of *Indian* Druggs, to which the Reader may have Recourse; but as many People make use of Mace in Bloody-Fluxes, some fell this Macer in the Room of that, believing it to be the same Thing, tho' there is a vast Difference, this being the Bark of a Tree, but Mace the Covering of the Nutmeg.

Suber Latifolium the broad-leav'd Lemery. Cork, according to *J. Baubin*, Ge-

rard and *Parkinson*, or the *Suber Latifolium perpetuo Virens* of *Tournefort*. The broad-leav'd Cork that is always green, is a Tree of a moderate Height, very much resembling the Oak, but the Trunk is thicker, bearing fewer Boughs, and the Bark is a great deal thicker, very light, spongy, of an ash-colour, tending towards a yellow, which is taken from the Tree first, and afterwards freed from an inner Bark; the Leaves are like the Oak, but much larger and longer, softer, greener on the Outside, sometimes a little indented; the Cups and the Acorns are also like those of the Oak. This Tree grows in the hot Countries, as *Spain*, *Italy*, towards the *Pyrenees*, and in *Gascony*: That which grows in *Spain* is different from those that grow about the *Pyrenees*, and in *Gascony*, in that the Bark is black on the outward Surface, and the Leaves continue green all the Winter, whereas they fall from the others at the End of Autumn.

The Acorn of the Cork is astringent and proper in the Wind Colick; the Dose is from about a Scruple to a Dram; it contains a great deal of Oil and little Salt, but the Bark has less of the Salt, and more of the Oil; it is deterfive and astringent; it stops the Hemorrhoids and Belly-Aches, being beat to Powder, it is proper to heal the Piles, being burn'd and applied outwardly.

BOOK the Fifth.

Of LEAVES.

THE Plants here to be treated of are only those whereof the Leaves are the most useful and essential Part, setting aside those Trees, or Shrubs, in which

the Branches, or Flowers, are the Parts for which they are chiefly considerable: Of this Class are Tobacco, Tea, Maiden-Hair, and such like.

1. Of Dittany of Crete.

THE *Dittany* of *Crete*, or *Candia*, is a Plant of two or three Foot high, whose Leaves are of the Size and Shape of the Nail of a Man's Thumb, white and woolly without and within; after which rise long Flowers in Spikes of a Violet Colour. This little Plant which is very beautiful to look upon, grows plentifully in the Isle of *Candia*, from whence it takes its Name.

Chuse your *Dittany* fresh and new, with fine, white, large, thick, soft, woolly Leaves, of a sweet aromattick Taste, and prefer such as is furnish'd with the deepest blue Flowers you can get, and refuse such as has small Leaves, not hairy, and where you meet with it fuller of little Sticks than Leaves. This *Dittany* is of some little Use in Physick, because of its warm aromattick Quality, and is an Ingredient in the Treacle, and some other Preparations.

Origanum Creticum latifolium to-Lemery. mentosum, seu dictamnus Creticus *Tournefort*, is a Kind of *Origanum*, or a fine white Plant agreeable to the Eye. The Stalks grow about two Foot high, hairy, a little purplish, divided into Branches or Twigs; the Leaves are of the Bigness of the Nail of the Thumb, roundish and pointed, with a small End, cover'd on both Sides with a white Down, odoriferous, and of an acrid pungent Taste: The Flowers grow spike-fashion on the Top of the Branch of a purple Colour; when the Flower is gone, there follow four Seeds that are almost round, enclos'd in a Covering that serves as a Cup to the Flower. The Roots are small and numerous; it grows in *Candia*, on Mount *Ida*, from whence it is brought dry. The Leaves are aperitive, cordial, proper to provoke the Terms in Women, to hasten Labour-Pains, to open and remove Obstructions, to resist Poison, and drive away malignant Humours by Transpiration. It is given in Powder for all the same Purposes. Dose to a Dram, and half an Ounce of the Decoction, or Tincture, in white Wine, for Sickness at the Stomach.

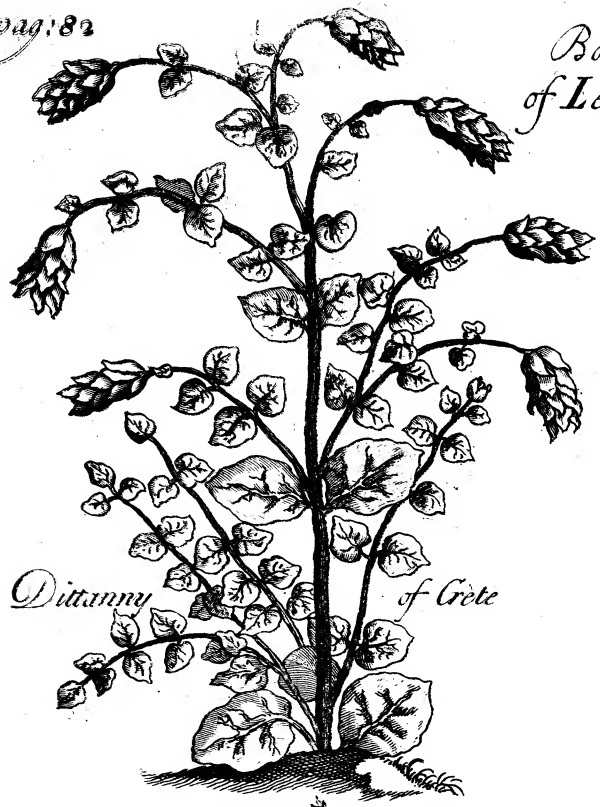
2. Of Poley Mountain.

Poley Mountain, call'd *Polium Montanum*, is a Plant of the Height of half a Foot, having small thick indented Leaves, garnish'd above and below with a fine yellow Down, inclining to a gold Colour, and the Flowers around, which blow in little Stars, of a gold Colour, very fine to look upon. This little Plant grows plentifully upon the Mountains and high Hills about *Provence* and *Languedoc*; it is brought to us in little Bunches with that which grows in the Plains, or along the Lanes, chiefly in sandy and other dry Places, being, notwithstanding, very different from the other, in that the Leaves of this are much less, and more woolly, bitterer, and altogether white: They are used in several Compositions of Treacle, and are counted alexipharmick and cordial.

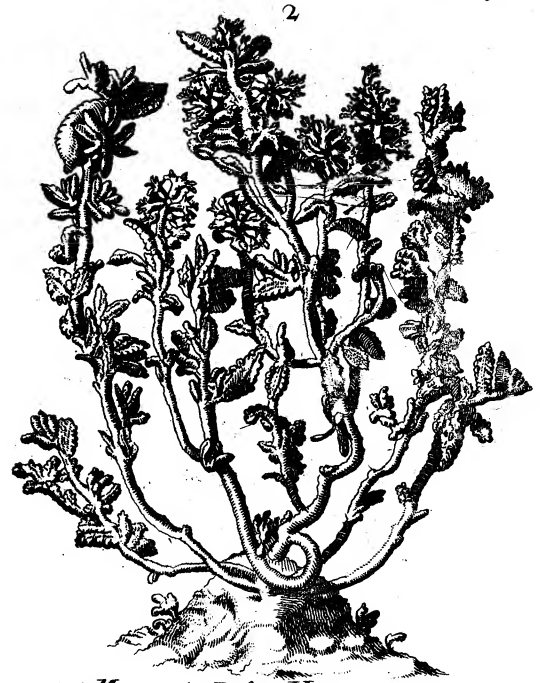
Polium Montanum, or *Poley Mountain*, is a Plant whereof there are two Sorts, one yellow, and the other white. The first is call'd *Polium Montanum luteum*, by *Tournefort*; or *Polium Montanum vulgare*, by *Parkinson*. It is of a small Height, very hairy and woolly, bearing a great many slender, round, hard, woody Stalks; the Leaves are small, oblong, thick, and indented; the Flowers, says Mr. *Tournefort*, are divided into five Leaves, as the *Germander* Flower; when that is dropp'd, small round Seeds follow, that are enclos'd in a Covering, which serves as a Cup to the Flower: This Plant grows on mountainous and rocky Places in *Languedoc*, *Provence*, and *Dauphine*.

The second Sort is call'd *Polium Montanum album*, by *Tournefort*, &c. and the *Poley Mountain* of *Montpellier*, by others. It differs from the former, in that the Stalks lie upon the Ground; the Leaves are less, and not so full of Cotton; the Flowers are whiter, and less scented. This Plant grows not only on the Mountains and hilly Places, but likewise in the sandy dry Plains, by the Road Sides, in *Languedoc* and *Provence*. The yellow is the best and most valued in Physick. This Plant yields a great deal of ex-

alted



Dittany of Crete



Mountain Poley Hair.



Marrium.



The Indian Leaf.

alted Oil and volatile Salt. The Tops are chiefly that which they call in *Latin*, *Coma Polii*, seu *Poliium Comatum*, or Poley-Hair.

They are aperitive, cephalick, sudorifick, vulnerary, provoke Urine and the Terms, resist Putrefaction, fortify the Brain, and expel malignant Vapours from the Head and Heart.

3. Marum, or Herb Mastick.

THE *Marum* is a little Plant that looks pretty to the Eye; the

Leaves are greenish, and very small, of the Shape of Iron Spikes, the Taste very bitter and disagreeable, and therefore it is called *Marum quasi Amarum*, as being bitter. After the Leaves come Flowers in Spikes almost like those of Lavender, which are of a purple Colour, and strong-scented.

This Plant grows plentifully in the Isles of *Hyer*, near *Tboulon*, from whence those who cultivate it have it brought. Chuse it fresh, odoriferous, furnish'd with Flowers, and as green as possible. It is little us'd in Physick, only in the Composition of some Troches, and the like; but as this Plant is scarce, the Apothecaries substitute *Amaracus*, which is what they call sweet *Marjoram*.

Marum is a Plant that has two *Lemery*. Species. The first is call'd *Chamaedrys Maritima incana frutescens foliis lanceolatis*, according to *Tournefort*, which is the hoary *Sea-Shrub* or *Germander*, with spear-pointed Leaves. It is a Sort of *Germander*, or a little Plant which grows like Thyme, with a great many Branches, or little round Twigs, woody and whitish, cover'd with Leaves larger than those of Garden-Thyme, and liker wild Thyme. The Flowers, like those of *Germander*, of a purple Colour. When the Flower is gone, it bears in its place four Seeds that are almost round. The whole Plant has an odoriferous Smell, and a piquant biting Taste. It grows in the hot Countries, but is introduced now into most Gardens.

The second Kind is the *Marum vulgare*; which is a Plant whose Stalks, Branches and Leaves, are like *Marjoram*, but something higher; for this grows near two or three Foot,

being woody, and extending its Branches large; it has some resemblance to the first Sort of *Marum*, but a little larger, whiter, and of a bitter smart Taste. The Flowers and Seeds are like those of Thyme, the Root is woody, and all the Plant of a strong Smell, that is aromatick, and agreeable enough. The best is that which grows in *Spain*, and other hot Countries; it requires a dry stony Ground. Both Sorts abound with Plenty of Oil and volatile Salt, with a little Phlegm. The *Marum* is cephalick, stomachick, sudorifick, vulnerary, and uterine, being good against all cold and moist Diseases of those Parts, Cramps, Convulsions, Burstings, Strangury, and the Bitings of mad Dogs, Serpents, and other venomous Beasts, being a famous Alexipharmick. It is likewise useful in all manner of malignant and pestilential Fevers. Dose from a Dram to two Drains. The Herb is of the Nature of *Origanum* and sweet *Marjoram*, and has all their Virtues. The distill'd Oil may be given from two Drops to six, against cold Head-aches, Megrims, Vertigo's, Apoplexies, Lethargies, Palsies, Weakness of the Nerves, &c.

4. Of the Indian Leaf.

THE *Folium Indum*, *Thamalapatra*, *Malabatrum*, or *Indian Pomel*. Leaf, comes from a large Tree that commonly grows in the *East-Indies*, about *Cambaja*.

This Leaf was not unknown to the Antients, any more than many other Drugs; one having writ that it was found swimming upon several Lakes in the *Indies*: But the most rational Opinion is, that this Leaf comes from a Tree of the Size of the Lemon. After the Leaves, grow small Berries, very like those of Cinnamon, except that they are less. We find Leaves underneath, where there is something in the Nature of a little Bladder, of the Bigness of a Pin's-Head, which some People will have to be the Seed.

I cannot understand for what Reason the Antients made use of this Leaf in the Composition of Treacle, since it is without Smell or Taste; notwithstanding, when it is fresh gather'd, it is said to have both; but I never could find that it had any sensible Quality

lity at all: Therefore, as I am not able to prevent the Use of it, or hinder its Sale, I shall direct you to chuse such as has the fairest Leaf, that is large, green, and as little broke as may be.

Folium Indum, seu Malabathrum, Lemery. or the *Indian Leaf*, is of the Size of one's Hand, like the Lemon-Leaf, of a pale green, smooth, and shining, having three Nerves that run length-ways upon it. It grows upon a Tree that is found in *Cambaja*, from whence it is brought dry'd. Authors advise us to chuse the freshest, having a weak Smell, when bruis'd, like Cloves, and of an aromattick Taste; but none of the Leaves that are brought to us, have any thing of these Virtues, but appear perfectly insipid and tasteless. By a Chymical Distillation, it affords an Oil and a flegmatick Spirit, which contains some little Salt in it. This Leaf is hot and dry; agreeing in Nature and Virtues, as some will have it, with *Spikenard*, or, as others, *Mace*. It is warming, digesting, and strengthening; comforts a cold Stomach, and helps Digestion. The Powder of the same is diuretick, stomachick, alexipharmick, and an Antidote against the Plague. Dose from half a Dram to a Dram. A Tincture of it in Wine or Brandy causes a sweet Breath; bathed on the Eye-lids, it strengthens the Eyes, stops the Rheum, and abates the Inflammation.

5. Of Tea.

THE *Tea*, which the People of *Pomet. China* and *Japan* call *Cha*, or *Tcha*, is the Leaf of a little Shrub, which grows plentifully about *Pekin* and *Nankin* in *China*, and in several Parts of *Japan*, which is reckon'd the best, and, from its excellent Qualities, is call'd the Flower of *Cha*, or *Thee*. It is a slender green Leaf, pointed at one End, and divided at the other, and a little cut or indented round about; and in the Middle of each Leaf there runs a Filament, or String, from whence proceed a Number of little Fibres. In a Word, it is of the Shape of the Figure represented in the Plate, which was taken from the Life. After the Leaves grow several Cods, which are each of the Size of one's Finger's End, of a very particular Shape,

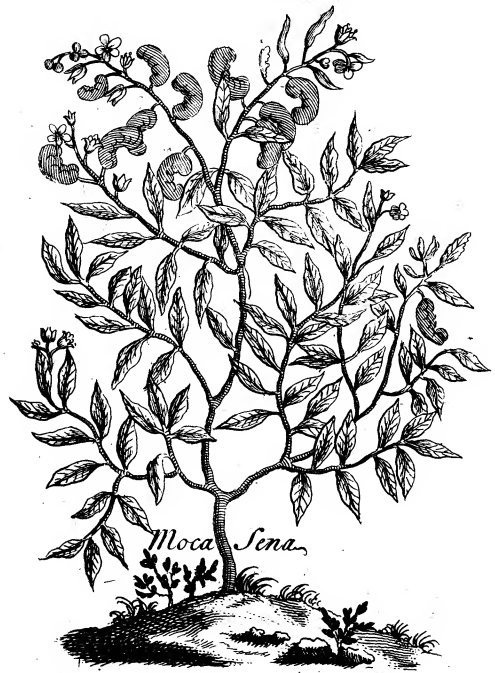
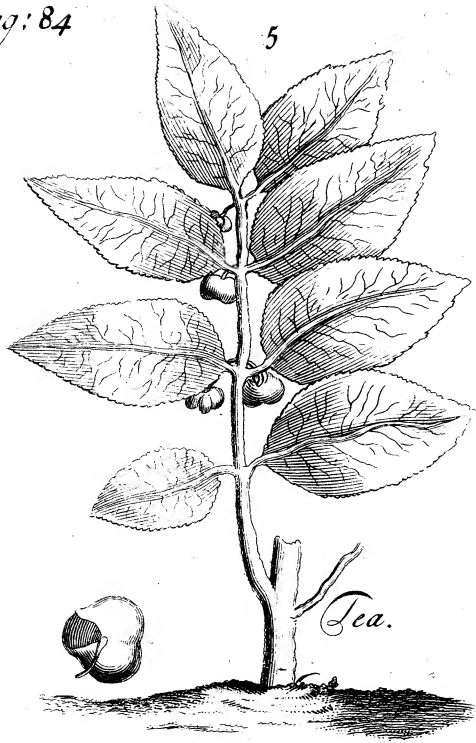
like the *Areca*; in each of which are found two or three Berries, of a Mouse-colour'd Grey without, and within having a white Kernel, very subject to be worm-eaten.

The *Japan Tea* differs not from that of *China*, but only as the Leaves are much smaller, and the Taste and Smell more agreeable. It is usually of a finer clear green. This Variety of Smell, Taste, and Colour has rais'd the Price; so that the *Japan Tea*, as describ'd before, which is the true Sort, of the fine Violet Flavour, will sell for a hundred and fifty, and two hundred Livres a Pound, which is betwixt twelve and fifteen Pounds *Sterling*.

The *Tea* which the *Dutch*, *English*, and other Nations bring us, is in little curl'd or twist'd Leaves, as it is now sold among us, and is thus prepar'd by the Natives of the Country; who, after they have gather'd it, dry it gently before the Fire, and the Leaves, in-drying, curl up just as we now see them. And that the Buyer may not be impos'd upon in this Commodity, which always bears a considerable Price, let him chuse that which is the greenest, the best scented, and which is as little broke into Dust or small Powder as possible, and prefer that, as I have observed, which comes from *Japan*, before that of *China*.

The *Tea* is so much in vogue with the *Eastern* People, that there are very few who do not drink it; and the *French* some Years ago had it in universal Esteem; but since *Coffee* and *Chocolate* have been introduc'd into that Country, there is nothing near the Quantities us'd as were before. I shall say nothing of its Virtues, but refer you to such Authors as have treated particularly of it, especially, the *Sieurs de Four* and *de Blegny*.

I cannot pass over this Article, without saying something of the Flower of *Tea*, which is what the Person who gave me the Leaves, made me at the same Time a Present of, and which is entirely different from the common *Tea*, in that it is of a blackish brown Colour, and more of the Shape of a Flower than a Leaf. And, whether this be a Leaf or a Flower, it is so valu'd by the *Dutch*, that they sell it Weight for Weight with Gold, which is about four Pounds an Ounce; as well by reason of the small Quantity they get of



of it, as from its agreeable Smell and Taste, above all, when it is new; so that it abundantly excels the true *Japan Tea*.

The chief Reason that this is become such a Commodity throughout all *Europe*; is because the *Dutch*, &c. change it for *Sage*, which the *Japanese* and *Chinese* are great Lovers of; which is not without Probability, since we have not a Plant that is endow'd with more Virtues than *Sage*, especially that Sort which, for its singular Goodness is call'd *Sage of Virtue* among us, and is the same with the *French Sage*, or that of *Guernsey* and *Jersey*; and it is certain, that if it grew in *India*, it would be much more valu'd; but because it is common, we make no Account of it, notwithstanding the *Latin* Proverb, *Cur morietur homo, cum crescit salvia in horto*? Why will any body die that has *Sage* in his Garden? So that we need not wonder if the *Chinese*, &c. exchange *Tea* for it.

I have thought it proper, in this Place, to refute the Error into which the Author of one of those Treatises I have mentioned before, has fallen, when he says that this *Tea* produces a blackish Seed, which he saw brought into *France*, and was preserv'd with all the Care imaginable. But this Author was wrong inform'd, since the Fruit, or rather Berry of the *Tea*, as I have said before, is of the Shape of the *Areca*, and the Size of an Acorn cut in two, and is cover'd trebly with a thin Shell, of a Chestnut Colour. This Author observes, that there is a febrifick Syrup made of *Tea*, to which he attributes great Virtues, which those who desire to know farther of may consult his Treatise for.

The, or *Tsia*, is a very little Leaf, *Lemery*. which is brought dry'd from *China*, *Japan*, and *Siam*. It grows upon a small Shrub, from whence it is gathered in the Spring, at which Time it is little and tender. The Figure or Shape of it is oblong, pointed, thin, a little indented on the Sides, of a green Colour. The Flower is compos'd of five white Leaves, form'd like a Rose, and some *Stamina*; which, when gone, is succeeded by a thick Cod, like a Hazel-Nut, of a Chestnut Colour, in which are found two or three Nuts or Berries, which contain in each a little luscious Almond, of an ill Taste. The Root is fibrous, and spreads upon the Surface

of the Earth. This Shrub flourishes equally in rich or poor Ground. The Leaf is more us'd for Pleasure in the Liquor we call *Tea*, than for any medicinal Purpose; but it has a great many good Qualities, for it lightens and refreshes the Spirits, suppresses Vapours, prevents and drives away Drowiness, strengthens the Brain and Heart, hastens Digestion, provokes Urine, cleanses or purifies the Blood, and is proper against the Scurvy.

6. Of Sena.

THE *Sena*, which some call the *Eastern Leaf*, comes from a Plant, *Pomet.* or rather a Shrub of about a Foot high, which grows in several Parts of the *Levant*, and other Places in *Europe*. This Plant, or Shrub, bears Leaves, which are more or less green, and of different Shapes, according to the different Places where they grow. After the Leaves come little Flowers, of a purple Colour, in Form of Stars; and after them, thin flat Pods, in which are contain'd five or six small Seeds, likewise flat, and broad at one End, and sharp at the other; and these Pods are what we call *Sena Husks*.

As *Sena* is a Leaf that is very common among us, from the great Sale of that Commodity, I must inform you, there are three Sorts that are brought to the Market, which we distinguish into *Alexandrian Sena*, *Tripoli Sena*, and *Moca Sena*; and under these three Kinds there are several Sorts, which have no other Difference than from the Places where they are cultivated, tho' the same Species may have a Variety in the Leaves, Flowers, and Fruit, from the Nature of the Soil where it is cultivated. Likewise the finest Sort, and best in Quality, is the *Sena* that comes from the *Levant*, which pays a Tribute to the Grand Seignior, which the *Turks* call *Palte*.

Chuse this *Sena*, with narrow Leaves, of a moderate Size, of the Shape of a Spear-Point, yellowish colour'd, of a strong fragrant Smell, in a manner sweet, the least broke, full of Sticks or dead Leaves, or any other Filth that may be. This Description of *Sena* will undoubtedly appear ridiculous to some People, who have no great Knowledge of it, who will have it that the best

Sena.

Sena has great, broad, green Leaves: But I am satisfy'd that no body that understands *Sena* will contradict what I say; and the rather because I must be allow'd to be a Judge of it, from the vast Quantities of this Drug that have pass'd thro' my Hands; besides, I have by me the entire Plant, from whence the Figure is engrav'd, as it was brought to me from *Aleppo*. The Use of *Sena* is so common, it would be needless for me to say any more, than that it is a very good Purgative.

The third Sort of *Sena* is that of *Tripoli*, which is a green *Sena*, fold sometimes, but very rarely. It comes next in Virtue to the *Alexandrian*, but is usually more churlish, and has very little Smell; notwithstanding which, it is bought up by those who understand little of it.

The third Sort is the *Moca Sena*, which the Hawkers call *Spike Sena*, because the Leaves are long and narrow, that is to say, one half longer than the true *Sena* from the *Levant*. The ill Quality of this *Sena* is sufficient to warn you against the meddling with it at all; for as it is good for nothing, you ought to have nothing to do with it.

As to the *Folliculi*, or *Sena Shells*, their Excellency obliges the Physician to prescribe them more frequently, because they purge very gently, and scarce give any Taste or Smell to the Medicine; otherwise than the Leaf, which gives so bad a Taste, that most People refuse to take that Physick, because of the Offensiveness of *Sena*. Chuse these Shells thick, large, and of a greenish Colour, so that the Seed which is within be plump, well fed, and almost like the Stones of Raisins, only that these are flat. Throw such away as are blackish and dry'd, and not fit for internal Use. You may make an Extract of *Sena*, by means of Fire and Water, and also a Salt, to which some People assign great Virtues, and pretend, by this Way, to make Infusions of *Sena* of greater Force and Efficacy. Some Authors have writ, that there is plenty of *Sena* to be found in *Italy*, especially in *Tuscany*, and about *Genoa*; but I believe that these Kinds of *Sena* are rather the Leaves of that Plant which the Botanists call *Colutea*, or improperly, the wild or bastard *Sena*; an Account of which may be seen at large in Botanick Authors.

There is a Plant found in *France*, which

the Botanists call *Gratiola*, or the Grace of God, which purges more than *Sena*. There is, besides, another Plant, which the Simplers call *Alypon montis Ceti*, because it is found plentifully at *Cette* near *Montpellier*, which purges more than *Sena*. Some call this *Alypon*, white *Turbith*.

Senna, Folium Orientale, or *Sena*, is a little longish Leaf, which is *Lemery*. brought dry'd from several Parts of *Europe*. It grows on a small Shrub, and is of two Kinds. The first is call'd *Senna Alexandrina, five foliis acutis*, the *Alexandrian Sena*, or that with sharp-pointed Leaves, by *Baubine* and *Tournefort*. It carries its woody Stalks a Foot and half or two Foot high; from whence come Leaves that are oblong and narrow, pointed, of a yellowish green. The Flowers are made up of five Leaves each; after which come flat crooked Pods, which some call *Sena Pods*.

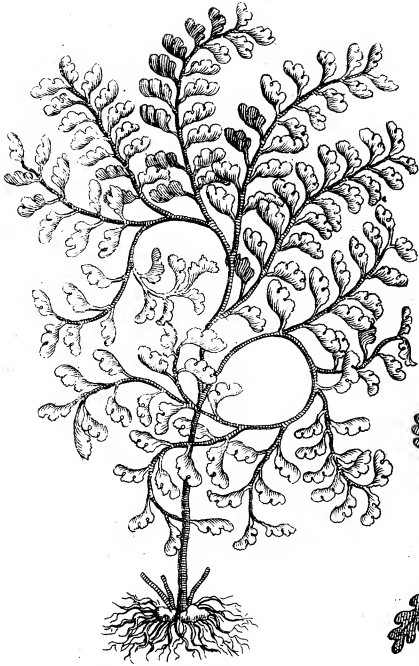
The second Sort is call'd *Senna Italica, five foliis obtusis*, by *Baubine* and *Tournefort*, or *Italian Sena* with blunt Leaves. It differs from the former, in that the Leaves are larger, more nervous, broad, and blunter at the End. We are furnished by the Merchants with three Sorts of *Sena*; the first and second of which are call'd the *Levant Sena*, and the last *Moca Sena*, as *Pomet* has described them. The Leaves and Pods of all the Sorts afford a good deal of Oil and Salt.

Other Accounts of *Sena* distinguish it into true and bastard. The true has three Sorts of it; first, the *Alexandrian*, with sharp-pointed long Leaves, fresh Smell, good Scent, free from Stalks, smaller or narrower than the other Kinds, of a lively Colour: This is the best of all. 2dly. That of *Aleppo*, which is generally fuller of Stalks and Dust, and has a shorter and blunter Leaf than the former. Chuse that which has a good strong Smell, of a pale green Colour, well cleans'd, and not musty: This is next in Goodness to the former. 3dly. The *Indian Sena*, which is much like that of *Aleppo* in Form, is the coarsest Sort of all, and the worst, and becomes something worse and weaker by reason of its long Carriage from the *Indies* hither, being often heated in the Hold of the Ship, where it is spoil'd. The *Bastard Sena* is the *Colutea*, or *Wild Sena*, spoke of before.

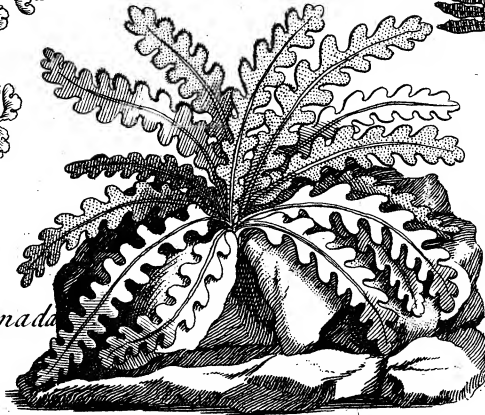
The

Book 5.
of Leaves.

7



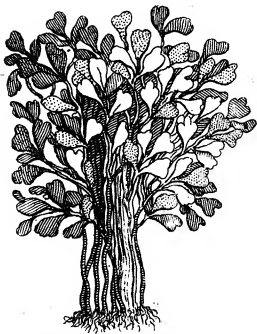
The white Maidenhair of Canada



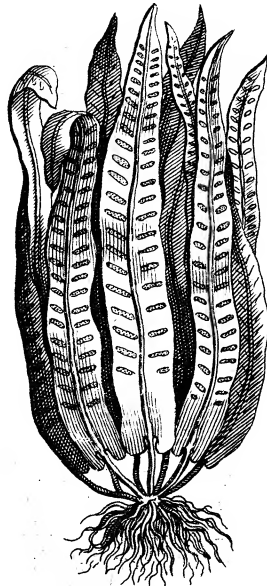
Ceteraich of Shops.



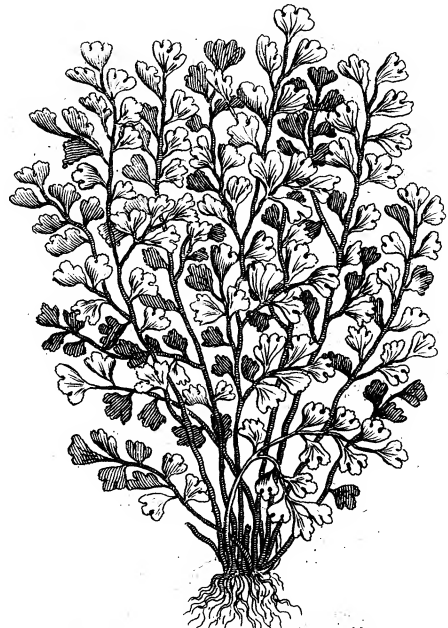
Polipodi



Salvia Vice or Wall Rue.



Scolopendrium.



Maidenhair of Montpellier.

Book 5.
of Leaves.

7

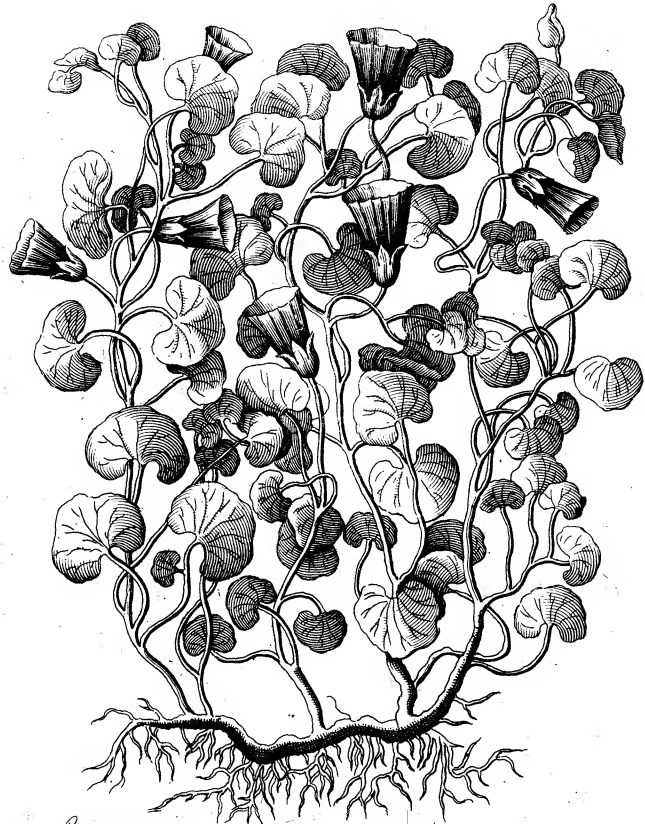


Golden Maidenhair.



Common Maidenhair.

8



Sea Colewort or Bindweed.



Pirola or Sea green.

The Leaf of the best *Sena*, is the most famous and common Purge against ferous Humours and Melancholy, which it discharges from the Head, Stomach, Lungs, Liver, Spleen, Womb, and Joints; but it gripes sometimes, by Reason of the sharp Humours from the Body that join with it, and upon which they act. It is corrected with Cinnamon, Cloves, Galingal, Ginger, &c. It is a general Purger, and may be quicken'd in its Operation by *Sal Gem*, Salt of Tartar, and Tartar Vitriolate: It is seldom given in Powder, but in Infusion or Tincture, from half an Ounce to two Ounces. There are eighteen or twenty Preparations of this Leaf in Use, in the most common Dispensatories, as the *Extract Benedictum*, *Decoctum Senæ Gereonis*, *Quercetan's Cathartick*, and the like.

7. Of Maidenheads.

Pomet. **T**HE *Capillaries*, or *Maidenheads*, are little Plants that are brought entirely whole to us from several Parts; the chief and most esteem'd, are those which come from *Canada*, and are call'd *Maidenhead* of *Canada*, and, by the Botanists, *Adiantum album Canadense*, or the white *Canada Maidenhead*. This grows about a Foot high, with a very slender Stalk, hard and blackish; from whence there arise small Branches bearing green Leaves, pretty deep indented, as may be seen by the Figure: It grows likewise in *Brazil*. This is cultivated with great Care in the King's Garden at *Paris*, as well as other Sorts of exotick Plants, which are brought from several Parts of the World, by Messieurs *Fagon* and *Tournefort*, the King of *France's* principal Physicians.

The other *Capillaries* that are brought from *Canada*, are made use of for Syrups, which are boil'd to a good Consistence and have Ambergrise added to them. There are many Virtues attributed to this Syrup especially for Coughs, Catarrhs, Diseases of the Breast, and to administer to Infants new born, with a little Oil of sweet Almonds. As to the Choice of *Maidenhead*, you must take such as is newest, very green, and the least broke that you can get.

Other *Maidenheads*, and the Syrup thereof, are brought from *Montpellier*, which is made

from a Plant the Botanists call *Adiantum album Monspelienſe*, or the white *Maiden-head* of *Montpellier*. The Syrup of this is different from that made of the *Canada Maidenhead*; which when faithfully prepar'd, ought to be of an Amber-Colour, and a very agreeable Taste. There are other Syrups of *Maidenhead*, and the like, prepar'd in the Southern Parts, as of Black *Maidenhead*, *Venus Hair*, *Scolopendrium*, and *Ceterach*; some add *Polypody*, *Salvia Vitæ*, and *Liquorish*: And all these Plants together make a red Syrup, which they sell as well as the Syrup of *Maidenhead*. Some Apothecaries distil a Water from the *Maidenheads*, and make a white Syrup of it; which sells very well, but has no more Virtue than a plain Dissolution of Sugar. Sometimes there comes from *Montpellier*, a liquid Conserve of *Maidenhead*, but it is very scarce, and little enquir'd for. As to the Preparations of the Syrups, I shall say nothing further; but those who would make the Syrup of *Maidenhead* of *Canada* or *Montpellier*, may consult such Books or Dispensatories as treat of them.

Adiantum, or the true *Maiden-head* of the Shops is a Plant that bears *Lemery*. several slender, blackish Stalks, of about half a Foot, or a Foot high, divided into fine delicate Branches, which are adorn'd with little Leaves, like those of *Coriander*, almost triangular, fragrant, and of an agreeable Taste: This Plant bears no Flowers; its Fruit, according to Mr. *Tournefort's* Observations, is produced in a folding of the End of one of the Leaves; which after it is stretched out, it encloses several spherical Coverings which are caked to the said Foldings, and cannot be discovered but by the Assistance of a Microscope: These *Capsulae*, or Coverings are furnish'd with, as it were, a Purse-String, which by its Contraction opens it; they contain some little Seeds in 'em that are almost round: The Root is fibrous and black; it grows in shady, moist, or stony Places, against Walls, or Sides of Wells and Ditches: The best they have in *France* grows about *Montpellier* in *Languedoc*.

It is brought likewise from *Canada*, *Brazil*, and several other Parts of *America*, where there is a Sort of the dried *Maiden-head*, a great deal larger than ours, called by *C. Baubine*, *Adiantum fruticosum Brasilianum*, and

and is the same with the *Maiden Hair* of *Canada*: The Salk is slender, hard, and of a brownish red, or purple Colour, tending to black, divided into many Branches, which bear little Leaves, almost like the common Sort, long, and indented on one Side, but whole on the other, soft, tender and fragrant; this is what is most valued, as being the best scented of all the *Maiden-Hairs*. It is common in several Parts of *America*, and especially in *Canada*; so that the Traders pack up their Goods with it instead of Hay, when they would send them to a distant Country; 'tis by this means we have such Quantities of it; but it would be much better if they would pack it up in Papers, or Bags, that would preserve the Scent and Virtue of it: Chuse such as is fresh, green, well scented, whole and soft to the Touch. This Plant contains little Phlegm, a good deal of Oil, but not much Salt; they are pectoral, aperitive, and raise the Spittle, sweeten the Blood, and provoke Womens Courses. They give the Name of *Maiden-Hair* to four other Kinds of Plants, which in some Measure resemble the *Adiantum*, and to which they attribute the like Virtues, viz. *Filicula*, *Ceterach*, *Wall-Rue*, and *Polytrichum aureum*, or Golden *Maiden Hair*.

Adiantum Aureum minus, and *Polytrichum mobile vel primum*. This is a little Plant about the Length of a Man's Finger, bearing many Leaves, on Stalks almost as fine as Hair, of a yellowish Colour; the Stalks bear on their Tops little longish Heads, the Roots are very little like small Threads: This Plant grows in the Woods, and against old Walls, Bogs and marshy Places; is a good sudorifick and antipleuritic, being infus'd half a Handful in a Pint of boiling Water, as you make Tea, and used after the same Manner.

Polytrichum vulgare, or the *Polytrichum* of the Shops. Mr. *Tournefort* has discovered with his Microscope, that this Plant, as well as the *Adiantum*, bears a little Seed rould up in the End of the Leaf, which is very small, and almost round, cover'd on the Ribs, with a great many light Particles like Dust; the Roots are very small and stringy; it grows like the other Sort, and is reckoned a good Pectoral, aperitive, and proper for Obstructions of the Liver and Spleen, and in Womens Cases.

Ceterach of the Shops, or the true *Scolopendrium*, is a Kind of *Maiden Hair*, or a Plant whose Leaves resemble in some Manner, Polypody, but they are much less; cut in almost round; their back Parts are reddish, or yellow, hairy, and cover'd with a little scaly Matter: Mr. *Tournefort* has made a Discovery of a Seed, or Berry, in this Plant unknown before: This grows in wild Places in the hot Countries; and those of *Languedoc* call it usually, *Golden Locks*, because of its near Approach to Hair and its golden Colour: It is pectoral, and particularly appropriated to the Diseases of the Spleen, and is a good Aperitive.

8. Of Sea-Colewort or Sea Bind-weed.

Soldanella, or *Convolvulus Maritimus nostras* of Mr. *Tournefort*: The *Pomet*. Sea Bindweed is a small Plant, whose Roots are slender, and the Leaves like those of the *Aristolochia* or Birthwort, except that they are less and something thicker; after which grow Flowers, very much resembling those of the common Bindweed, of a purple Colour. This Plant is brought to us entire from maritime Parts, where it grows in Abundance; 'tis of very little Use in Medicine, tho' very good to purge off dropical Humours; upon which Account M. *Brice Bauderon* mixes it very properly in hydragogick Powders: You need take no further Care about the Choice of it, only that it be new and as little broke as possible. There is another Sort of *Soldanella* we sell, and call *Pyrola*, Sea-Green, or Winter-Green.

The *Pyrola* so call'd, because the Leaves something resemble those of the Pear-Tree, from whence it takes its Name, and Winter-Green, because it preserves its Verdure all Winter, in Spite of the hard Season; is a Plant pretty common in some Places, as *Germany*, and other cold Countries. And as this Plant is something scarce in these Parts, our Herbalists sell to those who fancy this, the common Pear-Seed, and sometimes the young Pear-Leaves for those of the *Pyrola*, which is not easy to detect, because of the great Likeness betwixt the one and the other: 'Tis pretended, the Decoction of this is a very great astringent, and that it is very proper for

for the Cure of Ulcers, and other Maladies of the like Nature.

The *Pyrola* bears several little Stalks, at the End of each of which is a small roundish Leaf of a brownish green; from the Middle of the Leaves arises a Stem, whose Top is adorn'd with many little white Flowers, of a very good Smell, and the whole Plant is not above a Foot, or a Foot and a half high; it delights much in the Northern Countries, which makes it very rare in France and other warm Climates.

Soldanella, *Brassica Marina*, *Sea Lemery*. *Colewort*, or *Convolvulus Maritimus nostras* according to *Tournefort*, *Sea Bindweed*; is a Species of *Bindweed*, or a small Plant that sends forth slender, winding, reddish Stalks, that creep upon the Ground. The Leaves are almost round, smooth, shining, like those of the lesser *Celandine*, but thicker, full of a milky Juice, tied together by long Tails; the Flowers are in Form of a Bell, with the Mouth turn'd upwards, as other Kinds of *Bindweed*, and of a purple Colour: When these are gone, they are succeeded by Fruit that is almost round and membranous, which contains a corner'd Seed, black, or white; the Roots are small and fibrous: The whole Plant has a bitter Taste, and is a little saltish; it grows near the Sea-Side, and flowers in Summer. They dry it entire with the Root, and so it is transported: Chuse such as is fresh or new, as little broke as may be; it yields a great deal of essential Salt and Oil, purges violently, and is used in Dropsies, Palsies, Diseases of the Spleen, Scurvy and Rheumatism: The Dose is from a Scruple to a Dram.

Pyrola, *Winter-Green* or *Sea-Green*, is a Plant of which there are several Kinds. I shall only take Notice of two that have some Use in Physick: The first is call'd *Pyrola nostras vulgaris*, by *Parkinson*, or *Pyrola rotundifolia major*, by *Tournefort*, the greater round-leav'd *Winter-Green*. It bears from the Root five or six Leaves, supported each by a long separate Foot-Stalk, by which they trail upon the Ground; from among these rises an angular Stem, about a Foot high, furnish'd with several little pointed Leaves, which bear on the Top sweet-scented Flowers that are very beautiful to the Eye, compos'd each of many Leaves, in the Shape of

a Rose, of a white Colour, having something rising in the Middle that resembles an Elephant's Snout, which after the Flower is gone becomes an angular Fruit, divided into five Cells, fill'd with a Seed that is as small as Dust; the Root is thin, fibrous and winding, all the Plant of a bitter Taste and very astringent.

The second Sort is call'd *Pyrola minima*, or *Pyrola rotundifolia minor*, by *Tournefort*, the lesser round-leav'd *Winter-Green*. It differs not from the former, but only as it is less in all its Parts. These Plants grow in mountainous Places, in Woods, and Shades about *Geneva*, in *Germany*, *Bohemia*, *Moravia*, and other Northern Countries, from whence the dried Leaves are brought, but they are very scarce at *Paris*: Take Care lest the Merchant, too greedy of Gain, mix young Pear-Tree Leaves with them, which it is not easy to distinguish: They are both very astringent, vulnerary, cooling, proper in Fluxes of the lower Belly, Hemorrhoids, and Inflammations of the Breast, being taken in Infusion or Powder; they are likewise used externally in Plaisters and Ointments, to stop Blood, and to dry up Wounds.

9. Of Anil, whereof Indigo is made.

THE *Indigo* Plant grows about two Foot high, with round Leaves, *Pomet.* of a green, inclining towards brown on the Out-side of the Leaf, and Silver-colour'd underneath, pretty thick; after which come Flowers almost like those of Pease, of a reddish Colour, from whence come long, crooked Pods, resembling a Sickle, or Hook, which enclose a little Seed in them, like the Radish-Seed, of an olive Colour.

When the *Americans* sow this Plant they first dress the Ground, and afterwards make Holes in it about a Foot Distance one from another, and into each Hole they throw ten or twelve Grains of the Seed, which they cover lightly with Earth, and in three or four Days Time this little Seed will be sure to appear, especially in a wet Season; and in two Months, or six Weeks, sometimes this Plant will be ready to cut and make *Indigo* of, as the Sequel will shew; and if it is left in the Ground three Months, it will yield both

the Flower and Seed; but what they fear most, upon Account of this Plant, is a Kind of Caterpillar, which in St. *Christophers* they find sometimes to breed in a Night, and ruin all the promising Hopes of the Inhabitants: They Way they have to remedy this is, immediately to cut down all the Plant, and throw it into a Fat or Tub, with the Caterpillars and all, which yet proves of little or no Use: The other Way to remedy this Misfortune, is to clear a large Space betwixt what they have eat, and what they have not touch'd; this Havock, nevertheless, is not made in *Martinitico*.

Indigo is a Meal or Flower made by Means of Water and Oil-Olive, out of the Leaves of the *Anil*, or *Indigo*-Plant; for there is a Difference betwixt that made of the Leaves, and of the small Branches. The choicest of the former Sort is that which bears the Sur-Name of *Serquisse* from a Village of that Name, which is twenty-four Leagues from *Surat*, and near *Amadabat*. It is made likewise about *Biana* of *Indoua*, and *Cossa* near *Agra*, also in the Kingdom of *Golconda*; the *Dutch* bring it from *Brampour* and *Bengal*, but that is the least valuable of all.

When the Inhabitants of the Places above-nam'd would make the Flower or Meal of *Anil*, in order to make *Indigo* of it; they cut the said Herb with a Sickle, when the Leaves begin to fall upon touching them; and after they have stripp'd them from the Branches, they put 'em into a sufficient Quantity of Water, which is in a Vessel call'd the steeping Fat, there letting them infuse thirty-six Hours; after which they turn the Cock in order to let the Water run off, which is ting'd of a green Colour, inclining towards blue, into a Vessel of the Nature of a Churn, which is work'd by the Labour of several Men by Means of a Rouler, or Turner of Wood; the Ends of which run pointed, and are hoop'd with Iron; this they work 'till the said Water abounds with a Lather, then they cast into it a little Oil-Olive; to wit, one Pound into such a Quantity of the Liquor as will yield seventy Pounds of *Indigo*, which is the Quantity now sold in one Barrel, and as soon as the said Oil is thrown in, the Lather separates into two Parts, so that you may observe a Quantity curdled, as Milk is when ready to break; then they

cease churning, and let it stand to settle; which when it has done some Time, they open the Pipe or Cock of the Churn, in order to let the Water clear off, that the Meal which is subsided may remain behind, at the Bottom of the Vessel, like Clay or Lees of Wine: Having decanted it thus, they put it into straining Bags of Linen, to separate what Water was left, then they convey it into Chests or Boxes that are shallow, to dry it; and being dried, it is what we call *Indigo*, and that Name is given to this, in all Appearance, because it comes from *India*. Sometimes the *Indians* make their *Indigo* in a Sort of Ponds, made in Form of a Basin, which they prepare with Lime, that becomes of an equal Hardness almost to Marble.

We have no Sort of Commodity liable to more various Ways of being sophisticated, or counterfeited, than *Indigo*, when it bears a good Price; which if I should attempt to relate, it would make a small Volume of itself; but I do not think it necessary, since it is easy to distinguish that which is good from the bad, by what I shall tell you.

We have another Sort of this *Indigo*, call'd *Agra Indigo*, which is almost as good as the *Serquisse*; but as the Form does not fit, or recommend it to all the Word, it is only in Use with the Dyers: There come to us, beside this, several other Sorts of *Indigo*, which have no other Difference, than as to the Places where they are made, and according to the different Seasons and Age of the Herb from which they come; for the *Indigo* made of the Plant of the first gathering is better than that of the second, and the second better than the third; and the younger the Leaf is which is used, the finer the *Indigo* is, being of a more lively, shining, violet Colour.

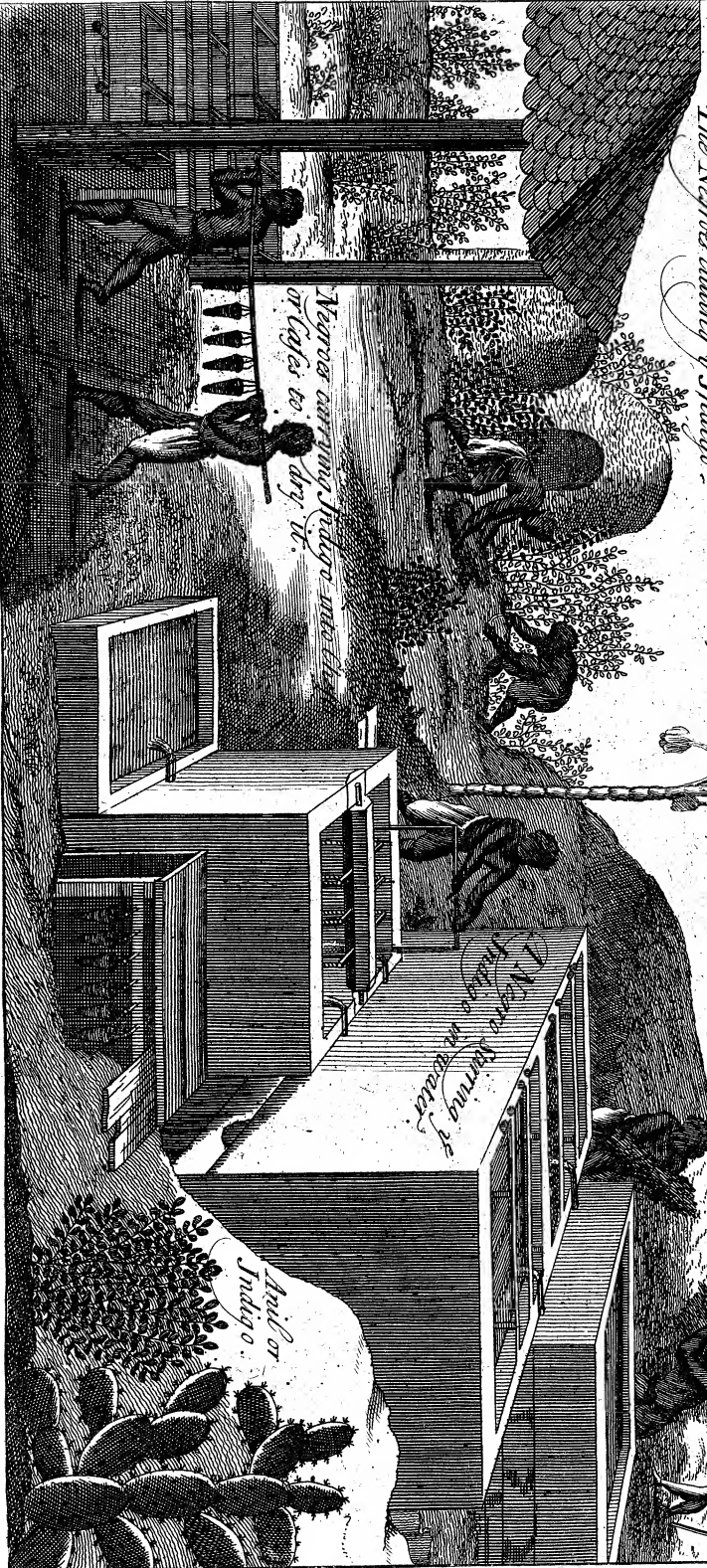
The Use of the *Indigo* is for the Dyers and the Whiteners, serving the last to put among their Linen to whiten it: The Painters use it to grind with White, for painting in Blue; for if it is us'd alone, and neat, it turns black, and ground with yellow it makes a green. Some Confectioners and Apothecaries very preposterously employ this to colour Sugars to make Conserves with, and Syrup of Violets, by adding some Orrice, which they sell at an under Rate, and cheat honest People.

The Negroes cutting & Indigo -

10

The Negroes throwing & Indigo into of water

Overseer of the Negroes



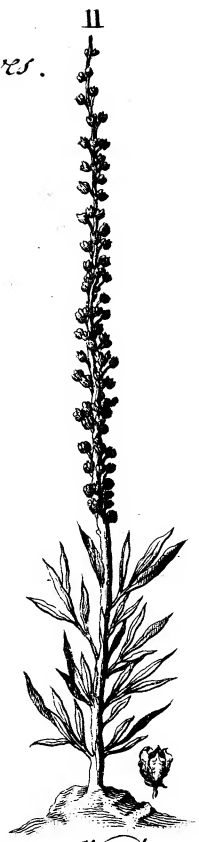
*Negroes carrying Indigo into the
or Ladies to*

*The Negroes throwing &
Indigo in water*

*Amil or
Indigo*



Woad or dyers-herb.



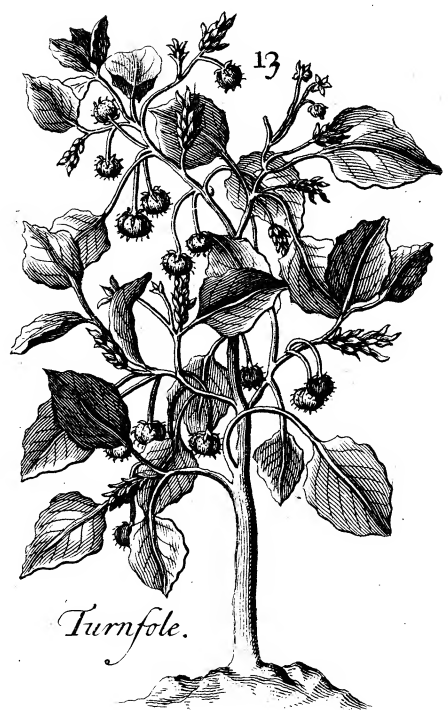
Woad.



Woad.



Curriers Sumach.



Turnsole.

13

10. Of the other Sort of Indigo.

THIS *Indigo* is also the Meal, or Flower, made from the *Anil*, which differs not from the former, but as it is made of the whole Plant, Stalk and Leaf; the best of which Kind is that which bears the Name of *Gatimalo*, which comes from the *East-Indies*, and whose Excellencies are discover'd in its being lighter, less hard, and in boiling, that it swims upon the Water.

The second sort of this *Indigo* is that of *St. Domingo*, which differs not from the *Gatimalo*, only that it is not of so lively a Colour. The third is the *Jamaica Indigo*, that is brought to *England*. The fourth is that of the *Leeward Isles*, and all the sorts, which are better or worse according as they are more or less neat and pure; for those who make this, mix it maliciously sometimes with Sand and Dirt; but the Cheat is easy to discover, in that the *Indigo*, which is fine and neat, will burn like Wax; and when the *Indigo* is burnt, the Earth or Sand will be left behind. M. *Tavernier* observes, in his Book, Page 242. that the *Indigo* Dust is so subtle, and so penetrating, that those who sift it are obliged to have their Face cover'd, and drink Whey very often: And to confirm this, and make good the Penetration of the *Indigo*-Powder, he says, having put several Times an Egg, in the Morning, near the Sifters of *Indigo*, and at Night breaking it, the Inside should be all stain'd thro' with a blue Colour. This is us'd only by the Dyers.

Anil, Gili, sine Nil, herba rorisma-Lemery. rini facie, or *Indigo*-Herb resembling *Rosemary*, is a Plant of *Brazil*, about two Foot high, the Leaves round and pretty thick. The Flowers are like those of *Pease*, reddish, and succeeded by long crooked Pods, containing in them Seeds like *Radish*-Seed, of an Olive Colour. All the Plant has a bitter piquant Taste. Of this they make *Indigo* [as describ'd by *Pomet* before.] The Leaf is reckon'd to be vulnerary, and proper to deterge and cleanse old Ulcers, being applied to the Part in Powder; likewise there may be a Frontal made of it to assuage and abate Pains in the Head.

The *Indicum*, so call'd, because this is prepared only in the *East-Indies*, is a blue Flower, or Meal, brought from thence, made only of the Leaves of the *Anil*, by the Means of Water, and a little Oil-Olive, [as taught before.] There are several Kinds of it, but the best is that of *Serquisse*, call'd so from a Village of that Name, where it is made. The next is that of *Agra*, made in shape of a Chestnut, from whence it is called so.

There is a Meal made of *Anil*, that is only distinguished from the *Indicum* spoke of before, as being made out of the entire Plant. Chuse such of this as is the lightest, neat, and clean, moderately hard, and of a fine bright Colour, and that will swim upon the Water, and flame in the Fire till it is almost all consumed.

11. Of Woad, or Dyers Herb, &c.

THERE is cultivated in *France*, especially near *Thoulouse*, a Plant *Pomet*. which is call'd, in *Latin*, *Isatis*, or *Woad*; and by the *French*, *Pastel*, *Gresde* and *Serech*. They make a Merchandize of this Plant, which bears some Resemblance or Affinity to *Indigo*, not with regard to the Plant from which 'tis taken, but as it is made from the Leaves prepared into that which is call'd *Pastel*, as the *Indigo* is made from *Anil*.

This *Pastel*, or first Kind of *Woad*, is very heavy, and like unto Earth, when fit for the Dyers Use. For making of it, the young Leaves are cut at the end of *February*, or at the beginning of *March*, and then put into Places to heat and rot, or to consume 'em away, by moistening them with Water, and stirring them twice a Week; and when the Herb is reduc'd in a manner to Earth, and is become dried, it is dispos'd or rang'd along with Leaves of the same Plant from whence it was taken; and after having prepared it in the like manner again, it is repeated by mixing, as at the first Time: so that from the End of *February*, to that of *September*, they cut the *Woad* four Times, which makes it appear in that Nature, and fills it so with Dirt; for the *Pastel* made of the first Cutting is much more efficacious than that cut in *September*, as well because it is mixed, as that the Leaves are much harder, and fuller

ler of Sand and Gravel, occasion'd by the Winds and Rain, which last during that Season.

The Dyers that spend this Commodity, dry the Drofs or Scum of it; after which it bears some Resemblance in Colour to *Indigo*, and is also sold by the Name of *Indian Flower*, or *Indigo*; which has given Occasion to Authors that understood not the Commodity, to take this for true *Indigo*, as *Dalechamp* and others did. One may see by the present Description, how it is possible of the young or first Leaves of this kind of *Wood* to make a blue Flower, or Meal, like the *Indigo*. There is another *Pastel* comes from *Picardy*, made of an entire Plant, which the Dyers call *Yellow*, and the *Latins*, *Luteola*. We make another Sort, that comes from *Provence*, for the Use of the Dyers, the Leaves and Stalk whereof are green; which is what the *French* call *Serech*, from the *Arabian* Word *Sereth*. This Plant is likewise call'd *Yellow Herb*, or *Small Broom*; and by the Inhabitants of the *Canaries*, from whence it first came, *Orisfel*.

All the other Plants already mention'd, we bring from *Portugal*, especially, from a Place or Sea-Port call'd *Porto*. We have a certain Commodity, which is nothing else but Leaves and young Branches of a Tree we call, after the *Arabs*, *Sumach*, beat or pounded; and is the same that is often called by the Leather-Dressers *Yellow*. This Commodity is in great use among the Tanners, Dyers, and Curriers, to dye green with.

The best *Sumach* for dying is that which is greenish and New. This Commodity obtains the Name of *Port of Port*, from the Place it comes from, being *Porto*. There is another *Sumach*, of great Use among the Dyers, made of the pounded Leaves, which serves instead of the Fruit, which, in the Berry, is of a very fine Red, and a sharpish Taste; likewise a pleasant Cure for the Flux of the Belly, being boil'd in Water with the Pomegranate Bark. The Fruit, ston'd and dried, are what we call *Sumach Berries*, and have the same physical Virtues, except that they are not so strong, because of their being dried. They will not keep good above a Year, because their Sharpness and Astringency are then lost.

12. Of the Dutch Turnsole in Paste and in the Cake.

THE *Dutch Turnsole* is a Paste made with the Fruit or Berry of a Plant which the Botanists call *Heliotropium Tricoccum*, or *Turnsole*, which grows plentifully in several Parts of *Holland*, of *Perelle*, or a dry'd Earth that is brought from *Auvergne* in *France*, Lime, and Urine: And after having mix'd these four Drugs together, they are put into little Barrels that hold about thirty Pounds. Those that make the *Turnsole* in Paste, do not sell it altogether soft, but in Form of square Cakes of Bread, which, after it is dry'd, is what we call *Turnsole* in the Cake, and as it is mix'd in the Paste when new made, so it is sold. But the *Dutch*, and others, seldom fail to throw in a Quantity of Sand, as well to encrease the Price, as to make it go off well; and that's the Reason that the *Turnsole* in Cake, or that which is dry'd, is reckon'd better than the soft. Besides, this kind of *Turnsole* in Cake, being well dried, strikes a blue, upon the Violet Tinge, and being rubb'd upon Paper, dyes it blue, being much better than that which makes it red.

13. Of Turnsole in Rags.

THIS *Turnsole* is so call'd, because it is such as gives a Tincture or Dye to Rags that are dipp'd in it. What is commonly sold in the Shops, is nothing but old Rags, or old Linen, dipp'd either in the Juice of the blood-red Grape, or that of Mulberries, and so dried in the Sun: But this is a Cheat, or an Abuse of the first Design; for the true *Turnsole* ought to be dipp'd in the Juice of the Berry of the Herb call'd *Turnsole*. This Plant which we call *Turnsole*, the *Greeks* call *Heliotropion*, the Sun Follower, because its Flower always turns to the Sun. It bears Berries always three set together, not much unlike the *Palma Christi*; whence it is call'd by *Pliny*, *Heliotropium Tricoccum*, the *Turnsole* with three Berries, which, when they are at their full Maturity, have within them, between the outward Skin and the Kernel or Seed, a certain Juice, or Moisture, which being

ing rubb'd upon Paper or Cloth, at first appears of a fresh and lively green colour, but presently changes into a kind of bluish Purple upon the Paper or Cloth; and the same Cloth afterwards wet in Water or white Wine and wrung forth, will strike the said Water or Wine into a red or Claret-wine Colour. And these are the Rags of Cloth which are the true *Turnsole*, and ought to be sold in the Druggists Shops, wherewith People colour Gellies, Conerves, Tinctures, &c. as they please. But the chief Use of these stain'd Rags is to colour Gellies or Tarts, or such like Things, which are frequent at Feasts and Entertainments; as also to colour all sorts of Tinctures, Spirits, and the like, that are void of Colour.

Of the Turnsole Rags from Lyons.

That of *Lyons* is compos'd as the other, of *Perelle*, quick Lime, and Urine, to which some add a Tincture of *Brasil Wood*, in order to give it a finer Gloss, and to make it of a deeper red. This is made frequently about *Lyons* and in *Auvergne*, it being much deeper colour'd; so that, when rubb'd upon Paper, the colour is very lively.

The *Isatis domestica*, sive *Glastum*, *Lemery*. or the *Latifolium* of *Tournefort*, in *English*, the *broad leav'd Wood*, or *Dyers Weed*, is a Plant that bears its Stalks three Foot high, as thick as the little Finger, round, hard, smooth, reddish, divided towards the top into abundance of Branches, cloth'd with a great number of Leaves dispos'd without Order, that are oblong and large as those of *Hounds-tongue*, without Hair, of a deep green Colour, and sometimes tending to a Sea-green. The Branches are furnished with a great many little Flowers compos'd of four yellow Leaves like a Cross, ty'd by a slender Foot or Stalk. When the Flowers are gone there arise in their Places little blackish Fruit, divided into Tongues, flat on the Sides containing each two oblong Seeds. The Root is about a Foot and a half or two Foot long, an Inch thick at the Top, and growing smaller by degrees downwards, white and woody. They are cultivated in the hot Countries, but particularly in *Languedoc*, near *Thoulouse*. The Taste is bitter and astringent. It yields abundance of Oil, and fixed Salt.

There is made of this Plant a dry'd Paste, in the Nature of an Extract, which is call'd *Pastel*, or *Indian Flower*, which they sometimes colour with *Indigo*, for the Dyers. This Plant is vulnerary, drying, astringent. Some People apply it to the Wrist, after stamping it, to cure an Ague or intermitting Fever, in the Shaking or cold Fit.

The *Rbus*, or *Sumach*, is a Shurb which grows sometimes the Height of a Tree. The Leaves are longish, large, indented on their Sides, and reddish. The Flowers dispos'd in Bunches, of a white Colour, each of which makes a little Rose of several Leaves; which being gone, there succeeds a flat *Capfula*, or Husk, that is almost oval, membranous, and red, containing in it a Seed of the same Figure, which resembles in some degree a *Lentil*, of a reddish Colour. The Fruit has an acid astringent Taste. This *Sumach* grows in stony Places, and is used sometimes instead of Salt to season Provisions with; from whence it is call'd *Rbus culinaria*, or *Kitchen Sumach*. The Tanners make use of the Leaves to tan Skins, thence it is call'd *Rbus Coriaria*, Tanners or Carriers *Sumach*. The Leaves and Fruit are both us'd in Physick; they are very astringent, proper in the Dyfentery, menstrual Courses, and Hemorrhoids, to stop Gonorrhoea's, and the like, being us'd in a Decoction, or in Powder.

Turnesol, or *Turnsole* in Rags, is made of Linen Cloth died at *Constantinople*, with *Cochineal* and some Acids. The Cotton *Turnsole*, call'd *Portugal* or *Spanish Wool*, is made from Cotton that is flattened the Size of a Crown, and dyed in *Spain* or *Portugal*, with *Mastich Cochineal*. Both Sorts are made use of to colour Liquors, Fruits, and Gellies.

There is another kind of *Turnsole* that is made with Rags dipp'd in a red Tincture, prepared with the Juice of the Berry, and a little acid Liquor. It comes from *Holland*, *Languedoc*, &c. and is us'd to tinge Wines of a red Colour.

The *Turnsole* in Paste, or in Cake, or *Stone Turnsole*, call'd likewise *Orseil*, is a dry'd Paste made up with the Fruit *Perelle*, quick Lime and Urine; the colour of the Paste will be blue. The Dyers use that which comes from *Holland*, and they make it at *Lyons*, but it is not so good.

14. Of Tobacco.

Pomet. **T**obacco is so called because it is met with plentifully in the Isle of *Tabago*; and by some it is call'd *Nicotiana*, because Mr. *J. Nicot*, a *French* Embassador in *Portugal*, was the first that brought it into *France* to the *Queen* Regent; upon which Account it was likewise call'd the *Queen's Herb*. It is also call'd *Antartick Bugloss*, because this Herb grows much in those Isles; and *Holy Herb*, from its great Virtues; last of all, *Petum*, which is the Name that the *Indians* give it, and which was the first, and is the true Name for *Tobacco*.

This Plant, at present is very common in *France*, there being few Gardens where it does not grow: But I shall not entertain you with a long Account of it, it having been writ upon by so many Authors, who have esteem'd it more or less, according as this Commodity has been agreeable to them.

If the Trade of *Tobacco* had been free, as it was some Years ago, I could have said something more satisfying upon this Subject; but as we are not permitted to buy any but at the Office, it is for that reason I shall treat of it only under those different Names it is there call'd by. We buy two Sorts of *Tobacco* of the Farmers, to wit, in Roll and in Powder. That in Roll is distinguish'd by several Names; as the *Brazil Tobacco*, which is a black *Tobacco*, of the Size of one's Finger. The second is in a dry reddish Leaf, roll'd the Thickness of a large Cane, and is call'd *Sausage-Tobacco*, from being like a Sausage in Shape. There is another Sort in this Form that comes from *Holland*. The third Kind is that call'd *Dieppe Tobacco*, and is a little black Roll, of the Thickness of a Child's Finger, or thereabout. There are several other sorts of *Tobacco*, as those of *Virginia*, *St. Domingo*, &c.

As to the *Tobacco* in Powder or Snuff, scented and unscented, there are so many Sorts, it is impossible to treat of them all; for which Reason I shall say nothing of them, but content myself to relate what Father *R. P. de Tertre* has writ about it; which is, That the Inhabitants of the Islands commonly cultivate four Sorts of *Petum*, or *Tobacco*; namely, green *Tobacco*, Tongue *Tobacco*, Amazo-

nian *Tobacco*, Musk *Tobacco*. The Savages call all *Tobacco*, without Distinction, *Toly*. The green *Tobacco* is the most beautiful, and of the finest Figure. The Leaves are a Foot broad, and two Foot long, commonly very subject to decay, and not reckon'd of any great Account. The Tongue *Tobacco* is so call'd because the Leaves grow in the Shape of a Tongue, and is very much esteem'd, because it is not at all subject to waste away and damage. These two first sorts are what are most commonly sold. The *Venice*, or Musk *Tobacco* is much less than the two former. The Leaves are a little rougher, more wrinkled, and pointed at the end, than the others. It is, in Proportion, the least of all, and most inclinable to decay, but most valued, and the dearest, because the Leaves have not only a Musk Scent, but the Smoke is perfum'd in the burning of it, with a very agreeable Odour, as that of the other *Tobacco* is unsupportable to a great many people in the World. But what is further remarkable, is, that one Plant of this musk'd *Tobacco* will communicate its Virtue to four others, to make it pass for the same; which is usually practis'd in the Places from whence it comes. Tho' the Manner of cultivating, and afterwards making *Tobacco*, be common among the Inhabitants where it grows, it may yet be satisfactory to a great many curious Persons in these Parts of the World, to have as succinct an Account writ of it as may be.

First of all sow the Seed, which is mix'd with five or six Times as much Ashes as Seed. After you have sown your Seed well, and that it begins to rise or spring out of the Ground, cover it every Morning with Branches of Trees, to defend it from the scorching Heat of the Sun, which would burn it up before it was ready to transplant. Make ready your Garden where you design to raise your *Tobacco*, that is to say, your Crop, by clearing, stubbing, cutting, and burning the Wood that is upon the Ground, and freeing it entirely from all Sorts of Weeds. When your Garden is ready, remove your Plants in a rainy or wet Season, and plant them down again in and about three Foot distance from each Plant to another every way, that it may have room to spread, without the Leaves touching one another, so as to make them

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The Negroes Stripping & Rolling Tobacco



them rot and corrupt. After the *Tobacco* is thus planted out, Care must be taken from Time to Time, to prevent the Weeds from over-powering it. When the Plant is ready to flower, stop it short, by cutting it about Knee-high; then pull off the Leaves underneath that hang on the Ground, so that you leave behind about 10 or 12 Leaves upon a Stalk, which being weeded or howed diligently every seven or eight Days, all that Time cleaning away all decayed Leaves in such a Manner, that the ten or twelve remaining may be prodigiously encreas'd, and become as thick as a good Skin. To know and try whether it be ripe, rumple or fold a Leaf in your Fingers, which, if it fall in touching, it is ready to cut: Being cut, they leave it spread upon the Ground; after which they string it upon certain Cords, in little Knots, so that the Plants may not touch one another; and so they leave it to dry in the Air, fifteen Days or three Weeks: And when it is rightly prepar'd, they roll it into what Form is best lik'd by the Buyer.

They make, by Distillation of *Tobacco* with Flegm of Vitriol, a Liquor that is emetick, or very vomitive, and proper to cure Itch and Scabs, by rubbing lightly with it. There is a black fetid Oil distill'd from it, by Means of a Retort, which is much of the same Nature. There is likewise a Salt made of it that is Sudorifick, to be given from four Grains to ten, in any convenient Liquor.

There are several other Sorts of Leaves, as *Betel*, or *Tembul*, which are the Leaves of a creeping Plant, of which the *Indians* make a Kind of Comfit with *Areca* and burnt Oyster-Shells. The *Coca*, which is the Leaves of a small Shrub, pretty like those of Myrrh, which the *West-Indians* use the same Way as the *East-Indians*, mixing it with *Betel* as the *Europeans* do with *Tobacco*. The Inhabitants of *Peru* use the Leaves of *Coca* two different Ways; the first, in making a Comfit of it with burnt Shells, to secure them from Hunger and Thirst in a Journey; the second, in mixing it with Leaves of *Tobacco*, which serves them for a thousand Extravagancies.

The *Alcanet*, or *Cyprus*, are the Leaves of a Plant which grow plentifully in *Ægypt*, and in the *Levant*, and which the *Indians* employ in painting their Nails and Hair yellow,

infusing it in Water; and to paint red, putting it in Vinegar, Juice of Citron, Alum-Water, or any other Acids. The *Ægyptians* make an Oil of the same Berries, which is call'd *Cyprus Oil*, very fragrant, and proper for relaxing and softning the Nerves. Several Persons have assur'd me, that the *Alcanet*, or *Ægyptian Cyprus*, is that which the Botanists call *Ligustrum Ægyptiacum*. It is here observable that there are several other Sorts of Herbs which the Druggists do not sell in *Paris*, because the Herbalists furnish the Apothecaries with what they have present Occasion for, which the Druggists, in other Towns in *France*, are oblig'd to sell, having no People that deal in Herbs to supply them; so that it is no little trouble sometimes to them, when they are obliged to send three or four Leagues for a Handful of fresh Herbs. But, in Recompence for that Trouble, they understand them better than they do at *Paris*, which makes the Herb-Sellers sometimes impose upon them one Thing for another.

Besides other Things, we sell a great deal of a small Seed, of a deep red Colour, no bigger than a Pin's-Head, which is found upon the Root of the large *Pimpernel*, which the Dyers use by the Name of Seed of *Cochineal*, and sometimes Wood and wild *Cochineal*. This *Cochineal* shou'd be chose fresh, dry, large, high in the Colour, and the cleanest that can be got.

The Plants of *France*, that come under the Catalogue of Druggs, are *Scordium*, Mountain *Calamint*, *Germander*, *Chamæpitys*, White *Hore-bound* or *Marrubium*, *Southern-wood*, the great and small *Wormwood*, *Ceterach* or *Spleenwort*, *Betony*, *Avens*, *Camomil*, *Periwinkle*, *Hemlock*, *Hart's-Tongue*, *Hound's-Tongue*, *Agrimony*, *Rupture-wort*, *St. John's Wort*, the great and lesser *Centaury*, *Melilot*, *Mugwort*, *Mint*, *Baum*, *Basilicum*, *Origanum*, *Sawory*, *Hyssop*, *Scabious*, *Thyme*, and several other Herbs treated of so largely by all Botanists, it will be unnecessary to say any thing further. We do not sell these Herbs in the Druggists Shops, because of the Herb-Sellers; but we sell the fix'd, essential, and volatile Salts, especially those of *Carduus*, *Wormwood*, *Mugwort*, *Centaury*, *Baum*, *Sage*, *Rosemary*, *Succory*, *Scurvy-grass*, *Benn*, and several other Sorts. But as to the Choice of these Salts, that honest People may not be cheated in the Purchase of them, which is

too frequently done by the Chymist and Druggist, who instead of any of these Salts, give 'em either Salt-Peter, Salt of Tartar, or Sal-Polychrest, which they put into so many different Bottles, and write the Names of the several Salts upon them: Therefore, I say, to hinder them from being cheated, let 'em throw any of these Salts upon lighted Charcoal, and if they fly off, or sparkle in the Flame, it is certain they are mix'd with Salt-Peter; but it is not so easy to discover the Tartar, but only that this Salt is not so soft to the Touch, as the vegetable Salts mention'd.

Nicotiana, in *English*, *Tobacco*, is *Lemery*. a Plant whereof there are principally three Kinds, the first is call'd, by *C. Bauhinus* and *Tournefort*, *Nicotiana major latifolia*, the broad-leav'd *Tobacco*, and by *Parkinson*, *Tobacco latifolium*, the same Thing. There are a great many other Names more curious than instructive, which I shall pass by: This first Kind bears a Stem of about five or six Foot high, as thick as a Man's Thumb, round, hairy, full of white Pith; the Leaves are broad, and larger than those of *Enula Campana*, without Stalk, a little pointed, stringy, of a pale, green Colour, glutinous in touching, of a sharp burning Taste: Mr. *Tournefort* says, that the Top of the Stem is divided into several Sprigs, that sustain Flowers made like Bells, cut or separated into five Parts, of a purple Colour; when the Flowers are gone, there is a husky, oblong Fruit succeeds, that is partition'd into two Cells, containing in them a good deal of small, reddish Seed: The Root is fibrous, and of a very biting Taste; the whole Plant is of a strong Smell.

The second Sort is call'd *Nicotiana major angustifolia*, the great Narrow-leav'd *Tobacco*, or *Hyoscyamus Peruvianus*; in Opposition to the first, call'd *Hyoscyamus latifolius Peruvianus*, the *Peruvian Henbane*. It differs only from the other, in that the Leaves are narrower, sharp-pointed, and hang to the Stem by longer Tails or Stalks.

The third Sort is call'd *Nicotiana minor*; the small *Tobacco*, by *Bauhinus*, *Tournefort*, and *Ray*, and by *Parkinson*, *Tobacco Anglicanum*, the *English Tobacco*. It bears a Stalk a Foot and Half, or two Foot high, round, hard, hairy, the Thickness of one's Finger,

sometimes branchy, glutinous to the Touch, and carries its Leaves, rang'd alternately, oblong, thick, and of a brownish, green Colour, hanging upon short Stalks; the Flower, Fruit and Seed, are like the first Sort, but the Flowers more inclinable to a yellowish Purple; the Root about a Finger's Thickness, and sometimes divided into white Fibres, that spread themselves round in the Ground. *Tobacco* is cultivated in fat, rich Land in Gardens, and yields abundance of a sharp, biting Salt, both fix'd and volatile.

It purges upwards and downwards with a great deal of Violence, in the Apoplexy, Palsy, Lethargy, Suffocations of the Womb, and in the Asthma taken by the Mouth, or being fomented with it; applied outwardly to the Part, or smoak'd, it relieves the Tooth-ach; in Powder or Snuff it purges the Nostriils, and excites Sneezing, and is a very good vulnerary, the Leaf, Ointment, or Powder, being applied to the Wound.

15. Of Coral.

CORAL, according to Mr. *Tournefort*, is a Plant that grows *Pomet.* at the Bottom of the Sea; it has neither Leaf, Flower, nor Seed; nevertheless it sticks to the Rocks in the Nature of a Root, and is cover'd with a Bark that is adorn'd with Pores like Stars, which descend to the Bottom; it is divided into Branches, which discover Rays that have some Analogy to Fibres: In short, it is undoubtedly encreas'd by its Seed, which is the Opinion countenanc'd by all those that rank *Coral* among the Number of Plants. It is agreed, at this Day, that it is hard in the Sea; the Softness of the Bark or Cruft, which is otherwise smooth, and almost oily, has, perhaps, deceiv'd those who have asserted that this Plant was soft. The Bark is a tartarous Cruft, red upon the red Coral, and white upon the white: The Extremities, or Ends of the Branches, are soft, and also produce little Balls, the Size of a red Gooseberry, divided commonly into six Cells, fill'd with a white Humour like Milk, which makes it a Sort of Tithymal; it is fat, acrid, and astringent. These little Balls are commonly call'd Flowers of Coral, but ought, with more

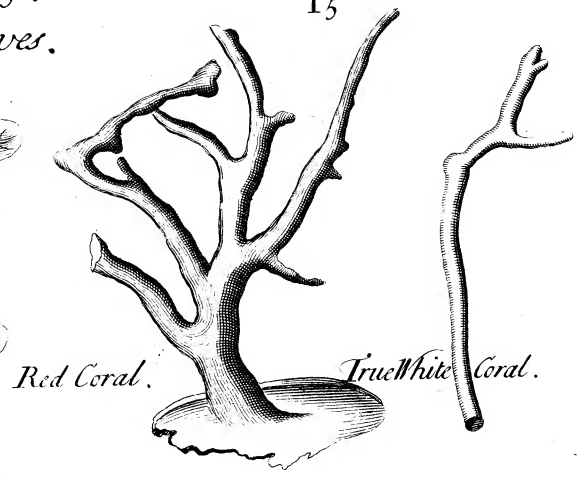
Book 5.
of Leaves.

9



Indigo.

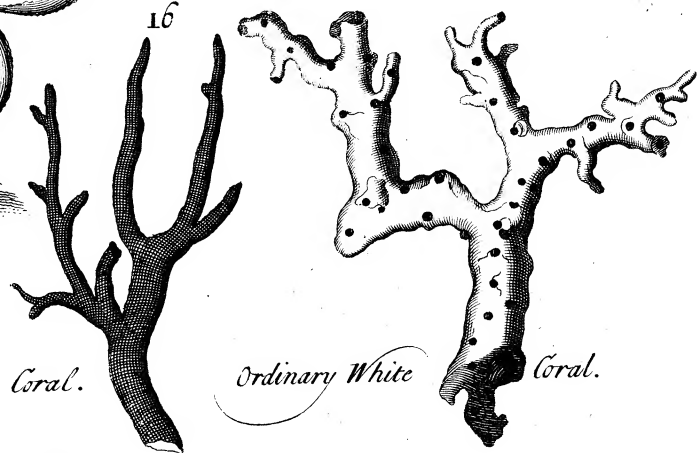
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Red Coral.

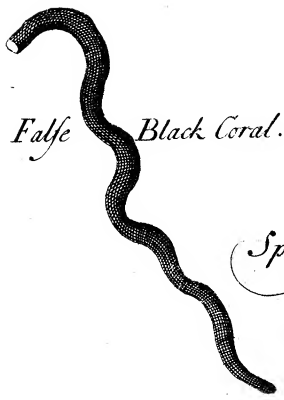
True White Coral.

16



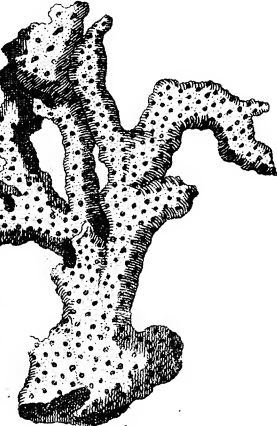
True Black Coral.

Ordinary White Coral.



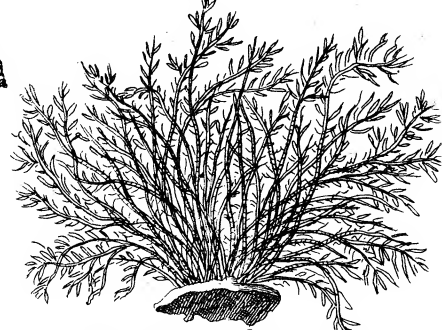
False Black Coral.

Sponge 18



Coraloides.

17



Coralline or sea moss.

more Reason, to be nam'd the *Capsula* of the said Plant: For our modern Authors have observ'd, that the white Juice which they yield, produces the Coral Plants on any Bodies upon which it falls; and besides the Coral they shew at *Pisa*, which sticks naturally upon a human Skull: I have seen a pretty large Piece that grew upon a broken Piece of Earthenware.

There are properly but three Sorts of Coral us'd in Physick, namely, the red, the common and the white Coral, which has some Resemblance to the red or flesh Colour: The true white Coral, which differs not from the red but in Colour, is the scarcest and dearest: They use commonly that Sort for the white, which *J. Bauhinus* calls *Corallium Album Officinarum Oculatum*, the white Coral of the Shops, that is full of Eyes: The false black Coral, call'd *Antipathes*, is of no Use at all.

They fish for Coral in the *Mediterranean*, on the Coast of *Provence*, near *Toulon*, or *Cape Creuse*, betwixt *Colioure* and *Roses*, upon the Coast of *Catalonia*, in the *Streights* which are betwixt *Sicily* and *Italy*, towards the *Bastion of France*, and in some other Parts; as on the Coast of *Sardinia*, and those of the Isles of *Corsica* and *Majorca*. The Coral-Fishing, according to *Mr. Tavernier*, is from the Beginning of *April* to the End of *July*, in which they usually employ two hundred Barks, some Years more, and some Years less.

As the Coral grows in the hollow Rocks where the Sea is deep, it is a great Piece of Artifice to get it up. The Coral-Fishers tye two Beams of Wood across, and hang a good Piece of Lead in the Middle, to sink it; then they tye Tufts of Hemp about the Beams, which are slightly or carelessly twisted, about the Thickness of one's Thumb, and tye the Beams with two Cords; the one to hang at the Prow, and the other at the Stern of the Bark; so that the Pieces of Wood are left at the Bottom to run along the Rocks, and catch hold of the Coral in their Passage: It is necessary, sometimes, to make Use of five or six Boats to get up the Beams; and during that Time, if one of the Cables happen to break, all the Branches are in Danger of being lost; for it is a great Risk in the taking the Coral out, that some does not fall into the Sea; and the Bottom being usually full of Mud, the Co-

ral is apt to waste and spoil, like the Fruits of the Earth; so that the clearer the Coral is got from the Filth of the Sea, the less subject it is to decay.

Of all the Corals the red is most in Use, as well for Medicine as other Things; and of People that value Coral, the *Japonesse*, and other Nations, most esteem the red Coral, as being thicker, more shining, and in finer Branches than any of the rest, besides its beautiful Colour; and they do not value the little Pieces, and such as is covered with a crusty Matter; nevertheless, when that is reduced to Powder, it is every whit as efficacious. By Means of certain Acids, they make a Tincture of red Coral, which is afterwards reduc'd to what is improperly called a Syrup, which is reckon'd an admirable Cordial, and useful to purify and cleanse the Mass of Blood. There is likewise a Magistery, and Salt, made of this; but the most common Way of using it is, reduced to an impalpable Powder, by levigating it upon a Marble with Rose-Water, &c.

16. Of Black Coral.

AS to the black Coral, the true Kind is so rare, that it is almost impossible to meet with it; for all that we now have, is only a Sort of Plant that is petrified in the Water, which some have call'd *Antipathes*; but it is entirely different from the true Coral, being very light, and more like Horn than Coral; whereas the true Sort is heavy, of a reddish black Colour, and very rough; and with the utmost Diligence I have met with some, but in very little Pieces, no bigger than the End of one's Finger; tho' I have a Piece of the common black Coral, of about two Foot long. As to the *Coralloides*, it is nothing else but white Coral that is not brought to its Perfection, and is of no manner of Use, yet it is sometimes sold instead of the White, tho' it is easy to distinguish, it being large, light, and imperfectly form'd.

17. Of Coralline, or Sea-Moss.

THE Coralline, or Sea-Moss, is what is gathered from Rocks, or Shells, in the
O Sea,

Sea, to which it is apt to cling; there are several Sorts of it to be met withal; but that which is used in Physick comes from *Bastion* in *France*, and other Parts of the *Mediterranean*, which is only what is in Practice. *C. Bauhinus* calls it, *Muscus Coralloides Squamulis loricatus*.

This Moss or Coralline, is of some small Account in Medicine, as it is pretended to have a Quality to destroy the Worms: As to the Choice, it ought to be greenish, and the most free of Dirt and Filth that can be got.

Corallium, Lithodendrum, or *Co-Lemery*. ral, is a stony Plant, that is found growing to Rocks, at the Bottom of the Sea, and crufted over in the Nature of Stone. The chief of what is sold comes from several Parts of the *Mediterranean*. There are three Sorts of it, red, white, and black.

The *Corallium Rubrum*, or red Coral of *C. Bauhinus*, grows commonly three or four fingers high, but such Corals as are found of any considerable Length, are kept in the Cabinets of the curious; it bears several Branches without Leaves, that are very hard, smooth, shining, and of a fine red; the Root is rocky, and of the same Hardness: This Coral is the most used and esteemed in Physick; chuse such as is all of a Piece, polish'd, shining, and of the highest Colour.

The second Sort is white Coral that grows much about the same Height. There are two Kinds of this, one call'd *Corallium Album, Oculatum*, which is a little stony Plant as the former, the Ends of whose Branches are round, and represent, in a Manner, little Eyes. The other is call'd *Corallium Asperum*, the rugged Coral; this is a little strong Shrub, about a Hand high, that is ramose, rough, white, full of Pores, or little Holes, and much lighter than the former; this last grows not only in the *Mediterranean* but in the red Sea, and is of small Account in Physick.

The third Kind of Coral is call'd by *C. Bauhinus*, *Corallium extra rubens intus nigrum*, or red Coral without and black within, but this is very scarce; and there is substituted in its stead a false black Coral, call'd *Antipatbes*, which is a stony Sea-Plant, which is usually cover'd in the Sea with a Sort of Bark or tartarous Crust, of the same Co-

lour. When they are young and tender, the Ends of their Branches are found divided into little Balls, of the Size of a small Gooseberry, that are soft, and distinguish'd usually into six little Cells, full of a milky Liquor, that is of an acrid styptick Taste, and these are call'd Coral Flowers.

Others say, that Coral, while under Water, is green and soft, but when it once comes into the open Air, it changeth both its Colour and its Nature, and from its Greenness becomes of a very delightful beautiful Red, and from its Softness, of a compacted Firmness, that is hard and durable. It springs up naturally, resembling a Plant or Shrub, adorn'd with many pretty Branches. The red is best, and of that the reddest, the palest being of less Use; but in Medicines a small Sprig Sort is taken for Cheapness. The white is next in Goodness; the best of which is that which is pure, white, and clear, almost transparent, free from Dross, and something resembling white Wax. The black is not valued, yet the greatest Rarity of them all. It is observable, that red Coral, infus'd two or three Days in white Wax, melted upon hot Embers, and poured an Inch over it, loses its Colour, and the Wax becomes yellow. Fresh red Coral put into the same Wax, in the same manner, becomes brown; and fresh red Coral put in like manner into the same Wax the third Time, makes the Wax become red; for the Wax dissolves, and draws forth Part of the red sulphureous Particles lying on the Surface of the Coral.

Coral is prepared by levigating it on a Marble into a fine subtile Powder. It is cooling, drying, and binding; strengthens the Heart, Stomach and Liver, absorbs Acidities, purifies the Blood, resists the Plague, and the Force of putrid and malignant Fevers; stops Fluxes of the Belly, and is profitable in the Gonorrhoea and Whites. It is said to prevent the Epilepsy in Children, being first given in the Mother's Milk as soon as the Child is born. It stops bleeding, helps in Difficulty of Urine, and is prevalent against the Stone in the Bladder, and the bloody Flux. Dose from a Scruple to a Dram, in any proper Liquor. Outwardly it helps Ulcers, filling them with Flesh, and cicatrizing; in Collyries it helps the Eye-Sight, stops the Weeping

Weeping of the Eyes, and absorbs the watery sharp Humours.

Of this there is a Tincture made with Spirit of Vinegar, or Juice of Lemons, and from thence a Syrup, Magiftery, and Salt prepared; but they are all forced unnatural Preparations. And crude Coral, reduced to such an impalpable Powder, as aforesaid, is far superior to all the other Preparations of it.

Corallina, call'd Coralline, or hard Sea-Moss, is of several Kinds. That which we now use in Physick, is call'd *Muscus Marinus*, *sive Corallina Officinarum*, Sea-Moss, or the Coralline of the Shops. This is a little bushy Plant, which grows about three Fingers high, bearing a great many little Stalks, that are as fine and slender as a Hair, stony, and furnish'd with very little Leaves, of an ash-colour'd green, and a fishy Smell, the Taste being salt and disagreeable, cracking or crackling betwixt the Teeth like small Stones, and being subject easily to be bruised betwixt the Fingers. Chuse such as is whole, clear, of a whitish green Colour, and very strong Smell. It yields a good deal of Salt and Oil. It is proper to kill Worms, suppress Vapours, provoke Womens Courses, and stop Fluxes of the Belly. Dose, in fine Powder, from half a Dram to a Dram.

The *Coralloides* is a Plant that is but petrified in Part, having the Appearance of a little Shrub, but without Leaves. There are several sorts of it, which vary in Size, Shape, Hardness, and Colour. They are all usually astringent as to Passage by Stool, and aperitive by Urine, but of no great vogue in Physick. It is call'd *Coralloides*, as being something like Coral in Figure and Hardness.

Other Authors say the Coralline is a hard stony Moss, growing usually on Rocks, in or near the Sea, rising either from the Stones thereof, or from the Shells of Scallops, Oysters, and the like. It grows scarce a Hand high, spreading forth several small Branches, like a green Herb, with many small short Leaves like Hairs. It is gather'd on all the Western Coasts, and the Northern Parts of Europe, and is found growing in little white Threads, fasten'd to the Rock or Shell it springs from, as Moss to a Tree; and if good, is very white, in little Strings, like the Un-

ravelling of coarse Linen Cloth, some an Inch long, some shorter, some longer, of an unpleasant Taste and Smell.

13. Of Spunges.

Spunges are a Kind of *Fungus*, or *Sea Musbrome*, which are found *Pomet.* sticking to the Rocks in the Sea. I shall not detain the Reader to give an Account of what a Multitude of Authors have said concerning Spunges; some saying that they are male and female, others that they are neither Plants nor Animals, but both, that is *Zoophytes*, which partake of the animal Kind, and that of Plants too. There are two Sorts of Spunges sold, namely, the fine, which are those the Antients call'd the male; and the coarse which are the female. The greatest Part of the Spunges that are sold comes from the *Mediterranean*, and there is a certain Island of *Asia*, that yields a very large Quantity of Spunges. This Isle is call'd *Icarus*, or *Nicanus*, where the young Men are not allow'd to marry, till they can gather a sufficient Quantity of Spunges from the Bottom of the Sea; and for this Reason, when any one wou'd marry his Daughter, a Number of young Fellows are stripp'd and jump into the Sea; and he that can stay longest in the Water, and give the best Account of, or gathers the most Spunges, marries the Maid, so that he pay a Tribute, out of his Spunges, to the Grand Seignior.

The finer the Spunges are, the more they are esteem'd, and they are reckon'd best that are fairest, clearest and lightest, whereof the Holes be small, and the least full of Stones, that may be; as to the coarse Sort, the nearer they approach to the fine the more they are valued.

The Use of Spunges is so well known, it wou'd be unnecessary to give any Description thereof; but after they are prepar'd, by cutting into sizeable Pieces, and put into melted, white Wax, and afterwards press'd to make them extend themselves; they are sold to Surgeons, and other People, by the Name of prepared Spunges. They are likewise calcin'd to make a Powder for the Teeth: The large or coarse Spunges have a sort of little Pebbles, and other extraneous Bodies in them;

to which when reduced to Powder, by Calcination, they assign a Property of curing the Gravel: Some Authors call these Stones by the Name of *Cystheolitos*, and affirm that such of 'em as are to be found in Shape of an Almond, being pounded and mixed in any proper Vehicle, are useful to destroy Worms in little Children.

The Sponge is a kind of Mushrome which grows to the Rocks in the Sea, of which there are two kinds, [according as *Pomet* has describ'd 'em already.] But tho' it is taken from the Sea, Authors have not yet determined in what Class to place it; some thinking it to be neither Vegetable, Mineral, nor Animal; others, that it participates of them all: Some again place it between Animals and Vegetables, and think it partakes of both of them, for that it has an active Quality to dilate itself, and shrink up together, when in the Sea, and therefore they will have it to be a Plant Animal; because in its Nature it comes near both to that of an Animal, and also to that of a Plant.

The most Part of Sponges that we use are brought from *Smyrna*, *Aleppo*, and other Places in the *Levant*. Those which are fine, smooth, soft, and not too full of large Holes in them, are said to grow in the *Archipelago*. Those which are large, fine, close, and lively colour'd, whether white or yellow, are accounted the best. The worst Sort are of a dirty Colour, rugged on the Surface, and hard, with small gritty Stones sometimes in them. The Sponge is of an alkalious Nature, and is good against Pains of the Stomach, Gripings in the Bowels, and the Colick; and is suppos'd to be a Specifick against the Stone and Gravel in the Kidneys or Bladder, or any Obstructions in the urinary Passages. The chief Use of it is either in a Powder calcined or crude.

The Sponge-Stone is found in those Places where Sponges are found, and is made of the Matter of Sponges petrified or harden'd. *Schroder* saith, that it also grows in Sponges, and is a brittle Stone, white or grey. It is attenuating without much Heat, and is good to break the Stone in the Kidneys and Bladder, and to discuss Tumours of the King's Evil, being drunk every Morning in Urine, or in Wine, with *Sal Gem* and *Tartar*. The levigated Powder absorbs Acids, destroys the

Matter breeding the Stone and Gout, cures Heart-burnings, and violent Pains in the Stomach.

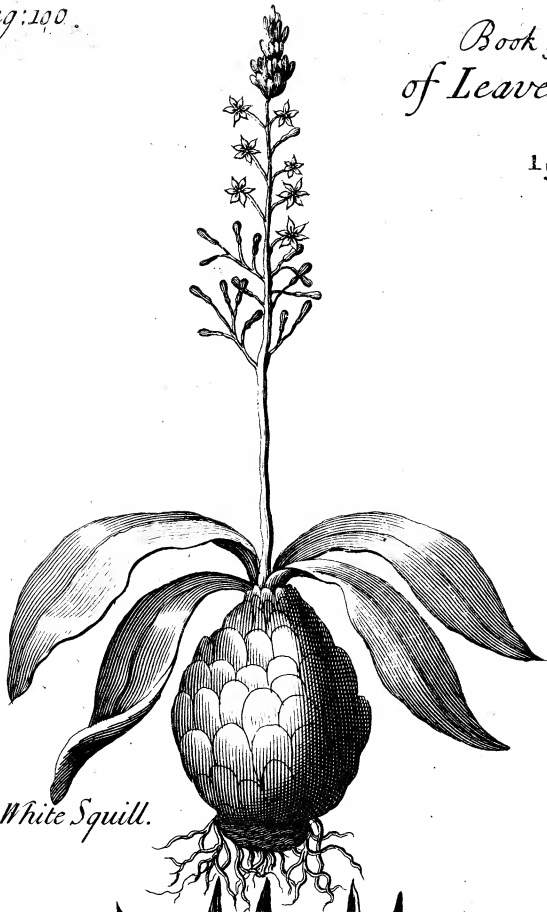
19. Of Squills.

SQUILLS are Sea-Onions, which are brought from *Spain*, &c. *Pomet*. where they grow plentifully, especially on the Sea-Shore; great Quantities also come from *Normandy*, especially about *Roüen*. They are of different Sizes and Colours; but those we commonly have are the red *Squills*, which the Antients call'd the Female. The white were known by the Name of the Male *Squill*, but we meet with very few of them. These Onions bear broad, large, long, green Leaves, and Flowers, like Stars, of a fine white Colour.

Chuse such Roots, or Bulbs, as are found, heavy, fresh, and full of Juice, and beware of those that are decay'd towards the Head, to which they are subject. They are made use of in the Shops for making Vinegar and Honey of *Squills*, and Troches for Treacle, and likewise in some Ointments and Emplastors; as Ointment of Marsh-Mallows, and the Plaister call'd *Diachylum magnum*. Several Persons have assur'd me, that the *Squills* which we have from *Normandy*, are those that the *Botanists* call *Pancreatium*.

The *Squills* are reckoned, especially the Heart, to be Poison; which is the Reason why, when they split them in two, they throw away the dry Leaves, and the Heart; and the middle Part betwixt both, they expose to the Air to dry; and being thus prepar'd, they make use of it, as aforesaid, to make Vinegar, Honey, Wine, Syrup, Lohoch, &c.

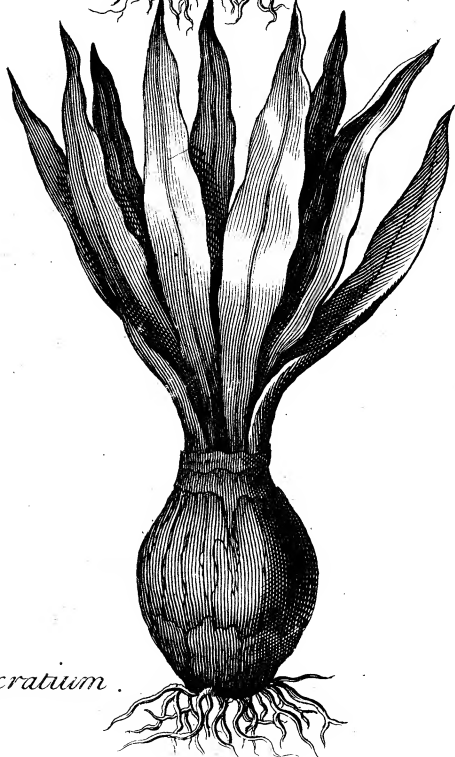
Scilla, or the *Squill*, is a kind of *Lemery*. *Ornithogalum*, or a Plant, whereof there are two Sorts. The first is the *Scilla major*, or *Scilla rubra magna vulgaris*, the great, common, red *Squill*, call'd by *Tournefort*, *Ornithogalum maritimum*, seu, *Scilla radice rubra*, the Sea-Onion, or red-rooted *Squill*; and by *Parkinson*, the true *Pancreatium*. It bears Leaves of above a Foot long, almost as broad as a Man's Hand, fleshy, very green, full of a bitter viscus Juice. From the Middle rises an upright Stalk, of about a Foot and a half high,



The White Squill.



The Red Squill.



Pancratium.



Pot-ashes or Kali.

20

high, bearing on the Top, Flowers compos'd of six white Leaves, that are form'd round; which, when gone, are succeeded by a Sort of roundish Fruit, rais'd with three Corners, and divided within into three Partitions, which are fill'd with black Seed. The Root is an Onion or Bulb as big as a Child's Head, compos'd of thick Coats or Spheres that are red, juicy, viscous, and encompassing one another, having at the Bottom several thick Fibres.

The second Sort is call'd *Scilla mascula*, the Male Squill, or *Scilla minor*, seu *Scilla radice albâ*, the lesser Squill, or that with the white Root. It varies from the former, in that the Roots and Leaves are not so large and big; besides, this is white, and less common. Both Sorts grow in sandy Places, near the Sea, in *Spain*, *Portugal*, *Sicily*, and *Normandy*. We have them brought to us of all Sizes. They contain a great deal of essential Salt, some Oil and Flegm, and a little Earth.

They are hot and dry, sharp, bitter, attenuating, inciding, absterging, discussing, alexipharmick and diuretick; powerfully cleanse the Stomach, open Obstructions of the Liver, Spleen, Gall, Meisentry; provoke Urine and the Terms, carry off slimy tartarous Matter from the Lungs; for which Reason they are accounted good against Colds, Coughs, Wheezings, Hoarseness, Difficulty of Breathing, and are singular against the Scurvy, Gout, and Rheumatism. The Root is prepared by rolling it in Dough, or putting it in Pye-crust, and baking it in an Oven, then taking it out and drying it. Being thus prepar'd, it is fit to make Vinegar of Squills, by infusing it in Vinegar. Dose from one to four Spoonfuls: Or Wine of Squills, by infusing it in Wine; which is emetick, and good against Asthma's, Phthiticks, Falling-Sickness, &c. given from an Ounce to two, or more. There are several other Preparations of the Root to be met with in every Dispensatory, especially *Quercetan's*, *Swelfer's*, the *Augustan* and *London* Dispensatories.

20. Of Pot-Ashes, Kelp, or Kali.

Pomet. THIS is a grey Salt, which we bring from *Alicant* and *Cartagena* in *Spain*, cast into Loaves or Cakes of

different Sizes. This Salt is made from a Plant that grows along the Sea-coast, which the *Botanists* call *Kali*, and we *Salt-wort*, *Soap-wort*, *Glass-weed*, *Kelp*, *Sea-Thongs*, *Sea-wrack*, and many other Names. This Plant bears a Stalk a Foot and a half high, or thereabouts, furnished with small narrow Leaves, as is express'd in the Figure. They sow this Herb, and when it is come to a due Height, they cut and manage it like Hay.

When it is dry'd, the *Spaniards* make large Holes or Pits in the Ground, in the Nature of a Lime Kiln; after which they throw therein a Bundle of the said dry'd Herb, to which they put Fire; and when they have cast that in, they throw in another Bundle upon that; and when it is well lighted, they fill it full of the dried Herb; and when they have fill'd it, they stop it up, and leave it all together for some Time, that it may not only be reduc'd the better to Ashes, but likewise incorporate, and be capable to form into a Stone or Cake, in which Form it is now brought to Market; and when they have open'd the Pit, they find the said Herb burnt into a hard Stone, which they are oblig'd to break and raise up just as they do Stone out of the Quarry.

We sell at *Paris* four Sorts of *Pot-Ashes*; the first and most valuable of which are those of *Alicant*, which, when they are right, ought to be dry and clean, of a bluish grey without and within, having little Holes made like a Partridge's Eye, and when spit upon and held to the Nose, have no offensive Smell. And beware the Stones be not enclos'd with a greenish Crust, or full of Pebbles; for the first will stain and spot your Linen, and the second by encreasing the Weight, will enhance the Price, besides spotting the Linen according to the Nature of the Stones that are found within. Likewise take heed that the Bales be not open'd, and the Commodity that was good exchange'd for that which is naught. This is very much us'd by the Glass-makers, to make the best Glass, and the Soap-boilers likewise use it considerably in the making of white and marbled Soap; but the greatest Part of that which comes from *Spain* is consum'd at *Paris* and the neighbouring Villages by the Scourers or Whiteners, who use it to whiten their Linen.

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They make this Salt, which the *French* call *Soude*, by the Assistance of common Water, a white Salt call'd Salt of *Kali*, or *Alkali*, which is as much as to say *Soude Salt*, because *Al* is an *Arabian* Word that signifies *Salt*, and *Kali*, *Soude*. Thus there are several Salts of Herbs, call'd *Alkali* Salts, as Wormwood, Centaury, and the like. There are those who pretend that the true *Alkali* Salt is the Glass Salt, but they deceive themselves, as they may be satisfy'd in the Chapter concerning the Glass Salt.

The second Sort is that of *Carthagena*, which only differs from that of *Alicant* in not being so good; neither is it of the bluish Cast, but more crufted, and the Bales are much larger. The third Sort of Pot-Ashes is that nam'd the *Bourde*, which is to be entirely refus'd, as being so bad, that it is fit for nothing but to deceive those that buy it. This is usually moist, of a blackish green Colour and very fetid. The fourth Sort is that of *Cherbourg*, which is made of an Herb found along the Sea-Coasts of *Normandy*. This is likewise of a very ill Property, being extremely humid, of the same Colour and Smell with the last Sort, and altogether fill'd with Stones. These two Sorts are good for nothing but to impose upon the unwary Buyer, and cheat the poor Whiteners.

21. Of Sandiver, or Glass Salt.

THE *Glass Salt*, which the Workmen call *Sandiver*, or the Scum of Glass, is a fat Dross that floats upon the Glass Metal when it is in Fusion. And this Froth comes from nothing but the Pot-Ashes, which they use in making their Glass; for the Flints that they make use of will afford no such Scum.

Take such *Sandiver* as is in very large Pieces, white without and within, heavy, and the likest Marble that can be; and throw away such as is fat, blackish, and moist. It is very much us'd by those who make your white earthen Ware, because it assists the Sand in its Vitrification. It is very odd that this should be of no use to the Glass-makers; and the earthen Ware Workers wou'd be at a loss without it.

It is to be had in all Places wherever Glass is made, it being a sort of superabundant Salt,

thrown forth from the Metal while melting in the Furnace, and by the Glass-Men taken off, as the Recrement of their Materials, with a Ladle. It is a very white Salt, and inclining nearest to a nitrous Taste, easily dissolving in the Air, or any moist Place; for as Glass is made of Sand and Pot-Ashes, the latter being put in to make the former melt into Metal, so this *Sandiver* is the Superabundance of that Salt, more than is requisite to go into the Body of the Glass, which being in Fusion, sends up to the Top whatever is more than requisite for that Purpose. This must be scumm'd off, or else 'twill make the Glass unfit for working, very brittle, and no ways pliable.

The best Metal will yield, in a Pot of two hundred Weight, near a quarter or half a hundred of *Sandiver*. The weaker the Salt or Ashes are, the greater is the Quantity of *Sandiver*: They yield some four or five Parts more than others do, for green Glasses. When the Ashes are bad, they are forc'd to fill the Pot four or five Times with more fresh Ashes, by reason of the Quantity of *Sandiver* that is in them, before the Pot will be filled with Metal. Whilst any of it is in the Pot unscumm'd off, they dare not cast in any cold Water to hinder the boiling; for if they should, the Furnace and the Pots would be blown up together.

This *Sandiver* serves to make Metals run; and a little thereof put into *Antimony* and *Salt Petre*, for making *Crocus Metallorum*, increaseth the Quantity of the *Crocus*, and it will therewith separate the better from the *Scoria*.

'Tis sold in *France*, and there us'd to powder their Meat, and also to eat instead of common Salt. Dissolved in Water, and pour'd upon Garden-Walks, it destroys both Weeds and Vermin. The more nitrous and fossile the Salts are, the more Unctuousity they have, and the more they run into *Sandiver*, to which Nitre comes somewhat near in Colour, Taste, and Fatness.

It is said wonderfully to dry and heal Scabs and Manginess, the diseas'd Part being bathed with Water in which it is dissolv'd. *Parkinson* says that *Sandiver* works much the same Effect with the Ashes of *Kali*, or Pot-Ashes; and is us'd often, being ground fine, either to be blown into Horfes Eyes, or, be-
ing

ing dissolved, squirted into them with a Syringe, to take away any Skin, Film, Cloud or Pearl, growing on the Sight. It is also used to dry up running Sores and Scabs, Tettors, Ring-Worms, and such like Vices of the Skin.

22. *Of Crystalline Glafs, and many other Sorts, with the various Ways of Colouring them, &c. from Pomet, Lemery, and several other Authors.*

GLASS is a Composition, or Mixture of Ashes, or some Alkalifate Salt, with Sand, Crystal, Flints, Pebbles, or other Stones, and melted together into one Body, by the Force of Fire. The first Ingredient going into the Composition of Glafs, is Pot-Ashes, call'd by the *French*, *Soude*, & *Roquette*; and by the *Italians*, *Polverina Barillia*, &c. There is little or no Difference in them, but as to the several Places they are brought from, for the best Ashes make the Salt, and the clearest and finest Glafs. Pot-Ashes made of *Kali*, which comes from the *Levant*, make a far whiter Salt than *Barillia*, and by Consequence a more perfect and beautiful Crystal.

Some use brass Boilers in making this Salt, which may do, where green or blue Colours are to be made; for this strong Lye will fret off some Part of the Metal or Verdigrise, which will damage a Crystalline Glafs: In this Case therefore, the better Way is to have the Copper, or Vessel doubly lined with Tin, because that emits no Tincture: Also, in making the aforesaid Salt, you must mix a Quantity, more or less, of Tartar calcin'd to Whiteness, with your Pot-Ashes, because it makes not only more, and a whiter Salt, and a more beautiful Crystal, but likewise opens the Body of the Pot-Ashes, causes a speedier Dissolution, and a better Extraction of the Salt, just as Alum or Vitriol opens the Body of Salt-Petre, in making *Aqua fortis*, or Spirit of Nitre, which otherwise without such Addition would not rise.

The second Ingredient that enters the Composition of Glafs is Glafs Stone, *Tarso*, or Sand; and this is what gives Body, Consistency and Firmness to Glafs, as Iron gives to *English* Vitriol, Copperas and Copper to

Hungarian, *Dantzick*, and *Roman* Vitriol, which otherwise would run into Water, in moist Places and Seasons. Glafs Stone is properly all, or most Sorts of Stones, which will strike Fire with a Steel; these are apt to vitrifie, and make Glafs and Crystal withal; those which will not strike Fire with a Steel will never vitrify; whereby you may partly know the Stones which will, and which will not, be transmuted into a glassy Body.

The third Place is given those Stones which are white, but not transparent, of which Kind is *Tarso*, which is a Sort of hard, white Marble found in *Tuscany*, at *Pisa*, *Seraveza*, *Carara*, the River *Arnus*, above and below *Florence*, and in many other Places of the World; that is the best which is without blackish or yellowish Veins in it like Rust. The next is a Kind of Pebble, in Appearance like white Marble, something transparent, and hard as a Flint, which being struck gives Fire, and turns not into Lime: This, when first put into the Fire, becomes white, and loses its Transparency, and afterwards it turns to Glafs.

Where fit Stones cannot be had, Sand is made Use of; and as some think, and affirm with good Reason, was the first Material made use of in making Glafs; it must be small, white, and very clean, and well washed, before it be us'd, which is all the Preparation of it. This is usually met with upon the Mouths and Banks of Rivers, and in many Places upon the Sea Shore, and sometimes upon Inland Sand-Hills. White Crystal Glafs requires a fine, clear, transparent Sand, but green Glasses a more coarse and brown.

The last Ingredient is *Manganese*, or *Magnesia*, so called from its likeness in Colour, Weight and Substance to the Load-Stone; and is accounted one of the Kinds thereof, which is found in *Germany*, *Italy*, *Piedmont*, &c. but of late Years, in *England*, among the Lead Mines; and wherever the Miners find it, they certainly conclude that Lead-Oar lies under it. The Potters spend great Quantities of it, this being the only Material wherewith they colour their black, as they do blue, with *Zaffer*. That is best which has no glittering Sparkles in it, and is of a blackish Colour, but being powder'd of a dark Lead.

Lead Colour: 'Tis a Stone very hard and ponderous, and the deeper its Colour is, the deeper it colours the Metal in the Furnace, and is to be put into the melting Pot, together with the *Fritt*. This is the most universal Material used in making of Glass; and is that which only purges off the greenish, bluish Colour which is in all Glass, and makes it not only clear and diaphanous, but also makes it dark, black, red, and purple, according to the Proportion which is added. The *Manganese* of *Piedmont*, and that of *England*, which are the best of all others, make a very fair Murray, and at last leave the Glass white, and take away from it the Greenness and Blueness; the Reason of which Operation seems to be a Change in the Figure, and more minute Parts of the Metal; for the Fire making the *Manganese* run, mixes it with the smallest Atoms of the Metal throughout; which by boiling and various Agitations and Revolutions of them, form those Reflections of Light, which we call white, clear, and diaphanous.

As much *Manganese* prepar'd must be used in common white Glass, as in that made of Flint, or Crystal; the Quantity of the *Manganese* is uncertain, and is only known by Practice and long Trial, and therefore cannot be positively determin'd, either by Weight or Measure, but must be wholly left to the Eye, Judgment, Trial and Experience of the Artist. In putting of it in, you are to try whether it has enough of *Manganese*, or no; if it be greenish, give it more *Manganese*, with Discretion, and put it in by little and little; for otherwise, instead of a clear, white, diaphanous Colour, which in just Proportion it always gives; if too much be added, it will make a Murray, Purple, or Black, and take away the Splendor of the Metal, which otherwise wou'd be clear and shining; for it is the Property of *Manganese*, to take away the Foulness and Greasiness which Crystal has, and to make it resplendent, white and clear.

A fourth Ingredient also, has of late been added to the Composition of Glass, which is Salt of Tartar: If the Proportion of twelve Pound of pure Salt of Tartar be added to an hundred Weight of *Fritt*, it makes it, without any Comparison, much fairer and pliable to work than ordinary. This Salt of Tartar must

be very pure, and put in when the *Fritt* is made, and then be mix'd with the Glass Stone, *Tarso* or Sand, together with the *Pulverine*, *Rochette*, or *Pot-Asbes* sifted and made fine, whereof the *Fritt* is to be made. Hitherto of the Materials; but to descend to the Instruments, and the Manner of working in the Glass, would be beyond the Scope and Intention of this Performance, therefore I shall proceed to shew you how to turn your Materials into *Fritt*, of which Glass is made and fashioned.

Fritt is nothing else but a Calcination of those Materials which make Glass; and tho' they may be melted, and make Glass without Calcination, yet this would require Length of Time, and occasion much Weariness, and therefore this Calcination was invented to calcine the *Fritt* in the *Calcar*; which when it is calcin'd, and the Proportion of the Materials, is adjusted to the Goodness of the *Pot-Asbes*, it presently melts in the Pot and admirably clarifies. *Fritt* seems to be derived from *frit-tare*, to fry; since, indeed, it is nothing else but Salt or Ashes mix'd with Sand, or Stone, in fine Powder, and so fry'd or bak'd together; the *English* call the whole Quantity, bak'd at a Time in the *Calcar*, a *Batch*: Then it runs into little Lumps like *Fritters*, called often in *Italian*, *Frielle*, or little *Fritts*.

It is of three Sorts; first, *Green-Glass Fritt*, made of common Ashes, without any Preparation of them, other than beating them to Powder, and a hard Sand fetch'd from *Woolwich* in *Kent*. Secondly, Ordinary *white Fritt*, made of Ashes of *Polverine*, or *Barillia*, without extracting the Salt from them, which makes common white Glass. Thirdly, *Crystal Fritt*, made with *Polverine*, or *Pot-Asbes*, and Salt of Tartar, with white Crystalline Sand, 'Crystal, Pebbles or Flints. The Materials must be finely powder'd, washed, searfed, and then incorporated well together, which put into the *Calcar*, will exactly mix in the smallest Particles, and minutest Atoms; for otherwise the Salt and Sand will, in the melting Pot, easily separate one from another, which they are apt enough to do were they not stirr'd with the Rake.

• To make the second Kind, or common white Sort of *Fritt* for the white Glass; searfe

searfe the pure Pot-Ashes, and what will not go thorow beat and searfe again; beat also finely and searfe your *Tarso*, *Cryстал*, &c. Take of the Ashes, &c. one hundred Weight, of the Stone from eighty to ninety; pure white Cryсталline Sand, wash'd and freed from all its Filth, six Pounds; mix all together, then put them into the *Calcar*, or calcining Furnace when it is hot; at first mix and spread them well in the *Calcar*, with a Rake, that they may be well calcin'd, and continue this till they begin to run into Lumps; the *Fritt* will be perfectly wrought in five or six Hours, being stirr'd all the Time, and a sufficient Fire continued; when you wou'd see whether it be enough or no, take a little of it out; if it be white, yellowish and light, 'tis enough: The calcining it more than five or six Hours is not amifs; for by how much the more it is calcin'd, by so much the better it is, and the sooner it melts in the Pot; and by standing a little longer in the *Calcar*, it loses the yellowness and foulness, which it wou'd communicate to the Glas, and becomes more clear and purified.

It is here to be noted, that in *Italy*, and other Places, when they take the *Fritt* out of the *Calcar*, they throw upon it a good Quantity of cold Water, while it is hot, then set it in a Cellar, from whence a Lye will drop, which may be strengthen'd with calcin'd Tartar to be kept for Use, with which they now and then water the *Fritt*; which being heap'd up together in a moist Place, the Space of two or three Months, or more, the said *Fritt* grows into a Mass, like a Stone, and is to be broken with Mattocks: This, when it is put into the Pot, soon melts and makes Glas as white as Cryстал; for this Lye is thought to leave, upon the *Fritt*, its Salt which produceth this Whiteness, and makes it easier to melt, and more *Cryсталline*, as aforesaid.

To make *Cryстал Fritt*, commonly call'd *Bollito*: Take of the best clear Pebbles, Cryстал, white Marble, *Tarso*, or Flint, ground small in a Mill, and sear'd as fine as Flower, two hundred Pounds; of pure Salt of Polverine, or Pot-Ashes, sifted also, one hundred and thirty Pounds; put them into the *Calcar* when it is well heated; for should the *Calcar* be cold, the *Fritt* would never be made: At first, for an Hour, make a tempe-

rate Fire, and always mix the *Fritt* with the Rake, that it may be well incorporated and calcin'd; then increase the Fire, always mixing the *Fritt* well with the Rake, for it is a Thing of great Importance, which you must continually do for five Hours, continuing a strong Fire; then take the *Fritt* out of the *Calcar*, being perfected, and put it into a dry Place, on a Floor, and cover it well with a Cloth, that no Filth or Dust may fall upon it; and you must take care of this, if you would have good Cryстал. The *Fritt*, thus made, will be white as the purest Snow. If the *Tarso* be lean, you may add to the Quantity ten Pounds, or more, of the aforesaid Salt; but this is to be done after making Trial: You ought always to make Trial of the first *Fritt*, by putting it into a Crucible, and setting it into the Furnace; if it grow clear suddenly, you will know whether it be well prepared or not, whether it be soft or hard, and whether any more Salt is to be added to it, or to be diminished. This *Cryстал Fritt* must be kept in a dry Place where no Moisture is; for by Moisture it will suffer Damage, grow moist, and run to Water, and the other Ingredient remain alone, which of itself will never vitrify. This is not to be water'd as the former, but may lie three or four Months; after which it will be much better to put into Pots, and sooner grows clear.

Green Glas Fritt, of which we have yet said nothing, is a Composition made of grosser Materials; to wit, of common Ashes, without any Preparation of them, or else of Gobets ground to a fine Powder, and a hard Sand; this requires ten or twelve Hours baking, more or less, according to the Goodness and Softness, or hardness of the Sand and Ashes. When the *Fritt* is put into the melting Pots, to be made into Glas, in the second, or working Furnace, whether it be green Glas, white Glas, or *Cryстал Fritt*, it is to be melted and kept so long in Fusion till it is purified and refin'd, before it is wrought: It purifies itself by sending up a Scum to the Top of it, which is a superabundant Salt, cast forth from the Metal, and by the Workmen is call'd *Sandiver*, and is to be taken off with the Scumming-Ladle, as the Recrements of the Materials. This *Sandiver* damages the Metal, and makes the

Glass obscure and cloudy, being always very foul, and therefore is continually to be scummed off, and taken away, as long as any of it rises.

To reduce Glass again into its first Principles; take Glass in Powder, what Quantity you please, Pot-Ashes, as much; mix or melt them in a strong Fire, which immediately put into warm Water, so the Glass will dissolve, the Salt will melt and mix with the Water, and the Sand, &c. will fall to the Bottom; by which it appears, that the Fusion of Glass is not the last Fusion, or beyond any Reduction. *Helmout* saith, if you melt Glass in fine Powder, with good Store of *Sandiver*, and set them in a moist Place, all the Glass will soon be resolv'd into Water, whereunto if you add as much *Aqua Regis* as will suffice to saturate the *Sandiver*, you shall find the Sand presently settle to the Bottom, in the same Weight in which it was first put in; for the Salt in the Glass is imbib'd, and taken up by the *Sandiver* and *Aqua Regis*, and so the component Parts, analys'd into their former Principles.

As to the Way of making *Prince Rupert's Glass Drops*: They are made of green Glass, well refin'd, for otherwise they will not succeed, but crack and break presently after they are dropp'd into Water: The best Way of making them, is to take up some of the Metal out of the Pot, upon the End of an Iron Rod, and immediately let it drop into cold Water, and lie there till it is cold; where observe, *First*, If the Metal be too hot when it drops into Water, the Drop will certainly frost, and crackle all over, and fall into Pieces in the Water. *2dly*, every one of them that cracks not in the Water, but lies in it till it is quite cold, is sure to be good. *3dly*, That the most expert Artifts know not the just Measure of Heat requir'd, and therefore cannot promise before-hand that the next shall be good, for many of them miscarry in the making, and oftentimes two, or three, or more, prove ill for one that hits. *4thly*, If one of them be taken out of the Water whilst it is red hot; the small Part of the Tail or Thread it hangs by, so much of it as has been in the Water, will, upon breaking, fall into Dust, but not the Body of the Drop, tho' its Cavities are full as large. *5thly*, If one of them be cooled in

the Air, or on the Ground, hanging by the Thread, it becomes, in all Respects, like other Glass. *6thly*, The Outside of the Glass Drops, that are cool'd in Water, is close and smooth, like other Glass, but within it is spongy, and full of Cavities or little Bubbles. *7thly*, The Figure of it is roundish or oval at the Bottom, not much unlike a *Pear* or *Pearl*, wreath'd from the Beginning of the Neck as it grows smaller, and terminating in a long Neck, for the most Part bended or crooked. *8thly*, if a Glass Drop be let fall into scalding hot Water, it will crack and break in the Water, either before the red Heat is over, or soon after. *9thly*, If it be taken out of the Water before it be cold it will certainly break. *10thly*, If they be dropp'd into Vinegar, or Spirit of Wine, or Water in which Nitre, or Sal Armoniac have been dissolv'd, or Milk, they never miss to frost, crack, and break to Pieces. *11thly*, If dropp'd in Oil-Olive, they do not so frequently miscarry as in cold Water, nor have so large Blebs or Bubbles in them, but some Part of the Neck, and small Threads break like common Glass; and if the Neck be broken near the Body, and the Body held close in the Hand, it breaks not into small Parts, nor with so smart a Force and Noise, as those made in cold Water. *12thly*, If you break off the Tip of the Thread, or Neck, of one of those made in Water, the whole will fly immediately into very minute Parts, which will easily crumble into coarse Dust. *13thly*, A Blow with a small Hammer, or other hard Instrument, only upon the Body of one of those made in Water, will not break it. *14thly*, One of them broke in the Hand, under the Water, strikes the Hand more smartly, and with a brisker Noise than in the Air; but fasten'd in a Ball of Cement, half an Inch in Thickness, upon the Breaking off the Thread, or Tip of it, it breaks the Ball in Pieces like a Granado. *Lastly*, Some of them being ground upon a Tile, or other Stone, break when the Bottom is a little flattened, and others not till half is rubbed, or ground off.

To prepare white Glass, or Crystal Glass, take *Fritt* of ordinary Pot-Ashes, to make a fair, white, common Glass; but *Fritt* of the best, whitest and hardest Pot-Ashes, in great Lumps, makes the Glass, which is call'd

call'd *Crystalline Glass*, not *Crystal* itself. You must put as much *Manganese* in one Sort as to another; cast the white and crystal-like Glass into Water, that you may have them clear in Perfection. You may make them without this casting into Water; yet it is necessary, if you would have them fairer than ordinary; and may be repeated, if you would have them yet more resplendent, and then you may work them into what Vessel you please. To have the Glass yet whiter, calcine them, that they may purify well, and have but few Blisters; and also add to a hundred Pounds of the *Fritt* twelve Pounds of pure Salt of Tartar, which must be put in when the *Fritt* is made, and so mix'd with Sand and Pot-Ashes sifted, and then make *Fritt* thereof, as before; and so will the Metal be fairer, beyond Comparifon.

Of Colouring Glass.

To calcine Copper or Brass variously for various Colours. First, This is done by *Ferretto* of Spain, which is thin Copper-Plates laid in Bits upon Sulphur, *Stratum super Stratum*, cover'd, luted, and calcin'd for two Hours, then beaten small, and sears'd: Or, 2dly, It is prepar'd thus with Vitriol instead of Sulphur. 3dly, You may make a Calcination of Brass, with Sulphur, thus: Take thin Plates in Bits, which lay upon Sulphur, *Stratum super Stratum*, which calcine for twenty-four Hours; then powder and searfe it, and reverberate again for twelve Days; grind, searfe, and keep it for use to colour Glass of a transparent red, yellow, Chalcedony. 4thly, Calcine Brass by itself, by putting Bits of brass Plates into a Crucible, and luting on the Top, which makes Glass of a Sky-Colour and Sea-Green. 5thly, Calcine Scales of Brass *per se*, which if well done will be red. Scales of Brass thrice calcin'd, become of a russet Colour, and will make a Sea-Green, an Emerald, a Turchois, and a beautiful Sky, with many other Colours.

To tinge Glass of a Sea-Green; take *Crystal Fritt*, put it in a Pot, without any *Manganese* added; for tho' this makes the Metal clear as Crystal, yet it gives a Quality to the Glass which leaves the Colour black,

or very foul; melt it, and take off the *Sandiver*: Being well and perfectly clarified, take of this Crystal twenty Pounds; Brass of the first, third, or sixth Preparation, six Ounces; *Zaffar* prepared one Ounce and half; mix these two Powders well, and put to the said Crystal at three Times. At first it makes the Metal swell very much, therefore mix the Glass with the long Squares; then let it settle, that the Colour may be incorporated for three Hours; then mix again, with the long Squares, and take a Proof thereof. Put in rather too little than too much of the Colour; for then it may be easily heighten'd. At the End of twenty four Hours, after it has had the due Colour, it may be wrought, mixing it well first from the Bottom of the Pot, that the Colour may be equally mix'd and spread through all the Metal, and united with it, otherwise it settles to the Bottom, and the Metal at Top becomes clear. At *Moran* they take half *Crystal Fritt*, and half *Pot-Ash Fritt*, and proceed as before, whence arises a fair Sea-Green, but the former is fairer.

For a Sky-Colour, or Sea-Green: Take *Fritt* made of the best Pot-Ashes, which purify from its *Sandiver*; and to twenty Pounds thereof add Brass, of the fourth Preparation, six Ounces, and put it in at three times, as aforesaid. At the end of two Hours remix the Metal, and make a Proof; being well-colour'd, leave it so for twenty-four Hours, so will you have an excellent Sky-Colour, varied with other Colours, then work it.

Another Sea-Green, yet more excellent, is thus made: Take *Caput Mortuum* of the *Vitriol* of *Venus*, made without Corrosives, expose it to the Air for some Days, and draw from it, without any Artifice, a pale green Colour, which being powder'd, to six Ounces of it, add *Zaffar* prepar'd, one Ounce and half; *Crystal Fritt* purified, as before, twenty Pounds: Work as in the first green, so will you have the most beautiful Colour of the three.

To make a gold-yellow in Glass, or a kind of Amber Colour: Take *Crystal Fritt* two Parts, pure Pot-Ashes *Fritt* one Part, both made of *Tarso*, which is much better than Sand; but if of natural Crystal, it is yet better; mix these well together, of which

take twenty Pounds; of *Tartar* well beaten, and searfed fine, *Manganese* prepared, of each three Ounces; mix these Powders well together first, then with the *Fritts*, put them in the Furnace, and let them stand four Days on an ordinary Fire, because they rise much. When the Metal is purified and well colour'd, which is at the End of four Days commonly, it will be very fair and beautiful, and is then to be wrought into Vessels, &c. This Colour you may make deeper or lighter, by adding or diminishing the *Powders*, or *Fritts*. If you would have it yet fairer, and more beautiful, you must take all crystal *Fritt*: Moreover, another thing is to be observ'd, you must put the Powder at several Times, into the *Fritt*, not into the Metal, for then it colours not.

To make a black Colour in Glas: Take Pieces of broken Glas of many Colours, grind them small, and put to them Powder made of *Zaffar* prepar'd, two Parts: *Manganese* prepar'd, one Part; this Glas, purified, will be a most admirable black, shining like Velvet, and will serve for Tables, &c. Another brighter Black: Take *Fritts* of Crystal and Pot-Ashes, of each ten Pounds; Calx of Lead and Tin two Pounds; mix all together, set them in a Pot in the Furnace, well heated; and when the Metal is pure, add six Ounces of Powder made of Steel, well calcin'd; Scales of Iron, finely powdered, of each equal Parts; let them boil twelve Hours, now and then mixing the Metal, then work it. Another black, yet clearer: Take of the best *Pot-Asb Fritt* twenty Pounds, *Manganese* prepar'd, one Pound and a Quarter, *Tartar* in fine Powder, six Pounds; mix them, and put them into the Furnace leisurely; let the Metal purify, which will be at the End of four Days; mix again well, then cast it into fair Water, and it will be a black beyond any of the former.

To make a fair Milk-white, call'd *Lattimo*: Take *Crystal Fritt*, twenty Pounds; calcin'd Lead and Tin, three Pounds and a half; *Manganese* prepar'd, one Ounce; mix all together, and put them into a Pot heated, let them stand twelve Hours, that the Materials may be melted; and at the end of eight Hours you may work it. It is a fair white; and to make a Peach Colour of it, add a suf-

ficient Quantity of *Manganese* prepar'd, and it will be a Peach Colour, but you must work it in Time, otherwise it will fade again.

To make a deep red: Take *Crystal Fritt*, twenty Pounds; Tin calcin'd, two Pounds; broken Pieces of white Glas, one Pound; mix these well together, put them in a Pot to run and purify them; being melted, add leisurely, one Ounce of this Mixture; Steel calcin'd and ground, Scales of Iron finely ground, of each alike; mix them well together, and in about five Hours it will be perfected: Too much of the Powder makes the Metal black and opacous, whereas it ought to be transparent; if it be too black or deep, put in of the fourth Preparation of Brass, about an Ounce, and mix them many Times, and in about three or four Repetitions it will become as red as Blood: Make several Tryals, and when you find it right and good, work it speedily, otherwise it will lose its Colour, and become black; you must also leave the Mouth of the Pot open, else the Colour will be lost. Let it not stand above ten Hours in the Furnace, and suffer it not to cool, if possible. If you find the Colour fades, put in some of the Steel and Iron-scale Powder aforesaid, and it will restore it again; 'tis a nice Colour, therefore speedily to be wrought.

For a transparent red in Glas, like Blood; take common white Glas, twenty Pounds, Glas of Lead, twelve Pounds, put them into a Pot glaz'd with white Glas; when the Glas is boil'd and refin'd, add Copper calcin'd to Redness, as much as you please; let them incorporate, mixing well the Glas, then add so much *Tartar* in Powder, as may make the Glas Blood-red: If the Colour be too pale, add more of the calcin'd Copper and *Tartar*, till the Colour is exact. Another transparent red: Dissolve Gold in *Aqua Regis*, many Times, pouring the Water upon it five or six Times; then put this Powder of Gold in earthen Pans, to calcine in the Furnace, till it becomes a red Powder, which will be in about forty Days; add this Powder by little, in sufficient Quantities, to fine crystal Glas, which has been often cast into Water, and it will give the transparent red a ruby Colour.

To make Glafs of Lead: Take of the beſt red Lead what Quantity you pleaſe, ſuppoſe fifteen Pounds; *Crystal Fritt*, or common white *Fritt*, twelve Pounds; mix them as well as may be, and put them into a Crucible with a ſtrong Bottom, which put into two other Crucibles of like Strength, one within another, and then put them into a Fire of Suppreſſion. The Lead will paſs thorow the firſt and ſecond Crucible, and in the third you will find the Glafs. Or thus: Take *Minium* fifteen Pounds; Salt of Pot-Aſhes eight Pounds; Sand the ſame Quantity; mix and put them into Crucibles as before, for fear of breaking; and make a Fire of Suppreſſion, ſo will you have very good Glafs of Lead. To work the ſaid Glafs of Lead. Before you take it upon the hollow Iron Pipe, let it be a little rais'd in the Pot, then take it out, and let it cool a little, and ſo work it on the Marble, being clean. At firſt let the Marble be well wetted with cold Water, otherwiſe the Glafs will ſcale it, and be itſelf alſo diſcolour'd, incorporating the Scales into itſelf; and continually wet the Marble whilſt you work this Glafs, otherwiſe it will loſe all its Fairneſs and Beauty; and do this as often as you take the Metal out of the Pot. This Kind of Glafs is ſo tender and brittle, that if it be not cool'd a little in the Furnace, before it is wrought into drinking Glaſſes, Cups or other Veſſels, and taken a little at a Time, and held on the Irons, and the Marble continually wetted, 'tis impoſſible to work it.

To make a gold-yellow in Glafs, of Lead: Take *Crystal Fritt*, calcin'd Lead, or *Minium*, of each ſixteen Pounds, mix and fearſe them well; add to them Braſs thrice calcin'd, fix Ounces; *Crocus Martis* made with Vinegar, forty-eight Grains; put them well mix'd into

the Furnace, let them ſtand twelve Hours, in which Time it will be clear; mix them, and make a Proof: If it be greeniſh, add a little more *Crocus Martis*, till it becomes of a moſt fair gold Colour.

A transparent red in Glafs is made thus: Take impalpable Powder of the beſt *Manganese*, refin'd Nitre, of each equal Parts, calcine and reverberate twenty-four Hours; then waſh away the Salt with fair warm Water, and dry the Powder, which will be of a red Colour; add to it its equal Weight of *Sal Armoniac*, grind them together on a Porphyry, with Spirit of Vinegar; then in a Retort, with a large Body and long Neck, ſublime in Sand for twelve Hours, break the Glafs, and take what is ſublim'd to the Neck and Body of the Retort, and mix it with what remains at Bottom, adding as much freſh *Sal Armoniac* as is wanted in the Weight of the firſt Sublimation; grind, as before, on a Porphyry, with Spirit of Vinegar, and ſublime alſo in the ſame manner; repeat this Work ſo long, till the *Manganese* remains all at the Bottom, fuſible.

A moſt excellent Blue to colour Glafs: Diſſolve Copper in *Aqua fortis* made with Nitre and *Hungarian* or *Roman Vitriol*, which ſharpens the *Aqua fortis*; and yields ſome Particles of Copper to it; then precipitate it with Spelter or Zink; and this has ſometimes been done with the Refiner's double Water impregnated with Copper; by this means you ſhall have a moſt incomparable Blue for colouring of Glafs.

There are almoſt an infinite variety of ways to colour Glafs, among which I thought theſe few might not be unacceptable, to give the Curious a little Inſight into this Art, which has of late Years received ſuch vaſt Improvement.

BOOK the Sixth.

Of FLOWERS.

I. Of Schoenanth, or Camels Hay.

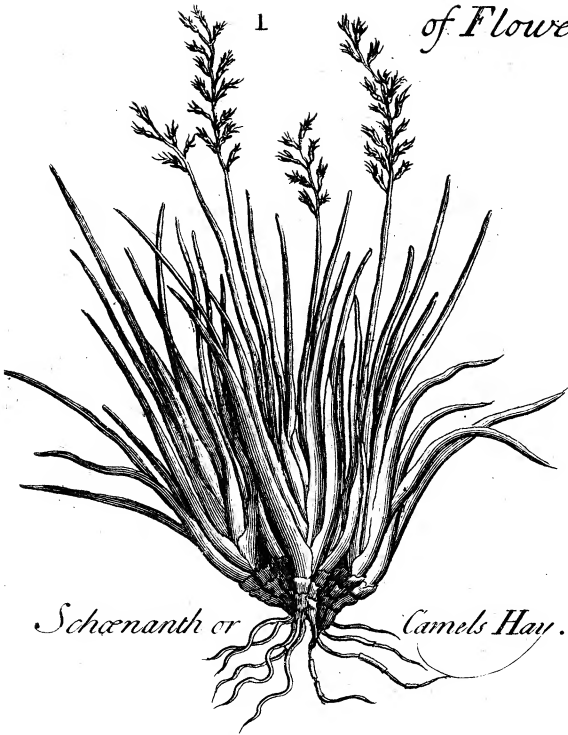
Pomet. **T**HIS *Schoenanth* is the Flower of a small Plant, or more properly speaking, a sweet Rush that grows plentifully in *Arabia Felix*, and at the Foot of Mount *Libanus*, from whence it is brought to us by the Way of *Marseilles*. This Plant is about a Foot high, the Root being knotty and very little, furnish'd with small, hard, long, white Filaments, and from each Root come several hard Stalks, of the Size, Figure, and Colour of a Barley-Straw, after which arise little tufted Flowers all on the Tops of the Stalks, the Bottoms of which are of a Carnation Colour; so that when this Rush is in Flower, it is a very fine Plant to look upon. And as this Flower is agreeable to the Eye, so it is to the Palate, having a warm, biting, and aromattick Taste.

We have brought from *Marseilles* the Flower and the Rush separate from one another, to wit, the Rush in little Bundles, and the Flower just in the manner as it is gather'd; sometimes clean and neat, and other Times nasty and dirty; which is the reason why such Apothecaries as are curious in their Druggs, clean and wipe every Flower with a Napkin, which is a troublesome Piece of Work. Chuse such as are the newest, and approaching nearest the scarlet Colour that you can get; and they are of no considerable use in Physick, they are absolutely required for the making of the great Treacle.

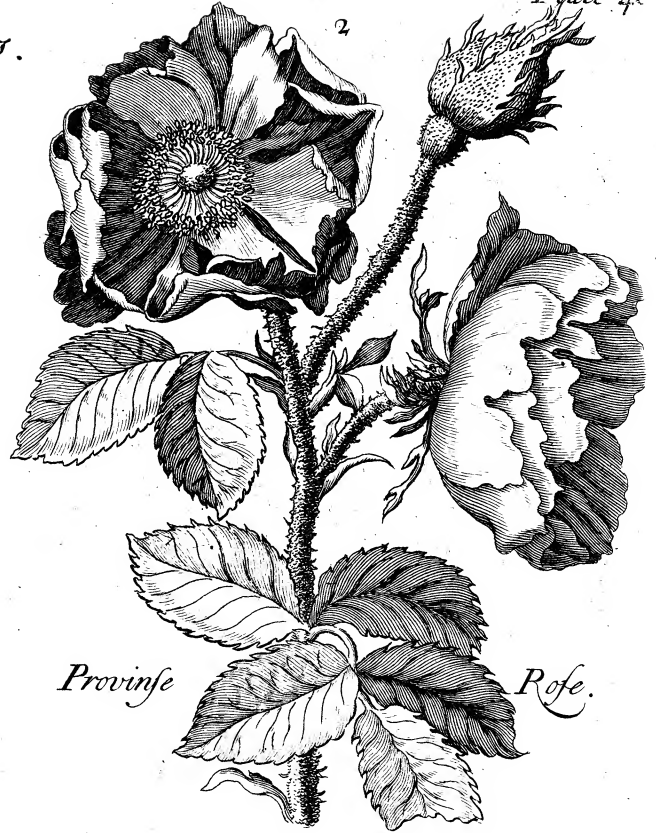
Fœnum Camelorum, *Juncus odoratus*, *Schoenanthus*, *Schoenanth*; the *Lemery*. *fragrant Rush*, or *Camels Hay*, is a kind of Reed or Grass which grows plentifully in *Arabia Felix*, at the foot of Mount *Libanus*, where it serves the People for Forage and Litter for their Camels. The Stalk is about a Foot high, divided into several hard Stems, of the Size, Figure and Colour of a Barley-Straw, being much smaller towards the Top. The Leaves are about half a Foot long, narrow, rough, pointed, of a pale green Colour. The Flowers growing on the Tops, are rang'd in double Order, small, hairy, of a red Carnation Colour, and beautiful to the Eye. The Root is small, hard, dry, knotty, adorn'd with long white Filaments. All the Plant, and particularly the Flower, is of a strong Smell, and biting Taste, pungent and very aromattick, being preferr'd to all the rest for its medicinal Use; to which purpose it is incisive, attenuating, deterfive, resists Malignity, is an excellent Vulnerary, provokes Urine, and removes Obstructions.

2. Of Provins Roses.

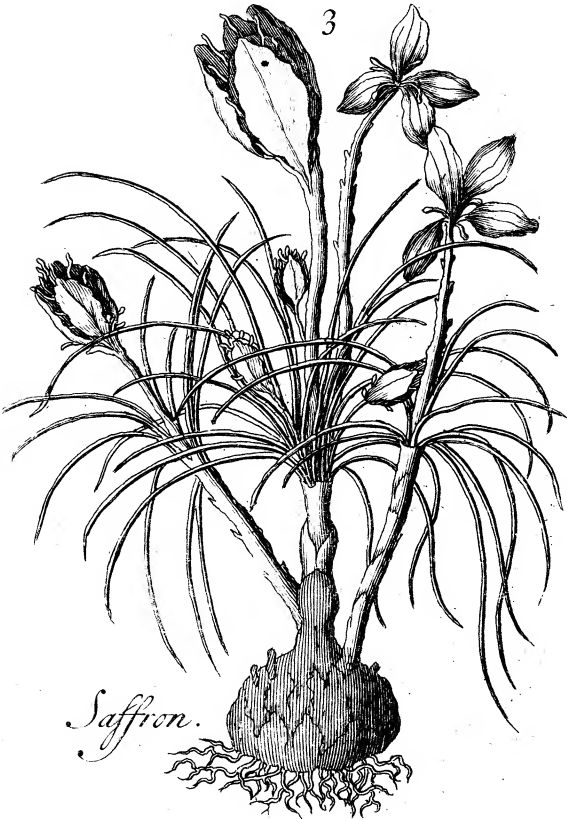
THE Roses, call'd *Provins Roses*, are Flowers of a deep *Pomet*. Velvet Red, which are brought from *Provins*, a little Town about eighteen Leagues from *Paris*. These Roses come in such great Quantities from that Place, that



Schœnanth or Camels Hay.



Provinse Rose.



Saffron.



Bastard Saffron.

it must be allow'd that the Ground there, is absolutely most proper for their Culture, and peculiarly adapted to the raising these Kind of Roses, because in Beauty and Goodness, they surpass all that come from other Parts; and that which contributes to their Excellency is, that the Inhabitants thereabout are perfectly skill'd in the drying of them, which makes them keep considerably longer than others, and preserves both their Colour and Smell. We bring now from *Provins* two Sorts, the larger and the smaller, the Goodness of either of which depends on their Colour, Smell, Equality, or Degree of Dryness.

Those, who make it their Business to deal in *Provins* Roses, preserve them in such dry Places, that no Air can enter in, and so close press'd or squeeze'd, that they may retain their Beauty a Year, or eighteen Months; but about that Time they must take Care to bring them out, lest they lose their Colour, and Worms breed in them: Some put them in old Iron, to hinder the Worms from destroying them.

These *Provins* Roses are what are most esteem'd of any Flowers in the whole World, because they are astringent and cordial, strengthen the Nerves, and other weak Parts of the Body; are of considerable Use in Physick, and enter several Compositions of Value: But since, of late Years, these *Provins* Roses were dear, several Druggists and Apothecaries have contented themselves with the common red Roses that are cultivated about *Paris* and other Parts, since which Time there has not been that Consumption for these Roses as formerly: Nevertheless, those who have made Use of the other Sort, have found, that they are not equal to the true *Provins* Rose; either in Beauty or Virtue, besides which, they will not keep so long, notwithstanding all their Pains to preserve them.

The true *Provins* Roses are so esteem'd in the *Indies*, that sometimes they will sell for more than their weight in Gold; but a great Quantity of what we sell for these Roses, is now made into Liquid and dry Conserve, and sometimes Syrups, which are often made in other Places, with other Kinds of Roses; therefore you must take Care in the Choice of these Things, to deal with honest People, for fear they make their Conserve and Syrups, when old, of a fresh, lively red, by

adding Spirit of Vitriol, or other Acids to 'em: The liquid Conserve is us'd to strengthen the Stomach, and the dry'd to stop Catarrhs, Rheums, &c. and also against Gripes and Belly-Ach. The Syrup has the same Virtues with the Conserve: There is likewise a Conserve made of the white Roses, but it is of little Value. We make besides another liquid Conserve, or Honey of Roses, which is made with the fresh Juice of the *Provins* Rose and Honey boil'd together.

It is of these Roses we make the best Rose-Water in the World, but that depends entirely on the Honesty of the Distiller, whether he will make all of the pure Rose, or by the Addition of a great deal of Water; and most commonly it is made, as I hinted before, of the Rose-Wood. The Use of this Water is so well known, that I need not waste Time to relate to you the great Consumption that is made, both by the Perfumers and the Apothecaries, and the large Quantities daily us'd by private Families, upon all Occasions, especially in Diseases of the Eyes, &c. Besides the Water, there is a fragrant and inflammable Spirit made of Roses, which is very proper to refresh and exhilarate the Spirits, as well as to strengthen the Stomach; but the Dearness of this Spirit, or rather essential Oil, and the Scarceness thereof, is the Reason why we sell but very small Quantities of it. Some Authors say, that the Roses which remain in the Alembick, or *Still*, after Distillation, and which are found like a Cake, in the Bottom, being dry'd in the Sun, is that which we call Rose-Bread; but a Decoction of the Buds being so much better, it is needless to say any Thing further of it; and the little Use, as well as Virtue, there can be in the Salt made from the Rose, prevents me entirely from proceeding any further on this Head.

Rose, in *French* and *English*, a Rose, is a Flower known through *Lemery*. the World; there are two Kinds of it, one cultivated, and the other wild: The Rose-Bush is likewise call'd in Latin, *Rosa*; it is a Shrub which bears hard, woody Branches, usually beset with strong, sharp Thorns; the Leaves are oblong, indented on their Sides, rough in touching, hanging five or seven on the same Stalk: The Flower is compos'd of several, large, beautiful, fragrant.

grant Leaves, supported by a Cup or Bud, which becomes afterwards an oval Fruit, of the Figure of an Olive, whose Bark or Covering is a little fleshy; it encloses, or contains angular, hairy, whitish Seed; the Roots are long, hard and woody; this Shrub, cultivated, or uncultivated, grows in the Hedges.

The cultivated Rose is distinguish'd into several Kinds; those which are us'd in Physick, are the Pale, or Carnation Roses; the Musk, or Damask-Roses, the common white and red Roses: The pale Roses call'd in *Latin*, *Rosæ pallidæ*, seu *Rosæ incarnatæ*, are fine and large, of a pleasant red, or flesh Colour, very sweet to the Smell, and that spread their Leaves wide; chuse such of these as are the most single, and least furnish'd with Leaves, because the volatile Parts are less diffus'd, and their smell and Virtue is the greater: They afford a great deal of exalted Oil, and volatile, essential Salt; are purgative, attenuate, and discharge a Mucus from the Head, purify the Blood, and purge, chiefly, the bilious and ferous Humours.

The Musk Roses, call'd in *Latin*, *Rosæ Moschata* & *Damascena*, are the small, single, white Roses, which blow not till Autumn; they have a Musk smell, very sweet and agreeable; the best and most efficacious, are those that grow in the hot Countries, as *Languedoc* and *Provence*; they yield great Plenty of exalted Oil, and volatile Salt: Three or four of these Musk Roses being bruis'd in a Conserve, or Infusion, purge briskly, so that sometimes they occasion Blood; those of *Paris* do not work so strong, but are more purgative than the pale Roses.

The common, white Roses, call'd *Rosæ sativæ albæ*, seu *Rosæ albæ vulgares majores*, are large, white and fragrant, a little laxative and deterfive, but are not us'd otherwise than in Distillations; they contain a great deal of Phlegm, exalted Oil, and but a little essential Salt.

The red Roses, call'd in *Latin*, *Rosæ Rubræ*, seu *Rosæ Provinciales*, are of a fine, deep, red Colour, but of little smell: They carry them in Bud, before ever they Blow, in order to preserve both their Colour and Virtue, which are destroy'd by the Air, if they are entirely expos'd to it. Chuse those that have the highest Colour; those that

grow about *Provins*, are the finest and most valued.

The red Roses are us'd for Conerves, and are likewise dried in great Quantities to keep, because they are employ'd to many Purposes, being well dried, so as to preserve their deep, red Colour, as well as the Smell they had when fresh. They are astringent, deterfive, proper to strengthen the Stomach, stop Vomiting, Looseness, Hemorrhages, being taken inwardly: Outwardly, they are us'd for Contusions, Dislocations, Sprains of the Hands or Feet, for Bruises, and to strengthen the Nerves and Joints: They are applied in Fomentations, Cerates, Ointments and Plaisters. You ought to observe to gather all your Roses in the Morning before the Sun has got high, for then the essential Parts are, as it were, concentr'd by the Coolness of the Night; otherwise, when the Sun has been upon them, it exhales a considerable Part from them. The little yellow Bodies which are found in the middle of the Rose, are call'd *Anthera*; these strengthen the Gums, and are us'd in Teeth-Powders. The wild, or Canker-Rose call'd *Cynosbaton*, I shall speak of in its proper Place.

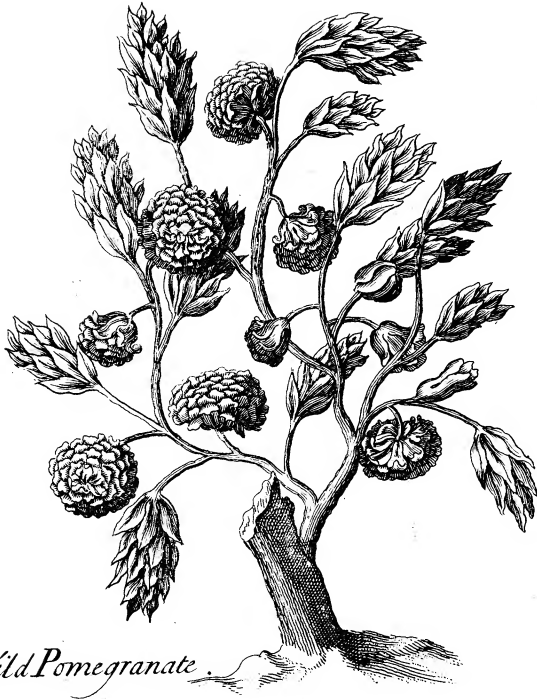
3. Of Saffron.

THE *Saffron*, which the *Latins* call *Crocus*, because of its reddish Colour, is the Chive, or Thread, of a Flower of a very beautiful red at one End; and yellow at the other, which is brought from several Parts of *France*.

That which bears the *Saffron* is an Onion, or bulbous Root, almost like those of the great *Shalot*, except that they are a little round, and of a Colour something redder, from whence arise Stalks, adorn'd with long, green, narrow Leaves, at the End whereof comes a deadish-blue Flower, in the Middle of which are three little Threads, which is what we call *Saffron*.

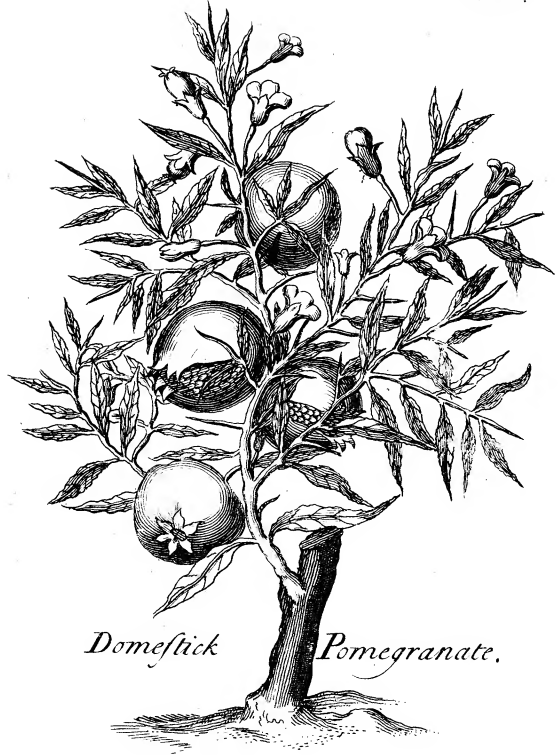
The best *Saffron*, and which is most valued, is that of *Boisue* in *Gatinois*, where it is husbanded with great Care, being almost all the Riches of the Country. They plant the Onions, or Bulbs of *Saffron*, in Spring-Time, in Rows like the Vines, a Foot deep

in

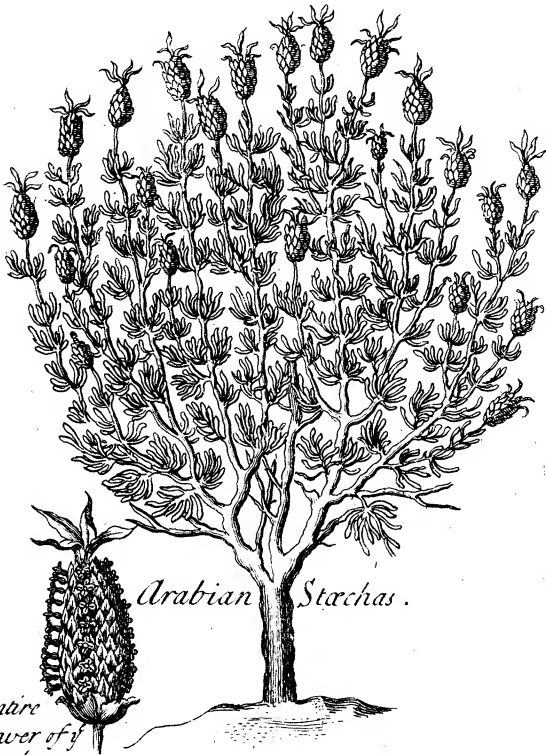


Wild Pomegranate .

6



Domestic Pomegranate .



Arabian Stachas .

*of entire
Flower of
Stachas .*

7



Atron or Yellow Stachas .

in the Earth: The first Year it brings nothing but the Herb, or Leaves, which remain green all the Winter long, 'till the beginning of Summer, after which the Leaves fall or dye. The second Year it returns with a gridelin Flower, in the middle of which there are three, little, reddish Threads, which is the Saffron; when it is ready to be gathered, which is in *September* and *October*, they gather it before the Sun rises, and then they retire with what they have got; and after it is clean they lay it upon Hurdles, or bake Stones, under which is a little Fire to dry it: The next Day they return to gather such as sprung a fresh since the other was got; for it is a wonderful Thing that these Bulbs recover again in four and twenty Hours, and continue several Days to be gather'd and dry'd, 'till the Roots will yield no more.

There grows in *France* several other Sorts of *Saffron*, as that of *Orange*, *Toulouse*, *Angouleme*, of *Menille* in *Normandy*; but the last is the worst of all, and none of the other three are so fine as the true *Gatinois*; for which Reason it is prefer'd before all the rest: And to have the Quality or Virtue required in it, the Chives, Threads or Hairs, which are call'd the Saffron, must be of a beautiful Colour, long and large, well tufted, of a fine red, good Smell, with the fewest yellow Threads, and as dry as is possible.

Saffron is much us'd in medicine, being one of the best Cordials we have. It serves for several Uses, because of its yellow Dye. The *Germans*, *Dutch*, and *English*, are such Admirers of the *Gatinois Saffron*, that they transport great Quantities of it every Year, in Times of Peace, into their own Countries. [Here we find our Author's Love for his own Country, or Ignorance of the Goodness of English Saffron, which is preferable to any other in the World besides, has led him into a palpable Mistake.]

As there is a great deal of Saffron-Powder sold, so it is generally a Cheat upon honest People, that being almost only sold in Powder, which has been us'd before hand by the Druggist, or Apothecary, to make Tinctures, Spirits, or the like, with. We have Saffron brought from *Spain* that is good for little or nothing, for besides the Cheat that may be impos'd upon us by their practice, they spoil

the Saffron entirely, thro' their Ignorance, which makes them believe that the Saffron will not keep without it be put in Oil. The Antients made *Pastilles* with Saffron, Myrrh, Roses, Almonds, Gum-Arabick and Wine; formerly they were brought from *Syria* and us'd for sore Eyes, and to provoke Urine. This Paste, or Troche, was call'd *Crocomagma*, and by us *Pastilles*, or Saffron Troches; but this Remedy is little known, and of less Use at present. There may be a Salt and Extract made from Saffron, but the Dearness of 'em is the Reason there are none made.

4. Of Bastard-Saffron.

Bastard-Saffron is a very common Plant, which grows about two Foot high, furnished with Leaves that are rough, pointed, longish, green and flash'd; at the End of each Branch arises a husky Head of the Bigness of one's Thumb End, of a white Colour: From this Head come several red and yellow Filaments, or Threads, which is what we call *German Saffron*, *Bastard-Saffron*, or *Flowers of Carthamum*: But as they cannot propagate this at *Paris*, but with great Trouble, we have it brought from *Alsace*, and both Sides the *Rhine*, where they cultivate it carefully. It grows plentifully in *Provence*, especially on the Side of *Selon*, and other Places.

This *Saffron* is in great Vogue among the *Feather-Sellers*, and for making *Spanish-red*, but without any Use in Physick, which is quite the Reverse of the other that is so useful in Medicine. As for this Saffron, which yields a Grain or Seed, the Apothecaries use it, after having cleans'd it well in the Composition of their Tablets of *Diacarthamum*, which this is the *Basis* of: Upon this Account they bear the Name. Chuse such Seed as is heavy, well fed, clean, new and dry, as can be got, and see that it be not mix'd with Melon, or Gourd-Seed; to distinguish betwixt which, know that the true *Carthamum* is round at one End, and pointed at the other; besides that, it is never so white as the *Melon-Seed*.

5. Of Saffianum, or the less Bastard Saffron.

THERE is another *Bastard-Saffron*, brought from the *Levant*, about *Alexandria*, &c. which is in little Threads or Chives, extremely fine and small, curl'd and reddish.

This *Saffron* is also a kind of *Carthamum*, which differs not from that afore, but only as it is much less. We chuse this Flower of the highest Colour, and finest Red, and likewise as fresh as we can meet with. The Use of it is for the Dyers about *Lyons* and *Tours*, where they confume the greatest Share to make their Colours fine, as the bright *Spanish Carnation*, and the like.

Crocus, or *Crocus Sativus*, according to *Tournefort* and *Baubinus*, in *English*, *Saffron*, is a Plant which bears several long Leaves, very narrow, and furrow'd. It springs about the End of *August*, or Beginning of *September*, with a low Stalk, or rather Foot, which supports a single Flower, something resembling that of the *Colchicum*, or dispos'd like the *Flower de Lis*, but much less, being divided into six Parts, of a blue Colour mix'd with Red and Purple; in the Middle of which Flower rise three small Threads, in the Nature of a Tuft, but divided, and of a fine Colour and Smell, which, when gather'd and dry'd, is the *Saffron*.

The Root of it is a Bulb as large as a Chestnut, and sometimes bigger, fleshy, sweet to the Taste, and cover'd with white or ash-colour'd Tunicles or Coats, supplied externally with a great many Fibres, whereby 'tis fasten'd to the Ground. They cultivate this Plant in several Parts of *France* [as observ'd by *Pomet*,] but the best is that of *Gatinois*, and the worst from *Normandy*. Chuse your *Saffron* new and fresh, that is well dried and oily; but take care that it be not artificial, by keeping it in oily Skins or Bladders, as is us'd by some. Let it be of a red Colour, with as little Yellow among it as may be. It abounds with an exalted Oil, mix'd with volatile Salt; and is cordial, pectoral, anodyne, hysterick, alexiterial, aperitive, us'd sometimes as a Restorative in our Food, and

in Collyries, to preserve the Eyes in the small Pox. It enters the Composition of some Plaisters, particularly *Oxyroceum*, but is chiefly us'd internally.

6. Balauftians, or the wild Pomegranate.

THE *Balauftians* are Flowers of the wild Pomegranate, *Pomet*. which are brought from several Parts of the *Levant*. We sell two Sorts of *Balauftians*, namely, the fine and the common. We mean by the fine the Husks, together with their Flowers; and the common have nothing but the Husk. The *Balauftians*, have no extraordinary Use in Medicine, only as they are powerful Astringents; however, make choice of such as are fresh, well supplied with Flowers of a deep Colour, that is, a fine Velvet red, as little mix'd with Chaff and Dirt as possible. The common Sort are not worth regard, being in a Manner wholly useles.

As to the domestick *Pomegranate*, we never sell it with the Flowers, because they will not keep like the wild; but instead of that, we have plenty of them brought from *Provence* and *Languedoc*, as a Fruit that is very agreeable to eat, as well as useful in Physick, the Juice serving to make Syrup with. We sell more of the Rind of the *Pomegranate*, as being most astringent; but take care that it be well dried, and do not smell musty: For the most Part of them who sell *Pomegranate-Bark*, sell nothing but such as hath been dry'd whole, without emptying, and when they are dry'd. and come to be us'd, they have such an ugly Taste, that they are rather fit to make one sick, than relieve one.

We sell a dry'd Conserve of *Pomegranate*, which is nothing else but Sugar dissolv'd in the Juice, which gives it a red Colour, with the Addition of a little *Cochineal*, Cream of Tartar, and Alum. This Conserve is difficult to make, because, if the Confectioner knows not how to work the Conserve, he will never be able to gain his Point, because of the small Quantity of Alum which he is obliged to mix with it; and there is nothing in the World more contrary to Sugar; which shews the Er-

ror of those, who say that they mix Alum with Sugar to refine it; and what we here assert, is so true, that four Ounces of Alum is capable of hindring two thousand Weight of Sugar from incorporating. But to come to our Conserve, only a little Alum must be added to the Sugar and Juice of the Pomegranate, while moist, and afterward they must dry in the Air together: But, in a Word, Alum is to Sugar as Oil to Ink.

Punica Malus, or the *Pomegranate*, is a Shrub, whereof there are two Kinds; one cultivated or domestick, and the other wild. The first is call'd by *Tournefort*, &c. *Punica quæ malum Granatum fert*, that which produces the Pomegranate; by *Parkinson* and *C. Bauhinus*, it is call'd *Malus Punica sativa*: The Branches are small, angular, armed with Thorns; the Bark is reddish, the Leaves are small, and resemble those of the Myrtle, but less pointed, hanging by reddish Stalks; of a strong Smell, when they are crush'd or bruised. The Flower is large, beautiful and red, inclining to purple, compos'd of several Leaves like a Rose in the Hollow of a Cup, representing a little Basket of Flowers; the Cup is oblong, hard, purplish, large at the Top, having, in some measure, the Figure of a Bell; they call it *Cytinus*. At the Bottom comes a Fruit after the Flower is gone, which grows into a large round Apple, adorn'd with a Crown, form'd by the Top of the Cup; the Bark is as hard as Leather, of a purple Hue, dark without and yellow within. This Apple is call'd in *Latin*, *Malum Punicum*, seu *Granatum*, the Pomegranate in *English*. It is divided internally into several Partitions full of Seed, heap'd one upon another, being fleshy, of a fine red Colour, abounding with a very pleasant Juice, each of which contain, in the Middle of them, an oblong Grain, yellow, and sometimes very irregularly form'd.

There are three Sorts of *Pomegranates* which differ in Taste; the one Sort are eager, or sharp, the other sweet, and some are betwixt both; manifestly neither the one nor the other prevailing, call'd vinous. These Pomegranates are improv'd in our Gardens, especially in all the warm Countries, as *Spain*, *Italy*, *France*, &c.

The second Sort is call'd *Punica Sylvestris*,

the wild *Pomegranate*. This is a Shrub like the Former, but more rough and thorny: They gather the Flowers when in their Prime, and are what they call *Balaustia*, or *Balaustians*; these are dry'd to keep, which the Merchant brings from the *Levant*: The wild *Pomegranate* grows only in the hot Countries, contains in it a good deal of Flegm, Oil, and essential or acid Salt.

The *Balaustians* ought to be chose new, large, fair, well blown, of a deep Colour, or reddish purple, affording Plenty of volatile Salt and essential Oil: They are proper for Bloody-Fluxes, *Diarrhœa*, Ruptures, to stop a Gonorrhœa, Whites in Women, and spitting of Blood. The Bark is us'd for the same Intentions.

The Juice of the *Pomegranate*, which is sharp or acid, is most valued in Physick, as proper to fortify the Stomach, stop Vomiting and Looseness, precipitate bile and choler: The Seed is likewise astrigent, and us'd in Injections. There is found upon the Rocks in the Sea a Stone, in Shape of an Apple, which both in Figure and Colour resembles this, and therefore is call'd a *Sea Pomegranate*.

7. Of Arabian *Stæchas*.

THE *Stæchas*, very improperly call'd the *Arabian Stæchas*, *Pomet*, being that which we sell, is brought to us from no other Part than *Provence* and *Languedoc*, where it grows plentifully. It is the Flower of a Plant which has very narrow green Leaves; this Flower comes in the Nature and Figure of Spike, of the Size of one's Finger's End, from whence arise little blue Flowers, almost like a Violet.

The greatest Part of the *Stæchas* we sell, comes from *Marseilles*, by reason of the Plenty they have in the Isles of *Hyeres*, for which Reason it went formerly by that Name. The little Use this Flower is of in Physick, makes it that we sell but small Quantities, it having little or no Taste, Smell, or Virtue.

There is another *Stæchas* we sell besides, whose Flowers are of a Citron Colour, which has occasion'd some to give it the Name of the yellow *Amaranthus*; but the

little Use that is made of it, gives me no Encouragement to say any thing further, but that it is a very common Plant in *Provence* and *Languedoc*. The *Arabian Stæchas* grows so large and thick in *Spain*, that it is found as big as one's little Finger, and the Spikes or Heads sometimes white. The chief Use of it is for Treacle, wherein there needs no farther Direction but to chuse it fresh, good, clean and neat.

Stæchas Purpurea, according to *Lemery*. *Baubinus* and *Tournefort*, is a beautiful Plant, which bears, in the nature of a Shrub, several Stalks, or Rods, of a Foot and a half, or two Foot high, woody, and divided into several Branches. The Leaves are like those of Lavender, but much less, narrower and whiter. The Tops support or carry Ears, or husky Heads that are oblong, mounted each on a Cluster of Leaves, and adorn'd with little Flowers, purple or bluish, dispos'd in Rows the Length of the Head. There succeed from each of the Flowers four Seeds, that are almost round, blackish, and enclos'd in a Covering, which serves as a Cup to the Flower. The Roots are woody. All the Plant has an aromattick Smell, with a Taste something acrid and bitter. It grows in great plenty in *Languedoc*, *Provence*, and the Isles of *Hyerès*, call'd by the Antients the *Stæchas Islands*. It delights in dry and sandy Ground, and is brought dry to the Shops, where the Flowers are only us'd. It is call'd *Arabian Stæchas*, because the greatest Quantities are brought from thence. It is attenuating, deterfive, aperitive, cephalick, hysteric, strengthens and comforts the Brain, provokes Urine and the Terms, resists Poison, and expels Melancholy.

Some say this Plant grows near the *Rhine*; that it has a pretty large Flower, much of the Shape of Hops, of a fragrant Smell; that when growing they are yellow and bluish, but when dried of a brown Colour, and in Knobs. Those which are the largest, best scented, and least broken, are the best. These Flowers are diaphoretick and vulnerary, us'd chiefly in Diseases of the Head and Nerves, and by their Fume they dry up Defluxions. They may be us'd in Powder, from a Dram to two Drams. A *Lixivium*, or Lye, of the Ashes in fair Water, will kill Lice and Nits in the Head. The Spirit of this Flower is

reckon'd excellent against all cold Diseases of the Womb, together with Wind, Gripes, and Convulsions; and exceeds *Hungary Water* internally or externally. The Syrup of *Stæchas* is given in Coughs, Catarrhs and Barrenness.

8. Of Rosemary.

Rosemary is a Plant so common, it wou'd be a needless thing to amuse any Body with a Description of it; but the considerable Sale there is of what is produc'd from it, engages me to treat of it. Therefore I shall begin with the Oil, which is made from the Leaves, Flowers, Stalk and all, by means of a common Alembick, with a reasonable or sufficient Quantity of Water; by which means we have a white, clear, penetrating, and fragrant Oil, endowed with a great many excellent Qualities and Virtues: But the Dearness of this Oil, by reason of the small Quantity that is made, occasions certain People to adulterate it, with mixing a considerable Part of the Spirit of Wine, well deflegmated, and so they confound Oil of Spike, Lavender, and other aromattick Oils; tho' it is easy to distinguish Oil of Rosemary, as being white, clear, and transparent, which, if mix'd, it will not be so pure, tho' it may retain a sweet Smell, and be very penetrating.

The Use of this Oil, which is call'd the Essence or Quintessence of Rosemary, is not very considerable in Medicine; but 'tis very much used by the Perfumers to aromatise their Liquors, Wash-Balls, &c. And some esteem it greatly for the Cure of Wounds, as a very specifick Balsam, which has given occasion to some Strollers and Mountebanks to make it a mighty Commodity, and swear that it is true Oil or Essence of Rosemary; when what they sell for it is nothing but Oil of Turpentine, and Pitch, melted together, and colour'd with *Orcanet*.

The next Merchandize we sell that comes from Rosemary, is the Queen of *Hungary's Water*, which has made such a Noise in the World for so many Years together, and is pretended to be a Secret deliver'd by a Hermit to a certain Queen of *Hungary*. The great

8



Rosemary.



Spike,

9



Dodder of Thyme.

11
Bisnague or Tooth-pick Flower.



12
Violets or Pansie.



great Virtues appropriated to this Water must be owing to the Spirit of Wine and Rosemary Flowers, from which two things it is only made. But there are a thousand Cheats imposed upon the World by those who pretend to have the true Receipt of making the right *Hungary-Water*: And these are the People, generally, that spoil this Medicine, by making it of the worst Materials, and in ordinary coarse Vessels; as their Manner is to take the whole Plant of Rosemary, infuse it in *Aqua Vitæ*, or common Spirits, and so distil it in an Iron Pot, with an earthen Cap fix'd to it. You have it describ'd at large, and the best Methods of preparing it, by Mr. *Verni*, Master-Apothecary of *Montpellier*, in his *Pharmacopœia*, or Treatise of distill'd Waters, pag. 829. and Mr. *Charas* in his *Chymical Pharmacopœia*, pag. 632.

The Use of *Hungary-Water* is so universal, and the pretended Virtues so many, that it wou'd be endless to attempt to enumerate them; besides, there are so many Treatises take notice thereof, that it would be a Work altogether needless.

We likewise sell the dry'd Flowers, and Seed and Salt of Rosemary, but in little Quantities of these. We have likewise a liquid Conserve of the Flowers; besides which, they bring us from *Languedoc* and *Provence* Oil of Spike, which is made of the Flowers and the small Leaves of a Plant which the Botanists call *Spica*, *sive Lavendula mas*, *vel Nardus Italica*, *aut Pseudo-Nardus*, which signifies Spike, male Lavender, *Italian*, or Bastard-Nard; and these grow common in *Languedoc* and *Provence*, and upon all the Mountains thereabout.

This Oil of Rosemary is proper for several Sorts of people; as Painters, Farriers, and others; besides its Use in Physick, wherein it is accounted cephalick, neurotick, cardiack, stomachick, and uterine; a great Strengthen-er of any weaken'd Part, especially the Head or Nerves; excellent against Vertigoes, Lethargy, Apoplexy, Epilepsy, Palsy, Convulsions, Syncope, Fainting Fits, Palpitation of the Heart; a good Specifick to strengthen the Eye-Sight, and open Obstructions of the optick Nerves, cure a stinking Breath, and relieve in the Spleen and Jaundice. We sell in our Shops, with this, Oils of Lavender,

Marjoram, Thyme, Sage, Mint, and other aromattick Plants.

Rosmarinus hortensis angustiore folio, according to *C. Bauhinus* and *Lemery. Tournefort*; or, the Garden-Rosemary, with the narrow Leaf. This is a woody Shrub, whose Stalk grows four or five Foot high, and sometimes much more, having several long Branches, ash-colour'd, on which grow long narrow Leaves, that are hard and stiff, of a brownish green without, and whitish underneath; a little succulent, of a strong Smell, aromattick, and of a pleasant, agreeable biting Taste. The Flowers are small but numerous, mix'd among the Leaves, each of which has a Tail cut at the Top into two Lips, of a pale blue Colour, inclining to white; of a sweeter Smell than the Leaves. When the Flowers are fall'n, there follow some little Seeds, that are almost round, join'd four together, and enclosed in a *Capsula*, or Covering, which serves as a Cup to the Flower. The Roots are small and fibrous. They cultivate this Shrub in Gardens, but it grows without improvement near *Narbonne* in *Languedoc*, and flowers in *May* and *June*. The Flower is call'd *Anthos*, which is as much as to say *the Flower*, by way of Excellence. Both the Leaf and Flower is us'd in Medicine; but those of *Languedoc* are to be valued before any of the more Northern Parts of *France*, because the Heat of the Climate renders the Plant there more spirituous and bitter. It yields a large Quantity of essential Oil and volatile Salt, besides fix'd Salt, which it affords great Plenty of, by burning to Ashes, making a Lye of them, then filtering, and afterwards evaporating in a Sand Furnace to a due Dryness.

9. Of Dodder of Thyme.

Epithymum is a Plant like a Bush of Hair, found upon several Sim- *Pomet.*
ples, as upon Thyme, from whence it took the Name of *Epithymum*, or Thyme-Weed. We sell two Sorts of it, to wit, the *Epithymum* of *Candia*, and that of *Venice*: The first in long Threads, of a brownish Colour, and pretty aromattick Smell. The second Sort, on the contrary, is very little, and curled,

curled, and has a great deal stronger Smell than the other. There is a third Sort of *Epithymum*, which our Herbarists fell by the Name of Country *Epithymum*; but this is good for nothing at all, having neither Smell nor Taste, which is the very reverse of the two former, which you ought to chuse fresh, odoriferous, and the least bruised that can be. This *Dodder* is of some Use in Physick, as entering into several *Galenical* Compositions.

There is another *Dodder* we fell, more of the Nature of the Plant it clings to; we call it *Cuscuta Podagra*, *Angina Lini*, *Dodder*, *Witbwinde*, *Gout-Herb*, &c. This Plant is the same thing with the *Epithymum*, having no Difference; but according to the Plants it climbs upon, it changes its Name. And to prove what I say, I shall relate what Mr. *Tournefort* gave me in Writing.

The *Cuscuta*, says he, is a Plant of a singular kind. It comes from a very small Seed, that produces long Threads or Strings, that are as fine as Hairs, which perish every Year with the Root. If they find any adjacent Plant, upon which they can wind or twist themselves, they catch hold of the Stalks or Branches, and draw their Nourishment from the Bark of the Plants. It bears several Flowers, at equal Distance, gather'd into little Balls. The Flowers are like little Cups, white, tending to a Flesh Colour, membranous, and fill'd with four or five Seeds, small, brown, or greenish, as little as Poppy-Seeds.

This Plant grows indifferently on all Sorts of Herbs, and there are above a hundred Plants to which it clings; and it is believ'd that this receives its Substance from those Plants which it surrounds, and likewise partakes of the same Qualities; so, commonly the *Dodder*, that grows upon Flax, or Flax weed, is what we mean by this *Cuscuta*, as that which grows upon Thyme is the *Epithymum*. It corroborates the Parts, opens Obstructions of the *Viscera*, and passes by Urine.

Epithymum, sive *Cuscuta minor*, *Lemery*. is a kind of *Cuscuta*, or *Dodder*, that is stringy, and winds it self upon any Plant it approaches, being of a reddish brown Colour, and having a pleasant fragrant Smell; that which has fewest

Stalks in it is to be prefer'd. By seeing how *Dodder* grows upon Nettles, Hemp, &c. we may apprehend what it is like. It is brought to us out of *Turkey*, *Italy*, *Venice*, and other Parts of the *Streights*. It is reckon'd amongst Catharticks, and said to purge watery Humours, and Melancholy; is aperitive, arthritic; purifies and cleanses the Blood; is good for the Spleen and *Hypochondria*, Wind, Rheumatism, and Gout, being beaten to Powder, or taken in Infusion in Water, Wine, or Whey.

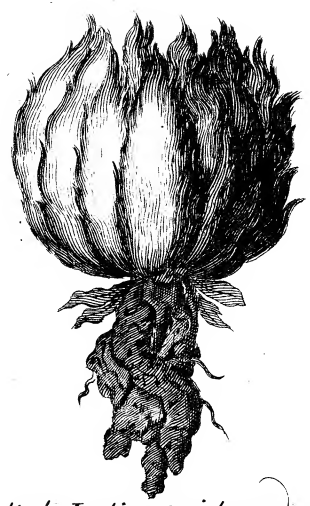
10. Of Spikenard.

Spikenard, or *Indian Nard*, is a kind of Ear of the Length and *Pomet*. Thickness of one's Finger, adorn'd with little brown Hair, or Nap, that is rough, coming from a small Root of the Size of a Quill. They pretend that the *Spikenard* grows in Tufts or Bushes, and that it raises a Flower from the Ground, upon a slender long Stalk; but as I never saw one upon a Stem, I have set it down in the Manner as we fell it, according to the Figure engrav'd with the Root, to shew that it is not so small and slender as Authors wou'd make it.

We fell three sorts of *Spikenard*, namely, the *Indian Spikenard*, so call'd, because it comes from *India*, whereof there are two sorts, *viz.* the great and the small. The second is the *Mountain-Spikenard*, which is brought from *Dauphiny*. And the third is the *Celtick-Spikenard*. The small *Indian Spikenard* is according as it is express'd in the Figure; of a bitter Taste, and a strong disagreeable Smell; and the large is of the Length and Thickness of one's Finger, and much of the same Quality, except that it is usually brown-er, and more upon the red.

As to the *Celtick Nard*, it is in little shelly Roots, full of pretty long Fibres, from whence arise little long Leaves, that are narrow at Bottom, and large towards the Middle, and a little sharp at the End; of a yellow Colour, something upon the red; when they are dry'd, they are fit for transporting. In the Middle of the Leaves comes a little Stalk, about half a Foot high; at the end of which are many small Flowers; of a Gold Colour, shap'd like Stars.

This



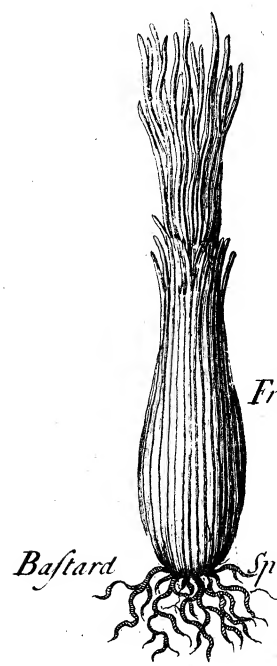
little Indian Spicknard.



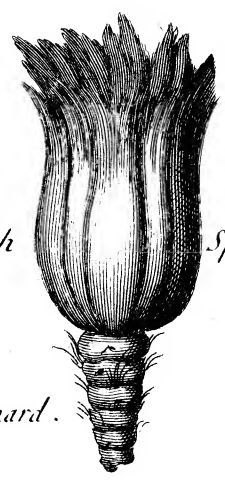
Celtick Spicknard.



great Indian Spicknard.



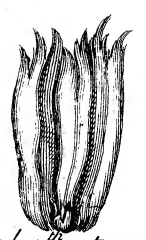
Bastard Spicknard.



French Spicknard.



Bouquain Spicknard.



Spicknard wthout root.

Hirculus.

This *Spikenard* is brought us in Bunches from different Parts, but the greatest Plenty comes from the *Alps*, from whence we have it by the Way of *Marfeilles* or *Röien*. The Use of this is only for the great Treacle, where it undergo's a long and difficult Preparation; for they are forc'd to put this, sometime, in a Cellar to make it moist, that this little Root may peel, which is the only Part that is put into the said Composition. One ought to take Care of several little extraneous Plants, which are usually found mix'd with it; as *Bastard Spikenard*, *Hirculus*, or the like. Chuse all the Kinds as fresh and fragrant as possible.

Nardus Celtica, or *Spica Celtica*, is *Lemery*. a little knotty Root, yellowish and aromatick, being form'd like an Ear, from whence it takes the Name of Spike or *Spica*. It bears fine, small Fibres, or slender Tails, pretty long, which support small, oblong Leaves, narrow at the Bottom, large or broad in the Middle, and end in a Point of a yellow Colour. There rises, among the Stalks a little Stem of about half a Foot high, bearing on the Top, a good many Flowers in Form of Stars: It grows in the *Alps*, *Tyrol*, *Liguria*, *Carinthia*, *Styria*, &c. That is best which is fresh, sweet-scented, with many small Fibres, full and strong, or not brittle; it is hot and dry, and of the Nature of the *Indian Spikenard*, but not altogether so strong; it strengthens the Stomach, expels Wind, is good against the Colick and provokes Urine; it may be given in Powder, from a Scruple to a Dram, and in Tincture to half an Ounce.

Nardus Indica, or *Spica Indica*, the *Indian Spikenard*, is a Kind of Ear, as long and thick as one's Finger, light, and supplied with long Threads, or Hairs, that are reddish, not brown, of a strong, unpleasant Smell: It grows in *India*, and is brought thence to *Alexandria* in *Egypt*; and from thence to *Venice*, and so hither; and is call'd *Spica*, because it resembles an Ear of Corn. There is a bastard *Spikenard*, which is a Sort of Lavender, a second Sort of *Narbonne*, and thirdly, A Mountain *Spikenard* like *Valerian*. When you chuse the *Indian Spikenard*, let it be such as is dry, of a yellowish red, or Cinamon Colour, fresh, smooth, with a long Beard, or Fibres, and a sharp Spike, biting,

attracting the Tongue, sweet-scented like *Cyperus*, and keeping its Scent long. If it be moist, or whitish, or rough, and without Dust, or Hairs, and Fibres like Wooll, it is naught: It is hot, cephalick, stomachick, and alexipharmick; attenuates and astringes, stops Fluxes, yet provokes Urine and the Terms, powerfully expels Wind, and cures the Jaundice; it resists the Malignity and Poison of the Plague, and all Manner of malign and pestilential Fevers: It is us'd in Powder, which is an Ingredient in *Mithridate*, *Venice-Treacle*, and other Antidotes, from half a Dram to a Dram and Half. The simple Oil is call'd Oil of Spike, and there may be an excellent compound Oil made of it with the Addition of other Spices.

11. Of Bifnague, or Tooth-Pick-Flower.

THE *Bifnague*, or *Visnague*, is the Tufts and Tassels of a *Pomet*. Plant, whereof you have the Figure under that Name, which grows plentiful in *Turky*, from whence we have it brought to sell. This Plant is cultivated and brought into several Parts of *France*, but chiefly into the royal Garden at *Paris*. Of the whole Plant we sell nothing but the Tassels, because the People of Quality, and others in Imitation, use them as *Tooth-Picks*; and the rather, because they are of an excellent good Taste: As to your Choice, you need to be no otherwise curious, than in taking such as are whole, the largest and fairest you can get

12. Of Hearts-Ease.

BESIDES the *Bifnague*, we sell a certain Violet Flower, which is *Pomet*. brought us from *Provence* and *Languedoc*, or from *Lyons*; call'd so, because of its bluish Colour, and its Resemblance to Violets, when dry'd; upon which Account the Apothecaries use it instead of *March-Violets* in several of their Compositions, where the true Violets are required, which is an abuse, as it has been observ'd by Mr. *Charas*, in his *Pharmacopœia*, the second Edition, Page 334.

But

But the Flower, whose Figure is here given under this Head, is what the *Botanists* call *Viola Tricolor erecta*, *Affurgens Tricolor Dodonæi*, &c. and by others *Viola Pentagonia*, in *English*, Pansy or Fancy, *Flos Trinitatis*, by some *Trinity-Flower*, and by others *Heart's-Ease*: It is call'd the Flower of Trinity; from having three Colours; to wit, the Violet, the blue and the yellow; which some have thought, tho' erroneously, a proper *succedaneum* for true Violets; which being so well known in all Countries, and treated of in every Herbal and Dispensatory, I shall say nothing further of them, either in relation to the Syrup, Flower, Seed or Comfit, of the *March* Violet, but advise every Body to apply themselves to honest People, when they want any of them, that they may furnish them with what is true, natural, and not decay'd.

There are other Sorts of Flowers sold by us, as red Poppy, Colt's-Foot, St. John's-Wort, Centaury, Car's-Foot, and Lilly of the Valley, with several others we are furnish'd with from the Herb Shops, and publick Markets in *Paris*, as I told you before; for which

Reason there are a great Variety of Simples that we do not keep in our Shops.

Herba Trinitatis, *Viola Tricolor*, *Facea major*, *sive Viola Tricolor*, *Lemery*. *sive Trinitatis flos*, *Pansy*, or *Pensie* in *French*, and *Fancy* in *English*, is a Kind of Violet, or Plant, bearing its Leaves upon creeping Stalks, like those of Ground-Ivy, blue, purplish, or white and yellow, without any Smell, each compos'd of five Leaves. After the Flower is gone, there appears a Pod, or Bag, which contains several small Seeds, the Root is fibrous or stringy: This Plant is cultivated in our Gardens, flowers most of the Summer; and yields some essential Salt and Oil: It is incisive, vulnerary, deterfive, penetrating and sudorifick; good for Ulcers of the Lungs, Coughs, Obstructions of the Womb and Gall: The Juice taken in white Wine, &c. is good against Fevers and Inflammations, drunk for a Continuance of three Weeks or a Month; it is said to be a specifick in the venereal Disease: The saline Tincture is much more effectual for that and other Purposes above mentioned: Dose 3 Drams in any proper Vehicle.

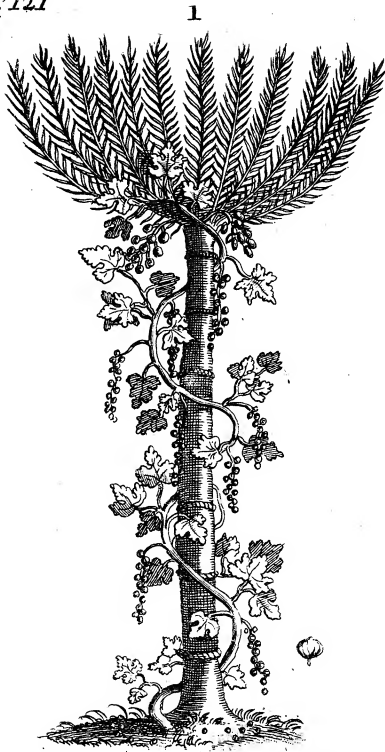
BOOK the Seventh.

Of FRUITS.

IN this Chapter I shall take in, under the Name of Fruit, whatever, in Herbs, Plants, Shrubs, or Trees it is that succeeds the Flower; and likewise, whatever attends any of them, whether naturally, or as an Excrecence, as Mistletoe to the Oak, or the like; together with what is produc'd from Fruits, which are commonly distinguish'd into two Sorts, to wit, into such as

bear Nuts, and such as bear Stones or Kernels. It is pretended that Fruits are compos'd of three essential Parts, namely, the Skin, or outward Membrane, the Pulp or fleshy Part, and the Fibres or stringy Parts. There are Fruits, whose Kernels are cover'd with a *Capsula*, or Case, that contains the Seed, and others that have none.

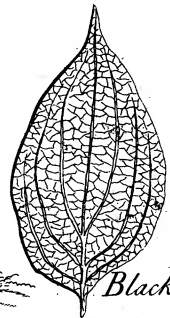
Book 7.
of Fruits



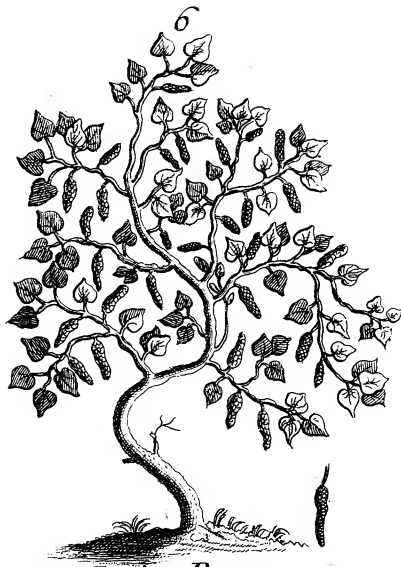
White Pepper climbing up of Areca.



Black Pepper climbing up of Aouai.



Black Pepper leaf.



Long Indian Pepper.

Mecaruchit.



Long Indian Pepper of America.

1. Of white Pepper.

Pomet. **W**HITE Pepper is the Fruit of a climbing Plant we commonly call a Creeper, whose Leaves are entirely like those of our Currants; after which come small Clusters, as it were adorn'd with round Seeds, green at first, but when ripe they are of a greyish Colour.

As the Pepper-Plant cannot support itself, the Inhabitants of those Parts where it grows, plant it at the Root of certain Trees, as the *Areca*, which is a Sort of Palm-Tree, very strait and tall; the *Cocoa*, or other Trees of the like Nature. But as this Pepper is rarely brought to us, a great many Persons will affirm, it is not the true white Pepper, being nothing more than the Bark of the black Pepper: It is for this Reason I have given you the Figure of it, and will endeavour to prove the white Pepper to be natural from the Places of its Growth, according to what Mr. *de Flacourt*, Governor in the Isle of *Madagascar* asserts; who says, that the true white Pepper grows upon a Creeper, and that the Stalk and Leaves smell altogether as Pepper; and that there are great Quantities in that Country, where the *French* have a good Establishment, and lade their Ships, every Year, with a great deal of it; for the Woods, all about, are full of it, so that it is Food for the Turtles and wild Pidgeons. It is ripe in *August*, *September* and *October*; Tho' some Authors, and among the rest *Pisè*, in his History of the *Indies*; and after him Mr. *Charas* observes, that there's no such Thing as white Pepper, it shall not hinder my Belief of it: For it is impossible that they can ever bark black Pepper, so as to make it smooth, and even as we find the white *Coriander* Pepper that the *Dutch* bring us. And further, when we break the Pepper, we see the outward Skin, which is an infallible Token, that it had never been broke before; for if it had been bark'd we should have easily discover'd the Wrinkles that must have been in the drying of it; and this is such a Truth, that all the Peppers we find bark'd, or husk'd, and blanch'd in *Holland*, which is always done with the black Pepper, appear plainly to have a wrinkled or wither'd Skin.

Chuse the true, white *Dutch* Pepper, the largest, best fed, heaviest, and the least black Seeds amongst it, that you can get; and take Care of such as is blanch'd, or withered, which is soon known by rubbing it in your Hands; for the white, mealy Colour will change yellow: Besides that, the *Coriander* Pepper that is not blanch'd, will appear with little Streaks like Ribs; and when beat to Powder, of a fine grey, tending to a white Colour: Its Uses are too well known to detain me any longer on that Head. We pound, or reduce to a gross Powder, the white *Coriander* Pepper, upon which we throw Essence of Amber-Pepper, or *Bergerac*, which has no other Use than to gratify Persons of Quality.

2. Of Black Pepper.

BLack Pepper is likewise the Fruit of a Creeper that has large, broad Leaves, very fibrous, and supplied with seven Strings, or nervous Ribs, that are very conspicuous, according to the Figure which was given me by Mr. *Tournefort*. The *Dutch* and *English* bring three Sorts of black Pepper, which differ not one from the other, but according to the Places where they grow. The first and finest is that of *Malabar*; after that the Pepper of *Jamby*, which comes the nearest to the *Malabar*. The third Sort is a meagre, lean, dry Pepper of *Bilipatham*; and tho' that be the least of all, it is nevertheless most esteem'd by the *Mahometans*; because, say they, the smaller the Pepper is, the better Condition it is of; for the smaller Pepper has the large Grain, and it is not so hot as the great Pepper, which is the Reason the *Dutch* rarely bring any of the little Pepper from *India*: Besides, they have a better Trade for the large *Malabar* Pepper, than other Nations, in that they never pay any ready Money, but truck with the Natives for their Commodities which they carry thither, as *Quick-Silver*, *Cinnabar* and the like; whereas the *English* buy theirs with ready Money; after which they are forc'd to exchange with the *Dutch*, and give them a Bale of *Malabar*-Pepper, for a Lot of black Pepper, which is ten Bales; which makes it that the *English* cannot furnish other foreign Markets with Pepper that is so fine and large as the *Dutch* do.

Chuse your black Pepper well fed, and little wither'd or wrinkled, heavy and full of white Grain, but as clean from Dust and Dirt as can be; and take Care of being impos'd upon with the Pepper which they us'd for blanching shell'd or bark'd, as I mention'd before. The black Pepper is us'd as the white, and is likewise of some Advantage in Medicine, because of its Warmth; for which Reason it is employ'd in some hot Compositions, as *Venice-Treacle*, and some others. Druggists sometimes sell it; but it is mostly fold by the Grocers. Pepper expels Wind, and cures the Colick, so that it is the Basis or Foundation of most of the Gripe-Waters that are made: The Tincture is good for most cold Diseases of the Nerves and Brain; as Palsies, Convulsions, Rheumatisms, Sciaticas, &c. The Chymical Oil, whereof this yields but very little, is an incomparable Remedy, internally or externally, in Weakness of the Parts of Generation of Men or Women, as likewise in Barrenness; a few Drops of the Oil in any proper Liniment, rubb'd upon the *Perineum* three or four Times will restore a lost Erection.

3. Of Fine Spice.

THE fine Spice is a Mixture of several Aromaticks mix'd together; and to prevent the Abuse that attends this Composition, I have thought fit to give the Receipt of those Things it ought to contain. Take black *Dutch* Pepper, five Pounds; dry'd Cloves, one Pound and a half; Nutmegs the same Quantity; fresh dry'd Ginger two Pounds and a half; green Anise and Coriander, of each, three Quarters of a Pound; powder them separately, and sift them thro' a fine Sieve; then mix them together, and take Care to keep them close stop'd for Use.

It is here observable, That the generality of those who make the four Spices, use instead of Pepper, Pepper-Dust; instead of Cloves, *Jamaica*-Pepper; instead of Nutmegs white Costus; or an uncertain Kind of Bark, that I know not well what to call; but is so like rough Cinnamon, that it is impossible to discover the Difference, but that the Taste is altogether foreign, and has

more Likeness to Sassafras: The lesser Galingal and Cloves mix'd together, and those who sell it, call it Cinnamon Wood, clov'd Cinnamon, or Clove-Wood, and say, that it is the Bark of the Clove-Tree, which is false; but for my own particular, I believe that it is the Bark of a Kind of *Sassafras*.

4. Of Cubebs.

CUBEBS are a little Seed, or Berry, so like the black Pepper, that if it was not for their little Stalk or Tail, and that they are a little greyish, no Body could find out the Difference betwixt them and Pepper: These grow likewise on a creeping Plant, but the Leaves are longer and narrower; after which come the Fruit in Clusters, each being tied by the Middle, with a little Stalk. The Isle of *Java*, *Bantam*, and other Parts of the Eastern World, produce great Quantities of *Cubebs*; they are of some Use in Physick, from their pleasant Taste, especially when held in the Mouth without Chewing; likewise of admirable Use to make the Breath sweet, and help Digestion. They are said to be good for barren Women, by taking away the Coldness, Moisture and Slipperiness of the Womb.

The best are such as are large, heavy and fresh. Not many Years ago it was disputed what they were; some said they were a Sort of Pepper like the black; others thought they came from *Agnus Castus*; and some again said they were the Fruit of *Ruscus*, or that of *Amomum*: which were all false Conjectures; for they are the Fruit of a creeping Plant, as I have before describ'd, and delineated in the Figure.

5. Thevet Pepper.

THE *Thevet* Pepper is a small, round Berry, of the Size of white Pepper, reddish as to Colour, and at one End has, as it were, a little Crown; but as this Pepper is of no kind of Use, by Reason of its Scarcity, I shall say nothing further of it, but only that it has a pleasant, aromatick Taste. The Tree that bears it, is of the same Figure, as express'd in the Plate under the Name.

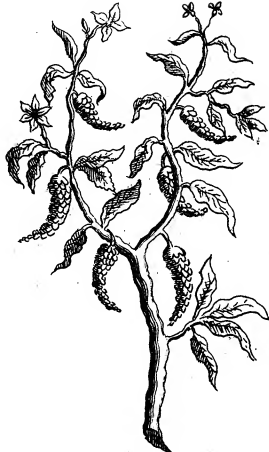
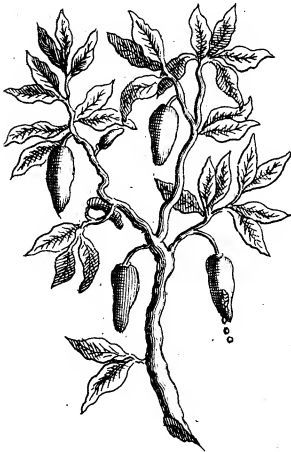


Cubets climbing up on y^e Thevet Pepper Tree.



Ethiopian Pepper.

9



3 Sorts of long Indian Pepper.

The *Dutch* likewise give the Name of *Amomum* to this Pepper, as well because of its Resemblance to *Jamaica*-Pepper, as because it has almost the same Taste; and because it is both round, and bears the Taste of Clove, it has obtain'd the Name of the little round Clove, to distinguish it from the Clove, or *Madagascar* Nut, and has the same Virtues as the common Clove.

6. Of Long Pepper.

LONG Pepper is the Fruit or Berry of a Plant altogether like that which bears the black Pepper, except that it climbs not so high, but grows commonly in the Nature of a Shrub, and supports itself upon its own Stem, and has smaller and much greener Leaves, and the Stalks or Tails are not so long.

The *East-India* long Pepper, which is that we usually sell, is a Berry of the Thickness and Length of a Child's Finger; that is, properly speaking, nothing else but a Collection of little Seeds together, something red without, and blackish within. In each of these Seeds, or Kernels, is a Sort of white Powder, of a hot biting Taste; and they stick so close together, as not to be separated but by pounding; and this Mass forms a Berry of the Size and Length aforesaid.

The *Dutch* and *English* bring plenty of this Pepper from *India*; which to have its desired Effects, ought to be fresh, well fed, weighty, hard to break, sound, and as clear as can be from Dust and Dirt. It is of some Use in Physick, especially the great Treacle, and some other *Galenic* Compositions; and is recommended, when bruised into a gross Powder, to boil in any Food, and given to Nurses to encrease and give a fresh Spring to their Milk. It certainly warms a cold Stomach, raises the Appetite, consumes crude and moist Humours, expels Wind, provokes Urine, and cures the biting of Serpents, and other venomous Creatures.

7. Of Long American Pepper.

THERE is found in the Islands of *America* a Shrub, which has Leaves almost like those of Plantain, which produces a Fruit

or Berry about a Foot long. According to the Relation of *Nicolas Monard*, this Berry is compos'd of several little Grains, or Seeds, that together make a long Spike, or Pod, and are contiguous one to the other; of the same Shape as the long Pepper. The same Monk says, that the Fruit, when fresh and young, is green; but when the Sun has ripen'd it, black; and that it has more Acrimony than the long *East India* Pepper.

This long *American* Pepper is what the *Americans* call *Mecaxuchit*, which serves them to put into Chocolate. 'Tis likely the Author of the Book of Tea, Coffee, and Chocolate, never design'd to speak of this Fruit, for he has taken no notice of it.

This long Pepper, according to its Appearance, is that which the Reverend Father *Plumier* intends by the Names of *Saurus*, *Botryitis major* *Arborescens foliis Plantagineis*; which signifies, *the great Lizard's Tail, growing like a Tree with Plantane-Leaves*. The Reverend Father observes, that this long Pepper is a Berry, or rather a Clufter, of half a Foot long, and from four to five Lines thick at the Bottom, but grows narrower at the End; and consisting of a great many Grains, or Seeds, of the Size almost of Mustard-Seed, which are black at first, and black and soft when ripe, of a hot biting Taste. The same Father says, That this Pepper is much us'd by the Islanders, as likewise the Root of the Plant, for curing of a Disease they call the Stomach-Ach, or a Pain in the Bowels. He further observes, That there are several Kinds of this Plant met with in the Islands, which vary not, save only as to the Size of the Leaves; but as this wou'd be too tedious to decide in this Place, I shall refer the Reader to the Book, where it is treated of at large.

8. Of Long Black Pepper.

BESIDES the other two Sorts of long, black Pepper, of which I have been speaking, we sell sometimes, tho' very rarely, a third Sort, by the Name of long black Pepper, or *Ethiopian* Pepper, *Moorish*, or *Zelim* Berry. This Pepper is the Fruit of a creeping Stalk, which produces neither Leaves

nor Flowers, but only five or six Heads of the Bigness of one's Thumb End, hard, and half round; from whence proceed several Pods of the Length of one's little Finger, and the Thickness of a Quill, brown without, and yellow within. These Pods are divided by Knots, and in each Knot is found a little Bean, black without, and reddish within, without any Taste or Smell. That which is most like the Pod, is of a hot, acrid, biting Taste, and pretty aromack, especially when held long in the Mouth; and by reason of its great Acrimony, the *Ethiopians* make use of it for the Tooth-Ach, as we do that of Pellitory of the Wall. But as this Pepper is little known, and very Scarce in *France*, I shall trouble you no farther with an Account of it.

9. Of Guinea Pepper.

Guinea-Pepper, which the *Americans* call *Mexico-Pepper*, *Tobago*, *Brasil*, *Spanish*, long red *Indian* Pepper of *Chilli-Axi*, and we *French*-Pepper, *Pimento*, or *American* Pepper; is a red Pepper, whereof there are three Sorts, *viz.* The first, that we sell, which comes in Pods of the Thickness and Length of one's Thumb. The second is much smaller, and comes almost in Shape of a Mineral, and as it were emboss'd. The third is much less, and almost entirely round. All the three Sorts of Pepper, as they hang to the Plant, are green in the beginning, yellow when half ripe, and red at last. Of the three Sorts, we sell only the first, in that the others are too acrid, that the Natives can't make use of them, as being too hot for the Mouth.

The *Guinea*-Pepper, which we sell, comes from *Languedoc*, especially the Villages about *Nismes*, where they improve it very much. And this Plant is at present so very common, that we have little or none from the Gardens, but the Fields altogether supply the Shops. The Use of it is chiefly for the *Vinegar*-Makers to turn into *Vinegar*; for which Purpose it ought to be fresh, in fine Pods, well dry'd, and of a good red Colour. Some People make Comfits of this Pepper to carry to Sea; and the People of *Siam* eat this Pepper raw, as we do *Radishes*: But it is much more

grateful to the Palate and Stomach, and must undoubtedly please better in Sauces, being preserv'd in a Pickle thus: Take strong Brine that will bear up an Egg, and *Wine-Vinegar*, of each a Quart; good Spirit of *Wine*, a Pint; put the *Pepper*-Pods into it, as well unripe and green, as those that are ripe, and of a red Colour.

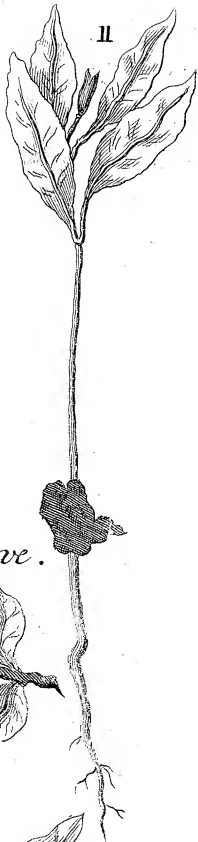
10. Of Cloves.

THE Clove, as is commonly thought, is the Flower of certain Trees, that is made hard and black by the Heat of the Sun. They were always very common in the *Molucca* Islands, till of late Years, the *Dutch* not being able to hinder the *English*, *Portuguese* and *French* from going thither, and bringing away Cloves from thence; thought it advisable to make themselves entirely Masters of that Commodity, to pluck up all the Trees, and transport them to an Island of their own, call'd *Ternate*; by which Means other Nations are forc'd to purchase that valuable Merchandise from them.

As to the Leaf of the Tree bearing the Clove, the Figure here represented in the Plate, which was taken from the Original deliver'd by Mr. *Tournefort*, will give any Body Satisfaction. Here is the Root, the Stalk, and the Leaves in the Figure mark'd *A*, which came from two Cloves which were planted, and which in a little Time produced that little Root, Stalk, and Leaf, as represented.

When the Clove begins to appear, it is of a whitish green, afterwards reddish, and according as it ripens, it grows brown; and that without being steep'd in *Sea-Water*, and dry'd before the Fire, as some Authors have observ'd: For the *Dutch* and Natives of the Islands make no other Preparation of the Cloves than after they are fallen from the Tree to let them dry in the Sun, expos'd in the open Field, and after that to keep them carefully from the Air. As it is impossible but there must remain some Cloves upon the Trees after the Crop is got, these grow to the Size of a Man's Thumb, and become a hard black Fruit, of a pleasant Smell, and fine aromack Taste. I never saw any so large, but only of the Bigness of one's little Finger.

We



Royal Clove.



Clove.



Male Nutmeg.

12



A Nutmeg from
whence arises a
Stalk & 2 leaves.

Female Nutmeg

AAAA. Nutmeg.
Cover'd wth Ma

We now and then meet with some of these Cloves, but very seldom, because the *Dutch* sell them separately, by the Name of the Mother Clove; and these large ones are known in Physick by the Name of *Antofle*: but the little Use of them is not a sufficient Encouragement to the Apothecaries to enquire after them; otherwise they are much proper for Use, as abounding more with an Oil that is vastly more fragrant and aromattick, and endow'd with much greater Virtues than the common Clove.

It is observable, that where the Clove-Trees grow, no Tree or Plant will thrive, because of the great Heat of these Trees, which consumes or wastes all the radical Moisture of the Earth round about them. It is observable likewise that there are no Trees or Plants in the whole World that afford so sweet a Smell as the Cloves when they first appear.

Chuse such Cloves as are well fed, or oily, dry, brittle, or easy to break; of a tawny red, well furnish'd at the Top, or Head, to which some improperly give the Name of *Antofle*. I mean, by their Furniture, the little Head at the Top of the Clove, which is very tender, and of a clear tawny Colour; and which, being put into the Mouth, yield a hot, piquant, aromattick Taste. Reject, or throw by such as are lean, blackish, soft, and without Taste or Smell; taking Care that such as appear to the Eye to be good, have not had an Oil or Tincture extracted from them, which renders them of a flat, bitter, earthy Taste. The Use of this Drug is too well known to need any Account of its Virtues, which are so considerable, as to give it a Rank among the best Cordials.

The *Dutch* candy Cloves when they are green, make an excellent Confect, which is of great Use to carry to Sea, to correct and expel Winds, prevent Crudities of the Stomach, Fainting, Swooning, &c. to restore Nature where decay'd, and recover a weak and languid Constitution, giving Heat and Vigour to the Body, and Motion to the Limbs.

The *Dutch* distil a great deal of essential Oil from the Cloves, and too often impose them on Strangers afterwards for a true Com-

modity. This Oil is us'd by the Perfumers, Surgeons and Apothecaries, in several Compositions, and as a Corrective for many sorts of Purges, as *Pilula ex duobus*, &c. There is a white Oil of Cloves made by means of Fire, a drinking Glass, and the Bottom of a Weight Scale, as observ'd by Mr. *Lemery*; but it is scarce worth the Time of doing it, and it is not much better than the other Sort.

II. Of the royal Clove.

There is another Clove express'd in the Figure, which we meet with now and then in *Holland*, tho' it is but seldom; which is a small Fruit of the Shape and Bigness of a Barley Corn, and which terminates in a Point, sticking five or six together upon one small Branch; so that they resemble, in some Measure, a little Crown.

This Clove is of an Iron Colour, and has the same Taste and Smell as the common Clove. The Tree which bears it is the only one in the World; and only found in the Middle of the Isle of *Massia*, in the *East Indies*, where it is call'd, by the Inhabitants of the Island, *Thimca Radoi*, which signifies royal Clove. This Fruit, by the Order of the King of the Island, is guarded by Soldiers, that no Person may have it but himself. They pretend likewise, that when this Tree is loaden with Fruit, the other Trees bend down towards it, to pay their Homage; and that the Flowers of the common Clove fall off when these begin to appear. The *Indians* string this Fruit, and make Beads of it, to carry about them, because of its agreeable Smell.

I shall say no more of this Clove, having nothing certain that I can collect, and having never seen it, notwithstanding all the diligent Enquiry I have made: But as the Thing has been certified to me by a Person who saw it in *Holland*, and that *Piso* speaks of it in his Natural History, from whence the Figure is taken; and that Mr. *Wormes* quotes it in express Words, from the 203d Page of his Book; the Sense of which I have already given you in *English*, but for the more curious I shall deliver it in the Original.

Garyophyllus Regius fructus est à nemine quod sciam hæcenus descriptus, florem potiùs quàm fructum figurâ referens, longitudine est grani hordei, ejusdemq; ferme latitudinis, oblongus, angulosus, sex vel octo cuspidibus alternatim è lateribus erumpentibus, & in summitate quasi coronulam constituentibus; colore ferrugineo, odore Garyophyllorum aromaticorum, sapore acri & planè Garyophylleaco. Provenit in insula Macciam Indiæ Orientalis; ab incolis vocatur Thinca Rhadoi, quod exponunt Garyophyllus regius.

Magno in pretio apud Indos sunt hi Garyophylli, & ad nos raro deferuntur. Unicam saltem ferunt esse hujus fructûs arborem in tota India in medio dictæ insulæ sitam. Flores ubi producit hæc arbor decidunt flores reliquarum arborum, quæ communes ferunt Garyophyllos. Arbores etiam reliquæ versus hanc se incurvant, honorem quasi deferentes, ut aiunt qui viderunt. Rex insulæ Satellitibus hanc arborem stipat, quamdiu fructum fert, ne quis præter ipsum eo gaudere possit. Hæc ex ore ejus qui in insula fuit & arborem se vidisse testatur; quæ, si vera, mira. Fructus filo per longitudinem trajicere solent, ut Armillarum loco, ob odoris gratiam, in brachiis gestentur.

Caryophylli, sive Garyophylli, in Lemery. English, Cloves. They are call'd a Fruit, but are rather an aromattick Flower, from an *Indian* Tree whose Leaves are long, broad and pointed. When the Fruit begins to appear, their Colour is of a whitish green; afterwards they grow red; and at last, when ripe, are of a dark brown, as we see them of now. The large Cloves are call'd, in *Latin*, *Antophylli*, or the Mother-Cloves, but they are very scarce. There is also the *Caryophyllus Regius*, or the royal Clove; [*describ'd by Pomet from Pifo.*] It has this Name from bearing on its Top a Sort of Crown; for which Reason the King of the Country keeps it in his own Possession; and because there is a common fabulous Opinion, that the other Trees bow towards this as their King.

The Cloves, in general, are cephalick, neurotick and cardiack, proper for Epilepsy, Palsy, and Vertigo; are good in Wind and Colick, and are allow'd, especially the Oil, to be the best Specifick in the Tooth-Ach. They are us'd in Powder, Tincture, Wa-

ter, Spirit, Oil, &c. The Way to make an Oil by Distillation, is to make a kind of Putrefaction first, in order to dissolve all the Parts of the Cloves, and to force the volatile Salt and oily Parts more effectually from the earthy Parts, thus: Take Cloves grossly bruis'd, one Pound, put to them Fountain or Rain-Water, lukewarm, two Quarts; cover it with a Vessel close, so as to lute it well; put it into a gentle Heat, in Sand, for fourteen Days; then put all the Matter into a Copper *Vesica*, tinn'd within, which cover with its Head and Refrigeratory; add a fit Receiver, lute the Junctures, and distil with an immediate, quick coal Fire, shifting as occasion requires; continue till you have distill'd about two thirds of the Humidity. This done, and the Vessels being half cold, separate the spirituous Water which swims above the Oil, putting up that into a Glass Vial, which keep close stopp'd for Use. Cohobate the distill'd Water upon the *Fæces*, and distill again as before, so will you have more Oil, which the first Distillation could not raise, which add to the former Oil, keeping the distill'd Water also for other Uses.

Or, Take Powder of Cloves, one Pound; warm Water, two Quarts; macerate them for a Fortnight; then put all into a Glass Retort, and distill in a Sand-Heat, with a moderate Fire, so will Oil and Water come over; which separate as before, and cohobate the Water, as in the former Operation; so will you have all that the Clove contains of Oil and volatile Salt, which is cephalick and cordial, besides its other Virtues. It is given from one Drop to three, incorporated with double refin'd Sugar, and mix'd with some proper Vehicle, either liquid or solid; as in Bolus's, Opiates, Pills, Tablets, or the like, as you see Occasion. It may be also mix'd with Oil of Nutmegs by Expression, to anoint the Temples for the Head-Ach, and the Stomach, to strengthen that Part, and procure Digestion. A pretty cephalick Balsam is made with Oil of Nutmegs, one Ounce; Oil of Cloves, one Dram; Musk and Ambergrife, each six Grains; Oil of Cinnamon, ten Drops; Oil of Mace, two Scruples; mix, and make a Balsam for internal and external Cafes.

12. Of the Nutmeg.

THE Nutmeg, or aromattick Nut, which the *Latins* call *Nux Moschata*, *Myristica* or *Aromaticca*, is properly speaking the Almond or Kernel of a Fruit of the Size of our green Nuts, which we distinguish into two Sorts; to wit, into the Male or long Nutmeg, and the Female, or round, common Nutmeg.

The Tree that bears the Nutmeg is of the Bigness of the Peach-Tree, and the Leaves have a very near Resemblance to those mention'd by *Dalechamp*, except that they are shorter and narrower; after which comes Fruit of the Nut or Abricot Size: This Tree, according to Mr. *Tavernier*, is not planted, but grows by Means of certain Birds, or Fowls, which swallow the Nutmegs whole, and throw them up again without having digested them; and that the Nutmeg being then cover'd with a viscus and gluey Matter, and being cast upon the Ground, they take Root, and produce a Tree, which grows just as if it had been planted after the Manner of others.

The Nutmeg is likewise a Commodity which none but the *Dutch* are Masters of, because it is cured no where but in the Isles of *Nero*, *Lontour*, *Pouleay*, *Rosgain*, *Poleron*, *Granapuis*, and in the great Island of *Banda* in *Asia*, not elsewhere: Likewise, as a late Author says, it is remarkable, that so little a Spot of Land shou'd furnish all the World with Nutmegs; which is not hard to believe, when one considers, that these Isles are so stock'd with Nutmeg-Trees, that it is almost incredible; and besides, these Parts lie in so good a Climate, that the Trees are always loaden with Flowers and Fruit, and they have three Crops a Year; to wit, in *April*, *August* and *December*, that of *April* is much more valued than those which are got in *August* or *December*; and the Climate is so temperate, that the Men live to one hundred and twenty Years of Age, and have nothing to do but eat, drink and sleep, and now and then walk about, while the Women employ themselves in separating the Browze from the Nutmeg, drying the Mace, and breaking the Shells wherein is the Nutmeg; being the

chief Commodity of the Country, and almost all they live by.

The Nutmegs we sell are nothing but the Kernels of the Fruit, which are covered with a hard, thin, and blackish Shell. Without the Shell is found a covering, which is thin and reddish, of a sweet Smell, and aromattick Taste, and is what we call Mace, but vulgarly, and improperly, the Nutmeg-Flower. After the Mace there is a green Browze, that is of no Manner of Use. From whence it is to be observ'd, that the Nutmeg has three Wrappings, or coverings; to wit, the Shell, the Mace and the Browze; and not barely two, as a late Author has observ'd; and the Thing is so true, that if any Person will give himself the Trouble to cut a Nutmeg Comfit in two, he will find the three Parts, about which I have been speaking.

The Trees which bear the Female, or common Nutmegs, grow not but in cultivated, or improv'd Lands; but those which produce the long Nutmegs, grow in Woods and Forests, which makes the *Dutch* call 'em wild Nutmegs; but as they are little us'd, because they are almost without Taste or Smell, and void of any Virtue, for this Reason they are seldom brought hither: These Male-Nutmegs being call'd by the Ancients *Azerbes*.

As to the common Nutmegs, we ought to chuse such as are heavy, firm, hard, and of a full Plumpness, of a light grey, whose Outside is finely marbled, and the Inside reddish, being of a fat, oily Body, which are the Signs of their Newness, and which being grated afford a sweet Flavour, and put into the Mouth, yield a warm, piquant, aromattick Taste. As to the little Hole that is met with so very common in Nutmegs, 'tis a vulgar Error to believe, that that makes it lose its Virtue; for there is no Nutmeg without it, that being the Place where the Stalk adhered to the Nut.

The Use of the Nutmeg is so well known, it wou'd be needless to say any Thing of it; I shall only add, that it is valued in Medicine, and being beat up with Sugar, there is a Powder made of it, which is admirable, taken in warm White-Wine, for curing of Catarrhs and Rheums, that proceed from cold Causes; and this is call'd the Duke's Powder.

Powder. The usual Quantity is to put two Ounces of Nutmegs to a Pound of Sugar, and some add Cinnamon. The Inhabitants of the Isle of *Banda* make a Confection of the green Nutmegs, which is brought to us by the Way of *Holland*, sometimes with Syrup, and sometimes without. These Comfits are some of the best we have, being very proper to strengthen and invigorate the Stomach, and to restore a natural Heat to Age; but their chief Use is to carry to Sea, particularly to the northern Parts, where they are esteemed; the People there being great Lovers of these Sorts of warm Sweet-meats.

As to the Oil of Nutmegs, by Expression, that which is brought us from *Holland* is no better than fresh Butter; which is the Reason the Apothecaries chuse to make it themselves, rather than buy it at such a cheap Rate, when it is good for nothing. The true Oil of Nutmegs ought to be of a thick Consistence, of a golden yellow, a sweet aromatick, and a warm, piquant Taste. The Manner of making this Oil is so easy, and hath been so long known to every Artist, that it wou'd be superfluous, at this Time of Day, to pretend to teach it; only this may be observ'd, that when it is express'd, it will be liquid and clear; but when cold it coagulates, and becomes yellowish, of a solid Consistency, and that it will yield a double Quantity of Oil this Way, from the same Weight of any other Spice, Fruit, or Seed whatever. There is likewise another Oil made by Distillation, which is a white, clear Oil, very fragrant, and has double the Strength and Virtue of the Former; and whatever the Nutmeg has singly in itself, is hereby highly exalted; so that four or five Drops is a Dose in any proper Vehicle; wherein it becomes cephalick, neurotick, stomachick, cordial, hepatick, uterine and alexipharmick; good against all cold Diseases of the Head, Nerves, Womb, &c. expells Wind, griping of the Guts, and Sicknes at Heart. The Mace that grows round the Nutmeg has all the same Virtues; discusses Wind, helps Concoction, cures stinking Breaths, strengthens the Child in the Womb, stops Fluxes and Vomiting; is of thinner Parts than the Nutmeg, and therefore more piercing. The Oils, by Expression and Distillation, are made the same Way

as those of Nutmegs. Chuse such as has the largest Blades, the highest and freshest Colour, and that is the cleanest you can get. As to the Bark, the Trunk, and the Branches of the Nutmeg-Tree, they are so little used, that they are not worth speaking of, because they are so seldom brought hither; and by Reason of their great Likeness to the white *Costus*, both in Figure and Taste: So that some sell *Costus* for the Nutmeg Bark, which you ought to beware of.

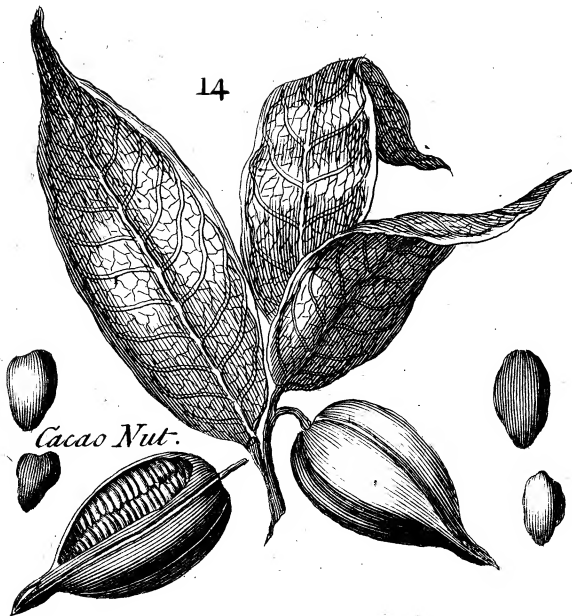
Nux Moschata, *Moschocaryon*, *Nux Unguentaria*, or Nutmeg, is a *Lemery*. Kind of Nut, or Fruit, of a foreign Tree, as large as a Pear-Tree, with Leaves like the Peach, but they are much smaller. The Flower is in the Shape of a Rose, of a pleasant Smell; after the Flower is fallen off, a Fruit appears as large as a green Walnut, cover'd with two Barks; the first which is very thick, is pull'd off when the Fruit is ripe; the second is much thinner and finer, reddish or yellowish; it is separated from the Nutmeg in order to dry, and is what we call Mace, not the Nutmeg Flower; this yields a great deal of Oil and volatile Salt.

When the Nutmeg is separated from the Barks, they dry and preserve it. The Tree which bears this grows plentifully in the Isle of *Banda*, where there are two Sorts, the wild and the cultivated, or male and female: The male, which is a long and large Nut, is seldom us'd: The female, which is the rounder and lesser Nut, is that generally sold in the Grocers Shops. When gather'd, some say they are laid in Quick-Lime, in the *Indies*, for two Reasons: *First*, that being carried into other parallel or proper Climes, they might not grow, for so in Time it might prove to their Damage. *2dly*, that being thus cured, the Worm, might not take them. The best are those of a reasonable Size, fresh, heavy, firm, not spongy, of an Oilyness when grated, and of a pleasant Smell and Taste, not too bitter or acrid. They fortify the Brain, Nerves and Stomach, assist Digestion, expell Wind, provoke the Terms, and resist Putrefaction.

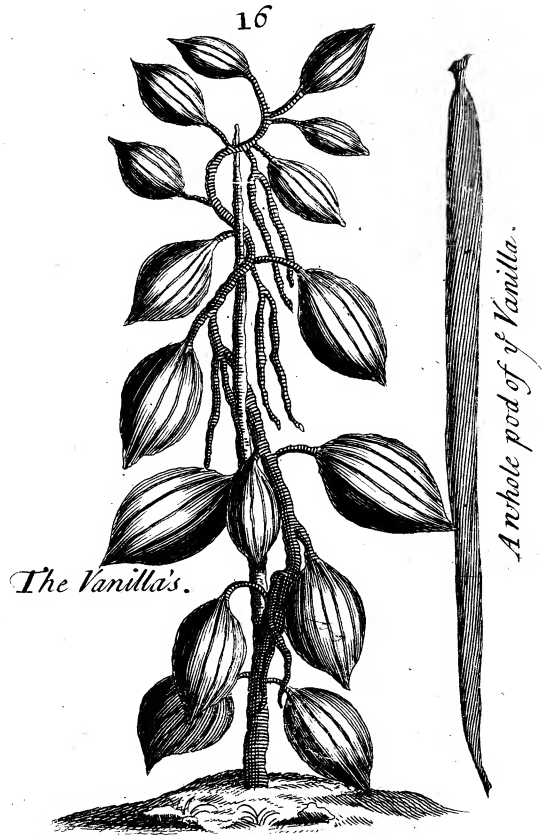
Chuse your Mace fresh, whole, of a yellow Colour, a good Smell, and agreeable Taste, being a little acrid. It has the same
Virtues



Coffee.



Cacao Nut.



The Vanilla's.

A whole pod of Vanilla.

Virtues with the Nutmeg, but the Virtues are more exalted, and it acts with greater Penetration and Efficacy. The Mace Bark or Wood of the Antients, is the Bark of the Trunk of a Tree of the same Name, which grows in *Barbary*, and is thick, reddish, and of a bitter, smart Taste. Its Virtue is astringent, and proper to stop the Bloody-Flux, and other Fluxes of the Belly: but as this Bark is seldom brought among us, they impose it instead of Mace, tho' the Qualities are different, and so confound the Mace Bark with the true Mace.

13. Of Coffee.

Pomet. *Caffè, Coffè, Coffi, Buna, Bon, Ban* or *Elkaine*, is, according to a modern Author, the Fruit or Berry of a Plant, whose Stalk resembles that of our Horse-Bean; but as he is a Person on whom we can lay no Stress, I shall hold with *Bauhinus*, that celebrated Author, who says, that Coffee is the Fruit of a Tree, whose Berries are brought from *Arabia Felix*, and that the Tree is like Spindle-Wood, or Priest-Cap, and that the Leaves are thick, and always green, according as it is represented in the Figure, which is taken from the said *Bauhinus*.

Chuse your Coffee greenish, fresh or new, and that does not smell musty, but whose Berry is of a middle Size; in short, the cleanest, driest and plumpest that can be had. As to those who have it brought from *Marseilles*, where they buy whole Bales together, let 'em take Care that the Bottom of the Bales be not mouldy, by which means the Goods will spoil and damage the whole Cargo. *Coffee* is used for little or nothing that I know of, but to make a Liquor with Water and Sugar, which is more or less esteem'd, according to the Country, that are Drinkers of it; which where it is valued, there is a great Consumption made of it, in the prepar'd Berry; which is done by drying it in an Oven or Kiln, so long, 'till it is well parch'd, or rather half calcin'd, and looks not of an absolute Black, but rather of a dark Purple, inclining to black; if it be well burn'd, and not over high, it has a grateful Flavour; but

if over much or too little done, or if afterwards it be ground any Time before it be used, it loses all its Force and Virtue; so that in making Coffee, the Powder is to be fresh ground, and us'd immediately; for an Hour's Time will pall and flat it, so as it shall lose all its volatile Parts, which float like an Oil upon the Liquor, when fresh; but upon the least keeping, after reduc'd to Powder, its essential Particles are so subtle as to fly away, or be destroyed by the Corrosive Nitre of the Air, which being expos'd but for a few Minutes, they instantly imbibe.

Caffè, Coffè, or Coffee, is a small Berry, longish and round, like a *Lemery*. Pine Apple, of a dark brown Colour; its Bark is a Kind of Husk that is a little hard and Woody; it encloses a Berry as large as a gring Pea, of an oval Figure, dividing itself into two Parts, yellowish, inclining to white; the Fruit grows upon a Tree of the same Name, which is common in the Happy *Arabia*, from whence it is transported through all the Dominions of the great *Turk*, and from *Turkey* brought to us, as is suppos'd, cur'd, that it may not be planted in other Countries.

It is of an excellent drying Quality, comforts the Brain, and dries up Crudities in the Stomach: Some Author says, it cures Consumptions, Rickets and Swooning Fits; it helps Digestion, eases Pains of the Head, rarifies the Blood, suppresses Vapours, gives Life and Gaiety to the Spirits, hinders Sleepiness after Victuals, provokes Urine and the Courses, and contracts the Bowels; it is an excellent Dryer, fit for moist Bodies, and most Constitutions, but that of young Girls, subject to the Green-Sickness; and likewise is prevalent in such as are apt to running Humours, Sores, or King's Evil upon them: It helps Abortion, and confirms the Tone of the Parts drunk after eating; but with this Observation, that this Liquor be always made fresh: for if it stands but two or three Hours, it will be pall'd and grow naught. It is an effectual Remedy against Worms in Children; so that if the Mother drink but frequently of it, when with Child, the Infant shall not be afflicted with Worms, during its infancy.

14. Of the Cacao, or Chocolate-Nut.

Pomet. THE Cacao, which the Americans call *Cacavi*, is a Fruit of several different Sizes; but the most usual is that of an Almond, which is found united together in a Sort of a Shell, not much bigger or less than a Pomegranate Seed; and in these Shells are enclosed about sixty or eighty Berries. As to the Shape, Leaves and entire Fruit of the Trees, they appear as represented in the Figure taken from the original or Life, as deliver'd to me by Mr. *Tournefort*; the Leaves are green, and the Fruit, when ripe upon the Tree, are of a very fine yellow Colour, and rib'd like the Melon.

Mr. *Tournefort*, in Page 191 of his Book, makes mention of four Sorts of Trees which bear the Cacao Nut; the first and the second whereof are call'd, *Cacahuacuabuitl*, the third *Xuchicacahuacuabuitl*, the fourth *tlacacahuacuabuitl*: This is what he relates, as to the four Sorts of Cacao's, which we now sell, which certainly come from different Trees; the first and best Sort is call'd the large and small *Carack*, from the Province of *Nicaragua*, from whence these Sorts of Cacao's are brought: The third and fourth are call'd the large and small Island Cacao's, because they come from the American Isles, as *St. Domingo*, &c. The most valued of the four Kinds of Cacao's is the large *Carack*, especially for making *Chocolate*, which is the chief Use; for the small Quantities that are eat of it, are not worth speaking of; they all ought to be chose fresh, plump, weighty, blackish without, and of a deep red within, well tasted and not of a musty Smell: The small *Carack* is next in Virtue to the great. As to the Island Cacao, especially the large, the nearer it comes to the *Carak*, the better it is. Some Authors say, that the Cacao is in such Use in *Mexico*, that it is the chief Drink of the Inhabitants of the Country, and that they give it as Alms, or Charity to the Poor: Besides, the other Sorts that come from the Isles, are ground to make Bread of different Sizes, for the Use of different Sorts of People.

The Cacaos, or Cacao, is a Kind of Almond that is made the Basis

or Foundation of *Chocolate*, and from whence it takes its Name: It grows in *America* from a small Tree call'd *Cacavate*, well supplied with Leaves that resemble those of the Orange-Tree, but that they are longer, and more sharp-pointed; the Flower is large, and of a yellow Colour, and leaves, in falling off, long, stringy Filaments, which are green, from which a yellow, pointed Fruit is form'd, of the Size of our Melons. Each Fruit contains twenty or thirty little Nuts, or Almonds, as big as the *Pistackia*; and sometimes there are such as contain fourscore of these. They are each of them cover'd with a yellowish Pellicle or thin Skin; which being separated, a tender Substance appears, which is divided into several unequal Particles, that are oily, of good Nourishment, and leave a certain Acridness upon the Palate. The Inhabitants of the Country, where this grows, call it *Cacahuatl*, and the Spaniards, by Corruption, *Cacao*.

It grows in all the Spanish West-Indies; *Guatemala*, *Hispaniola*, *Cuba*, *New-Spain*, *Jamaica*, &c. in hot, but shadowy Places, for being planted in Ranks and regular Walks, shady Plantane-Trees are rang'd with them; the one to shelter the other, lest the parching Sun, by its excessive Heat should kill them, or the boisterous Wind injure them. This Cacao-Tree, not exceeding our Cherry-Tree for Bigness; as it is a Tree of singular Beauty, having large, broad, oblong, green Leaves, which fall back, and hang like so many Shields, to preserve and defend the tender Fruit; so it is a Tree of great Profit to the owner, arising from its most desirable Fruits, which grows after an admirable Manner in Cods; studded, as it were, in the very Body of the Tree, as well as the Arms and Boughs, from the very Earth upwards; each Cod containing about thirty or forty Nuts, regularly set in a Mass of soft, slimy Pulp, both to preserve, as well as nourish, the tender Fruit. The Nuts, among the Indians and Spaniards, go for current Money, even in those Countries where Gold and Silver are naturally produc'd; there is Food and Raiment, Riches and Delight all at once!

The Cod is said to be very like the Pear or Pear fashion'd Gourd. Each Nut is about the Bigness of an Almond Stone, and cover'd

1

with

with a thin Shell, blackish without, containing within a brownish red, or almost Chestnut-colour Kernel, with brownish Ash colour'd Veins, which to the *Indians* is pleasant in Taste, tho' not altogether so to us. The Cods being gathered, they break them, take out the Nuts, and lay them upon Mats to dry in the Sun, till the Moisture within them be consum'd, and then keep them both for Meat and Merchandize.

This Fruit is certainly cooling, as may easily be discern'd by their cold nitrous Taste. They open Obstructions, restore in deep Consumptions, stimulate to Venery causing Procreation and Conception, facilitate Delivery, preserve Health, help Digestion, make People inclinable to feed, ease Coughs of the Lungs, Gripings of the Bowels, and Fluxes thereof, cause a sweet Breath, and assist in a Difficulty of making Urine. The chief Use of them is in Chocolate, which is so well known, there needs no longer Discourse about it.

15. Of Chocolate.

Pomet. **W**E fell several Sorts of Chocolate, which have no other Difference but according to their Fineness and Goodness, the Drugs that compose 'em, and the Countries where they are made. But the best Chocolate, and the finest, is what we make now at *Paris*, especially when it is made with the largest *Carack Nut*, and wrought up with the finest Sugar, good Cinnamon, and the purest and best *Vanilla's*: In short, when it is made by an honest Man, who understands how to prepare it, and will neither spare Labour nor Cost; for it is impossible to afford good Chocolate at a common Price; and the most of those who sell their Chocolate at such an easy Rate, could scarcely buy the fine Sugar we make use of at the same Price. Altho' some still cry up the *West-India*, *Spanish*, *Portugal*, and *St. Malo's* Chocolate, at this time there is no Place in the World where they make better Chocolate than at *Paris*. I did not think it proper to give you the Composition here, since there are so many Books that treat of it, and the Compositions are so various, that every one is for pleasing his own Fancy.

Nevertheless, I cannot forbear acquainting you with what is propos'd by the *Sieur Blegny*, in his Book, who mentions the Flower of *Orejivalla*, to be added to the Composition, because it is a Drug which I believe to be imaginary, as not being able to know what it was, after the most diligent Search I could make. And the *Sieur Blegny*, who calls himself the Author of that little Book which I have just mention'd, had reason to say he could not meet with it among the Druggists, for he could not give me any Account of it. When I ask'd him, before a certain Person, what the *Orejivalla* Flower was, he told me it was what went into the Composition of the *American* or *Indian* Chocolate which he had seen in several Books. As to the *Achiotl*, that is nothing else but what we call the *Rocou*, which is not made as the said Author says, but as it is set forth in its proper Place in this Treatise; and after knowing that the *Achiotl*, was the *Rocou*, there are very few Grocers but could have furnished him with it, and he needed not have put it in his Book, that he could not meet with it at the Druggists.

16. Of Vanilla's.

THE *Vanilla's*, according to the *Sieur Rousseau*, are Pods or *Pomet*. Cods of about half a Foot long, of the Thickness of a Child's little Finger, which hang upon a Plant of twelve or fifteen Foot high, that climbs like a Creeper; for which Reason they grow most frequently upon Walls, or at the Roots of Trees, or else upon Props, or the like, whereby they are supported. They have round Stalks, dispos'd in Knots like the Sugar Cane; from each Knot there put forth large thick Leaves about a Finger's Length, which are as green as the Stalk, and fall off, or wither away, as the great Plantane does; after which come Pods which are green at first, yellowish afterwards, and grow browner, according as they ripen. When they are ripe, the People of *Mexico*, those of *Guatemala*, and *St. Domingo*, gather them, and hang 'em up by one End in the Shade to dry: and when they are dry enough to keep, they rub them with Oil, to hinder them from drying too

much, and prevent their breaking, and then they put them up in little Bags of fifty, a hundred, or a hundred and fifty, to bring them hither. Nevertheless, there are some who value their Gain more than their Conscience, who let them hang upon the Stalks 'till overripe, and receive from them a black fragrant Balsam, that flows till the essential Parts of the *Vanilla* are exhausted, and it can run no more; and then they gather the Pods and pack them up for Sale, as aforesaid.

The great Lords of *Mexico* are mighty Lovers of these Plants, as well because of the pleasant Smell of their Fruit, which they mix plentifully in their Chocolate, as from the great Profit they yield them in Trade. They are the *Spaniards* who bring us this rich Commodity, and who give it the Name of *Vanilla*, which signifies a Sheath, because the Pod resembles the Figure of a Sheath. It is of a pleasant Taste and Smell. Chuse such as are well fed, thick, long, new, heavy, not wrinkled, or rubb'd with Balsam, and which have not been kept moist, but of a good Smell: and beware of those that are small, and dry, and of little Smell, and the Seed of which is very little, black and shining. The *Vanilla's* are much us'd in *France* for making up Chocolate, and sometimes to perfume Snuff. Some pretend the internal Part of the Pod is good to strengthen the Stomach. As to the Balsam, the *Spaniards* keep that, for we have none of it brought to us.

Vanilla, or *Vanilla's* is a Pod, of *Lemery*. about half a Foot long, and the Thickness of a Child's Finger, sharp at both Ends, of a dark Colour, a pleasant balsamick Taste and Smell, a little acrid, containing very small, black, shining Seeds: This Pod is the Fruit of a Kind of *Volubilis*, or a Plant of four or five Foot high, which the *Spaniards* call *Campeche*. It rises like a Creeper, and winds about the neighbouring or adjacent Trees, upon Poles, or climbs upon Walls. The Leaves resemble those of Plantane, but they are larger and more fleshy. The Flowers are blackish. This Plant grows in *Mexico*, where the *Indians* call it *Tlixochitl*, and the Pod *Mecasutbill*.

Chuse such *Vanilla's* as have the longest Pods, pretty thick and heavy, well fed, of a good

Taste and pleasant Smell. It yields a great deal of Oil and volatile Salt; is cordial, cephalick, stomachick, carminative, aperitive. It attenuates viscid Humours, provokes Urine, and Womens Courfes; is mix'd in Chocolate, and makes it agreeable both to the Taste and Smell.

17. Of Acacia.

THE *Acacia's*, so called by some, are the Fruit, or rather *Pomet*. the Seeds of a yellow Fruit, inclining to red, of the Size of a *Magdalen* Pear, or an Orange. The Tree which bears these, is, according to the *Sieur Rousseau's* Letter, five or six Foot high, adorn'd with Leaves of a yellowish green, and something of the Shape of the Ivy. The Flowers are small, and grow in Tufts, of a Caranation Colour, from whence comes a yellow Fruit, as said before. At the Bottom of which hang other Fruit, or Seeds, of the Bigness of Chestnuts, of the Shape of a Kidney, and of an Olive-Colour, cover'd with a Nut or Stone, in which is a white Almond, which after it has been roasted like a Chestnut in the Fire, is pleasant to eat. There is contain'd likewise in the Kernel of these *Acacia's* a black caustick Oil, which is a good Remedy to cure Corns upon the Feet, and take away red Spots in the Face.

The *Americans* cut the yellow Fruit in Slices, and eat it with Sugar, as we do a Lemon; as well to revive the Spirits, as to cool them, because they are full of a well-tasted Juice. Chuse such as are large and new, of an Olive-Colour, with white Kernels, which are certain Signs they are fresh, and not of a Chestnut-Colour, which is a Token of their Age and over Ripeness.

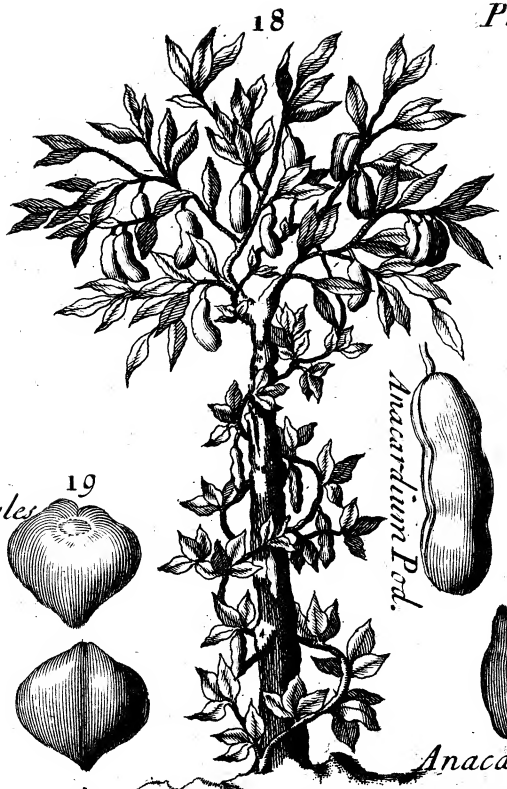
Acacia vera, seu *Aegyptiaca*, the true *Acacia*, or that of *Egypt*, is *Lemery*. a thick Juice, very heavy, of a brown reddish Colour, which is brought in the Shape of Balls, that weigh about five or six Ounces, tied up in very thin Bladders. They say it is made from a Fruit almost like Lupins, contain'd in Pods which are born upon thorney Trees in *Egypt*, whose branches are pretty much extended, bearing fine white Flowers. Chuse that which is neat, solid, weighty,



The Acacia.

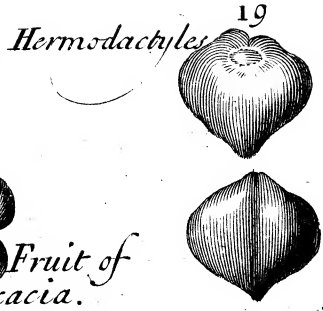
Fruit of
Acacia.

The Tree bears Acacia.

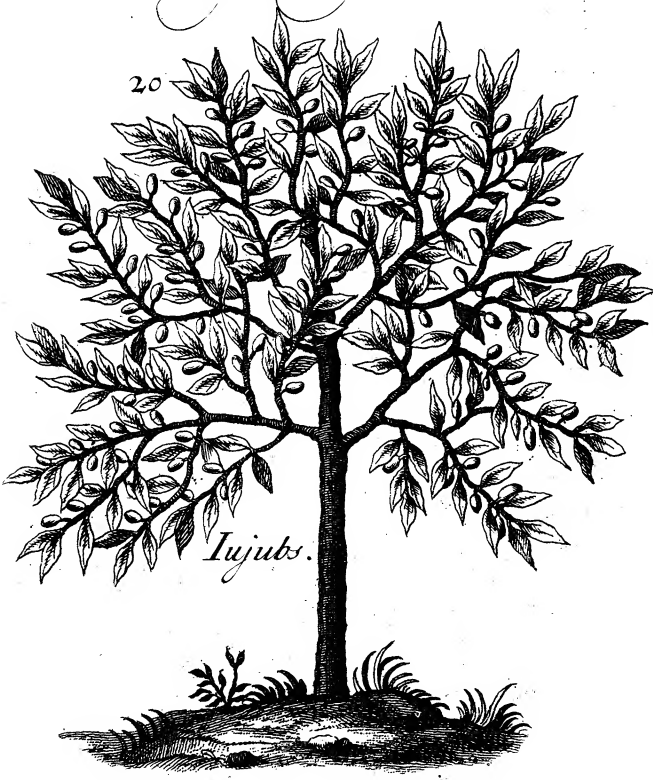


Anacardium
Fol.

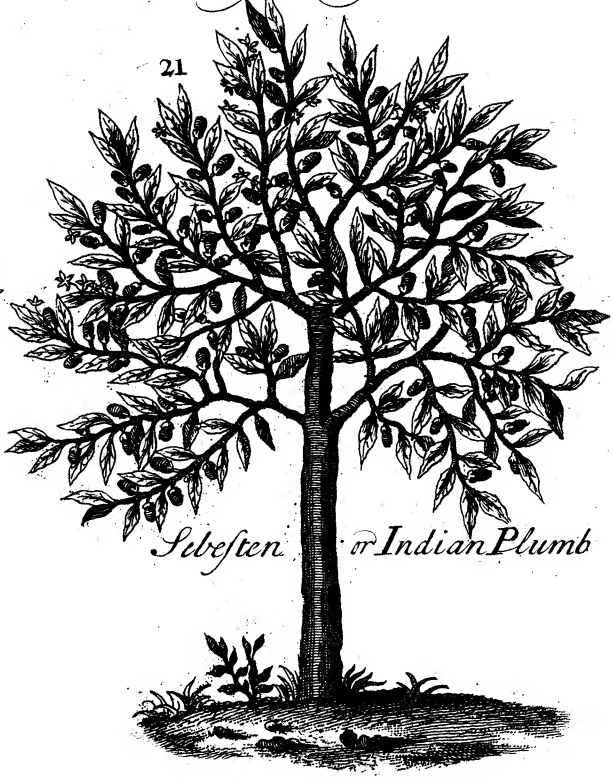
The Plant bears Anacardium.



Hermodactyles



Tujubs.



Sebesten
or Indian Plum

weighty, of a blackish Colour, something reddish, shining, easy to break, and of a styptick Taste. It affords a good deal of Oil and essential Salt; is astringent, incrassates or thickens the Humours, strengthens and resists Poison, stops Hemorrhages and Fluxes, and is good for Indispositions of the Eyes. As the true *Acacia* is sometimes scarce, the Shops use or sell that which is made of the Juice of Sloes, or the Fruit of the black Thorn, brought over in round Balls, wrapped up in Bladders, of a very sharp, styptick, or astringent Taste. It is us'd in *Rob* or *Quiddony*, made with Damask Rose-Water, and double refin'd Sugar. The true *Acacia* is made by Expression out of the Fruit, and that either ripe or unripe. From the ripe Fruit there is a black Juice, so call'd; from the unripe Fruit a red or yellow Juice, the Colour not so black, but more inclining to red, and of a sweet Scent: And this is the true *Acacia* of *Dioscorides* and the Antients, which is to be used in making of *Venice-Treacle*.

18. Of *Anacardiums*.

THE *Anacardium* is a kind of *Pomet*. Bean, brought from the *East-Indies*. The Tree which bears it has greenish Leaves that are half round; after which come Pods of the Size of the large Bean, in which are usually inclos'd two *Anacardiums*, which, when half ripe are of the Colour of burnt Coffee; but when full ripe, are of a shining black. Chuse such as are large, well fed, new, dry, and have in them a white Almond. They pretend that the green Fruit of these, are a dangerous Poison; but otherwise when dry. After they are prepar'd in Vinegar, they become a good Purgative; but nevertheless they ought not to be meddled with, without the Advice of an able Physician. They yield an Oil like the *Acacia's*, which has the same Virtues.

Anacardium is a kind of large *Lemery*. Fruit, like a Chestnut, being in some measure of the Shape of a Bird's Heart, whence it derives its Name. It is of a shining black Colour, containing in it a white Kernel. This Fruit grows on a Tree in the *Indies*, whose Leaves are almost round,

and the Fruit in Pods, of the Size of our *Windsor* Bean; holding each not above two *Anacardiums*, which afford Oil, and are sold in great Plenty. They rarify and purge the pituitous Humours, are resolving, refresh the Brain, and strengthen the Memory, being taken in Decoction.

19. Of *Hermodactyls*.

THE *Hermodactyls* are Fruit shap'd like an Heart, reddish without, *Pomet*. white within, of a light Substance, very subject to Worm-eat; which is brought out of *Egypt*, where the Trees which bear this Fruit grow plentifully. After the Diligence that I have used, in order to discover the Flowers and Leaves of these Trees, I think it need no longer remain a Surprize on this Head, when I say that the *Hermodactyls* are Fruit, notwithstanding all that Authors have hitherto said concerning their being Roots; and the Figure of the *Hermodactyls* here given, will shew to the contrary, it being easy to judge that they are Fruit and not Roots: And the more so, from what was writ from *Marseilles* the last Year, That the *Hermodactyls* coming from *Egypt*, were the Fruit of a large Tree. Chuse such as are fresh, large, well-fed, reddish without, and white within, the driest and least full of Dust that can be got. It is a Commodity of which they lay in no great Store, it being so ready to decay, or Worm-eat, as I mention'd before. They are much us'd in Physick amongst several *Galenical* Compositions.

The *Hermodactyl* is a tuberous or bulbous Root, as thick as a *Lemery*. little Walnut, being of the Shape of a Heart, red without, and white within, of a spongy light Substance, without Fibres, easy to break, and crumble into Powder like Meal, of a sweetish Taste, a little glutinous. It is brought dry from *Egypt* and *Syria*. The common Opinion is, that it is a sort of *Colchicum*, call'd by *Gasp. Bauhinus*, *Colchicum radice siccata alba*, the *Colchicum* with the white dried Root; and by *Lobel*, the *Hermodactyl* of the Shops that is not poisonous.

There

There are others that believe it is a kind of tuberous Orrice, call'd by *Casp. Baubinus*, *Iris tuberosa folio anguloso*, the tuberous Orrice with the many corner'd Leaf, and by *Matthiolus*, *Hermodactylus verus*. Mr. *Pomet* is of a quite different Opinion, as you have it before, for these two Reasons: The first, because this is more of the Shape or Figure of a Fruit than of a Root: and the second because they write from *Marseilles*, that the *Hermodactyls* come from *Egypt*, and that they are the Fruit of a large Tree: The first Reason does not appear a good one to me, because I have found *Hermodactyls* to be more like the Shape, or bear a greater Resemblance to a tuberous or bulbous Root, than that of Fruit; and if one considers the Substance, it is very like the Root of *Arum*, and several others: The second Reason does not better convince me than the first; for those who writ from *Marseilles*, that the *Hermodactyl* was a Fruit, do not appear to have been better inform'd, or understood the Matter any clearer than before; so that we ought to suspend our Judgment on this Affair, and wait till it is decided by more Travellers that can give a better Light into this Business, and sufficiently clear up our Doubts. It is a singular Purge, expelling tough Flegm, and clammy Humours, from the Joints and extreme Parts of the Body; and is accounted a Specifick against the Gout in the Hands and Feet, given in Powder from half a Dram to a Dram; and in Infusion, from two Drams to half an Ounce. The *Hermodactyl* Pills are good against Palsies, Tremblings, Convulsions, Colicks, Gouts, &c. being given from two Scruples to four.

20. Of Jujubs.

THE *Jujubs* are the Fruit of a Tree which grows commonly in *Provence*, but chiefly in the Gardens of *Hyeris* near *Toulon*, where it is in such great Quantities, that almost all we sell comes by the way of *Marseilles*. The Tree that bears them is of a moderate Height, and the Leaves are greenish, thin, and fibrous; after which comes Fruit of the Bigness of one's Thumb End, green at first, and something reddish as they ripen.

Chuse your *Jujubs* fresh, large, well fed, and fleshy, of a good Kind, that have been well dry'd, that they may keep without danger of rotting; and take care that they be not kept in Places too moist, or gather'd when they are too ripe, for that is the Way to lose them all. They taste, when well gather'd, and rightly managed, like Raisins of the Sun, with one Stone, like a Prune-stone, in the Middle. *Dodonæus* saith, they are of two Kinds, *viz.* the red and white; and the red are of three Kinds, to wit, *Jujuba major*, *Jujuba minor*, and *Jujuba agrestis*. The first, which grew originally in *Africk* and *Egypt*, and were thence translated into *Italy*, *France*, &c. are those which we chiefly use; being moderately hot and moist. This Plum is an excellent Pectoral, and opens the Body, temperating the Sharpness of the Blood and Humours. It expectorates tough Flegm, and is good against Coughs, Colds, Hoarseness, Shortness of Breath, Wheezings, Roughness in the Throat and Wind-Pipe, Pleurifies, Heat of Blood, Exulceration, or Excoriation of the Kidneys and Bladder, cleansing them, and by their mucilaginous Quality making the Passages slippery. They are us'd, in a Decoction, for the Stone, Gravel, &c. or for opening Obstructions in the Liver, Spleen, Dropsy, and Jaundice, by Urine.

Jujuba, or *Zizipha*, a large Fruit of the *Ziziph* Tree, is like a moderate-siz'd Prune or Plum, oblong or oval, red without, yellow within, fleshy and tender, of a sweet and vinous Taste, having a tough Skin, and a hard strong Kernel. The Fruit grows upon a Tree call'd *Ziziphus* by *Tournefort*, and wants little of the Plum-Tree in every respect, but is crooked, cover'd with a rough uneven Bark, that cracks, or splits; the Branches are hard, furnish'd with strong Thorns. The Leaves oblong, something hard, terminating in a blunt Point, of a fine shining green Colour, slightly indented on their Sides; the Flowers growing among the Leaves, being tied by short Stalks; each of which, according to Mr. *Tournefort*, is commonly compos'd of five Leaves, like a small Rose, which is placed in the Middle of the Cup, of a grassy or pale Colour. When the Flowers are gone, the Fruit, or *Jujubs*, succeed;

ceed; being green at first, and reddish as they ripen. This Tree grows in the hot Countries, and is very common in *Provence*, and in the Isles of *Hyerès*, near *Toulon*, from whence the dry'd Fruit are brought. They are pectoral and aperitive, being usually employ'd in Puffs for Diseases of the Breast; they sweeten the Sharpness of the Humours, by their sweet and glutinous Substance, and provoke Spitting.

21. Of Sebestens.

Pomet. **S***ebestens* are a blackish Fruit, that are brought by the Way of *Marseilles*, from the *Levant*, &c. The Tree that bears this Fruit is about the Height of our common Plum-Trees; the Leaves green, and almost like them, but that they are a little rounder: The Flowers are whitish, in Form of a Star, from whence comes the Fruit, about the Size of one's Finger End; it hangs to the Branch, by a little white Cup, as it is brought to us.

Chuse your *Sebestens* fresh, plump, moist, and full of Pulp, of a black, brown Colour outwardly, adorn'd with white Caps, which is an essential Sign of their Newness, and such as have neither been wash'd nor rubb'd. The Flesh is sweet, viscous and pulpy, therefore reject such as are otherwise, and whose Caps are gone, which is a Token they have been wash'd or rubb'd; and also take Care not to chuse those that are hard, small, and of a reddish Colour.

The Way of using the *Sebestens* is much the same as that of the *Jujubs*, and their Virtues alike, so that one is frequently us'd for the other: The *Egyptians* make a Gluey Sort of Birdlime of the viscous Fruit, which is call'd *Alexandrian Birdlime*; but as this seldom comes amongst us, we use that which is made in several Parts of *France*, in *Normandy*, and about *Orleans*. This *Birdlime* is prepar'd from the inner Rind of the green Bark, and that of the Holly-Tree, steep'd in a Pond or Pit, and afterwards beat together in a Mortar, 'till it is reduced into a Paste, and then well work'd with the Hands, and wash'd in the Water; it is put up in Barrels, to be sent to several Parts: The Choice of

it is, to take such as is the greenest, the least fetid, and freest from Water that can be got: The Use of it being to catch Birds, and other Creatures of the like Nature.

Schroder says, the Plums of the *Sebesten*-Tree are small, with a three-corner'd Stone; they are temperate in Respect of Heat, and moist, soften, and prevent, or allay the Acrimony of Humours; are us'd chiefly in Deffuxions of Rheum, Obstructions of the Belly, and quench Thirst. You may make a Decoction of them with Wine and Water, to move the Belly gently to stool; or make an Electuary of them thus: Take *Sebestens* without the Stones, Prunes ston'd, Pulp of Tamarinds, of each five Ounces; Violet-Water two Pints; Juice of the Herb Mercury, clarify'd, four Ounces; Sugar Penids half a Pound: Of the four greater cold Seeds, blanch'd, of each two Ounces; Diagridium three Drams: Boil the *Sebestens*, Prunes and Tamarinds, in the distill'd Water, which being dissolv'd, mix with the Juices; then add the Penids and Pulp of Prunes, which being dissolv'd also, mix the Diagridium, and make an Electuary. It purges, and is good against exquisite, continual Fevers, taking away their vehement Heat; quenches Thirst, causes Rest, and carries off the Sharpness of Humours, and provokes to Urine.

Sebestena, or *Prunus Sebesten*, is a Fruit of the Size of a small Acorn, *Lemery*. that is oblong, roundish and black, wrinkled as a little Prune, of a sweetish, viscous, or clammy Taste, cover'd at the upper End with a small woody Cap, of a whitish Grey. The Fruit grows upon a Tree of the same Name, resembling the Prune Tree; only that the Leaves are a little more swallow-tail'd, and indented; the Flowers are small, white, and like those of the *Geranium*. This Tree grows in *Syria*, *Egypt*, &c. Make choice of your Fruit, according to the Directions given by *Pomet*; they contain in them much Oil, and some essential Salt; are moistening, emollient, sweetening, pectoral, and serve to open the Breast, cleanse the Reins, provoke Spittle, and relax the Bowels.

22. Of Dates.

Pomet. **T**HERE are three Sorts of *Dates* which we sell; the best are those which grow in the Kingdom of *Tunis*. There are likewise some that come from *Sally* in *Africk*, but those are lean and dry, and differ much from the others of *Tunis*, which are fat and fleshy: We have others that are brought from *Provence*, which do sell well, being large, fleshy, fair without, and white within. The Tree that bears this Fruit is the Palm, which is so well known throughout the whole World, it would be unnecessary to describe it.

Chuse such *Dates* as are large, full and fleshy, of a golden, yellow Colour without, and white within; the Taste sweet and pleasant; let the Pulp be firm, white about the Stone, and reddish towards the Bark; of a *Malaga* Wine-like Taste, which being shaken makes no Noise: If they are small, hard, without Pulp, or rattle, they are naught: Those of *Tunis* are worth much more than those of *Sally* or *Provence*, as hinted before. These *Dates* are so common, that they serve for the Subsistence of more than an hundred Millions of Souls; but for medicinal Uses, they are not much employ'd, saving in the *Diaphanicon*, or Electuary of *Dates*, some pectoral Ptisans, with *Sebestens* and *Fujubs*, &c. besides which, they are frequently eat as other Fruit.

Dactyli, or *Fructus Palmae*, the **Lemery.** *Dates*, are an oblong, roundish Fruit, a little larger than one's Thumb, fleshy, of a yellowish Colour, sweet and agreeable to the Palate, being enclos'd in a long, round, strong, hard Nut, of an Ash-colour'd grey, cover'd with a little, thin, white Skin, and is brought chiefly from *Tunis* in *Barbary*; it grows upon a large Tree, call'd *Palma Major*, or *Palma Dactylifera*, whose Trunk is large, round, streight, high, cover'd with a thick Bark, rising all the Way, with several scaly Knots, which make it advantageous to climb; the Leaves only grow at the Top longwise, pointed as those of the Flower-de-Lis, spiring, and opposite one to the other, branching about four Foot long, and as thick as one's little Finger;

triangular, hollow, spongy, and bending Archwise; the Flowers are white, and grow together on a Cluster, like a Bunch of Grapes, and are succeeded by the *Dates*; which, when ripe, serve for the Food, or Supply, of vast Numbers of People in the *Indies*, *Syria*, *Africk* and *Egypt*; but what are brought hither, serve only for Physical Uses, being deterfive and something astringent; but allay the Acrimony of the Stomach, strengthen the *Fetus* in the Womb, moderate the scouring of the Guts, and are cooling in inflammatory Fevers: They are reckon'd peculiarly serviceable to destroy all tartarous Mucilage, and other gross Humours that breed Stone, Gout and Rheumatism.

23. Of Palm Oil.

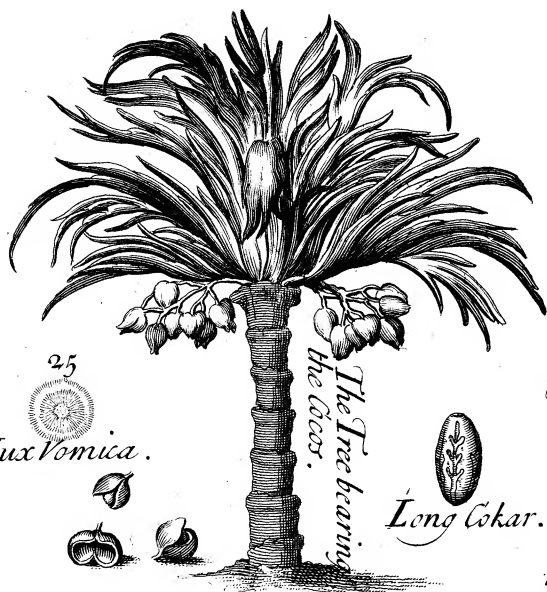
P*alm Oil*, or Oil of *Senega* is an unctuous Liquor, as thick as **Pomet.** Butter, of a gold-colour'd yellow, and a Violet, or Orrice Smell, especially when it is new and right. This Oil is made by Ebullition, or Expression from the Almond or Kernel, from a Fruit that grows by Clusters, of the Size of an Egg, and which bears about a hundred of them together. The Tree which produces this, is a Sort of Palm that grows commonly in *Africk*, especially at *Senega*, and in *Brasil*. The *Africans* make this Oil after the same Manner as they make Oil of Bays at *Calvisson* in *Languedoc*, and it serves 'em to eat, as we do Butter; as to that which is old made, they burn it in Lamps.

Chuse your Palm Oil fresh and new, of a good Smell, and sweet Taste, so that it be as pleasant and grateful as the best fresh Butter we have, and of the highest Colour. The white Colour it acquires by Age, has made some People fancy that the *Palm-Oil* is white: Take care it be not compounded of Wax, Oil Olive, Orrice Powder, and Turmerick, as it happens to some you may meet with, where the Merchant, or Buyer, understands how to counterfeit it; but the Cheat is easy to detect, because the true Palm Oil loses all its Colour, if it is expos'd to the Air, which the Counterfeit Oil will not do; besides, the true *Palm-Oil*, that becomes white, in



22

24. *The Palm bearing Large Cokar Nuts in their Shells.* *Dates.*

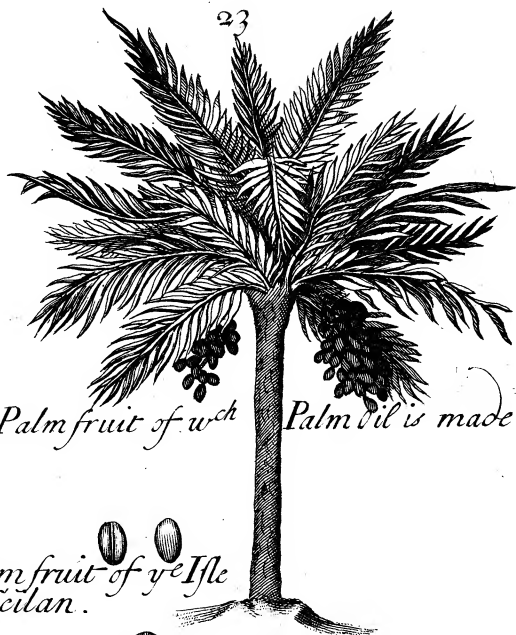


25

Nux Vomica.

The Tree bearing the Coes.

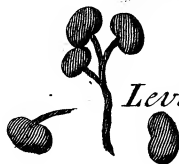
Long Cokar.



23

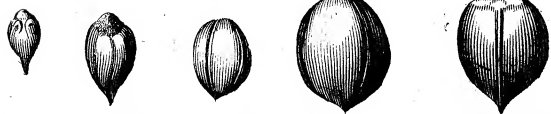
The Palm fruit of which Palm oil is made.

Palm fruit of ye Isle of Ceilan.



26

Levant Nut



Cokar Nuts of diverse Sizes without their Shells.

The Maldive Nut.

in course of Time; will recover its natural Colour, by melting it over a gentle Fire, which happens not to the adulterate Composition. They use this Oil to ease the Gout, and cure cold Humours.

24. Of Cokar-Nuts.

THese are Fruit of various Sizes and Shapes, as represented in the Figures of them, which are engrav'd from the Originals which I have in my Hands. They are proper for several Sorts of Works; as Bowls, Beads, Snuff-Boxes, &c. The only Place in *Europe*, where they trade most with those Kind of Fruit, is at *Dieppe*. I shall not stop here to describe the Trees which bear them, but shall only say, that this is a different Sort of Palm-Tree; but as so many Authors have treated of it, I shall add nothing more. The *Cokar* furnishes the Workmen with considerable Business, that deal in *Beads* and *Snuff-Boxes*; and the larger Sort is of such vast Use in *Africk*, *Arabia*, and several other Parts of the World, that many Millions subsist by Means of it only, producing so many Necessaries of Life; which were I to enter into a Detail of, it wou'd swell this Chapter to too great a Bulk. There is another Sort, but much more scarce, which *J. Bauhinus* calls *Nux Indica ad Venena celebrata*; sive *Coccus Maladivæ*; the *Indian Nut*, famous against Poison, or the *Maldivæ Nut*. I know no Difference of this from the other *Cokar*, than that it is much longer and sharper-pointed; the high Virtue ascrib'd to this, is the Reason why it is so very scarce and rare.

The *Cokar-Nut* describ'd by other Authors, is said to be an *Indian Nut*, which grows as plentifully, if not more abundantly in the *Spanish West-Indies*; as *New Spain*, *Campeche*, *Bay of Mexico*, *Cuba*, *Hispaniola*, *Guatimalæ*, *Jamaica*, &c. The Tree ascends direct and high, having on its Top a Tuft of Palm-like Branches, of a most beautiful Figure, bringing forth monthly Clusters of very large Nuts; containing within a very large Kernel, which eats as pleasant as an Almond, with a milky Juice, which is drank for quenching Thirst.

The Kernel is covered with a very hard

Shell, of which the *Turners* make Vessels and drinking Cups; some so large as to hold a Quart, three Pints, or more; and the Shell is cover'd with a thick Rind, which being beaten, becomes Hard like Flax or Hemp, of which cloathing is made, Cords, Ropes and the like; so that the *Cokar-Nut Tree* seems to be well provided with all Necessaries for human Life; as Cloathing, Vessels of Use, Meat, Drink, &c. The milky Water, within the Nut, is pleasant, both to quench Thirst, and also to nourish the Body; and by the Heat of Fire, it will thicken into a Jelly, like a Custard made of Cows Milk; otherwise it is an excellent pleasing Liquor, cooling, moistening, and sweetening the Juices; for which Reason it is said to be good against Consumptions and Hæctick Fevers, abating all preternatural, and irregular Heats. The Branches of the Trees being cut yield a pleasant Liquor, which being distill'd, gives a strong *Aqua Vitæ*: The Kernel, besides its serving for Meat, yields, by Expression, an Oil, which is better than any Oil Olive, not inferior to the best Oil of sweet Almonds. Of the Branches they make Houses; of the Trunk their Boats and Ships; of the coarse Hards, on the Outfides, their Cables; of the finer Stuff, Sails for Ships, and Cloth, as aforesaid.

25. Of the Vomiting-Nuts.

THE Vomiting Nuts are round, flat Nuts, of the Size and Shape represented in the Figure of Dates; which are of divers Colours; as yellow, white, brown, &c. These Nuts, according to the Relation of some Persons, are of the Size of our Rennet Apples, which grow upon a large Plant in several Parts of *Egypt*, from whence come the vomiting Nuts we now sell. The best Relation we have of the Growth of them, as well as their Description, is to be met with from Mr. *Paul Hermans*, Physician and Botanist of *Leyden*, one of the most able Men of his Age. This Relation of his has a great deal of Analogy, with that I shall here take Notice of, except that he says that they grow only in the Isle of *Ceylon*, whereas every Body knows they

they come from several Parts: He says likewise that there is another Sort of *Nux Vomica*, which comes from the Isle of *Timor*, and that the Fruit is not so big, by three Parts in four, as that of *Ceylon*; and that the Plant is called a Briony Wood: *Lignum Colubrinum*, is *Arboris Timorensis radix lignosa*, &c.

They are brought from *Egypt*, the *Levant* and *East-India*, and are generally flat, round, and of the thicknes of a Crown Piece, almost like Lupins, but larger; hollowish on the one Side, and a little bunch'd round on the contrary; of a greyish Colour, with a Kind of Freeze, or soft Cotton, covering the whole; but of so hard and horny a Substance, that it cannot easily be beaten into Powder but must be grated, or ground in a Horse Mill: The chiefest Things they are us'd for, is to infatuate Birds, as Crows, Ravens, Pigeons, &c. It is said it will kill Dogs, Cats, and other Creatures, if it be given mixed with their Meat: And it is probable, that if it kills not such Creatures as Wolves, Foxes, Tigers, &c. yet possibly it may so stupify and disguise them, that they may the more easily be master'd and kill'd by Mankind: It is also mix'd with Paste, and given in a Bait to catch Fish withal. This has been given inwardly, to three or four Grains, for several Intentions, but is much better let alone, since there are so many Remedies that may be us'd with less Danger.

Nux Vomica, is a little flat Fruit, *Lemery*. as round as a Farthing, downy or lanuginous, of a greyish Colour, hard as Horn, of various Colours within, sometimes yellow, sometimes white, and sometimes brown: Some People believe this to be the Kernel of a Fruit as large as an Apple, that grows upon a great Plant in several Parts of *Egypt*; but the Truth is, no Body as yet truly knows the Origine of the *Vomiting Nut*, and there is nothing to be depended on the Histories concerning it. Chuse such as is large, clean, and new, to be employed chiefly for intoxicating of Birds and Fish, tho' it is not poisonous if given to Men, but may be us'd in small Quantities, and is reckon'd detersive, drying, resolute, being apply'd externally and internally: It is commended as useful to resist Poison, and

drive away Melancholy and Vapours by Perspiration.

26. Of the Levant Nut or Berry.

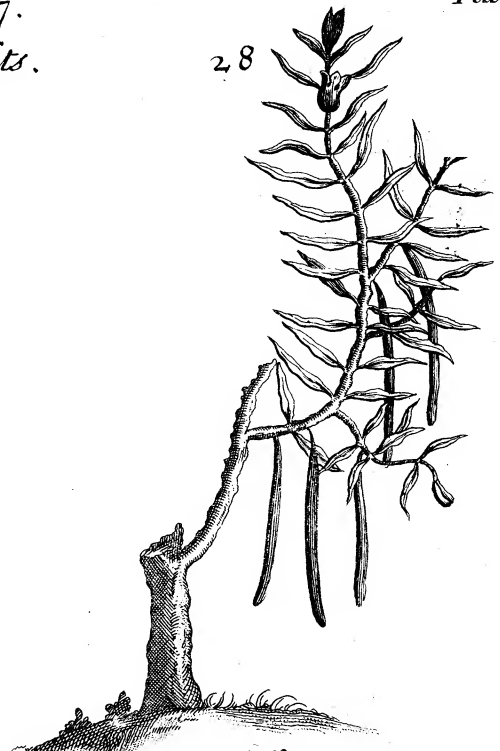
THESE Berries which we now sell by the Name of the *Levant*, *Pomet*. or Eastern Berry, are a small Fruit of the Size of a good large Bead, half round, and something of the Shape of a Kidney, as you will see represented in the Figure of the Date. These Fruits are of a reddish Colour, and hang to the Plant which bears them, by a little Stalk of the same Colour. In these Fruits are found a little Kernel, which is divided into several Parts, which are very subject to be worm-eaten; therefore chuse those that are heavy, fresh, the highest colour'd, largest, and least fill'd with Dirt that may be; they are serviceable to destroy Vermin, being usually mix'd with *Stavesacre*.

There is, besides, another Fruit call'd the *Fagara of Avicenna*, which is almost like the *Levant Berry*, or *Coculus Indus*, and whose Figure is shewn with that of the Date. *Lemery* says there are two Sorts of it, the *Fagara major*, which is as large as a Chick Pea, which is cover'd with a delicate fine Bark, betwixt a black and an ash Colour: The second is call'd *Fagara minor*, which is of the Figure and Size of a *Cubeb*, of a brown Colour, and aromattick Smell, and the Taste a little bitter and piquant; both which partake of the Nature of the *Cubeb*s, being good to strengthen the Stomach, assist Digestion, and expel Poison.

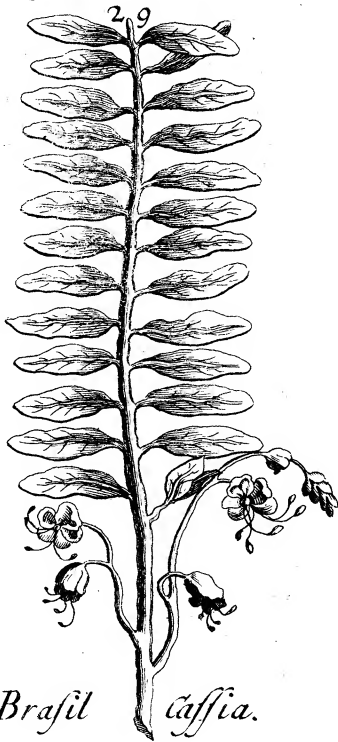
Some Authors call the *Levant Nut*, or the *Coculus Indus*, the *Bacca Lemery*. *Orientalis*, which are Berries brought from the *East-Indies*, as also from *Turkey*; round, and a little larger than Bay-Berries, hollow within, and of a brownish Colour, or rather of a blackish-ash Colour, on the Outside; having a white Kernel within, and of a hot Taste, drawing Water into the Mouth; and as is reported, grow many together like Ivy-Berries, yet each by itself, on a Stalk. Some will have them to grow on a Kind of Night-Shade, others on a Kind of Tithymal or Spurge; but the Truth is scarcely yet known: They are chiefly us'd for



Cassia of y Levant.



Egyptian Cassia.



Brasil Cassia.



Cassia of y Islands.

for Baits to catch Fish withal, or in a Powder to kill Lice and Vermin in Childrens Heads.

27. Of Cassia.

Cassia is a Kind of Fruit of different Lengths and Thickness, which hangs to the Branches of different Trees. The first and most esteem'd is that of the *Levant*. This *Cassia* grows plentifully in several Parts thereof, from whence it is now brought by the Way of *Marseilles*, as may be seen by the Figure of the Tree represented in the *Cat.* The Leaves are green, and the Flowers yellow.

Chuse this *Cassia* fresh, in thick Sticks, that are heavy, not laid in, of a brown Colour, whose Bark appears fine and white within, and is supplied or furnish'd with a black Pulp, a white hard Stone or Kernel in Form of a Heart. This Marrow or Pulp ought to be sweet, without being either sharp or musty, and such as will easily separate from the Cane. Beware that the Canes be not knotty or crooked, but all of a Piece, and without being subject to shake or rattle with the Kernels void of Pulp. Some will have it, that the true Way of distinguishing of the *Levant Cassia*, is by the Length of the Sticks; which nevertheless is no general Rule, because those are frequently met with in the *Antilles*, or Western Islands. But the best Way I have found, is to take that of *Marseilles*, because there is none comes that Way but what comes from the *Levant* and *Egypt*.

28. Of Egyptian Cassia.

THE *Egyptian Cassia* is a Fruit like the former, only that it is thinner, and a great deal tenderer. The Tree that bears this *Cassia* grows to a prodigious Size; it is as large as any Tree we have in *France*, and differs not from the former but as the Leaves are much smaller. They meet with such vast Quantities of these Trees throughout *Egypt*, that the *Cassia* they produce goes for almost nothing at *Grand Cairo*. One wou'd chuse this as soon as that of the *Levant*, only that

they break the Cases with their Thumbs to get out the Pulp. The *Levantine* and *Egyptians* make a Confection of the *Cassia*, being yet green, which they keep to loosen the Belly, it being a Medicine very convenient, and easy to take. The *Cassia* Confect ought to be new, and boild to the Consistence of a Syrup that is neither eager nor musty. Some People preferve it, as the *Levantine*s, to keep the Body open.

29. Of Brasil Cassia.

IT grows in *Brasil*, from the Trees, Leaves, Flowers and Fruit, as in the Figure represented. The *Cassia* which these Trees produce is so large, that if I had not seen a Piece in Mr. *Tournefort's* Hands of about a Foot and a half long, and the Thickness of three Fingers, I could not have believ'd that there was any *Cassia* so thick. But as this Fruit is of little Use, I must, nevertheless, tell you, that the worst *Cassia* we use is that which comes from the *American* Islands.

30. Of the Island Cassia.

THE *Cassia* of the Isles is that which at present is us'd at *Paris*, and is a Fruit of the same Nature with the former, and all the Difference is according to the Places from whence it comes. The *Antilles* are full of these Trees, so that the *Cassia* of those Parts costs them nothing but the Trouble of gathering. 'Tis the Profit or Perquisite of the Seamen who gather it, and stow it at the Bottom of the Ship amongst other Goods; which is the Reason why it oftentimes comes so dirty, being full of Gravel and Filth that it gathers from the Ballast of the Ship: However chuse such as comes nearest to the Fineness and Goodness of the *Levant Cassia* that you can get.

Schroder says, that which comes from *Brasil* purges more in one Ounce, than that from *Egypt* in two; yet that brought from the *East-Indies*, and by the *Levant*, is accounted the best, being brought from *Bantam* in great Quantities. That from the *West-Indies* is generally large and thick rinded, and not so pulpy, and therefore worth much less than

the *East-India*. The Pulp gently loofens the Belly, and brings forth the Excrements without griping, temperate in respect of Heat or Cold, and moderately moist. It is good for such as are troubled with Fevers, the Pleurisy, or any Inflammation of the Liver or Spleen, being mix'd with Water, and Drinks of a cooling Nature. It is good to cleanse the Reins and Ureters, to bring forth Gravel and Stone, being a Preservative in those Diseases, if drunk in a Decoction of Cicers, Parsly Roots and Liquorice. It is extracted by forcing the Pulp, taken out of the Cane, through a Sieve, under which is a Vessel of hot Water, that by the Help of the Vapours, the Pulp being stirr'd about in the Sieve, it may the easier pass thorow, when hot; you ought to extract it but just at the Time of using, because it grows four with keeping. There are several other Extracts, according to the Nature of the Occasion.

Cassia fistula Alexandrina, sive *Lemery*. *purgans*, or *Canna fistula*, is a Reed or Cane, the Length usually of a Man's Arm, thicker than one's Thumb, and almost round or cylindrick, woody, of a blackish Colour. The Bark is as hard as Wood, compos'd of two Cods, but equally join'd together, which cannot be separated but by breaking their Junctures. The Hollows or Cells are divided by thin Partitions, but very hard ones, that are fill'd with a Pulp, or Substance like Marrow, that is liquid, black, and sweet as Sugar. Each of these Cells contains a thick Seed, like a little Pea, that is flat, and almost round, of a yellow Colour. This Cane is the Fruit of a large thick Tree which grows in *Egypt*, the *Indies*, and several other Parts of the World. The green Leaves much resemble those of the Walnut-tree. The Flowers grow in Numbers upon one Stalk, compos'd each of five Leaves, dispos'd in a Circle, of a yellow Colour.

When the Flowers are fallen, the *Cassia* Sticks grow out and harden themselves, so that they break one against the other, when the Wind is strong, and make such a noise, that they may be heard two Leagues round. The best *Cassia* is that which comes from the *Levant*; but it is so dear and scarce in *France*, especially in War-time, that we are oblig'd

to make use commonly of such as comes from *Egypt* and the *Antilles*; that of the *Levant* and *Egypt* is brought to us by the way of *Marseilles*, but the others by *Dieppe*, *Rochelle*, &c.

31. Of Tamarinds.

Tamarinds are sharp, acrid Fruit, which are brought from the *Levant*, sometimes in Bunches, but more commonly freed from their Stalks. The Tree which bears them has very small Leaves; after which come white Flowers, almost like Orange-Flowers, from whence arise Husks that are green at first, and grow brown as they ripen; when the Inhabitants of those Parts gather them in Clusters, they dry them a little before they are sent hither.

Chuse your *Tamarinds* fat or oily, fresh, of a Jet black, and a sharp pleasant Taste, which have not been laid in a Cellar, which may be known by their too great Moisture, and their Smell of the Vault; besides their Kernels, that are blown up. Avoid such as are adulterated with *Molasses*, Sugar, and Vinegar. They are much us'd in Medicine, because of their cooling purgative Quality.

There grow a great many *Tamarind* Trees at *Senega*, where the Negroes make the Fruit into Cakes, after they have stoned them, and freed them from their little Stalks, which they make frequent use of to quench their Thirst. These *Tamarind* Cakes are very scarce in *France*. They cleanse *Tamarinds* like *Cassia*, and with Sugar make a Confection of it, which is not unpleasant.

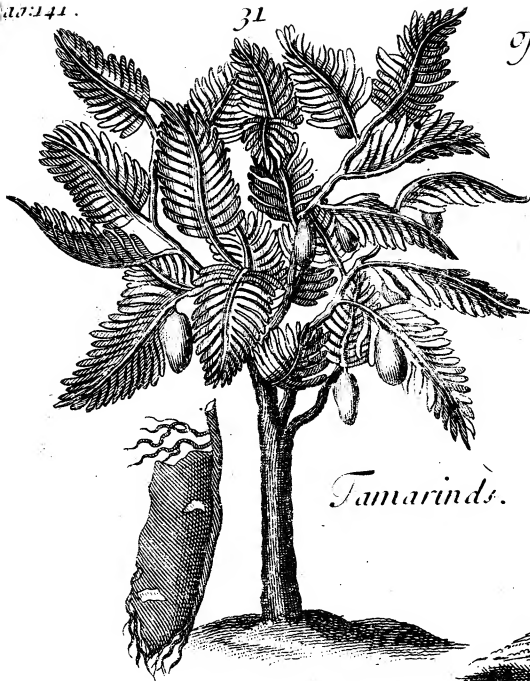
Tamarindi, or *Oxyphœnica*, is a Fruit about the Length of one's *Lemery*. Finger, as broad and thick as the Thumb, cover'd with a green Bark at the Beginning, but that grows brown as it ripens, and is so tender that it easily falls off, or separates. The Fruit affords a black, sourish, or sharp Pulp that is grateful to the Taste, and that hangs by long Fibres, or woody Strings, form'd in the Nature of a Bunch. They take this Pulp from the Seeds or Pepins, as they do that of *Cassia* or *Lupins*.

The Tree which bears the *Tamarinds* is call'd *Tamariadus* by *Gerard*, *Parkinson*, *Bauhinus*

31

32

33



Tamarinds.



Citron Myrobalans.



M. Indian.

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36

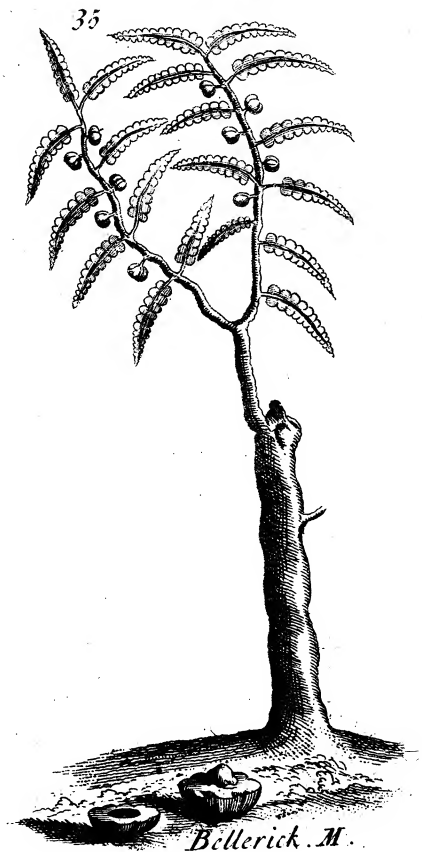
35



Chebulick M.



Embllick M.



Bellerick M.

binus and *Ray*; or *Siliqua Arabica*, quæ *Tamarindus*, the *Arabian Date*, which is the *Tamarind*, or *Balam Pulli*, seu *Mederam Pulli*. It is as big as an *Ash* or *Cherry-Tree*. The *Trunk* is large, cover'd with a thick ash-colour'd *Bark*. The *Wood* is hard, the *Branches* furnish'd with a great many *Leaves*, like those of the *Female Fern*, long as one's *Hand*, compos'd of several small *Leaves*, rang'd on the *Side*, hard, nervous, or stringy, green, of a pleasant *Taste*. The *Flowers* springing from *Wings* of *Leaves* join'd eight or ten together like those of the *Orange-Flower*, white-colour'd, sometimes strip'd with red *Veins*. The *Roots* are long, large, and red. This *Tree* grows in several *Parts* of *India*, as *Cambaya*, *Senega*, &c. The *Leaves* are proper for quenching *Thirst*, and cooling in burning *Fevers*, being taken in *Decoction*.

The *Indians* separate the *Tamarinds* from the *Bark* and the *Bunch*, after having dry'd them a little, as we have them now frequently amongst us, hanging one to another. Choose the newest, that are hard as *Paste*, pulpy, black, of a sharpest grateful *Taste*, and vinous *Smell*. They yield a good deal of acid *Salt*, *Oil* and *Flegm*; are detersive, gently laxative and astringent. They allay, by their Sharpness, the too great *Motion* of the *Humours*, abate feverish *Heat*, cool, and quench *Thirst*. They are given in continual *Fevers* and *Looseness*, being taken in *Decoction*, *Bolus*, &c. or a *Pulp* may be made, as of *Cassia*; *Dose* from an *Ounce* to two. It strengthens the *Stomach*, creates an *Appetite*, resists vomiting, and cuts tough *Flegm*. An *Extract* is made thus: Take *Tamarinds*, boil them in fair *Water*, strain, clarify with the *White* of an *Egg*, and thicken by consuming the *Water* to a due *Consistence*. *Dose* from two *Drams* to half an *Ounce*. It cools *Inflammations* of the *Stomach* and *Liver*, *Reins*, *Back*, and *seminal Vessels*; is good in *Catarrhs*, *Rheums*, *Eruptions* of the *Skin*, salt and sharp *Humours*, *St. Anthony's Fire*, &c.

32. Of Citron Myrobalans.

Pomet. THE Citron or yellow *Myrobalans*, are Fruit which grow in several *Parts* of the *Indies*, especially about

Batacala and *Goa*, upon *Trees* whose *Leaves* are of the *Shape* represented in the *Cut* of them. When these *Fruit* are ripe, they are of the *Figure* or *Likeness* of the *Mirabel Plum*, enclosing a *Stone*, which yields a *Kernel* like the *white Pine*. The *Indians* candy this *Fruit* while it is green, as we do *Plums*, and they serve to loosen or relax the *Bowels*. The *Portuguese* and *Dutch* bring us this *Fruit* thus candied for the same *Purpose*; but the greatest *Quantity* is brought us dry, which the *Apothecaries* keep for several *Galenical Compositions*, after the *Stone* is broke. Choose your *Citron Myrobalans* of a reddish yellow, long, well fed, heavy, and hard to break, of an astringent disagreeable *Taste*; and beware of being impos'd upon by any of the other four *Sorts*, to wit, the *Indian*, *Chebulick*, *Emblick*, or *Bellerick*.

33. Of Indian Myrobalans.

THE *Indian Myrobalans* are small long *Fruit*, of the *Size* of a *Child's Finger End*, black without and within, without *Stone*, and very hard, that are brought from the *East Indies*, where they grow in great *Quantities*, and from whence they take their *Name*. The *Tree* which bears these has *Leaves* like a *Willow*, after which comes *Fruit* of the *Size* and *Shape* of a *Spanish Olive*, which are green at the *Beginning*, and grow browner as they ripen, and blacken in drying. As we have them now brought to us, they are hard, and black as *Ebony*. Choose those that are well fed, dry, blackish, of a sharpest astringent *Taste*, and the heaviest you can get.

34. Of Chebulick Myrobalans.

THE *Chebulick Myrobalans*, or those call'd *Quibus*, are *Fruit* very like the *Citron*, except that they are bigger, blacker, and longer. The *Tree* which bears them is as high as an *Apple-tree*, and has *Leaves* like the *Peach*, with *Star-Flowers* of a reddish *Colour*. These *Sorts* of *Trees* are to be met with about *Decan*, or *Bengal*, where they grow without *Culture*. Choose these *Myrobalans* fleshy, the least wrinkled and black, that

that is possible, such as are refinous within, of a brown Colour, that has an astringent Taste, and also a little Bitterness.

35. Of Bellerick Myrobalans.

THE *Bellerick Myrobalans* are a small Fruit of the Bigness of a Nutmeg, of a reddish yellow without, and yellowish within, in which is found a Stone supply'd with a Kernel of no Virtue. The Tree which bears this is large, and the Leaves like those of the Bay-Tree. The Fruit is found hanging to the Branches, in Shape of little Gourds, of a yellow Colour. 'Tis of little moment to direct you to the Choice of them, since they are good for little or nothing.

36. Of the Emblick Myrobalans.

THE *Emblick Myrobalans* are a blackish Fruit, of the Bigness of Galls, easy to divide into Quarters; for which Reason almost all we have brought are after this manner. The Trees that bear them are as high as the Palm, and the Leaves are almost like the Fern. Chuse such as are least fill'd with Stones and other Trash, which they are very subject to; but on the contrary the most fleshy and blackest you can meet with. The *Indians* do not use the *Emblick Myrobalans* either to candy when green, as the others, or break for their Kernels, but they employ them to dye Skins, as the Leather-Dressers do *Sumach*, and also to make Ink. Some hold that all the *Myrobalans* grow upon one and the same Kind of Tree, which is far from Truth, as I have shewn, for some of them grow fifty or sixty Leagues from one another. The *Citron Myrobalans*, which the *Indians* call *Arare*, purge Bile: The *Indian*, which those People call *Rezenuale*, and *Bellaris Gotta*, purge Melancholy: The *Emblick*, call'd *Annual* by the *Indians*, and the *Chebulick*, *Areca*, purge Flegm; besides, these five Species of *Myrobalans* us'd sometimes in Pharmacy, call'd the *Areca*.

Myrobalani, or *Myrobalanes*, are *Lemery*. a Fruit the Thickness of a Prune, which are brought to us from *India* dry. There are five Kinds of them: The

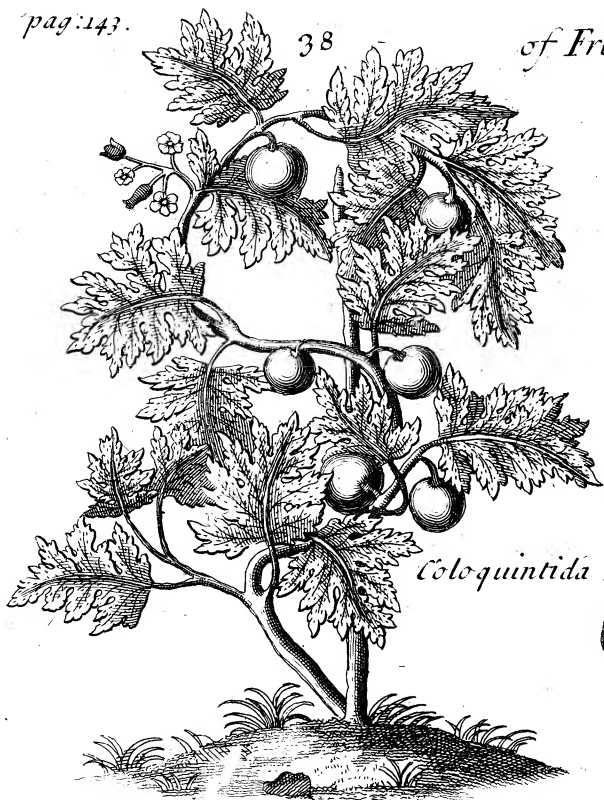
first call'd *Myrobalani Citrini*; the second, *Myrobalani Indici*; the third, *Chebuli*; the fourth, *Emblivi*; the fifth, *Bellerici*. The *Citron*, or yellow Sort are small, oblong, or oval, of the Size of an Olive, or a little bigger, rais'd on several Sides, containing each a longish Stone. They grow upon a Tree resembling a Prune or Plum, but that bears Leaves like a Service-Tree. It grows without Management or Care in *India*, and particularly near *Goa*. This Kind of *Myrobalan* is the most us'd of all the Sorts in Phylick: It ought to be chosen fleshy, heavy, hard, of a reddish yellow Colour, and an unpleasant astringent Taste.

Myrobalani Indici, sive nigri, sive Damascii, the *Indian*, or black *Myrobalans*, are an oblong Fruit, the Size of a small Acorn, rough and ridged, lengthways of four or five Sides, very hard, hollow within, and void of a Stone. They grow upon a Tree whose Leaves are like those of the Willow, &c. as describ'd in *Pomet*.

Myrobalani Chebuli, Quebuli, Chepuli, Cepuli, or *Chebulick Myrobalans*, are a Fruit like Dates, oblong and sharp, or pointed at that End which bends to the Tree, having five Corners or Ridges, of a yellowish brown Colour. They grow upon a large Tree like a Plum-Tree, that grows in *India*, without Culture. The Leaves are like those of the Peach-Tree; the Flowers form'd Star-wise, of a Colour tending to red. Make choice of large, fleshy, hard *Myrobalans*, of a dark yellow Colour, and an astringent Taste, inclining to bitter.

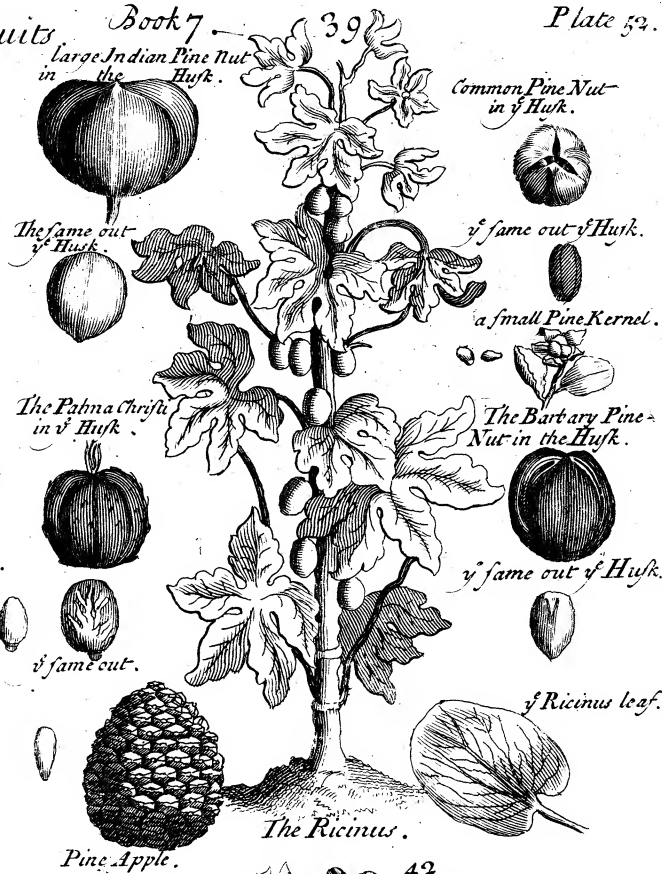
Myrobalani Emblici, Embelgi, Emblegi, Ambegi, Dyseni, or *Emblick Myrobalans*, are a Fruit that are almost round, and about the Size of a Gall Nut, rough on the Outside, and ridg'd on the six Sides, of a dark brown Colour, containing each a thick Nut, like a Filbert, rais'd on six Corners, of a yellow Colour. The Fruit grows upon a Tree the Height of the Palm, having long Leaves cut small, and indented very like the Fern; we have these brought to us cut in Quarters, separated from the Stone, and dried. You ought to chuse them clean, without Shells, blackish without, grey within; of an astringent Taste, attended with a little Sharpness. The *Indians* dye Skins, and make Ink with them.

Myro-



38

Coloquintida.



39

Large Indian Pine Nut in the Husk.

Common Pine Nut in the Husk.

The same out of Husk.

of same out of Husk.

a small Pine Kernel.

The Palma Christi in the Husk.

The Barbary Pine Nut in the Husk.

of same out of Husk.

of same out.

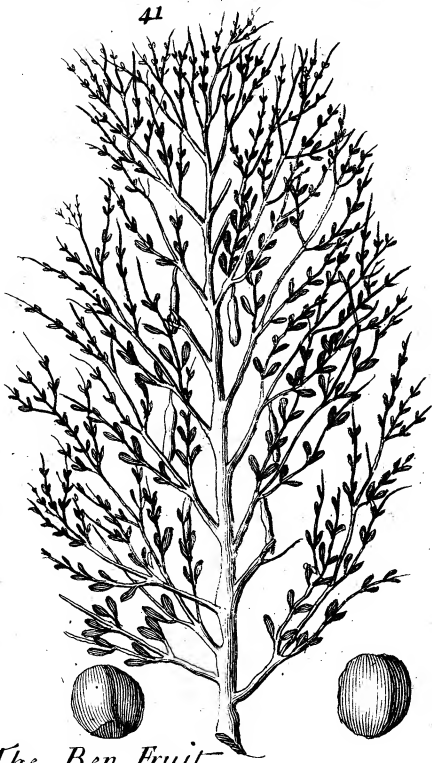
of Ricinus leaf.

The Ricinus.

Pine Apple.

41

A branch of the Ben Tree.

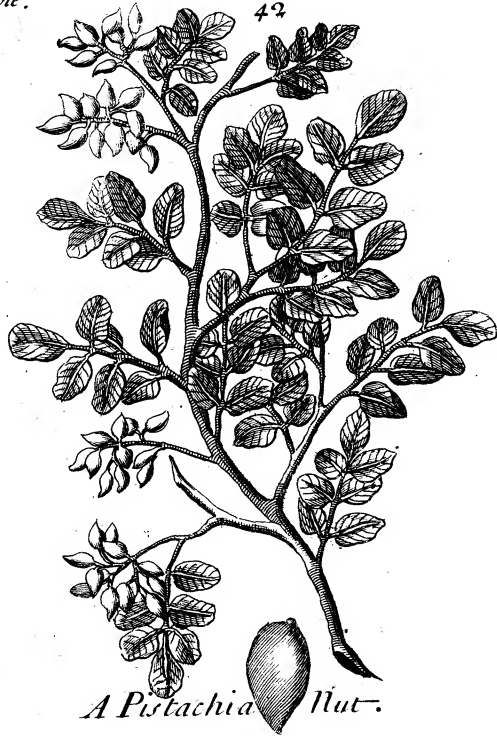


The Ben Fruit.

A Ben Husk.



42



A Pistachia Nut.

Myrobalani Bellerici, Belleregi, Bellegu, or Bellerick Myrobalans, are Fruit of the Size of the common Sort, oval, or almost round, hard, yellow, more united, and less angular or corner'd than the others, containing each an oblong Stone or Nut, as large as an Olive; the Stone encloses a little Kernel: The Tree that bears this has Leaves like the Bay, and as big as a Plum-Tree. All these Sorts of Fruit yield a great deal of essential Salt and Oil, a moderate Quantity of Earth and Flegm: They are all gently purgative and astrigent, something like *Rhubarb*; but the Citron Kind are esteem'd more particularly for purging the bilious Humours; the *Indian* the Melancholy, and the others for the Serous or Flegmatick: They may be given from six Drams to double the Quantity either in Pills, a Decoction in Wine, or an Extract made of the pulpy Part, by steeping them in Wine, then straining out the Infusion, and inspissating, or thickning to a Consistence.

37. Of the Areca.

THE *Areca* is a Fruit whereof *Pomet.* there are two Sorts; to wit, one that is half round, and the other pyramidal: These small Fruits resemble one another entirely; especially within, they are like a broken Nutmeg, and are brought to us from several Parts of *India*; but as we trade in them no otherwise than as a great Rarity, I shall not trouble you further about them, only that the Tree, bearing the *Areca*, is from a Branch of the Peppers already describ'd.

Areca Palmæ Species. Scalig. A-Lemery. reca sive Fanfel Clus. in Garz. Ludg.

Palma cujus fructus sessilis Fanfel dicitur. Avellana Indica. The Palm, whose Fruit is call'd *Fanfel*, or the *Indian* Filbert, is a Species of the Palm Tree, very high and straight, that grows in *Malabar*, and several other Parts of *India*. The Flowers are small, white and almost without Smell; the Fruit is of an oval Figure, the Size of a Nut, having a green Bark or Peel, at first, which becomes very yellow as it ripens, soft and very hairy. The Bark or Rind being taken away, there appears a Fruit the Size of a

Filbert, sometimes half round, sometimes pyramidal; which being broken, resembles that of a Nutmeg in Fineness.

The Fruit which the *Indians* call *Chofool*, not being as yet half ripe, makes those that eat it giddy and drunk: When ripe it is insipid and astrigent. They reduce it to Powder after having dry'd it in the Sun, and having mix'd it with Betle, burnt Oyster-Shells, Camphire, Aloes Wood, and a little Ambergrise, they form them into Troches, which they chew in their Mouths to make 'em spit and purge the Head.

38. Of Coloquintida.

Coloquintida is a Fruit of the Size of our Rennet Apple, that grows *Pomet.* upon a climbing or viny Plant, that has green Leaves, very like those of the Cucumber. The Fruit being upon its Stalk, is of the Colour of the *Collebasb*, and grows plentifully in several Parts of the *Levant*, from whence they are brought to us, freed from the first Skin, or outward Shell, which is yellow.

Chuse the finest white *Coloquintida* Apples, that are light, round, and as little foul and broken as may be. Those who have their *Coloquintida* from *Marseilles*, or other Parts, order their Correspondents, if they would serve them well, to take care that the Apples be not broken, and the Pepin, or Seed shak'd out; tho' out of an hundred Weight of *Coloquintida*, they shall not find forty fit for Use, because of the gross Part, and the Seeds which ought to be thrown away.

Coloquintida is one of the bitterest and most purgative Drugs in Physick; therefore it ought not to be us'd, but with great Precaution, and especially not without throwing away the Seeds. The Confectioners cover these Seeds with Sugar, and sell them to catch or delude Children with; and People of Quality upon extraordinary Occasions; but the Apothecaries keep these by them to powder, and put into their purging Compositions, especially the common Lenitive Electuary; which is a great Abuse, and a very wicked Practice.

Colocynthis, vel Colocynthis fructu Lemery. rotundo minor, vel Cucurbita Sylvestris fructu rotundo minor: The lesser *Coloquintida* with the round Fruit, or the lesser wild Gourd, with the round Fruit; is an *Indian* Plant which bears several Stalks that creep upon the Ground, hairy and rough, The Leaves grow singly ty'd to long Stalks, running one from another, large, indented, hairy, rough and whitish, especially on the Outside, mark'd with several white Spots. The Flowers are of a pale yellow, succeeded by a Fruit about the Size of a moderate Orange, almost round, naturally pretty dry and light, cover'd with a hard Bark, or entire Shell, that is of a yellowish, shining Green. The *Indians* separate, or pull off this Bark, and having dry'd it within, that is, the Flethy Part of the Fruit, they bring these Apples of different Sizes, white, spongy, light, and of an intolerable Bitterness, which is what we call *Colocynthis Officinarum*, or the *Coloquintida* of the Shops. There are several Cells or Apartments fill'd with large Seeds, like those of *Melon*, but shorter, more fleshy and a great deal harder, of a yellowish Colour, inclining to white: They cultivate this Plant in several Parts of the *Levant*.

Chuse such as are fine, large, white Apples, fleshy, well dry'd, light, that will easily break, and are very bitter; they yield a great deal of Oil, together with volatile and essential Salt. The *Coloquintida*, separated from the Seeds, is call'd Pulp of *Coloquintida*, and is often us'd in Physick; it purges violently by Stool, is proper to evacuate the serous Humours of the more gross Parts of the Body, and is recommended in the Epilepsy, Apoplexy, Lethargy, Small-Pox, over-flowing of the Gall, Sciatica and Rheumatism; but ought never to be administred alone, but us'd in Compositions, as Pills, Confections, Troches, and the like.

39. Of Indian Pine Kernels.

Pomet. THE *Indian* Pine Kernels are little Almonds of a yellowish white Colour, the Size of a Pea, but much longer, of a disagreeable Taste, attended with a great Acrimony. These little Ker-

nels are cover'd each with a Pellicle, or white Skin, very fine and thin, and a small Shell that is hard, but not very thick, which makes that it will break easily. These small Fruit grow in a Husk, or triangular Shell, where there are very often three Kernels together. The Plant that bears this Fruit is call'd, in Mr. *Herman's Paradisus Batavus*, *Ricinus arbor fructu glabro, granatiglia Officinis dicta*; which signifies the *Ricinus*, or a Kind of *Vervain-Tree*, with the smooth Fruit call'd in the Shops, *Tyle-Seed*, or *Tilli-Berries*; the Figure of the Plant, the Leaves and Flowers are unknown to me; nevertheless, I believe it is this Plant as here represented, that bears the *Indian* Nuts, which ought to be chosen fresh, plump and fleshy; the least fill'd with Husks, Shells, or other Filth and Dirt that can be. Take care that they be the true Nuts, and that the *Palma Christi* be not impos'd upon you in their Stead, which is difficult enough to distinguish, when the *Palma Christi* is not speckled; for when it is so, you can scarce be deceived: Otherwise when it carries the Colour of the *Indian* Nut, 'tis not easier to know the Difference.

The Use of the Nuts, or the Kernels of 'em, is to purge, and it is, indeed, one of the greatest Purgatives we have, which makes it that we ought not to meddle with them, but with great Care and Precaution, not venturing to administer them but to strong robust Bodies. As to the Quantity, one may take one, two, or three, according to the Constitution of the Person. Some affirm that it is nothing but the thin Membrane, or Skin that covers the Kernel, which gives it the purgative Quality, which I can assure you is not so.

There are other *Indian* Pine Kernels, which we call, improperly, little Pine Kernels. Besides we sell another Sort, call'd *Barbary* Pine Kernels, large *Indian*, or *American* Pine Kernels; these are those Sorts which *Baubinus* calls *Ricinus Americanus, femine nigro*; the *American* Pine with the black Seed.

Besides these, there are two Sorts of *Indian* Pine Nuts which we do not trade in at all by Reason of their great Scarcity. The First are Kernels of the Size and Shape of the Filbert, extremely white, and are cover'd with a hard Shell of different Colours;

hours; to wit, grey and reddish; these grow three together in a Shell, of a triangular Figure; the Plant which produces them being call'd *Ricinus fructu maximo*, or the *Ricinus*, with the large Fruit.

The second sort are little long Kernels, of the Bigness of a Pin's Head; spotted a little, as the *Palma Christi*, which grow three together, in a little three-corner'd Pod, of the Size of a Pea: These little Pods, or Shells, differ from the other Sort, in that about the Shell and the Husk there are five little hairy greenish Leaves, which altogether resemble the Figure taken from them. The Plant Leaves which these small Pine Kernels have, are exactly like those of Dittany, only that these are greenish, and those of Dittany are whitish. These little Fruits are extremely scarce, and the Plant that bears them is call'd *Ricinus Indicus fructu minimo*, the *Indian Pine* with the least Kernel. As for the *Palma Christi*, the great and the small, together with the *Spurge Berry*, I shall say nothing, because many Authors have treated of 'em; and the rather because honest People will have nothing to do with them.

40. Of the white Pine Kernels.

These are a white Sort of little longish Almonds, that are round on one Side, of a sweet Taste, to which they give the Name of sweet Pine Kernels. These small Almonds are cover'd with a thin Pellicle or Skin, that is light, reddish, and has a very stong Nut. These Nuts, supply'd with Almonds, are found in the Pine Apples, and are call'd, according to their Subject, Pine-Nuts, Pine-Kernels, or Almonds from the Pine Fruit: Those we now sell come from *Catalonia*, as likewise *Provence* and *Languedoc*, and several other Parts of *France*. To get the Kernels from the Pine Apples, they are thrown into a hot Oven, where the Heat obliges them to open; afterwards they break the Nuts, and take from thence the Kernels, which are sent into different Parts of the World: Choose 'em white, the largest and least mix'd with Shells and Skins that you can get, and which are of a sweet Taste; in a Word, which neither smell of Oil or Mustiness: They are much

us'd, especially in *Lent*, to make several Sorts of Ragoos: The Confectioners cover them with Sugar, after having stoved them some time to take out the Oil: They make an Oil of them by Expression, which has the same Virtues with Oil of sweet Almonds, especially when the Kernels are fresh and new: They are sometimes us'd to feed *Canary Birds*; and a Paste made of the Powder after the Oil is press'd from them, is good to wash the Hands with.

Ricinus Vulgaris according to *Baubinus* and *Tournefort*, or *Ca-Lemery. taputia major Vulgaris*, the common *Ricinus*, or greater Spurge, is a Plant that has the Resemblance of a small Tree, whose Stalk rises six or seven Foot high, thick, woody, hollow within like a Reed, branching at the Top, of a dark, purple Colour, cover'd with a white Powder like Meal; the Leaves are in the beginning round, but as they grow bigger they become corner'd, and divided like the Fig-Leaf, but much larger and soft to the Touch: The Flowers are so many pale *Stamina*, Threads, or Chives, which do not last long, and which leave nothing after them, either of Seed or Berry: These Fruits growing separately, upon the same Stalk, dispos'd in the Nature of a Bunch, that is prickly and rough to the Hand: Each of this Fruit has three Sides, and is made up of three *Capsule* or Coverings, which contain severally an oval or oblong Seed; pretty thick, of a livid Colour, spotted without, and fill'd with a white tender Pith: When the Fruit is full ripe it is full of Chinks, or Cracks, by which the Seed rushes out with force; the Root is long, thick, hard, white, and stringy: They cultivate this Plant in Gardens, not only for its Beauty, but because it drives away the *Moles*; it grows of different Sizes and Heights, according to the Places wherein it is set; for in *Spain* one may see them of the Height of a man; and in *Candia* there are others that grow to the Bulk of large Trees, provided there be Poles for them to mount on: The *Ricini*, or Tyle-Berries, are us'd in Medicine, and contain in them Plenty of Oil and Salt; they purge violently all Sorts of Humours, and may be given from one Grain to six.

There is an Oil made of them by Expression, after they have been well beat, call'd in Latin, *Oleum de Kerwa*, *Oleum Cicinum*, *Oleum ficus infernalis*: It purges only by rubbing the Stomach and Belly with it: It kills the Worms, cures the Itch, deterges old Ulcers, and allays the Suffocation of the Womb. These Berries are brought from *America*, and are call'd, in Latin, *Grana Tiglia*, *Tyle-Berries*, or *Indian Pine Kernels*, because, in Shape and Size, they resemble the *Pine Kernels*, which are larger than these, grow in a Shell like them, but are not thorny. There are several Sorts of *Pine Kernels*, from the several Sorts of *Pines*, which produce them; of which I shall give you an Account of four; one whereof is cultivated, and the other three wild.

The cultivated *Pine* is call'd *Pinus*, or *Pinus Sativa*, vel *Domestica*, by *Baubinus*, *Raius*, *Tournefort* and *Gerard*: The Trunk of which is large, upright and tall; naked, or bare at the Bottom, and full of Branches at the Top, cover'd with a rough, reddish Bark; the Wood is firm, strong, yellowish and scented; the Branches are dispos'd in order; the Leaves grow two and two, long and small like Threds; hard, durable, and constantly green; pointed or prickly at their Tops; furrounded at the Bottom with a membranous Sheath. The Husks or Shells, are of several membranous Foldings, which contain two Cells, fill'd with nothing but a light Dust; these Husks leave no Fruit behind them growing upon the same Stalks with the Leaves, and begin by a Button, which arrives to be a large scaly Apple, almost round, or pyramidal, of a reddish Colour: These Scales which form it are hard, woody, thicker commonly at the Point, or Top, than at the Bottom; hollow lengthwise, with two Cavities, each of which contains a hard Shell, or oblong Nut, cover'd, or edg'd with a thin, light, reddish Rind; they call these in Latin, *Strobili seu Pinei*, seu *Nuces pineæ*, or *Pine Nuts*, which enclose in each an oblong Kernel, half round, white, sweet to the Taste, and tender.

The second Sort is call'd *Pinus Sylvestris*, by *Raius*, &c. or *Pinus Sylvestris vulgaris Genevensis*, by *Baubinus* and *Tournefort*, the common wild *Geneva Pine*; this grows,

usually, less high than the cultivated, but sometimes it attains to the same Height and Size; its Trunk more frequently straight, but is sometimes crooked; the Leaves are long and narrow; the Fruit much smaller than the first, more resinous, and falls easily when ripe: This Tree grows in mountainous and rocky Places.

The third Sort is call'd *Pinus Sylvestris Mugo*, five *Creim*, or *Pinaster Austriacus* the *Austrian wild Pine*, being a diminutive *Pine*, which grows not above the Height of a Man; it divides itself from the Root into several large Branches, that are flexible and pliant, spreading wide, cover'd with a thick, rough Bark; the Leaves are of the same Form, and dispos'd like the cultivated *Pine*, but much shorter, thicker, fleshy, less sharp at their Ends, and greener: The Fruit are not so big as those of the *Larix*, or *Cyprus*, but they are scaly, form'd pyramidally like other *Pine-Apples*; the Root is thick and woody: This Plant grows in mountainous and Stony Ground; as about the *Alps*, and among other Rocks.

The fourth Sort is call'd *Pinus Sylvestris Maritima*, conis firmiter ramis adhaerentibus, by *Baubinus*, *Ray* and *Tournefort*, or *Pinus Sylvestris altera Maritima*, the wild *Sea Pine*: This is a small Tree whose Wood is white, strong-scented and resinous; the Leaves are like those of other *Pines*; the Fruit are in Pairs, and shap'd like those of the cultivated *Pine*, but a great deal less, being ty'd strongly to the Branch, by their woody Stalks. This Plant grows in mountainous Parts, near the Sea.

All the *Pines* that grow in the hot Countries yield Plenty of *Rosin*, by Incisions made in their Bark; they afford Abundance of Oil and essential Salt: The Bark and Leaves of the *Pine* are astringent and desiccative. We have *Pine Kernels* from *Catalonia*, *Languedoc* and *Provence*, which are taken from the *Pine Apples*, as taught by *Pomet*: Chuse such as are new, plump, clean and white, that have a good sweet Taste; they contain a great deal of Oil, and some Salt; are pectoral, restorative, sweeten and correct the Acrimony of Humours, increase Urine and Seed, cleanse Ulcers of the Kidneys, resolve, attenuate, and mollify; and may be us'd internally and externally.

41. Of the White Ben Kernel.

Pomet. **T**HE white *Ben* is a triangular Fruit of different Colours, the Size of an hazel Nut, being white or greyish, in which is found a white Almond, of a sweet Taste, disagreeable enough. The Tree which bears the *Ben* is very scarce in *Europe*, and the impresson I have here given you, is taken from that which is at *Rome*, in the Garden of Cardinal *Farnese*.

Chuse such Kernels as are white, fresh, and the heaviest you can get. They are of no other Use, that I know of, but to make Oil of, which has a great many good Qualities: The first is, that it has neither Taste nor Smell, and never grows rank, which makes it of great use to the Perfumers and others, for preserving the Scents of Flowers, as *Jessamine*, *Oranges*, *Tuberose*, and the like. With this Oil it is they make all their sweet Essences, adding to the Flowers aforenam'd, as they fancy, *Ambergrise*, *Musk*, *Civet*, *Benjamin*, *Storax*, *Balsam of Peru*, &c. They grow in *Syria*, *Arabia*, *Æthiopia*, and *India*, where they come to Perfection, which they scarcely ever do in *Europe*.

The whole Nut is of a purging Quality, and the dry Pressing, or Powder, after the Oil is taken out, is of a cleansing Nature, and drying; the Shells or Husks, bind extremely; the Kernels bruised, and drunk with a little Ale, purge the Body from gross and thin Flegm; the Oil, which is drawn out of the Nut, does the same, provokes vomiting, and cleanses the Stomach of much foul Matter gather'd therein; but the Nut itself, in its gross Body, does much more trouble the Stomach, unless it be roasted at the Fire, for then they lose much of their emetick Quality, and only purge downwards; and they are given in Clysters with very good Effect to cleanse the Bowels and cure the Colick. The Kernels, taken in Posset-Drink to a Dram, mollify the Hardness of the Liver and Spleen. The Oil, besides its excellent Use to the Perfumers, is employed by the Glovers and Skinners to preserve their Leather from Spots or Stains, or from ever growing mouldy, as those

perfumed with Oil of Almonds do. It more easily extracts, and longer retains the Perfume of any Thing infus'd in it, than any other Oil whatsoever. Being drop'd into the Ears, it helps the Noise in them, and Deafness also. The Kernel used with Vinegar and Nitre, is good against the Itch, Leprosy, running Sores, Scabs, Pimples, and other Defections of the Skin. Mix'd with Meal of *Orobous*, and apply'd plaisterwise to the Side, it helps the Spleen, and eases the Gout, and Nerves which are pain'd with Cramps, Spasms, Colds and Bruises. Mix'd with Honey, it dissolves Nodes, Tophes, Knots, and hard Tumours.

Ben parvum vel Balanus Myrsinica, Pharagon incolis ad montem Sinaï, or Granum Ben, the Ben Berry; is a Fruit like a Hazel Nut, oblong, triangular, or rais'd with three Corners, cover'd with a Rind, or thin Scale, pretty tender, and of a grey or white Colour. Within the Bark or Rind is a white oily Almond of a sweetish Taste. The Fruit grows upon a certain Tree in *Æthiopia*, resembling the *Tamarisk*. Chuse such as is new, large, and well fed; of which there is an Oil made, as of Almonds by Expression, call'd *Oleum Balaninum*, and which has this particular Quality not to grow rancid with keeping. The *Ben* purges upwards and downwards all bilious and pituitous Humours, given from half a Dram to a Dram and half. Externally it is deterfive, resolutive and drying.

Besides this there is another Species of *Ben*, that is much larger than what I have been speaking of. It is call'd by *Monard*, in his History of Drugs, *Ben magnum, seu Avella purgatrix*, the great *Ben*, or purging *Filbert*. It grows in *America*, and is brought sometimes from *St. Domingo*, but is very scarce in *France*. It purges upwards and downwards. The *Indians* use it for the Wind-Colick. The Dose from half a Dram to a Dram. They weaken its force by roasting of it.

42. Of Pistachia Nuts.

THE *Pistachia* is a Fruit of the Size and Shape of a green Almond, which we bring from several

ral parts of *Persia*, and other Places in *Asia*, especially about a Town call'd *Malover*. The Tree which bears them is much of the Height of a young Nut-Tree, and the Leaves almost round, after which comes Fruit in Clusters, very beautiful to look upon, being green mix'd with red. Under the Skin or Husk is found a hard white Shell, which contains a Kernel or Almond, of a green Colour, mix'd with red on the outside, and green within; of a sweet pleasant Taste. Chuse your *Pistachias* in the Shell, very heavy and full; in short, so that three Pound weight of them in the Shell may yield a Pound when broken, that is, a Pound of Almond.

As to the broken *Pistachias*, chuse the newest, that are red without, and green within, and the least bruise'd that can be. As to their Size, some esteem the largest and others the small, especially the Confectioner, when he is to use them for candying over with Sugar, in order to make what they call *Pistachia Comfits*. They are very little us'd in Physick, except that sometimes they put 'em into some *Galenical* Compositions, being a proper Restorative in old Age. They make an Oil of the *Pistachia*, but it is of so little Use, I shall nothing of it.

Pistachia, *Phistachia*, *Fistici*, or the *Lemery*. *Pistachia*, is a Fruit of the Shape and Bigness of the green Almond, which is brought from *Persia*, *Arabia*, *Syria*, and the *Indies*. They grow in Clusters upon a kind of Turpentine or Fir-Tree call'd *Terebinthus Indica* by *Theophrastus*, or the *Pistachia* of *Dioscorides* by *Tournefort*, &c. and by *Parkinson*, *Nux Pistacia*. This Tree bears Leaves made like the common Fir, but larger, which are fibrous or stringy, and sometimes divided at the End, and sometimes pointed, ranged severally upon a long Rib, terminated by a single Leaf. The Flowers are dispos'd in Bunches, in which are fix'd at the Bottom, Chives or Threads, which rise to the Top of the Flower, of a purple Colour. These leave no Fruit behind them; the Fruit growing upon Stalks that bear no Flowers at all.

The *Pistachia* has two Barks or Rinds; the first is tender, of a greenish Colour, mix'd with red; the second is hard as Wood, white and brittle; they enclose a Kernel of a green Colour mix'd with red on the out-side and

within, of a sweet agreeable Taste. They are pectoral, aperitive, moistening, restorative, fortify the Stomach, and procure an Appetite. The ripe Nut in Substance is freely and liberally eaten by people of Quality, as well to gratify the Palate, as for any physical Uses.

43. Of Almonds.

WE usually sell two Sorts of Almonds, to wit, the sweet and *Pomet*. the bitter. The Trees which produce these are so common, I did not think it proper to give any Description of them, contenting myself only to say that both Sorts of Almonds come from several Parts, as *Province*, *Languedoc*, *Barbary*, and *Chinon* in *Touraine*; but the most valued of all, are those that grow about *Avignon*, because they are usually large, of a high Colour, that is to say, reddish without, and white within, of a sweet pleasant Taste, which is contrary to those of *Chinon* and *Barbary*, that are small and half round. As to the Use of the sweet Almond, it is so considerable, and so well known throughout the World, it would be needless to mention it. I shall only treat of the Oil, as being a Commodity of great Consequence, considering the vast Consumption that is made of it. There are some of the sweet Almonds sold in the Shell, the best of which are reckon'd those that break easily under the Thumb. These are of scarce any other Use than to furnish Gentlemens Tables as part of the *Desert*.

Amygdala or the Almond, is the Fruit of a Tree call'd in *Latin* *Lemery*. *Amygdalus*, or the Almond-Tree, which is cultivated in our Gardens. The Leaves are long, narrow, and ending in a sharp Point, of a bitter grateful Taste; they resemble the Peach Leaves, and are hardly to be distinguish'd from them when pluck'd from the Trees, except that they are tougher or more pliant. The Flower is also very like that of the Peach, but much whiter, and less purgative. It is succeeded by a hard woody Fruit, oblong, cover'd with a hairy greenish Husk that is fleshy. It contains within it an oblong flat Almond, which all the World knows. There are two kinds of Almonds,

of Fruits .



Almonds .



Citrons .



Citrons .



The sweet or Portugal Orange

48



The Bigarade or large Orange .



of sour Orange



China Orange .

monds, [*as said by Pomet;*] the first whereof, or the sweet, are pleasant to eat, of good Nourishment and proper against Laiks and the Bloody-Flux; they are pectoral and opening, good against Coughs, Cold, Asthma's and Consumptions. An Emulsion or Milk made of them with Barley-Water, is a good Drink in Fevers, Diarrhoeas and Dysenteries. The Virtues of the Oil will be mention'd under that Head.

44. Of Oil of sweet Almonds.

OIL of sweet Almonds is prepar'd several ways: Some do it by blanching, and others by pounding, some reduce them into a Paste by beating the Almonds, some only bruise 'em, and so sift 'em; in short, some use good Almonds, and others bad ones, and every one according to his Capacity and his Conscience; but the Method of expressing the Oil is so commonly known, that it wou'd be trifling to pretend to give any Account of it at this Time of Day; only to inform you that there are two Sorts, the one drawn by the Fire, and the other without, which is call'd the cold drawn Oil, and is only proper for internal Use, the hot being subject in a short Time to grow ranc and stinking. After the same manner Oil of bitter Almonds is made, chiefly for external Use; as likewise Oil of Walnuts, Hazel-Nuts, Ben, white Pine-Kernels, and of the larger Sort call'd Oil of the internal Fig, which is much us'd by the Savages to kill Vermin; as also a cold Oil is drawn from white Poppy Seeds, the four cold Seeds, Linseed, and the like, by way of Expression. As to the Way of chusing all these Sorts of Oils, the best Advice I can give you is to deal with honest People that are above putting a little Cheat upon you, and not to deal with Hawkers, nor run from Shop to Shop, but give a Price for that which is good in its Kind.

Besides the Oil, there are Mackaroons made by the Confectioners out of the Almonds blanch'd and beat up to a Paste with Sugar, &c. The Almond-Paste which remains after the Expression of the Oil, serves the Perfumers to sell for scouring the Hands clean, and making the Skin smooth. The Oil by Expression new drawn, is good a-

gainst Roughness and Soreness of the Breat and Stomach, Pleurifies, Coughs, Asthma's, Wheezings, Stitches, hec tick Fevers, Ulcers in the Kidneys, Bladder, Womb, and Guts; and helps Scalding of Urine. Oil of bitter Almonds helps Deafness, if dropt into the Ears, as also Pains and Noise therein. Outwardly it softens hard Nerves, takes away Spots in the Skin, and brings down the great Bellies of Children. Oil of bitter Almonds given inwardly with *Manna* and *Sugar-candy* is good against Colick and Stone, Gripes in Children, dry Coughs, and for Women in Labour. Some say that the Oil of sweet and bitter Almonds both may be preserv'd from being rank by the help of Spirit of Wine tartariz'd.

45. Of Citrons.

THE Citrons, both the sweet and four, are Fruit so common, and so well known in most Parts of the World, that I shall pass by their Description, and content my self to say that what we sell come from *St. Remes* about *Genoa*, *Nice*, and *Manton*, a little Village belonging to the Duke of *Savoy*, from whence they are brought by Sea and Land to *Marseilles*, *Lyons*, *Rouen* and *Paris*. The Sale of Citrons is not made in the Cities aforesaid, except *Nice*, but by the Determination of the Council of the Place, which happens twice a Year, that is to say, in *May* and *September*; sometimes three times a Year, according as the Crop or Harvest is considerable. When the Sale is over, and that some Merchants wou'd have only the choice, they throw by such as will pass through an Iron Ring made round for that Purpose, for all that go through only serve to make into Juice, which they transport to *Avignon* and *Lyons*, for the Dyers in Grain. As to the choice of sweet or sour Citrons, the Commodity is too well know to need any Direction.

46. Of Oil of Citron.

WE sell two Sorts of *Citron Oil*, to wit, the common, and the Essence of *Cedre*, or the essential Oil. The first and most valued is that which bears the Name of the

the *Cedre* or *Bourgamot*, which is made two ways, either by the *Zest*, or the rasping or grating of the Citron-peel fresh; or else by an Alembick and Water they draw a white odoriferous Oil, altogether like the Oil of sweet Almonds, but that it is not so gross and fat. The second Sort is the common Oil of Citrons, which is greenish, clear, and fragrant, and is made by the Alembick, with the Lee or Settling that are found in the Bottom of the Cask, wherein Juice of Citrons has been kept; fifty Pounds whereof will afford three Pounds of clear Oil, more or less, according to the Goodness and Newness of the Citrons. These Oils are us'd by the Perfumers, because of their agreeable Smell, especially the essential Oil. As to the four *Bourgamot*, 'tis a Juice made from a certain Kind of half-ripe Citrons that come from *Bourgaire* near *St. Remmes*, from whence it is carry'd into several Parts. The Use of it is likewise for the Perfumers, and several other Persons that have occasion for them.

47. Of candied Citrons.

WE have small Citrons brought from the *Maderas* of different Sizes, candied two Sorts of Ways, to wit, dry and liquid. The dry are very pleasant to eat, which when they are well done, are tender, green and new. There is another Sort besides this, that comes from the *Maderas*, candied dry, the best of which is the freshest, in little Quarters, clear and transparent, very green on the Outside, and the most frosted with the Candy within that can be, very fleshy, easy to cut, and well dried, not full of black Spots, which happens not to it but by Moisture, which it gets by Age.

The Citron-peel is much us'd, because it is excellent to eat. There is, besides, such as we call Chips, that are cut into little Slices or Pieces. The *Turks* with the Juice and Sugar make what they call *Sorbec*, the best of which comes from *Alexandria*. With the clarified Juice and fine Sugar we make Syrup of Citron, to cool the Blood, and quench Thirst. That which is made at *Paris* is not fit for any Thing, being made chiefly of decay'd Citrons.

Citron-peels come also to us from *Spain*

and *Portugal*; those which look brisk or fresh and of a lively yellow Colour, and that have a fragrant Smell are best; if the Colour and Smell be decay'd, they are not of much value. When rightly order'd they are cephalick, neurotick, stomachick, cardiack, hysterick, and alexipharmick, good against all cold and moist Diseases of the Head and Nerves, Bitings of Serpents and mad Dogs, and all Sorts of malign and pestilential Diseases; Measles, Small-Pox, Plague, Surfeits, &c.

Under this Head it may not be improper to say something of *Lemons*, which are much of the same Nature. They grow in all the southern Parts of *America*, as also in *Spain*, *Portugal*, *Italy*, and *France*, and with much Care and Housing in the Winter in *England*. The Juice, which is that we intend to speak of here, is sharper than that of Citrons, and therefore dryer and cooler. It is of good Use in Weakness of the Stomach, Vomitings, violent burning Fevers, as also in malignant and pestilential Fevers, and in Diseases of the Kidneys and Bladder. It is also us'd as a *Menstruum* to dissolve the Bodies of some Mixtures and Drinks. A Syrup of Lemons for the same Purpose is made with an equal quantity of Sugar, and thus the Juice is preserv'd; for if it be kept long by itself, it will be apt to grow musty, and lose its Acidity, and then the Juice is spoil'd.

Citreum vulgare, as Mr. *Tournefort* calls it, is a little Tree that is always green, whose Branches spread wide, and are pliant, cloath'd with a smooth green Bark. The Leaves are plain, long, and large as the Walnut, pointed like those of the Bay-Tree, but more fleshy, indented on their Sides, of a fine green shining Colour, especially on the outside, and of a strong Flavour. The Flower is made up of five Leaves, round, the Colour white, inclining to red or purple, of a pleasant Smell, supported by a round hard Cup. When the Flower is gone, the Fruit forms itself usually oblong, sometimes oval, and sometimes almost round, as thick as a large Pear, cover'd with a rough uneven Rind, fleshy, thick, of a green Colour at the Beginning, but as it ripens, it becomes of a light Yellow without, white within, of a very agreeable Smell, and a biting aromack Taste. This Rind covers a vesiculous

ficulous substance, divided into several Cells or Partitions full of a Juice that is acid, and very pleasant to the Taste, and with some oblong, white pithy Seeds, of a Taste that is a little bitter. The Fruit carries the Name of the Tree that bears it, which is the Citron Tree; cultivated in the hot Countries, as *Italy*, *Provence*, or *Languedoc*; the Fruit is chiefly used in Physick, the Leaf and Flower very rarely.

These two latter, namely, the Leaf and Flower, afford Abundance of Oil, volatile and essential Salt. They are cordial and strengthen: The Rind, especially the very outward Part that is yellow, yields a good deal of Volatile Salt and Oil; it is proper to fortify the Heart, Stomach and Brain, and to resist Poison. The Juice contains in it a Quantity of essential Salt and Flegm, but very little Oil: It is cordial, cooling, proper to abate the Heat of the Blood, to precipitate the Bile, to quench Thirst, and resist Poison. There is a way of sticking a Citron all over with cloves, to carry in the Pocket to smell to in any epidemical Sickness, in order to drive away the Contagion. There is another Kind call'd the *Sweet Citron*, because not sharp as the other; but in no Esteem either for its use or Beauty.

48. Of Oranges.

Pomet. THE sweet and sour Oranges, come from *Nice*, *Aficuta*, *Grave*, the Isles of *Hyer*, likewise from *Genoa*, *Portugal*, the *American* Islands, and *China*; but the largest Store of those we use now come from *Provence*, where they are sold indifferently without any Method or Order; Oranges as well as citrons are so common I shall make no Description of them.

Oranges are candied whole, after having been scoop'd and emptied or peel'd entire: And these are what we call *whole Oranges*, or *Candied Orange Peel*. The finest is that which is made at *Tours*, because it is clearer, more transparent and of an higher Colour: We have *Orange Peel* cut in Chips made at *Lions*, which is what we call *Orangeat*. The other chief Use we make of *Oranges* of all Sorts, both sweet and sour, and the *Bege-rade* is to candy the Flowers, which come

chiefly from *Italy* and *Provence*: The distilled Water is what we call *Naptha*, or *Orange-Flower Water*, which is most us'd by the Perfumers; that which is best ought to be of a sweet Smell, bitter Taste, very pleasant, and of that Year's Distillation; for what is kept above the Year loses its Smell. Those who distill *Orange Flowers*, draw a clear Oil of a strong Fragrancy, which the Perfumers call *Neroli*; the best is made at *Rome*, and afterwards that in *Provence*: Notwithstanding some will assure you this is an Error, and that there is better made at *Paris* than either in *Italy* or *Provence*; the Reason is, because *Italy* and *Provence* being hotter than our Climate, the Sun more readily exhales the Odour; but with this Difference notwithstanding, that we cannot draw the same Quantity of Oil, as in the hot Countries, because all the World knows that the Smell of Flowers proceeds from nothing but the Heat of the Sun and the Dew, which makes that in *Italy* and *Provence* they undergo several more Distillations. And therefore the Flowers that are in Prime one Month in *Paris*, hold two in *Provence*, and three in *Italy*, because of their greater Nearness to the Sun.

The People of *Provence* bring us an Oil, which they make from the *Zest*, and the outward thin Rind of the *Oranges* by means of an Alembick and Water; and this Oil is of a strong, sweet Smell. They bring besides, another Sort we call *Orangelettes*, made of the *Orange-Kernels*, or *Seeds*, which they distil in an Alembick, with a sufficient Quantity of Water; after having infus'd it five or six Days in the said Water. This Oil is of a golden yellow, and a strong fragrant Smell. The Oils of *Oranges* are excellent Remedies for curing Worms in little Children, and likewise the Water made in drawing the Oil serves for the same Purpose: Upon this Account the Perfumers of *Provence* transport a great deal in Bottles and Barrels to several Parts to give to young Children. The greatest Quantities of this Oil are made at *Grave*, *Biot*, three Leagues from *Grave*, and at *Nice*. I ought to inform you, that most of the Oils which come from *Provence*, are adulterated or mix'd with Oil of Ben, or Sweet Almonds; for which Reason they ought not to be bought by honest People.

Aurantium, Arantium, Aureum Lemery. *malum, Pomum Nerantium vel Aneurantium,* is a Kind of a fine yellow, sweet scented, round Apple, that grows upon a Tree call'd in Latin, *Malus Arantia, sive Arantius*; the Leaves are of the Shape of those of the Bay-Tree, but much larger, always green, having a fine White, fragrant Smell, compos'd usually of five Leaves that stand round, and are supported by a Cup. This Tree is cultivated in all our Gardens, but especially in the warm Countries.

There are generally two Sorts of Oranges, one small, yellow, greenish, bitter and sharp; the other large, of a fine golden Colour, and sweet to the Taste: The bitter is most us'd in Physick, from the outward Rind of which they make *Zests*, which are endow'd with a great deal of exalted Oil and volatile Salt, which contains almost all the Scent of the Fruit; the Juice is acid, and consequently full of essential Salt. The Rind of the bitter Orange is much esteem'd to recreate the Spirits, strengthen the Stomach and Brain, resist the Malignity of Humours, and excite Womens Courses.

The Juice of the bitter Orange is cordial, and the Flower cephalick, stomachick, hysterick, and proper against Worms: The other Orange contains in it a sweet and pleasant Juice, compos'd of a great deal of Flegm, a little Oil and essential Salt, whereof the Rind likewise partakes in the same Degree: The Fruit is moistening, cordial, cooling, and good to allay Thirst in continual Fevers: The Seed has the same Virtue as that of the Citron, but is seldom us'd in Physick.

Others there are who divide the Oranges into three Sorts; the Crab or four Orange; the bitter or *Seville*, and the *China*, or sweet Orange: Of all which, the *Seville* or bitter Orange is of most Virtue, and mostly us'd in Physick; as the Peel for Confections, the Oil for Perfumes, Juice for Syrups; for candying, Flowers; Seed or Kernel for Emulsions, and the Water, or Spirit for a Cordial; in all which Forms they are stomachick, cephalick and anticolick.

49. Of the Ananas, or King of Fruits.

Pomet. IT was thought a just Appellation, after Father *Du Tertre*, to call the *Ananas* the King of Fruits, because

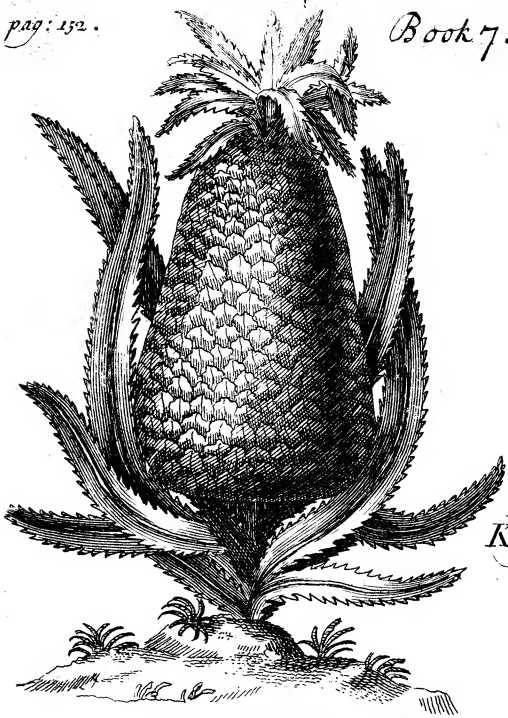
it is much the finest and best of all that are upon the Face of the Earth. It is for this Reason that the King of Kings has plac'd a Crown upon the Head of it, which is as an essential Mark of its Royalty; and at the Fall of the Father, it produces a young King, that succeeds in all his admirable Qualities. It is true, there are others besides that bud again underneath the Fruit, and the same at the Bottom of the Stalk that produces the *Ananas* in much less Time, and with the same Ease, with that which bears the Crown: But it is also true, that the Fruit which produces this, is incomparably much finer than the others.

This Fruit grows upon a round Stalk, the Thickness of two Thumbs, and about a Foot and half high, which grows in the middle of the Plant, as the Artichoak in the midst of its Leaves; they are about three Foot long, four Fingers broad, hollow like small Canes, and altogether hairy, or rather bristly on the Sides or Edges, with little sharp Prickles, and ending with a sharp Thorn like a Needle. At first the Fruit is not so big as one's Fist; and the Cluster of Leaves, which is the little Crown born upon the Head, is red as Fire; from every Scale or Shell of the Rind of the Fruit, which in Shape, tho' not in Substance, is very like the *Pine-Apple*, there arises a little purplish Flower, which falls off, and withers as the Fruit encreases.

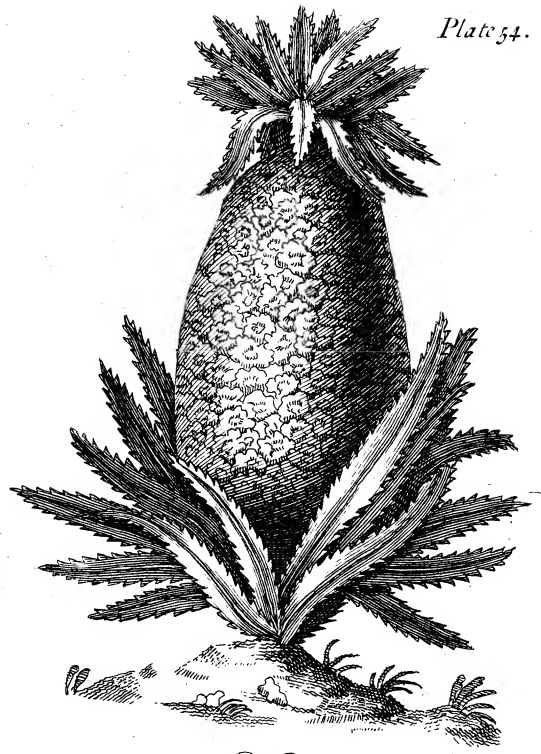
They are distinguish'd into three Sorts, namely, the large white *Ananas*, the Sugar-Loaf, and the Rennet Apple: The first is often eight or ten Inches Diameter, and five or six high; their Flesh white and fibrous, but the Rind of a golden yellow; when it is ripe it sends forth a ravishing Smell, which is as strong as that of the Quince, but much more delicate; but tho' it is much larger than others, the Taste is not so excellent, neither is it so much esteem'd; it sets the Teeth on Edge, and makes the Gums bleed more than the others.

The second Sort bears the Name of the *Sugar-Loaf* from its Shape and Form, that entirely resembles it: It has Leaves a little longer and narrower than the former, and that are not so yellowish: The Taste is bitter, but it makes their Gums bleed that eat much of it. I have found in this Kind a Seed like

49



The Ananas or King of Fruits.



51



DogWort Cotton.

50



Cotton.

like a Sort of Creffes, tho' it is the general Opinion that the *Ananas* does not feed at all.

The third is the least, but the best, and is call'd the *Rennet-Apple*, because of its Taste in particular, and Smell, that both agree to that Fruit; it seldom sets the Teeth on Edge, or makes the Mouth bleed, if it is not eat of to a great excess indeed: All agree that they grow after the same Manner, bearing all their Tufts of Leaves, or their Crown upon their Head; and the Pine-Apple Rind, that rises and cuts like that of the Melon, and is very fleshy and fibrous, the one as well as the other; this altogether melts into Water in the Mouth, and is well tasted; and that partakes of the Peach, the Apple, the Quince, and the Muscadine Grape all together.

Some to take away the Quality it has of bleeding the Gums, and inflaming the Throats of such as eat too much, or before they are full ripe; after having pair'd off the Rind, and cut it into Slices, they leave it a little while to steep in *Spanish Wine*; and it not only frees the *Ananas* from this ill Effect, but it communicates to the Wine a most agreeable Taste and Smell. There is a Wine made of the Juice, almost as strong as *Malmsey*; and which intoxicates full as soon as the best and stoutest Wine in *France*. If you keep this Wine above three Weeks it will be almost dead and spoil'd; but if you will have Patience with it for a little Time longer, it will recover itself perfectly, and be stronger and better than before. When moderately us'd, it is good to exhilarate the Spirits when oppress'd, prevent the Nauseating of the Stomach; is good to relieve the Suppression of Urine, and is a Counter Poison for those who have eat too much of the same Fruit, so as to surfeit or be disturb'd with it. We sell at present the *Ananas Comfits*, at *Paris*, which are brought from the *Indian Islands*, which are very good, especially for aged People to restore the natural Heat, and comfort feeble Spirits.

Ananas, Nanas, or Fayama, is a *Lemery*. very fine *East-India* Fruit, which grows upon a Plant like a Fig-Tree and of the Size of the *Artichoke*. This Fruit is adorned on the Top with a little Crown,

and a Bunch of red Leaves like Fire: The Rind appears with a Shell like those of the Pine-Apple, but separate like that of the *Mel- lon*; the Flesh is fibrous, but dissolves in the Mouth, having the delicious Taste of the Peach, the Quince and the Muscadine Grape all together.

There are three Sorts as Mr. *Pomet* has described them from Mr. *Du Tertre*: They make a Wine from the Juice which is almost equal to *Malmsey* Sack, and will fuddle as soon; it is proper to strengthen the Heart and Stomach against Nauseating, to refresh and recruit the Spirits; it excites Urine powerfully; but grown Women ought to avoid it, because it procures Abortion: They make a Confection of the *Ananas* upon the Spot, which is brought hither whole; this is good to warm and restore a weak and aged Constitution.

50. Of Cotton.

COTTON is a white soft Wool *Pomet*. which is found in a Kind of brown Shell, which grows upon a Shrub in form of a Bush, according to what Father *Du Tertre* says of it. At first, when the Islands were inhabited by the *French*, I saw them says he, fill their Houses full of *Cotton*, in hopes it would yield them great Profit in Trade; but most of the Merchants would not meddle with it, because it took too much room in the first Place, and was subject to take Fire, decay and the like.

This Shrub grows in a Bush, and the Branches that stretch wide are well charg'd with Leaves, something less than those of the Sycamore, and almost of the same Shape: it bears a great many fine, yellow, large Flowers; the Head of the Flower is of a purple Colour, and it is all strip'd on the Inside; it has an oval Button that appears in the Middle, and grows in Time to the Size of a Pigeon's Egg; when ripe it becomes black and divides itself into three Parts at Top; the *Cotton* or Down, looks white as Snow: In the Flake, which is swell'd by the Heat to the Size of a Pullet's Egg, there are seven Seeds as large as Lupins, sticking together; within it is white, oily, and of a good Taste.

This *Cotton* comes in great Quantities from all the Islands, and the Natives take great Care in the cultivating of it, as a Thing very useful for their Bedding: I have observ'd one Thing of the *Cotton* Flower not known to any Authors yet, or at least not taken Notice of; which is, that the Flowers, wrap'd up in the Leaves of the same Tree, and bak'd or roasted over a Fire of burning Coals, yield a reddish viscous Oil, that cures in a little Time old standing Ulcers. I have often experienced it with very good Success: The Seed of this Shrub will make the Parroquets fuddled; but it is beneficially us'd against Fluxes of Blood and Poisons.

We sell several Sorts of *Cottons*, which only differ according to the Countries from whence they come, and the various Preparations made of them. The first is the *Cotton*, in the Wool, that is to say, that which comes from the Shell, from which only we take the Seed: Those *Cottons* come from *Cyprus*, *Smyrna*, &c. The second is the *Cotton* in the Yarn, which comes from *Damascus*. The *Jerusalem Cottons*, which are call'd *Bazac*; the lesser *Bazacs*; the *Beledin Cottons*; those of *Gondzel*, *Motafin* and *Genequin*; but of all the *Cottons* we sell no better than that of *Jerusalem*, and the Islands. The true *Bazac*, or *Jerusalem Cotton*, ought to be white, fine, smooth, the best spun, and most equal, or evenest that can be. As to the *Cotton* in Wool, the whiter, longer, and sweeter it is, the more valuable it is. Those who buy in whole Bales, ought to take care it be not damag'd with Mould, Mustiness, or wet. *Cotton* has many Uses too well known to insist on. As to the black Seed which is found in the *Cotton*, there is an Oil made of it, admirable for taking away Spots and Freckles, and to beautify the Face; and has the same Virtues with Oil of the Cokar Kernels, made after the same Manner by the Natives, especially in the Island of *Assumption*, from whence almost all the Cokars we now sell are brought.

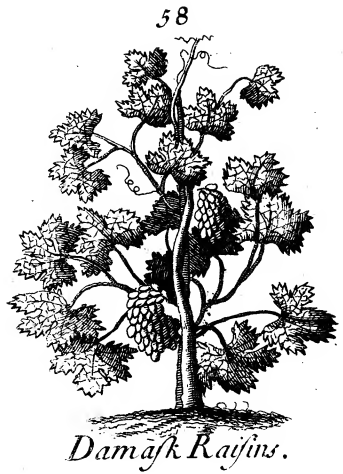
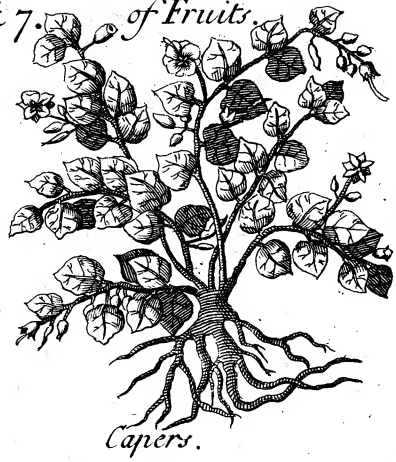
Xylon, Coto, Gossipium, Cotone-Lemery. um, Bombyx Officinarum, or the *Cotton* of the Shops, is a Plant whereof there are two Kinds; the first is call'd *Xylon sive Gossipium herbaceum*, by *J. Bauhinus*, *Ray* and *Tournefort*, *Gossipium fruti-*

cescens annuum, by *Parkinson*, and *Gossipium fruticescens semine albo*, by *C. Bauhinus*; which signifies either the Herb *Cotton*, the Annual Shrub *Cotton*, or that with the white Seed: It bears a Stalk of a Foot and a half, or two Foot high, that is woody, cover'd with a reddish hairy Bark, divided into several short Branches. The Leaves are a little less than the Sycamore Leaves, shap'd almost like those of the Vine, hanging to long Stalks, adorn'd with a Nap or Hair; the Flowers are numerous, fine and large, having the Shape or Form of a Bell, slit or cut into five or six Divisions to the Bottom, of a yellow Colour, mix'd with red or purple: When the Flower is fallen, it is succeeded by a Fruit the Bigness of a Filbert, which being ripe opens into three or four Quarters or Partitions, from whence appears a Flake of *Cotton*, white as Snow, which swells up or tumefies by Heat, to the Size of a little Apple. It contains in it gross Seeds like small Peas, oblong, white and cottony; each having in it a little oleaginous Kernel that is sweet to the Taste.

The second Sort is call'd *Xylon Arboreum*, or the Tree *Cotton*, by *J. Bauhinus*, *Ray* and *Tournefort*; it differs from the former in Bigness, for this grows into a Tree or Shrub of four or five Foot high. The Leaves approach, in some Measure, to those of the *Linden* Tree, indented deep into three Parts, without Nap or Down: The Flowers and Fruit are like those of the other Kind. The two Species of *Cotton* grow in *Egypt*, *Syria*, *Cyprus*, *Candia* and the *Indies*: The Flowers are vulnerary; the Seed pectoral, proper for Asthma's, Coughs, to procure Seed, consolidate Wounds, for Dysenteries, Scourings of the Belly, Spitting of Blood, &c.

51. Of Dog's-Wort Cotton.

THE *Houëtte*, or *Dog's-Wort Cotton*, is a Kind of *Cotton* from *Pomet*. the Husk, which grows upon a Plant which the *Botanists* call *Apocynum Cynocrambe*, which signifies *Dog's-Cabbage*, or *Dog's-Wort*, which is represented in the Print of *Cotton*; this grows plentifully near *Alexandria* in *Egypt*, especially in moist and marshy Grounds, from whence we have what is now sold amongst us. This has no other Use than to line the Robes of Persons of Quality.



Apocynum Ægyptiacum lactescens, Lemery. *siliqua Asclepiadis C. Bauhinus, vel Apocynum Syriacum, seu Palæstinum, sive Ægyptiacum*, the Syrian, Palestine or Ægyptian Dog's-Wort; *Apocynum Ægyptiacum floribus spicatis*, Tournefort, Ægyptian Dog-Wort with Spike Flowers; and by some *Esula Indica*, or the Indian Spurge. This is a Plant which grows in the nature of a little Shrub, with straight Rods, or Shoots, of about three Foot high, whose Leaves are long, large and thick as those of Aloes, set against the Stalks, white and full of the same Liquor with the other Parts of the Plant; to wit, with a white Juice like Milk, that is acrid and bitter. The Flowers grow at the tops of the Branches in the nature of an Ear, Bell-fashion'd, indented, and yellow. When the Flowers are gone, a Fruit succeeds as thick as one's Fist, oblong like a large Sheath or Case, which hang two and two upon a hard crooked Stalk. The Fruit is call'd, in Ægypt, *Beidelsax*, and is cover'd with two Rinds or Barks: The first, or outermost of which, is a green membranous one; the second resembles a thin Skin that has been dress'd or smooth'd, of a Saffron Colour. This Rind contains a stringy or fibrous Matter, like the Moss of a Tree, with which all the Fruit is full, in the nature of a fine Cotton; that is very soft and white, which is call'd *Houatte*, or *Hoüette*. They find in this Cotton Seeds made like those of *Pumkins*, but a Part less, reddish, full of a whitish Pulp, and of a bitter Taste. The Root is long, strong, surrounded with Fibres. This Plant is beautiful to the Eye. The Stalk and Leaves are cover'd with a sort of Wool, and are full of Milk. It grows in Ægypt about *Alexandria*. The Leaves being stamp'd and apply'd as a Cataplasm, are reckon'd proper to resolve cold Tumours. The Juice makes the Hair come off, and is a Remedy for cutaneous Cases us'd externally: But it is also Poison given inwardly; for it purges with that Sharpness and Violence, that it causes mortal Bloody-Fluxes.

52. Of Olives.

Pomet. WE sell at *Paris* three sorts of Olives, which do not differ but in Size, and according to the Country

from whence they come. Those of *Verona* are most valued of all the three Sorts; to wit, of the large and small, and those with the great Stones are those next to the *Spanish* Olives; and the third Sort are the *Provence* Olives, which are call'd the *Picholine*, or the *Pauline*, and very improperly *Lucca* or *Luke* Olive, from whence there comes none.

The Tree that bears the Olives is usually small, as may be seen by the Cut of it. As to the Leaves, they are thick and green, the Flowers white, and the Fruit green at the beginning, but of a reddish green when ripe. I shall not take up your Time to describe the several Works that are made of the Olive Wood, but content myself only to speak of the Oil that is from the Olives.

As soon as the Peasants see that the Olives are ready to be gather'd for keeping, which is about *June* and *July*, they gather them, and carry them to Market as they do *Cherries*. Those who would preserve or pickle them, throw them into cold Water, and after they have lain there some Time, they take them out, and put them in Salt and Water, with the Ashes of the Olive-Stones burn'd and made into a Lye; and after they have remain'd there a sufficient Time, they barrel them up, according to what Size best fits them, with a Brine or Pickle of Salt and Water, upon which is thrown a little Essence or Tincture made of Cloves, Cinnamon, Coriander, Fennel, and other Aromatics. And the whole Knowledge of managing these Olives depends upon understanding this Mixture, which they keep as a Secret amongst them.

Chuse your Olives, but especially the *Verona*, new, right or true, firm and well pickled; for as soon as the Brine or Pickle leaves them, they grow soft and black, and, in a word, good for nothing; which is of some Consequence, because they are a pretty scarce Fruit. For the *Spanish* Olives they are as big as a Pigeon's Egg, of a pale green, and bitter Taste, which does not please every Body; but for the *Provence*, especially the *Picholine* Olives, they are reckon'd the best, because it is pretended that Messieurs *Picholini* of *St. Chemes* knew how to pickle them better than other People, since those are the finest and best Olives, because they are much greener, and of a better Taste than the *Pauline*

lime and other Olives of *Provence*. They are of delicate Nutriment, stomachick, pectoral, antiscorbutick, gently loosen the Belly, and are chiefly us'd as Sallading.

Olea, or the Olive-Tree, is of a *Lemery*. moderate Bulk or Size, whereof there are two Sorts, one cultivated, and the other wild. The first is call'd *Olea Sativa* by *Dod*, both the *Baubines*, *Ray*, and *Tournefort*, the planted or cultivated Olive, whose Trunk is knotty, the Bark smooth, of an ash Colour; the Wood pretty solid, of a yellowish Colour, the Taste a little bitter; the Leaves are longish and narrow, almost like the Willow, pointed, thick, fleshy, oily, hard, and of a pale green without, and whitish underneath, but without Hair or Down, hanging by short Stalks opposite to one another. There arise betwixt the Leaves, Flowers dispos'd in white Bunches, that are supported upon Stalks, consisting each of a single Leaf, rais'd to the Top, and slit in four Parts, but that grows narrower, or contracts itself at the bottom into a Pipe. When the Flower is gone, there follows an oblong or oval Fruit, green, fleshy, succulent, which is call'd *Oliva*, or the Olive. This is less or bigger, according to the Place where it grows. That which grows in *Provence* and *Languedoc* is as big as an Acorn; that which *Spain* produces is larger than a Nutmeg: Both Sorts have a little acrid bitter Taste, and contain under the fleshy Part an oblong stony Nut, which has a Kernel enclos'd within it. This Tree is cultivated in *Spain*, *Italy*, *Languedoc*, and *Provence*.

The wild Olive is call'd *Olea Sylvestris*, by *Gerard* and *Ray*; or by *Tournefort* and others, *Olea sylvestris folio duro subtus incano*. It differs from the former in that it is much less in all its Parts, and that the Leaves are much whiter underneath. They grow likewise in the hot Countries, and they pickle them up with Salt and Water to make 'em fit for eating; for as they are taken from the Trees, they have an unsufferable Taste. They likewise make Oil Olive from them by Expression, as may be seen in *Lemery's Universal Pharmacopœia*. This Oil is emollient, anodyne, resolute, deterfive, proper for Bloody-Fluxes and the Colick. The *Olives* abound with a great deal of Flegm and essential Salt, which they lose in being squeez'd,

or passing thro' the Press. The Leaves are astringent. The *Olive* Branch was always the Emblem of Peace, as the Laurel is of Glory. There are certain wild Olives grow near the red Sea, that throw forth a Gum very proper to stop Blood, and cure Wounds.

53. Of Oil Olive.

BESIDES the Olives, we make a considerable Business of the Oil, *Pomet.* which is so necessary to Life, that we may bring it in competition with Bread and Wine. The way of making Oil Olive is little different from that of Almonds, since it depends upon nothing else towards the making of good Oil, than after the gathering of the Olives, when they begin to redden, that is to say, when they are full ripe, which is in *December* and *January*, to press out the Oil in the Mills for that purpose, which produces an Oil that is sweet, and of a pleasant Taste and Smell: And this Oil is what we call *Virgin-Oil*; the most valuable of which is that of *Grasse*, *Aramont*, *Aix*, *Nice*, likewise some other Places. But as the newgather'd Olives do not yield the Quantity of Oil which those do which lie some Time upon the Floor, those who would have a great deal of Oil, leave the Olives to rot, and afterwards press them; but the Oil which they produce is of an unpleasant and disagreeable Taste and Smell. Some also, to make them yield the more, throw boiling Water upon what remain'd of the first Pressing, which they squeeze over again; and this Oil, made thus, is what we call common Oil, not varying in Goodness, but according to the Places from whence it comes. The best common Oils come from *Genoa*, *Oneille*, and other Parts of *Italy*, and from *Provence*, and the worst come from *Spain*, but especially from *Majorca* and *Portugal*.

The Choice of Oil is so well known to all the World, it would be useless to insist upon it. And Oil Olive is so much used, that we have no Sort of Commodity whereof we make a greater Consumption, in that few can be without it; besides its use in Medicine, as being the Basis of all compound Oils, Cerecloths, Balsams, Ointments, and Plaisters. Besides these great Qualities that are

are in Oil Olive, I shall not stop to say that it is a natural Balsam for the Cure of Wounds, being beat up with Wine; and it is of Wine and this Oil, that the *Samaritan* Balsam is made, and it is a Medicine in vogue at this Day, as well with the Rich as the Poor. Oil Olive is also useful for burning, especially in Churches, and the like, because it does not stink so bad as other Sorts of Oils, besides it lasts longer; but its Dearness makes it that the Poor cannot use it. We likewise have a considerable Trade in Nut-Oil, which we have brought us from *Burgundy*, *Touraine*, or *Orleans*, which bears a great Price, because it is much us'd by Painters, and other Workmen, as Printers, Rolling-press Workers, and the like: and, besides, there's a great many who use it for the cure of Wounds, as being a natural Balsam, and so for frying withal. As to its use for burning, it is a very ill Practice, because it is quickly consumed, and moreover it is reduced to a Coal. We make further a considerable Dealing in Oil of Rapes, which we have from *Flanders*, and a common Sort from *Champagne* or *Normandy*. So likewise we have Oil of Camomile and Linseed from *Flanders* and other Parts, especially when Train or Whale-Oil is dear. Besides the Oil of Olives compleat, which is, as I have said, what is press'd out of ripe Olives, and is brought to us frequently from *Florence* as well as *Genoa*, there is the Oil *Omphacine* press'd out of unripe Olives, for which reason it is cooling, drying, and binding, used in several Compositions for strengthening the Stomach, healing Exulcerations, cooling the Heat of Inflammations, and repercussing Tumours in their beginning; hereof is made Oil of Roses, *Omphacine* and Oil of Quinces. The Oil of ripe Olives heats and moistens moderately, whereof the old mollifies more than the new, but the last is best for internal Uses, and loosens the Belly, taken in warm Ale, or the like, to an Ounce. It corrects the Dryness or Huskiness of the Breast, and allays the Pains of the Belly, relaxes the Ureters, cleanses and heals them. It is us'd with warm Water to provoke vomiting, and cleanse the Stomach. A Linctus is made of it with Syrup of Violets against Hoarseness, and Shortness of Breath, and to open Obstructions of the Breast or urinary Passages. It is us'd in Clysters to

loosen the Belly, and mollify the harden'd Excrements. The distill'd Oil Olive is that which is call'd Oil of Bricks, which is a subtil and piercing Oil, and of great Virtues, but not much us'd, because it stinks so egregiously, tho' good in both Gout and Palsy.

54. Of Soap.

Besides the great Consumption made of Oil Olive for Works where requisite, for different Foods and for Physick, it is made the Basis or Ground-work of several Sorts of Soap which we sell, I mean those of the best Sorts, the most valuable of which is the *Alicant* Soap, next the *Carthagena*, the third is the true *Marseilles* Soap, the fourth that of *Gayette*, the fifth the *Toulon* Soap, we falsely call *Genoa* Soap. Soap is a Composition of Oil Olive, Starch, Lime-water, and a *Lixivium* or Lye of Pot-ashes, mix'd altogether by boiling into a Paste, which is made into Balls or Cakes, in the Form and Figure as they are now brought to us. As to the mixture or sprinkling of their Green and Vermilion together, I shall say nothing, it being a Secret the Soap-boilers keep among themselves; nevertheless I have been assur'd that they mix red Oker of *Copperas*, and that from *Aqua fortis*, which is the *Caput Mortuum* of Vitriol, call'd *Colcothar*; but as I am not certain, I shall say nothing further of it.

The choice of Soap is to have it dry, well marbled or stain'd, and true from the Place whence it derives its Name; that is to say, that such as is sold for *Alicant* be true *Alicant*, and so of the rest. The *Toulon* Soap shou'd be dry, of a white tending to a little blewish Colour, cut even, glossy, and of a good Smell, and the least fat or oily that can be. As to the marbled Sort, that which is of a red Vein on the Side, and of a fine green and Vermilion within, is most esteem'd, because it is best mark'd, of most use, and the best Sale. As to the Virtues of Soap, they are well enough known; but as few will imagine it is of any great Use in Medicine, I must nevertheless declare that it is us'd with Success in the Cure of cold Humours, being dissolv'd in Spirit of Wine; and there is a Plaster compos'd of it, call'd the Soap Plaster, which has very great Virtues, as many Authors do affirm. Besides the Sorts of Soap that

that I have been speaking of, there is a kind made at *Rouën*, which is of a certain Grease that is found upon the Kettles and Pots of the boiling Cooks and Tripe-Dressers; but as this is a pernicious Soap, I shall say no more of it, but that it serves the poor People. We sell a liquid or soft Soap, which we call black Soap, made at *Abbeville* and *Amiens* of the Remains of burnt Oil; but as this Soap is of a brown Colour, there comes from *Holland* a green Sort, because instead of the burnt Oil they make Use of Hemp-Oil, which is green. The black *Abbeville* Soap, which we sell in little Barrels, is much in Use amongst the Cap-Makers, and several other Workmen or Artificers. The green, liquid, or soft Soap from *Holland*, is us'd by several to rub on the Soles of the Feet of such as are in Fevers, which is pretended to carry them off, which ought not entirely to be rejected, since I have known Persons who have been cured by it. But as this Soap is very scarce in *France*, since none comes there in Time of War, they must content themselves with that of *Abbeville*.

55. Of Capers.

Capers are Buds or Tops of Flowers which grow upon a Plant that is a Shrub about *Toulon* and other Parts of *Provence*, from whence come almost all the Capers we now sell. They likewise come from *Majorca*, as you will find hereafter.

We sell several Sorts, that scarce differ but as to their Size, and the several Countries that produce them, from whence they take their Names; for 'tis a certain Truth, that all the Capers eaten in *Europe*, except those of *Majorca*, come from *Toulon*. Likewise from the Names of Places they are call'd *Nice* or *Genoa* Capers; whereas they are all the same, and ought to be call'd *Toulon* or *French* Capers. When they are ready to be gather'd, they ought to be done so in four and twenty Hours; for if they are not gather'd exactly during the Time of budding, they open themselves, and are neither proper for Pickling or making Vinegar. When the Peasants have gather'd their Capers, before they pickle 'em they run 'em thro' Sieves whose Holes are of different Sizes, by which means they have Capers of several Sorts, which nevertheless

come from the same Plant; however, the lesser the Capers are, and full of Stalks, the more they are valued. As to the *Majorca* Capers, they are little dirty Salt ones, whereof there is some Sale in Times of Peace. At *Lyons* they eat another Sort of flat Capers with a rank salt Taste; yet this Sort being seldom or never demanded, we sell but very few of them; but much more of two other Sorts of Flowers pickled in Vinegar, one whereof is call'd Monks hood, and the other Broom or Broom Buds; which Plants are so well known, they need no Description.

Capparis spinosa fructu minore, folio rotundo; the round leaved Caper, *Lemery*. with the less prickly Fruit, says *Bauhinus*. This is a little Shrub adorn'd or furnish'd with crooked Prickles; the Branches are bending, the Leaves round, and something bitter to the Taste. It bears Sprigs, or little distinct Stalks, carrying on their Tops small Heads, or green Buds, which are gather'd when at their full Growth before they are blown, to pickle for preserving: When the Bud is full blown, there appear four white Leaves like a Rose, supported on a Cup likewise of four Leaves, in the middle of which rises a Spire that ends in a Bud. When the Flower is gone, this Bud, according to Mr. *Tournefort*, produces a Fruit whose Shape resembles that of a Pear, which encloses in its Flesh several small Seeds, lodg'd each in a small Nich or Corner. The Roots are long and thick, from whence the Rind or Peeling is separated to dry; it ought to be thick, hard, whitish, difficult to break, and of a biting Taste. The Caper Tree, or Shrub, is cultivated in *Provence*, especially about *Toulon*.

There is another Species or Kind of Caper, which differs from that we have been speaking of, in that it is not prickly, and that the Fruit is larger. It is call'd by *Casp. Bauhinus*, *Capparis non spinosa fructu majore*, the greater Caper without prickly Fruit. This grows in *Arabia*, of the Height of a Tree, and retains its Leaves all Winter. The Caper, and the Bark thereof, are both us'd in Physick, and yield a great deal of essential Salt and Oil. They excite or promote an Appetite, strengthen the Stomach, are aperitive, and particularly serviceable in Diseases of the Spleen. The Bark of the Root is very aperitive, and proper to open Obstructions of

the Spleen and other *Viscera*, to dissipate Melancholy, and resist Poison. The Pickle is us'd as Sauce with Meat, and is made of Vinegar, Salt-Water, and a proportionable Quantity of Spirit of Wine, which preserves the Pickle and the Things pickled.

56. Of Bay-Berries.

Pomet. **B** *Ay-Berries* are Fruit of the Bigness of one's little Finger end, green at the beginning, and which grow browner as they ripen: These *Berries* are as well known as the Tree that bears them, of which it wou'd be needless to make mention, only so far as to say, that they ought to be chose fresh, well dry'd, the best fed, and the blackest that can be; take this precaution that they be not wormeaten, to which they are very subject.

These *Berries* are of some Use in Physick, but more considerably with the Dyers and the Farriers. They are much us'd in *Languedoc*, and made into Oil, as I shall shew in the next Chapter; and tho' they grow plentifully in several Places of the *Streights*, yet they are brought to us from *Port O Port*, of a blackish brown Colour, having a Kind of hot oleaginous Taste. They are cephalick, neurotick; alexipharmick, and anticolic; they mollify, discuss, expel Wind, open Obstructions, provoke Urine and the Terms, facilitate the Travel of Women in Labour, and help Crudities in the Stomach. They are good for the Nerves in Convulsions and Palsies, give ease in the most extream Colicks, and take away the After-Pains of Women in Child-Bed; they are us'd in Powder, Decoctions, Tincture, Spirit, Electuary, Plaister and Oil; the last of which is made by a Distillation, which discusses Wind, cures the Cholick, Cramps, Convulsions, Palsies, Pains, old Aches, Gouts, Lameness, Numbness, Sciatica. Dose inwardly, from four Drops to six; or outwardly, a Drop or two put into the Ear, helps the hearing. It is also excellent for Diseases of the Skin; as Dandriff, Morpew, fore Heads, Scabs, &c.

Laurus, or *Laurus Vulgaris*, the *Lemery*. *Bay*, is a Tree which grows usually of a moderate Height in temperate Climates, but which rises higher in the hot Countries, as in *Italy*, *Spain*, &c. The Stem is smooth without Knots; the Bark some-

thing thick, the Wood porous and easy to break; it bears long Branches, and its Leaves the Length of one's Hand, two or three Fingers broad, pointed, hard, always green, a little succulent, stringy, smooth and fragrant, of an acrid, aromattick Taste, and a little bitter, tied by short Stalks. The Flowers are each of a single Leaf cut into four or five Parts, of a white or yellowish Colour, succeeded by *Berries*, the Bigness of a small Cherry, oblong, green at first, but brown as they grow riper: There is found upon the Skin a pretty hard Shell, which contains within it a longish Seed. These *Berries* are odorous, aromattick, oily and bitter: The Roots thick and uneven; the Tree grows in hot dry Places, is improv'd in Gardens, the Leaves are useful in Medicine, and yield a good deal of Oil, and volatile Salt.

57. Of Oil of Bays.

THE *Oil of Bays*, or *Oleum Laurinum*, is an Oil made of the *Bay-Pomet*. *Berries*, by bruising them and letting them stand in warm Water several Days in *Balneo Mariae*, then distilling by an Alembick; which is barrel'd up to be transported to several Places. That which is mostly sold in *France*, is brought from *Provence* and *Languedoc*, especially from a Place call'd *Calingson*, near *Montpellier*, from whence the best is brought. As for that of *Provence*, it is nothing else but Fat and Turpentine colour'd with *Verditer* or *Nightshade*. Therefore use none but that from *Languedoc*, as being the best of all, when it has all its requisite Qualities, which are to be new, well scented, of a good Consistence, and of a green Colour, tending something towards a yellow; and meddle not with that which is green, shining, liquid and of another Smell than the *Bay*, such as that of *Provence*, or what is made at *Lyons*, *Rouen* or *Paris*, by knavish People who have no Conscience, but wou'd impose their Rubbish upon the World for a good Commodity. Such are those who counterfeit and sell Rosin for Scammony, *Arcanson* for *Gum Guajacum*, fat Pitch for Benjamin, and Kitchin-stuff discolour'd with green, for *Oil of Bays*, Turmerick for Saffron Powder, and Honey boil'd up with a Hodge-podge of powder'd Roots for Treacle, and in a Word, all Sorts of Drugs sophisticated to deceive

deceive the publick, and to make a better Advantage than their Fellow-traders; which is a Thing I fear too much practis'd all over *Europe*, as well as in *France*.

58. Of Damask Raisins.

THE Raisins call'd the *Damask* are the flat ones of the Length and Thickness of one's Thumb End, which we have brought from *Damascus* the Capital of *Syria*, in Bags or Bales. Chuse the newest, largest, and best sed, and beware they are not *Calabrian Raisins*, or flat Jubes, and made up in Form of the *Damask Raisins*, as it happens but too often to several *Grocers*, who make no Difficulty to sell the one for the other; which nevertheless are easy to distinguish, because the *Damask Raisins*, are thick, large, fleshy, dry and firm, and are seldom without two Kernel Stones or Pepins; neither are they of such a faint disagreeable Taste as those of the *Calabrian*, which are of a fat, soft and sweet sugary Taste as well as the Jubes.

The *Damask Raisins* are much us'd in Pectoral Ptisans and Decoctions, and are frequently join'd with *Fujubs*, *Sebestens* and *Dates*; likewise in Syrup of Marsh-Mallows, in the healing Lohoch, Lenitive Electuary, Confection of *Hamech*, and in the Electuary of Fleawort. *Raisins* are nothing else but Grapes dip'd several Times in boiling Water, and dry'd in the Sun. *Damask Raisins* are most approv'd of; but we commonly use those that are prepar'd in *Narbon* in *France*, and out of which there is a strong Spirit extract-ed, or a good Sort of Brandy: They are endued with much the same Properties as Figs. Take *Raisins* of the Sun half a Pound, boil them in a sufficient Quantity of generous Wine, pulp them thro' a Hair-Sieve, and add two Ounces of Hyssop in Powder, of the cooling Species, or Powder of Pearls one Ounce, and make an Opiate to be taken to the Quantity of two Drams in an *Asthma*.

59. Of Currans.

THE Raisins of *Corinth*, or *Currans*, are little Raisins, or Grapes of different Colours, being black, red and

white, and commonly of the Size of the red Gooseberry: The Vine that bears this is low, furnished with thick Leaves very much indented, which grow plentifully in a vast spacious Plain that is situated behind the Fortres of *Zant* in *Greece*. This Plain is surrounded with Mountains and Hills, and is divided into two Vineyards, in which are Abundance of Cyprus, Olives and Houses of Pleasure, which make, together with the Fortres and the Mount *Discoppo*, a Prospect perfectly beautiful.

When these little *Raisins* are ripe, which happens in *August*, the People of *Zant* gather and stone them, then spread them upon the Ground to dry, and when dry'd carry them into the Town, where they are thrown thorow a Hole, into the great Magazine, call'd the *Seraglio*; where they are squeez'd so close by them that own them, that they are oblig'd to use Iron Instruments to pull them out, and when they are pull'd out, to put 'em into Casks or Bales of different Bigness; and to make them so tight as they are brought to us, they employ Men to tread them with their Feet, for which Purpose they rub 'em well with Oil beforehand.

Sometimes also we bring *Raisins* from *Natolia*, *Lepanto*, and *Corinth*; from whence they take their Name: The *English* have a Factory at *Zant* govern'd by a Consul and six Merchants to carry on their Commerce, which brings in no small Advantage, for they consume more *Currans* in a Year than all the rest of *Europe*. The *Dutch* have a Consul and two Merchants, and the *French* a Commissary that does the Duty of the Consul and Merchants under one. The People of *Zant* believe to this Day that the *Europeans* use these *Raisins* to dye Cloths, not knowing that they are for eating.

This Fruit is so common upon the Spot, that they sell not for above three Livres or a Crown a Hundred Weight, and at *Marseilles* are not sold under nine or ten Livres, according to the Crop and Hazard of the Sea; which when free, the *English* and *Dutch* bring 'em plentifully from thence to *Bourdeaux*, *Rochelle*, *Nantes* and *Roüen*, where we buy them at an easier Price, than at *Marseilles*. Chuse such as are the newest, and freshest, small and in the close Mass, unpick'd

pick'd and not rubb'd over with Honey; they open Obstructions, and nourish much, being of excellent Use to restore in Consumptions and Hecticks; they are good in Coughs, Colds, or Asthma's, either in Decoction, Honey, Syrup or Conserve.

Vitis Vinifera, the Wine-bearing Lemery. Vine, is a Shrub whose Stem or Stalk is winding or crooked, cover'd with a cracking Bark, reddish, bearing several long Shoots, furnish'd with Wyers, that creep and cling to the neighbouring Trees, or Props. The Leaves are large, fair, broad, almost round, jagged and cut in; green, shining, and a little rough to the Touch. The Flowers are little, compos'd usually of five Leaves each, dispos'd round, of a yellowish Colour, and fragrant. The Fruit are round or oval Berries, pressing close one against the other in a thick Bunch, green and sharp at the Beginning, but in ripening they become of a white, red, or black Colour; and are fleshy, full of a sweet agreeable Juice. They are call'd in *Latin*, *Uvæ*, and in *French*, *Raisins*, as we now call them when dry.

When in Spring Time they cut the Tops of the Vines in the Sap, there naturally distills or drops a Liquor in Tear call'd, *the bleeding of the Vine*, and in *Latin*, *Aqua Vitæ*; which is aperitive, detersive, proper for the Stone and Gravel, being taken inwardly: The Eyes are likewise wash'd with it, to destroy the Humours, and clear the Sight.

The Vine Buds, tender Leaves and Clingers, which they call in *Latin*, *Pampini seu Capreoli*, are astringent, cooling, proper for the Flux of the Belly and Hemorrhages, being taken in Decoction; they are likewise made into Fomentations for the Legs, and to procure Rest. The Shoots or Wood of the Vine are aperitive, being made into a Decoction. The *Raisins*, while green, are call'd in *Latin*, *Agrestæ* or *Verjuice*, being astringent, cooling, and provoking to an Appetite; when ripe they quicken the Stomach, loosen the Belly, and when press'd become Must, which is afterwards made into Wine.

Raisins are either dry'd in the Sun, or before the Fire, to deprive them of their Flegm, and make 'em capable of keeping; they are call'd *Uvæ Passæ*, seu *Passulæ*, or dry'd *Raisins*. There are several Sorts after

the same Manner, as the large, which are call'd *Uvæ Damascenæ*, or *Damask Raisins*, and the small call'd *Uvæ Corinthiacæ*, the *Corinthian Grapes* or *Currans*: they are all proper to sweeten the Asperity of the Breast and Lungs, to soften the Bowels, and relax the Belly, and to promote expectoration, being cleans'd from their Stones, which are astringent.

The Husk, or Skin of the Grape, which remains after the last Expression, from whence they draw the Must, is call'd, in *Latin*, *Vinacea*: They throw this on Heaps, to the End, that it may ferment and grow hot; then they wrap it round the Member or the whole Body of the Patient afflicted with the Rheumatism, Palsy, or Hip-Gout, to make him sweat, and to strengthen the Nerves; but it sometimes raises the Vertigo, by Means of the sulphureous Spirit that ascends to the Brain.

60. Of Raisins, Grapes, or Jubes.

THEse are such as we have brought from *Provence*, especially *Roquevarre* and *Ouriol*: For when the *Raisins* are ripe they gather the Bunches, dip 'em in Liquor and afterwards put them upon Hurdles, and the like, to dry in the Sun, turning them from one side to the other, by which Means they dry equally; and when they are dry they put 'em up in little Chests of white wood, such as they are brought over in: And to answer the Quality required, they ought to be new, dry, in fine Bunches; that is to say, they least plump and stony that may be, but to be clear and bright, of a sweet sugar Taste.

There are other Sorts of *Raisins* that come from other Places, which we call *Piccardans*, which are much less, drier, and skinnier; in a Word, less than the *Jubes*. We sell great Quantities of *Calabrian Raisins*, which are fat, and of a very good Taste: The *Maroquins*, which are black *Raisins*; the *Raisins* of the Sun which come from *Spain*, which are those whereof they make their *Spanish Wine*, are dry'd red and bluish *Raisins*, and of a very good Taste. The *Spanish Raisins*, of the less Sorts, are some-

thing larger than those of *Corinth* and several others.

There are a vast Quantity of other Sorts where of there are great Trade, and Abundance of different Wines; as those of *Spain*, *Alicant*, *St. Laurence*, *Frontignan*, *Hermitage*, *Burbataune* or *Languedoc*, and several others. There are other Sorts from which we drive a great Trade of Brandies, that come from *Cognac*, *Blois*, *Saumur*, and other Parts; besides which, there are several other Kinds of Brandy, as that made from Beer, Cider, Fruits, &c. but as they do not properly relate to this Head, I shall pass them by.

The Use of Brandy is so common at this Time, we have no Occasion to enter into a Detail of it any further than as it relates to Medicine, in which it is us'd to strengthen the Nerves, abate Pain, refresh the Spirits, and dispose the Parts to Perspiration. We make from Brandy, by an Alembick, a spiritous Liquor that is clear and transparent, call'd Spirit of Wine; which, if good and true, ought to be white, and, when set on Fire, that will burn off without any Moisture remaining. To know whether it is truly deflegmated, or Proof-Spirit, as it is term'd, is to try it with Gun-Powder in a Spoon, which if it burns dry, and afterwards fires the Gun-Powder, it is an infallible Sign of its Goodness.

61. Of white and red Tartar.

WHite and red *Tartar* is a Sort of Stone which is found sticking to the Casks of white or red *German* Wines, and is denominated according to the Thickness it is of, and the Place from whence it is brought. The finest *Tartar* is that of *Germany*, as well because of its Thickness, as the Time that it remains in the Casks, where it obtains the Name of white or red *Tartar*: The first according to its requisite Quality, it being thick enough, easie to break, white without and brilliant within, and as little earthy or dreggy as may be; and the red is the better the nearer it approaches to the former. The second is what comes from *Provence* and *Languedoc*, which comes nearest to that of the *Rhine*. The third Sort is what we now call the Gra-

vel of *Lions*; which differs not from that of *Paris*, save only that it is a little Thicker, and a higher Colour. The Use of *Tartar*, and the Gravel, is for the Dyers, Goldsmiths and Refiners, to blanch Silver; and likewise for several chymical Operations, as hereafter: The white is preferable to the red, being much better.

62. Of Crystals of Tartar.

THE Cream or *Crystals* of *Tartar*, is a white or red *Tartar* reduced to Powder, and by Means of boiling Water converted into little white *Crystals*, after the Manner as will be shew'd hereafter. The best Cream of *Tartar* is brought us from *Montpellier*, and other Parts about *Nismes*, where they make great Quantities, but the last is less fine than that of *Montpellier*.

To purify *Tartar*; take good white *Crystalline Tartar*, ten Pounds, beat it into fine Powder, and dissolve it in six Gallons of boiling Spring Water, and continue the boiling 'till it is dissolved; then presently strain it hot thro' a Bag, and stir the strained Liquor continually round with a wooden Slice 'till it is cold; then let it rest, and in two or three Hours after, the pure and fine *Tartar* will sink to the Bottom of the Vessel in the Form of an impalpable and shining Powder. This *Tartar* is good to attenuate and dissolve gross and tartarous Humours, which cause Obstructions in the first Region of the Belly, Liver, Spleen, Mesentery, Pancreas, Reins and Womb. It is an universal Digestive and Deopillative, and for this Reason is commonly given as a Preparative to stronger Purgations; and it is good for all such as are naturally hot and costive, and do not easily go to Stool, gently opening and loosening the Bowels, without offending the Stomach, or disturbing the other Functions of Nature. Dose from two Drams to half an Ounce and upwards.

For Crystallizing and making Cream of *Tartar*: Dissolve what Quantity you please of the best white *Tartar*, in a large Quantity of boiling Water; which Liquor pass hot thro' a Bag, into an earthen or glass Vessel; evaporate about half of it away, and then set it in a cool Place to crystallize for two

or

or three Days evaporate again half the Liquor, and crySTALLIZE again, till you have got all the Tartar: What swims on the Top is call'd the Cream of Tartar, and the Shooting on the Sides are call'd CrySTALS of Tartar. The Virtues of both these are the same with the former, being aperitive and purgative, good for cachectical, hydropical, and asthmatical Persons, and excellent against *Tertian* and *Quartan Agues*; and the Dose and way of giving are the same.

63. Of the Vegetable Salt.

THE Vegetable Salt, or soluble Tartar, is the Cream and Salt of Tartar dissolv'd together, which is lately come into Practice, and is said to be the Invention of Friar *Auge* the Capuchin; the Sale of which has been considerably great, since some have dispos'd of for him two hundred Weight of the red Tartar, and above a thousand Weight of Cream of Tartar. Take CrySTALS of Tartar in Powder, eight Ounces; pure Salt of Tartar four Ounces; mix them, and, in a glaz'd earthen Pipkin, put upon them three Pints of pure Spring Water; boil gently for half an Hour, then letting it cool, filtrate, and evaporate to Dryness, so will you have eleven Ounces at the Bottom, and six Drams of a white Salt, which keep in a Glas close stop'd for Use. This will dissolve in any cold Liquor, and is call'd the Vegetable Salt. It has all the Virtues of purified Tartar aforegoing, and may be given from a Scruple to a Dram, in any proper Liquor; but because this Remedy is appropriated to open Obstructions of the Liver, Spleen, Womb, &c. and that Iron is one of the chiefest Specificks for this Purpose, you may by the following Method unite the two Ingredients into one.

64. Of Chalybeated Tartar.

TAKE of the purified Tartar before, one Pound; clear Filings of Iron or Steel two Ounces; pure rain Water eight Pints; boil all in a clear Iron Kettle, as long as you boil an Egg fit for eating, or somewhat longer; then pass it thro' a woollen Strainer,

and stir the Liquor till it be cooled, and you shall have a Powder of a chalybeate Tartar, of a greenish Colour, and shining when dry, containing in it the Vitriol of *Mars*. This is incomparably more aperitive than the foregoing Preparations, and has all the Virtues of them exalted to a high Degree, and therefore a most prevalent thing against the Green-Sickness, and other hysteric Diseases; but if you prepare it of the purified Tartar that is soluble, it will easily dissolve in any Liquor, and so be more fit for Use. Dose from half a Scruple to half a Dram. *Note*, That the Artift had best prepare the purified Tartar of which this is to be made, by itself, because most of what is sold in the Shops is adulterated with Alum or Nitre, or both. Or you may make it thus:

Take of Tartar crySTALLIZ'd one Pound; Rust of Iron three Ounces; Water six Quarts; boil all together for half an Hour, or so long as to dissolve the Tartar; strain it hot thro' a Bag into an Iron Kettle, and in twelve Hours it will shoot into brown CrySTALS at the Sides and Bottom of the Kettle; decant the Liquor, evaporate it half, and set it to crySTALLIZE again in the former Kettle: Continue these Operations till you have all your Tartar, which dry in the Sun, and keep for Use. It is a good Remedy for Obstructions, especially against *Quartan Agues*, having all the Virtues of the purified Tartar, but much more powerful. Dose from fifteen Grains to two Scruples, in Broth or other proper Liquor.

65. Of Soluble Tartar chalybeated.

TAKE of Tincture of *Mars* one Pint; of the purified soluble Tartar four Ounces; mix, dissolve by boiling, and evaporate to Dryness; so will you have eight Ounces of a soluble chalybeate Tartar in a black Powder, which keep for Use in a Glas close stopp'd. It has all the Virtues of the chalybeate Tartar before, and of the Tincture of *Mars*, being powerful to remove all kinds of Obstructions, cure Cachexies, Dropxies, nephritick Colicks, Obstructions of Urine, and stoppages of Terms in Women. Dose from ten Grains to thirty.

66. Of Soluble emetick Tartar.

TAKE purify'd Tartar or Crystals in Powder four Ounces; Spirit of Urine, or *Sal Armoniac*, as much as to cover it two Inches; mix and dissolve; then add Glafs of Antimony in fine Powder one Ounce; pure Spring Water ten Ounces; boil in a Sand Heat seven or eight Hours, putting in more Water as the Liquor consumes; then filtrate and evaporate to Dryness. Or, thus, Take of the soluble Tartar four Ounces; Glafs of Antimony in fine Powder one Ounce; fair Water a Quart; mix and boil seven or eight Hours, putting in more Water as the Liquor consumes; then filtrate, and evaporate to Dryness, so will you have a grey Powder of the same Virtue with the former.

It is a most powerful thing against all long continuing and obstinate Diseases in 17 Part of the Body, disposing the Patient to Health. It prevails against melancholy Madness, Frenzies, Deliriums, and particularly against all manner of inveterate Pains of the Head, whether *Idiopathetick*, or by consent of Parts. It is powerful against the Vertigo, Epilepsy, Apoplexy, Difficulty of Hearing, Ringing and Noise in the Ears, Loss of Memory, Nauseousness and Loathing at the Stomach, Weakness thereof, Want of Appetite, Wind and Pain in the Stomach and Bowels, the yellow Jaundice, Dropsy, tedious and long continued tertian and quartan Agues, putrid and acute Fevers, Poison immediately receiv'd, a bilious Pleurisy, and all Diseases arising from Cholera, virulent Dysenteries, the Plague, Hungarick Fever, and the like. It is an Emetick that works with little Violence, and may be given from five Grains to fifteen in Mutton, Chicken, or Veal Broth.

67. Of the Distillation of Tartar.

THAT which is call'd a Distillation of Tartar, is the Bruising white and red Tartar to a Powder, and putting it in an earthen Pot, so as to draw off by the Force of the Fire a Flegm, which

is a white Water, without Taste, that ought to be thrown away. When the Flegm is separated there remains a reddish Water, which is the Spirit of Tartar, and after that, a black Oil that is foetid and very thick, which is what we now call black Oil of Tartar, or Oil of Tartar by the Retort. That which remains in the Retort like Coal, after having been calcin'd and whiten'd, by the means of hot Water, is made into a very white Salt, which is the true Salt of Tartar. The Spirit of Tartar rectified, that is to say, distill'd or drawn over again, is very proper to cure the Epilepsy, Palsy, Asthma, and Scurvy. The Dose is from one Dram to three, in a convenient Liquor.

The black Oil of Tartar by the Retort is admirable for the Cure of Scabs, and other external Remedies; but as it is too foetid, they may rectify it with rich dried Earth before they make use of it. The Salt of Tartar is very necessary to make the vegetable Salt with; and something considerable in Physick, as well as to take out the Tincture of Vegetables, and to make white Oil of Tartar, call'd the *Oleum Tartari per Deliquium*, or Liquor of Tartar.

Most of those who make the Salt of Tartar never trouble themselves about drawing off the Spirit or Oil, but only calcine the red Tartar over a Coal Fire, till it comes to a Whiteness, and so put it up into Bottles for Use. The true, fix'd, or alkaline Salt of Tartar ought to be pure, white, dry, piquant to the Taste, attended with a little Bitterness; and when it is thrown on a Coal Fire, does not sparkle at all.

Abundance of Chymists, especially the meaner sort, sell a Salt of Tartar made with Salt-petre, which deceives the Eyes of those who know no better than that it is extremely white; but the Use of it is very mischievous, tho' the Cheat is easy to discover, because this will sparkle upon the Fire, which the true will not do.

They make of the true Salt of Tartar, after they have set it in a Cellar, a white clear Oil, which is what we improperly call Oil of Tartar *per Deliquium*. Those who would make this Oil, take the calcin'd Tartar and place it in a Cellar or Vault, in a Glafs hung up in the Air, and the Oil which flows from it is clear and fine as if it had been made from

from the Salt. This Secret is owing to a Lady at *Paris*, who discover'd this for beautifying the Face, without subjecting it to Wrinkles. There are some People who make this Oil by dissolving Salt of Tartar with Water, and sell it for true Oil, which can never answer, because this is reddish, thinner, and is more acrid than the other, so that it will fret the Skin in a little time, if laid upon it.

68. Of Tincture of Salt of Tartar.

Pomet. THE Tincture of Salt of Tartar is made of Salt of Tartar that has undergone the strongest Degree of the Fire, and afterwards is dissolved in Spirit of Wine tartariz'd, which, after it has stood in Infusion some time, is pour'd off, or decanted into a Bottle to be well stopp'd and kept for Use. This Tincture when lightly prepar'd, ought to be of a noble red Colour. It is us'd in Physick chiefly for the Scurvy, and to cleanse the Blood. Dose from 20 to 40 Drops. It is observable, the better Colour this Tincture is of, the better it is prepar'd; and the older it grows, the more decay'd and fainter the Colour is.

69. Of Tartar Vitriolate.

Pomet. MAGistery of Tartar, or Tartar Vitriolate, is compos'd of Salt of Tartar, or Oil of Tartar *per Deliquium*, and good Spirit or Oil of Vitriol mix'd together and dried by a Sand Heat to a very fine white Salt; which, if right, ought to be as dry and light as possible. But take care that it be not made of Cream of Tartar boil'd in Spirit of Vitriol, as happens too often, and sometimes of Salt-Petre fix'd, or with Crystal Mineral. That made with Cream of Tartar is easy to discover, when reduc'd to Powder, by the Hardness of the Grain, which is usually met with in breaking it; and the last, because it will sparkle on the Fire, and easily dissolve. This is frequently us'd in Physick as a good Aperitive, &c. and ought to be kept in a Glass Vial close stopp'd, because it is apt to run to Water.

70. Of Volatile Salt of Tartar.

TAKE Volatile Salt of Tartar, of the Lees of white Wine *Pomet.* express'd and dry'd in the Sun, or otherwise; put them into a Retort, and distil with a gradual Fire, as you have it taught by Mr. *Charas* in his *Royal Pharmacopœia, Galenical and Chymical*, printed in the Year 1676. This Volatile Salt is of a strong diaphoretick Nature, but is more particularly aperitive and diuretick; it ought to be very white, and of a Smell almost as quick and penetrating as the Volatile Salts of Animals. It may be given to five or six Grains in good Wine or other Liquors.

71. Of the Gravel or Stone Tartar.

THE ash-colour'd Gravel is made from the Wine-Lees calcin'd dry, and that it may have the due Quality requir'd, it ought to be a Stone new made, of a greenish white Colour, and of a saltish bitter Taste. This is us'd by the Dyers and other People, that have occasion for it; and the best is that which comes from *Burgundy*, because it is made of the best, and therefore must needs be much better than what our Vinegar-Brewers make.

As this is Wine-Lees calcin'd, they make it by means of hot Water, which has almost the very same Virtues with Salt of Tartar, except that it is more corrosive, as well as the Oil *per Deliquium* that is made from it. This is also employ'd with quick Lime to make a Salt, which, after it has been fus'd in a Crucible, is cast upon a Stone, or into a Bason, and after it is cold, is cut into little Tablets, and put into a Bottle well stopp'd; and these little Stones are true Caustick Stones. They are likewise made together with Oak-Ashes, Alum, and quick Lime, by the Assistance of hot Water and Fire; and these are called Velvet Causticks, because they operate so gently.

Tartarum, or Tartar, is a hard stony or crusty Matter, which is *Emery* found sticking to the Insides of Wine Casks. This Tartar is compos'd of the grossest

grossest and most saline Part of the Wine, which is separated by Fermentation, and harden'd to a stony Substance on the Sides of the Cask. There are two Sorts of Tartar, one call'd white Tartar, that is made from white Wine; and the other red Tartar, that is made from red Wine.

The white Tartar is separated in much less and thinner Pieces than the red Tartar, but is much finer, and fuller of Salt. Choose the thickest, heaviest, and most brittle, of a greyish or ash-colour'd White, clean, crystalline, and shining within, and of a sharpish pleasant Taste.

The red Tartar is divided into large thick Pieces, being to be chose pure, dry, reddish, and weighty. This Tartar is coarser than the white, but of the same Taste, and contains the same Principles, but less of Salt. The best sort comes from *Germany*, *Languedoc*, and *Provence*. White Tartar is purified by boiling in Water, and straining it thro' woollen Bags, then evaporating and crystallizing the Liquor, which makes what we call Crystals of Tartar. The Scum or Cream that floats at Top during the Evaporation, is call'd Cream of Tartar. This, when dried, is confounded with the Crystals, which ought to be in little clear shining Bodies, pure, white, heavy and dry, of a sharpish agreeable Taste. It is us'd to blanch Wax, and also to clarify Whey, a Dram being sufficient for a Pint. This white Tartar yields a great deal of essential acid Salt, and some Oil.

Red Tartar yields less Salt than white, but more Oil and Earth. They both make Vinegars when dissolv'd in Wine. The Crystals differ not from the Tartar itself, but that they contain less earthy Parts in them. All the Tartars from Wine are aperitive, and something laxative, open Obstructions, and excite to Urine, allay or abate Fevers, and are proper to dissolve tough Flegm in the Glands. The Dose of Tartar depurated is from a Dram to three Drams.

72. Of German Black.

Pomet. WE have brought from *Mayence*, *Frankfurt*, and *Stratburg*, a Black in Stone and Powder, which is

made from Wine Lees burnt and cast into Water, and, after having been dry'd, ground in a Mill and sifted, having burnt Ivory, Bones, or Peach Stones added to it; and when they are all well ground and mix'd together, they make what we call *German Black*, which the moister it looks, of the most shining Colour, being made of Ivory Black, the better it is, and exceeds that made of Bones, and Peach-Stones, and the worst sort of Lees; for it is on the Goodness of the Lee that the Fineness of the Colour depends. There are other Blacks made at *Troyes*, *Orleans*, and *Paris*, which bear the Name of the Places where they are made. They are all of 'em of no other Use than for the Rolling-Press Printers.

73. Of Figs.

FIGS are Fruit that are of several Colours; to wit, the green, *Pomet.* the Violet, the white, and other Colours; yet of all the sorts we sell none but the Violet and the common Fig. When Figs are ripe, the People of *Provence* gather them, and dry 'em upon Sieves and Hurdles. We have three sorts of Figs in *Provence*, viz. the Violet, the *Marseilles*, and another thick fat Fig. The violet Figs ought to be large, dry'd, fresh, and well blown; those of *Marseilles* small while new, dry, but not rotten or decay'd; and the fat Figs as like those of *Marseilles* as possible.

The Fig-Tree is so familiar in hot Countries, that there is not any other so frequently to be met with either about their Houses or in the Fields. It has a large Trunk, full of Branches spreading largely abroad, the Wood is very spongy, of a white Colour, pretty much resembling Vine Leaves, but a great deal larger, and pouring forth a Quantity of milky Juice. The Fruit comes from the Wing of the Leaves, being three-corner'd, and of the Shape of a Pear, in which are contain'd Flowers by the singular Contrivance of Nature, as *Valerius Cordus* has first of all observ'd. These Flowers are single-leav'd, small, concave like a Spoon, ending in a small Point, and of a whitish Colour, inclining to a Purple, with a Pointal or Rudiment of a Seed in the Cavity of the Flower,

Flower, and dwindling away into a Fruit call'd a *Fig*; being outwardly of a greenish Colour inclining to a Violet. To which Colour the Figs of *Marseilles* are esteem'd next. These being ripe and dry, stop Catarrhs or Defluxions falling upon the *Uvula* and Wind-pipe, and qualify the acrimonious *Serum* trickling down upon the Lungs. In *Portugal*, especially in the Kingdom of *Algarve*, there is a hot, fiery, inflammable Spirit drawn from Figs by Distillation, which they use instead of *Aqua vita* or Brandy.

These several Preparations of Figs are good. Take four Ounces of dry'd Figs, boil them in a sufficient Quantity of fair Water, and make a Pisan to be aromatiz'd with some Drops of Oil of *Sassafras*, or the like; to be given in the Small Pox, Measles and Asthma: Or, take fat Figs, two Ounces, bruise and infuse them in a Pint and half of Spirit of Wine a whole Day, then strain out the Liquor, burn it away to the Consistence of a Syrup, to be given in a Cough, Hoarseness and Shortness of Breath: Or else, take of the Roots of Marsh-Mallows and white Lillies, of each two Ounces; of Mallows, Violets and Pellitory Leaves, of each a Handful; Fenugreek-Seeds two Ounces, twenty fat Figs, Flowers of Camomile and Melilot one Pugil, boil them in a sufficient Quantity of Water, and then pulping or forcing them thro' a Hair-Sieve, add of the Ointment of Marsh-Mallows two Ounces, of the Oil of Worms one, and make a Pulvis to help Suppuration.

Ficus, *Ficus Communis*, or *Ficus Lemery*. *Sativa*, the Fig-Tree, is of a moderate Height, whose Stalk is not straight, but the Bark is smother than ordinary Trees, of an Ash-colour, the Wood is spongy and soft, and white within; the Leaves are large, broad, thick, cut in five Divisions or angular Parts, like those of the Vine, but much larger and harder, rougher and blacker, hanging by a Stalk that throws out a milky Liquor when broke. This Tree neither bears Flower nor Husk nor Shell that appear; but many *Botanists* pretend that the Flowers are enclos'd in the Fruit, and that they are certain Threads like the *Stamina* that are found in the young Figs.

This Fruit, when no bigger than a Pea, is call'd *Grossulus*; when something larger en-

creas'd, but yet not ripe, *Grossus*, seu *Grossa*; and when entirely ripe, *Ficus*: It grows of the Size and Shape of a Pear, of a greenish Colour, whitish without, and reddish within; fleshy, succulent, viscous, and of a sweet delicious Taste: It affords a flat and almost round Seed. The Roots of the Tree are numerous, long, fair, hard to break, supply'd with Filaments of a yellow Colour. They propagate the Figs presently in temperate Climes, but the best grow in *Languedoc*, in *Provence*, and other hot Countries. There are two species which differ in Figure, Size, Colour and Taste; they are all hard of Digestion because of their viscous and tough Substance. When they are dry'd in an Oven, they are call'd dry'd Figs, *Carica* or *Ficus Passæ*; then they serve for Food and Physick, being easy of Digestion, since they have lost great store of their viscous Flegm by the Heat of the Oven in drying: Figs yield a great deal of Oil, and essential Salt: These soften the Acrimony of the Humours, fortifie or strengthen the Breast, hasten the Birth, ease Diseases of the Kidneys or Bladder, being taken in Decoctions, or else they relieve sore Mouths and Throats in Gargles, or apply'd externally to any Part, give Ease and promote Suppuration.

Ficus Indica, vel *Ficus Indica foliis Mali Cottoni similibus, fructu ficubus simili in Goa*, according to *C. Bauhinus*. This is a Tree that grows near *Goa* in *India*; it is large, very high, and thick, extends its Branches very wide, from whence arise Fibres like those of the *Cuscuta*, of a golden Colour, which being arrived or come from the Ground they grow strong and take Root by little and little from the great Trees, which stretch themselves over all the new filaments, that adhere likewise to the Earth and produce Trees after the same Manner, and so on perpetually; so that these Figs multiply in such a Manner as to fill a large Country with Trees of such a large Kind and such a Height, that they form a spacious massy Forrest, which becomes a great Relief and advantageous Shade against the Sun-Beams. The Leaves of the young Branches are like those of the Quince, green without, and white and lanuginous underneath, and serve for Food for the Elephants. The Fruit of the small Fig is made like ours, but not

as Blood without and within, sweet and good to eat, but nothing like the *European Fig*. The *Indian Fig* is moistening, cooling, pectoral, and the Bark of the Tree serves for Cloathing.

74. Of Brignole Prunes and Prunelles.

Besides Figs, we have considerable Pomets. Dealings in *Prunes* of *Brignole*, which are brought from *Provence*, especially *Brignole*, a little Village near *St. Maximin*, from whence it takes its Surname. These *Prunes* are brought in long Cases, but more usually in Boxes that are cover'd with white Paper artificially cut; these *Prunes* or *Prunelles* ought to be dry, fair and fleshy, and when the Paper is cut, if the Cover be dry, it is a certain Sign that they are good.

We sell Abundance of *Prunes* and *Prunelles*, as the large and the small, *St. Catharine Prunes*, and the little black *Damask*, and *St. Julian Prunelles*, which we have from *St. Maure's*, *Chizon*, and other Parts of *Touraine*. Besides, we sell a great deal of *Prunelles* which are longish and come from *Bourdeaux*, and several others from *Monturel*, *Perdrigon*, *Imperial*, and generally all Sorts of Fruits, dry and liquid, which we have brought from other Parts, but especially *Tours*, as dry'd Pears, Apples and Cherries; with Variety of others that are kept for eating in *Lent*. The Choice of all these Fruits is to have them new in Boxes, or little Chests, that are lin'd within and cover'd without.

Prunum or *Prune*, is a Fruit of *Lemery*. several Kinds, according to the different Places where it grows, both as to Shape, Size, Colour and Taste; but they are all so well known I shall only mention the black *Damask Prune*, which we use in Physick, call'd in *Latin*; *pruna parva dulcia atro-cærulea*, the little, blewish, black sweet *Prunes*; they are of a moderate Size, round, fleshy, cover'd with a black Skin; their Substance red, succulent, not sticking to the Stone, but of a good Smell and sweet pleasant Taste. The Stone is small, longish, stony, enclosing a little Kernel almost round or oval, of an agreeable Taste, inclining to be bitter. These *Prunes* grow upon a Kind

of *Prune Tree* of a moderate height and Size, call'd *Prunus Sativa fructu parvo dulci atro-cæruleo*. The Leaves are longish, pretty broad, slightly indented on the Sides; the Flower is compos'd of five Leaves, dispos'd like a Rose, of a white Colour; this Tree is cultivated in the Gardens.

The *Damask Prunes* ripen towards Autumn, and are to be chosen pretty large, well fed, ripe, new gather'd, of a good Taste and Smell; they yield a great deal of Flegm, Oil and essential Salt. They dry great Quantities of these *Prunes* in their Ovens about *Touraine*, and near *Bourdeaux*, and disperse 'em all over *France* and other Parts in the Winter. That which is call'd the *Prunelle* ought to be taken fresh, fleshy, dry, soft and of a good Taste. Fresh or dry'd *Damask Prunes* are moistening, emollient, laxative, being taken in Infusion, Decoction, or eaten in Substance. They find sometimes upon some Sorts of *Prunes*, a white, shining, transparent Gum, which the Merchants mix sometimes therewith, it being very like it in Colour and Virtue; it is good for the Stone or Stone Colick, given in Powder or Mucilage.

75. Of the large Chestnut, call'd by the French Marons.

These are Fruit which we trade in as well as the *Limogin Chestnut*. Pomets. nuts; but as they are very common, I shall not insist upon a Description, only inform you, that the best Sort are those about *Lyons* and the *Vivarez*; which when good, shou'd be large, fresh, firm and Ash-colour'd. As to the small *Chestnuts*, they come near to the large, but only that they are clearer and much redder. Their Use is to eat as well as the other *Chestnuts*, as all the World knows: Besides, these are of some Use in Physick, because they are more astringent.

Castanea, or the *Chestnut Tree*, is of two Kinds, one *Domestick* and *Lemery*. the other Wild. The *Domestick* is call'd *Castanea Sativa* by *Casp. Baubin*. This is a great spreading Tree at this Day cultivated by all People as well for its Beauty as its Profit, and so well known to every Body, we may be excus'd a Description. The wild *Chestnut*

76.

Mifseltoe.



Bazdyendge



78

Moss.

Aleppo Galls.



Chestnut is call'd *Castanea Sylvestris*, quæ peculiariter *Castanea*, or *Castanea minores*, the lesser *Chestnut*. This differs no otherwise from the former, but as it grows wild instead of being improv'd; it is much less in Size, and the Fruit smaller. It grows plentifully in the *Limofin*, in *Languedoc*, and supports a great many Persons in the World and especially the Poor. The large Sort of *Chestnuts* that grow in the hot Countries are call'd *Marone* or *Marons*, most of which are brought from the *Vivarez* and the *Limofin*: Chuse such as are largest, the most fleshy, and of the best Nutriment; they all abound with a good deal of Oil and a little Salt. The *Chestnuts*, especially the small, are astringent, and the Rind is us'd to stop the *Fluor Albus* in Women.

76. Of the Oak.

Pomet.

THE *Oak* is a Tree known to all the World, as well because of its durableness, as for the different Uses made of it. This Tree was for its Virtue, Strength, Firmness and Duration, by the Ancients dedicated to *Jupiter*. Some pretend that this Tree is a mortal Enemy to the Olive and the Walnut Tree; so that neither of them can live near it.

The first Thing and the most considerable we have from the *Oak* is the *Misseltoe*, which is an excrescence that is found clinging to the Top of the said Tree. This Production appears extraordinary, in that the *Oaks* do not produce the *Misseltoe* in all places: There is little that I know like that, which is met with betwixt *Rome* and *Loretto*, especially near a little Village nam'd *Foligni*, which is about the Mid-way. This Excrescence resembles the Branches of Trees, and is of a solid, heavy Substance, of a reddish brown outwardly, and of a yellowish white within, where is found a Sort of *Turnsol*.

The Branches that are so hard and compact, bear several little Sprigs which intermingle with each other, and from whence arise a great many longish, thick leaves, that are semi-circular, of a pale green, and bear little whitish Berries, altogether resembling our little white Currans, and these Berries contain a viscus Humour which the Antients us'd

to make Glue of. The *Misseltoe* furnish'd with its Leaves continues always green during the Time it remains upon the Tree. Chuse the largest, heaviest, and best fed: You may know if it be true by the deep Colour, and the *Turnsol* that is within, but the surest Way is to see that some Part of the *Oak* hangs to it. They attribute a great many Virtues to the *Misseltoe* of the *Oak*, and the Antients revered it, and held it sacred as well as the Tree itself. *Julius Caesar* and *Pliny* say, that the *Druids* assembled themselves under these Trees to perform their Devotion: There being a Country we call at this Day the *Druids* Town near *Chartres*, where it may be seen that the *Oak* bears the *Misseltoe* in *France*.

This *Misseltoe* taken inwardly, is esteem'd an excellent Remedy against the Palsy, Apoplexy and falling Sickness. Because of its extraordinary fine Virtues, which wou'd be too many to enumerate; the *Italians* treat of it very largely under the Name of the Wood of the *Holy Cross*.

The second Thing we have from the *Oak*, is a little Plant we call *Polypody* of the *Oak*, which is like what we have from Walls. This Sort of Plant grows from Places where the Branches of the *Oak* are forked, by means of some small Earth that lights there, and the Water which drops upon it: It grows likewise upon the Stump of the said Tree. We rarely use this *Polypody*, because it is not so proper, since that is much better which grows upon old Walls, which is the Sort that is brought to us about *Paris*. Chuse such as is new, plump, dry, brittle, of a reddish, tawny Colour on the outside, and greenish within; the Taste being sweet and Sugar-like, inclining something to a Liqueur-like Taste.

Quercus vulgaris, the common *Oak*, is a thick, strait, durable Tree, spreading its Branches wide. The Trunk is cover'd with a thick rugged Bark; the Leaves are large, longish, and broad, deep slash'd or indented, hanging upon short Stalks: The Flowers are in long Shells or Husks, compos'd of little Threads hanging upon one another by a fine Fibre or String; These Husks leave no Fruit behind them, the Fruit growing in different Parts, which are the Acorns; that are about the Size of the Olive, of an Oval

or cylindrical Figure, tied at that End that is towards the Tree; each being contain'd in a hard grey Cup, call'd in Latin, *Cupula seu Calyx*. This Acorn is cover'd with a hard Rind, that is smooth and shining; green at first, but yellowish as it grows riper: Within this Rind we meet with a Sort of a Kernel, or hard fleshy Seed, compos'd of two Lobes. The Acorns hang upon the Tree by long or short slender Stalks, and their Taste is astringent.

All the Parts of the *Oak* contain in them a good deal of Oil and essential Salt. The Leaves and Bark of the *Oak* are astringent, resolving, proper in the Sciatica, Gout and Rheumatisms, being us'd in hot Fomentations; they stop Fluxes of the Belly and Hemorrhages, being taken in Decoction. The Acorn, call'd in Latin *Glans Quercina*, is likewise employ'd in Medicine; chuse such as are large and plump, separated from the Rind, and dry'd gently; but take care of Worms, to which they are subject, let 'em be reduc'd to Powder before using; they are astringent, and proper to appease Wind-Colicks, and the Fluxes of Women newly delivered.

Polypodium, or common Polypody, hath a Root taking a very slight and superficial Hold of the Earth. It is pithy and brittle, about the third Part of an Inch thick. Within it is of a pale green Colour, but outwardly a little reddish, and cover'd over with fine thin Scales when it is fresh and green; but being dry, it becomes of a more red Colour. It is knotty, or full of round Knobs, and adorn'd with several small Filaments like Hairs. Its Pith is sweetish, with somewhat of a sharp, austere, or styptick Taste. The Leaves spring out of the Knots or hollow Knobs of the Roots. They are single, about nine Inches in Length, and parted into several Jags or Scallops, cut close into the Ribs. They are sharp-pointed, of a light green Colour, and growing alternately opposite to one another. It bears no Flowers, but there arise several small Knobs like Blisters, upon the lower or under Part of the uppermost Jags of the Leaves, rank'd in a double Order. They are round, and about the sixth Part of an Inch thick, consisting of a fine Dust, that is first a little yellowish, and turns of a bright golden Colour. Every Grain of

this Dust is a Sort of small Coffin, or Seed-Vessel, being of a round Figure, and membranous, which, when ripe, breaks into two equal Parts, and pours forth several Seeds so small, that they can scarcely be discerned by the naked Eye.

Polypody grows upon Rocks, old Walls, and antient decay'd Trees; but that which grows upon old Oaks is reckon'd the best; upon which account *Polypody* of the Oak is commonly prescribed, and is rank'd among the purging Medicines. Yet *Dodonæus* denies its cathartick Quality; neither ought we to dissemble the Matter, for the Decoction of it scarcely moves the Belly, but the Powder of it does something, being given from one Dram to two Drams.

This Root contains a great deal of Oil, and no small Quantity of an acid Flegm; but this is, as it were, suffocated by the Oil, which is the Cause that it produces no Alteration of Colour on the blue Paper, when it is dipp'd in the Infusion of it. There is likewise a large Quantity of Earth extracted from *Polypody* by a chymical Resolution. 'Tis from this Earth that its styptick and brackish Taste proceeds. The Roots are very properly administer'd in all Distempers proceeding from a saltish Disposition of the Blood; such as the Scurvy, Rickets, and Hypochondriack Passions. They also help to abate an inveterate Cough, when it is attended with a saltish Spittle. They are prescribed in Potions and Apozems, from one Ounce to two.

Take of *Polypody* of the Oak two Ounces, Salt of Prunella one Dram; infuse them in a Quart of warm Water; strain it: To be taken by Cupfuls or Spoonfuls, as an Apozem. Or take *Polypody* of the Oak one Ounce and half; Elecampane-Roots three Ounces; infuse them all Night in a Quart of warm Water; in the strain'd Liquor add two Ounces of *Calabrian* Manna; mix and make a Ptisan to be drank. Take of the Decoction of *Polypody* Roots six Ounces; in which infuse two Drams of Sena-Leaves; in the strain'd Liquor dissolve the Electuary of *Diacarthamum* three Drams; mix and make a purging Potion. *Polypody* Roots are us'd in the catholick Electuary, the lenitive Electuary, the Confection of *Hamech*, the Panchymagog Extract of *Hartman*; *Quercetan's* Pills

Pills of Tartar, and in the Hiera of Colocynthida.

77. Of Oil of Acorns.

Pomet. BESIDES the *Polypody*, the Oak produces *Acorns* which are its proper Fruit, and every Body pretends to make and sell the Oil; but as I never saw any to this Day, I shall say nothing of it, but that all the Oil of *Acorns* that the People of *Provence* send us, is nothing but the *Ben* or *Nut Oil*, in which the *Acorn* has been infused. The great Rarity of this Oil, is the Reason that the World attributes such great Virtues to it, just like that of the true Oil of *Talck*: There may be a true Oil of *Acorns* drawn by the *Retort*, but it will be black, and of an ill Smell.

The Oak produces over and above the *Acorn*, the *Misseltoe*, and *Polypody*, a Moss which is what we call *Usnea*, and enters the Compositions of the *Cyprus Powders*; those of *Frachipane* and *Le Marechale*, or the *Farriers Powder*, which we have brought from *Montpellier*. The true Description of making these Powders is unknown to me, which obliges me to refer the Reader to a Description made by the *Sieur Barbe* in a little Treatise of his printed at *Lyons*.

78. Of Galls.

Pomet. **G**ALLS are the Fruit of a Kind of Oak that grows plentifully in the *Levant*, especially about *Aleppo* and *Tripoli*, which are those we call *Aleppo* and *Tripoli Galls*: Besides, they are brought from *Smyrna*. There are some grow in *France*, in *Provence* and *Gascoigny*, but much inferior to those of the *Levant*, in that they are usually reddish, light, and altogether smooth; and those of the *Levant* are prickly, from whence they are denominated the prickly Galls; more heavy, blackish, or greenish, or whitish. The Variety of these Fruit is the Reason why they are put to different Uses. Those of *Aleppo* and *Tripoli* are for dying black, and making Ink; the white to dye or stain Linnen, and the Light *French Galls*, for dying

Silk: All the Sorts are of some Use in Physick, especially the more astringent and styptic they are; being good to draw together, and fasten loose Parts, to dry up Rheums and other Fluxes, especially such as fall upon the Gums, Almonds of the Throat, and other Parts of the Mouth; us'd in a Decoction in Water or Wine they cure *Diarrhœas*, *Dysenteries*, and are good against all Weaknesses of the Bowels. A Fumigation in Claret is good for Women to sit upon, that are troubled with a Flux of Reds or Whites, or falling down of the Womb; as also of the Fundament: The Ashes quenched in Wine or Vinegar being apply'd staunch Blood; and the Powder of the crude *Galls* may be given inwardly from ten Grains to a Scruple, to all the Purposes aforesaid.

There grows upon a species of Oak in *Turkey* a little reddish Fruit, of the Bigness of a Hazel-Nut, call'd by the *Turks*, *Bazdienge*, whose Figure is represented by the Impression of the Oak. The *Levantine*s, especially those of *Aleppo*, take a hundred Drams of *Cochineal*, which they call *Cormeti*; fifty Drams of *Bazdienge*, and fifty Drams of Tartar; and after powdering them all, they make a very fine *Scarlet*. This Fruit is very scarce in *France*, which makes me I can say no more of it.

Galla, or the *Gall-Nut*, is an Excrescence which grows upon an *Lemery* Oak in the *Levant*, whose Origin proceeds from this, that certain Insects bite the tenderest Part of the Tree; so that an Humour flows out into a Shell or Bladder, which fills and hardens as it grows on. There are several Sorts of *Galls*, that differ according to their Size, Shape, or Colour, by the Surface of them being smooth or rugged. They are usually round, and as big as the common Nut, some as the Filbert, rough or prickly, white, green, or black. The best come from *Aleppo* and *Tripoly*. Choose the best fed and weightiest.

There are also *Galls* grow in *Gascoigny*, and in *Provence*, which differ as those of the *Levant* do, they being smooth, light, reddish, and affording a less Tincture. They are astringent, and enter several medicinal Compositions; as Plaisters, Ointments, Injections, Fomentations, &c.

79. Of Agarick.

Pomet. **A**garick is an Excrefcence that is found upon the Trunks and large Branches of feveral Trees, but chiefly upon the Larch Tree, call'd by the *Latins*, *Larix*, and upon feveral Sorts of Oaks; but the beft of all ought to be fuch as is white, light, tender, brittle, and of a bitter Taffe, pungent, and a little ftyptick. And this is the *Agarick* the Antients ufed to call the Female. As for that which is term'd the Male, it is ufually heavy, yellowifh, and woody, which ought entirely to be rejected from physical Ufes. The beft *Agarick* is that from the *Levant*, it being abundantly better than what comes from *Savoy* or *Dauphiny*. We have likewise fome brought from *Holland* that is rafp'd and blanch'd on the Outfide with Chalk. In fhort, none is fit for Ufe but the *Levant Agarick*.

Agarick was a Medicine fo familiar to the Antients, that they made ufe of it not only for purging Flegm, but likewise in all Diftempers proceeding from grofs Humours and Obftructions; fuch as the Epilepfy, Vertigo, or Giddinefs of the Head, Madnefs, Melancholy, Afthma, and Diftempers incident to the Stomach, and the reft of that kind; yet they complain'd that it weaken'd the Bowels, and purg'd too churlifhly; upon which Account *Galen* fteep'd the Powder of it with Ginger, and gave it, to a Dram, in Oxymel, or Honey of Squills. It is prefcrib'd in Powder, tho' rarely, from a Dram to two; but in Decoction, or Infufion, from two Drams to half an Ounce.

By a chymical Diffolution it paffeth almoft all away into Oil. It yields no volatile Salt, but abounds with a fort of fcaly Earth, and an acid Flegm, from whence the Infufion of *Agarick* makes the blue Paper of a purple Colour. Hence it clearly appears, that it ought to be corrected with Cloves, Cinnamon, Mace, Mint, Wormwood, and others of this kind. Its Slownefs in working may be help'd or promoted with Scammony and Calomel; or it may be wet in fome purging Decoction made of *Afarabacca*, *Sena*, and other Purgatives, and then dry'd again, and

formed into Lozenges, adding Balfam of *Perru*, or Oil of Cinnamon to correct it.

Lozenges are commonly prepared in the Shops. But we muft not forget to take notice, that *Lufitanus* admonifhes us to make ufe of the Troches of *Agarick*, or Lozenges, while they are fresh, and new made, left their Virtue be weaken'd by long keeping. Befides the Troches, there is an Extract and Rofin prepared from *Agarick*. It is likewise ufed in the Confection of *Hamech*, *Hiera Picra*, the blessed Extract, and Pills of *Euphorbium*.

80. Of the Confection of Hamech.

Agarick being one of the Ingredients of this Composition, which *Pomet.* we have brought from *Montpellier*, together with Confect of Hyacinth and Alkermes, Treacle and Mithridate, I thought it not improper to mention it in this Place. Tho' it is almoft out of Practice in fome Countries, it remains a good Medicine ftill, if faithfully prepar'd; however, I fhall only give you the Receipt, and leave you to confult the Method of preparing it in the Difpenfatories of Mr. *Charas* and others.

Take Polybody of the Oak, Raifins ftoned, Damask Prunes, of each four Ounces; Citron, Chebulick, and *Indian* Myrobalans, Violet-Seed, Coloquintida, white Agarick, *Sena*, of each two Ounces; Wormwood, Thyme, of each one Ounce; red Rofes, Anifeed, and Fennel, of each fix Drams; Juice of Fumitory depurated, a Quart; Sugar and pure Honey, of each three Pounds; Caffia, and Tamarinds pulp'd, and pure Manna, of each four Ounces; Rhubarb, white Agarick, *Alexandrian* *Sena*, of each fix Ounces; the five Myrobalans and Epithymum, of each fix Ounces; Cinnamon and Ginger, of each two Drams: Mix all together according to Art, and make a foft Electuary, working it well, and preparing it truly, and it will keep a long Time. This Confect, thus artfully made, is of a fhining black, and a good Confiftence. This, with the other before-mention'd, we reckon the five great Compositions of the Shops.

We sell likewise dry'd Mushromes, and black Sow-bread, which are brought from *Provence* and *Languedoc*, with the Bulbs of Tube-rose, Ranunculus's, and Junquils, which come from *Italy*, *Provence*, and some from *Constantinople*, together with Jews-Ears, &c. And they bring us from *St. Fleur* in *Auvergne* a certain grey Earth, in little Shells, which is what we call *Perelle*, and the People of that Country tear from the Rocks. This Earth is produc'd

by the Winds, which carry the Earth upon the Rocks, and by the Rain and the Sun this Earth is calcin'd after being wet. The Use of it is to make *Orseille*, of which mention was made in the Chapter of *Turnsol*. We sell, besides, a certain Herb, which we call *Presse*, and the Botanists *Equisetum*, or Horsetail, which the Cabinet-Makers, and other Artificers in Wood, use to polish their Works withal.

BOOK the Eighth.

Of GUMS.

P R E F A C E.

WE distinguish Gums into two Sorts; namely, such as are aqueous, and such as are resinous. We understand by the aqueous Gums those that will dissolve in Water, Wine, or other the like Liquids; as Manna, Gum Gutta, or Gamboge; and by the resinous, those that will not dissolve but in Oil, as Gum Elemly, Tacamahaca, and the like, as you will find by the subsequent Discourse. There are some who will add to these two Sorts a third, which they call the irregular, and which they pretend will, without Trouble, dissolve in Water or Oil, as Myrrh and Benjamin. If Seeds, Roots, Woods, Barks, Flowers, Leaves, and Fruits, are so difficult to distinguish one from the other, it cannot be less serviceable to have a perfect Understanding of Gums, in which Traffick several Nations have made it their Business to impose upon us.

1. Of the Manna with which God fed the Israelites in the Desert.

WHEN the Israelites had pass'd the red Sea in a miraculous manner, and were deliver'd from their Enemies, the Famine pursued them into the

Desert, and they murmur'd against *Moses*. But that faithful Minister of God made his Supplication to Heaven, and God delay'd not to give them Food; for there fell a great Storm of Hail in their Camp, and the next Morning it rained *Manna* upon the Earth, which was continued for forty Years; during the Time the *Hebrews* remain'd in the Desert.

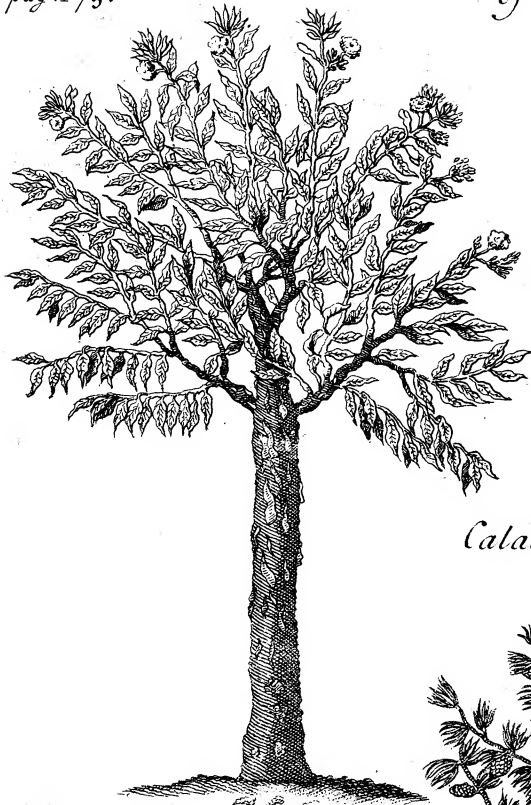
sert. The People were presently surprized when they beheld the Earth all cover'd with a kind of Grain they were Strangers to. And the Scripture informs us, that not knowing what it was, they cried out with Admiration, *Man hu! Quod est hoc!* What is this! But *Moses* told them it was the Bread of God that was sent from Heaven, and appointed them to come every Morning before Sun-rise, to gather this divine Food; because, when the Day was advanc'd, there was not time to gather the *Manna*, which melted away after the rising of the Sun.

But the *Jewish*, as well as the Christian Interpreters, do not agree about a great many Passages relating to this *Manna*. They are divided about the Etymology of the word *Manna*: Some will have it that it comes from the Hebrew Word *Man hu*, which the *Jews* pronounc'd when they saw the Earth cover'd with little white Grain or Seeds which fell during the Night; nevertheless several others, of which number *Buxtorf* is one, say, that the Word *Manna* signifies Food prepar'd, as if he should say, the Food which God had prepar'd for his People. Several maintain that this *Manna* was the same with the purging *Manna* now us'd in Physick; that is to say, a Liquor which falls in the Nature of Dew, and which is congeal'd into little Grains, like those of *Coriander*. *Valesius* Physician to the Emperor *Charles* the Fifth, is of this Opinion. *Cornelius à Lapide*, who was a very learned *Jew*, said, in his Commentary upon *Exodus*, that he had seen in *Poland* little Seeds like Millet, something long and reddish, which fell, during the serene Nights, in *June* and *July*, and that they eat it when boiled; it having the same Taste as that made from the *Panix*. And I have been confirm'd in this by a Friend of mine, who was a long Time in *Poland*, especially on the Side of *Silesia* where this Dew falls plentifully. And I am assur'd, having also seen on the Heights of *Dauphiny*, at the Foot of the Mountain of *Geneva*, about four a-Clock in the Morning, a large Quantity of this *Manna*, which I have taken presently, or at first Sight, for a Seed, but after having tasted it, I found, by its sweet sugary Taste, that it was a Dew like that spoke of in the Holy Scriptures; for as soon as the Sun was up, it dissolv'd.

Those which hold that the *Manna* with which God fed the *Jews* in the *Desert*, was not the same with that us'd in Physick, say, that that which purges must weaken and cannot nourish; but *Vossius* answers this Difficulty, and says that this *Manna* differs not at all in its Nature, but as to its Accidents, from that us'd in Physick; and this Difference arises from the Preparation which the Angels made in sweetning and purging this Dew from the grosser Parts that the common *Manna* is loaded with, in order to make Bread of it by boiling; as they do by that which falls in *Poland* in the Months of *June* and *July*. We see Men daily who make their Food out of strong Poisons by a continued Custom and Habit; and Wine that shall be agreeable to Persons when sick, shall be offensive to the very same Persons when well. *Valesius* does not doubt in the least but that the *Manna* in the *Desert* did directly purge the *Hebrews*, who were replete with gross Humours, which they collected by the Use of Garlick, Leeks and Onions, of which they fed during their Abode in *Egypt*; and after they had been duly purged, that the *Manna* became nutritive, especially after having been prepar'd or purified by the Angels; for it is expressly said in *Psalms* lxxviii. ver. 23, 24, and 25. *God commanded the Clouds from on high, and he opened the Doors of Heaven, and had rained down Manna upon them to eat, and had given them of the Corn of Heaven: Man did eat Angels Food.* And this Explication appears very agreeable to the Hebrew Word *Manna*, which signifies Nourishment, or Food prepar'd; as it is infer'd from the 31st Verse of the 11th Chapter of *Exodus*, where it is said, *And the Taste of Manna was like Wafers made with Honey.*

2. Of Manna.

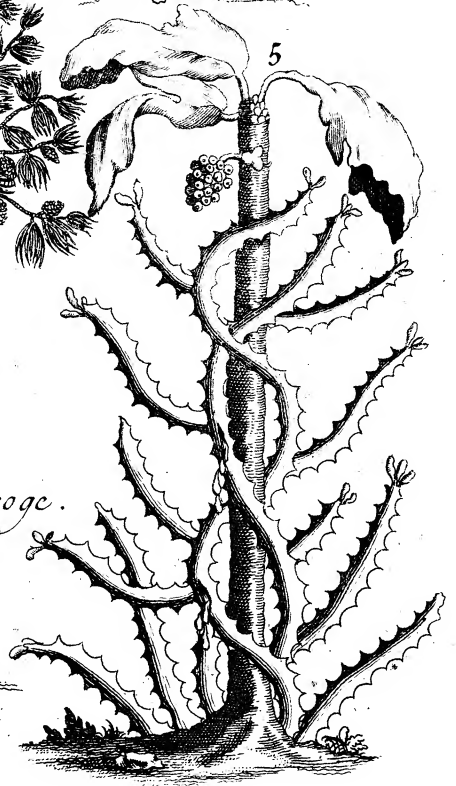
THAT which we call and sell now by the Name of *Manna*, *Pomet*, is a white crystalline Liquor that flows without Incision, and with the Incision that is made upon wild and domestick Ashes, which the *Italians* call *Fraxini* and *Orni*; that grow plentifully in *Calabria*, *Sicily*, but chiefly at *Galliopoli*, from whence almost all the *Manna* we now sell is brought.



Calabrian Manna.



*Manna of Brian-
son.*



Gamboge.



*Liquid
Manna.*

We fell several Kinds by the Name of *Calabrian Manna*. The first and best Sort is the *Manna* of Mount *St. Angelo*, but that is difficult to be got, and very little demanded by People who do not understand it: The second is the *Sicilian Manna*, which is usually white, dry, and teary, but very subject to be full of Chestnut or Fig-leaves: The third Sort of *Manna*, is that which is improperly call'd *Briançon Manna*, which is dry'd from a white Matter that is decay'd and very apt to be full of Dirt.

The *Arabians* look'd upon *Manna* to be a Sort of airy Honey, or a Dew that falls from the Heavens: And this was a common received Opinion for many Ages; but *Angelus Sala*, and *Bartholomæus ab Urbe veteri* two Franciscan Friars; who in 1545, publish'd Commentaries upon *Mesve*, were the first that I know of that in their Writings affirmed *Manna* to be truly the concentered Juice of the Ash-Tree, as well the common as of the wild, generally call'd *Quickbean*. *Donatus Antonius ab alto mari*, a Physician and Philosopher of *Naples*, who flourish'd about the Year 1685, has confirm'd this Opinion by several Observations.

For first, having cover'd Ash-Trees for several Days and Nights together all over close with Sheets, so that no Dew cou'd possibly come at them; yet he has found *Manna* upon these Trees so cover'd, under the Sheets, when at the same Time not the least Sign or Impression of any Dew or Honey was to be seen upon the upper-Part of the Sheets. 2dly, All those who make it their Business to gather *Manna*, freely own and confess that it drops out again of the same Places of the Trees, from whence it was before taken, and by degrees coagulates with the Heat of the Sun. 3dly, In the Trunks of the Ash-Trees, little Bladders or as it were Blisters are often observed, or rise near the Bark, which are fill'd with a Liquor of a white Colour, and sweet Taste, which afterwards thickening, is turn'd into a very good Sort of *Manna*. 4thly, The very same Liquor flows out of the Bark of the Ash when it is wounded: And it is very observable, that Grasshoppers and other small Insects, very often bore through the Bark of this Tree, that they may suck this sweet Tear; and when they have left it, the *Manna*

sweats out of the small Wounds that they have made. 5thly, Wild Ashes being cut down by Coopers on Purpose to make Hoops for Wine-Vessels, it often happens that no small Quantity of *Manna* flows out of their Stocks and Boughs, being cloven or split lengthways, and expos'd to the Heat of the Sun. 6thly, Such as are employ'd in the making of Charcoal, confidently assure us, That they have often observ'd *Manna* sweat out of the Ash-wood, after it has been kindled and thrown into the Fire.

The same Author further takes Notice that the same Trees yield *Manna* every Year, but not all of them indifferently; upon which Account there are a great many that make it their Business for the Sake of Gain, to bring up these Trees: Yet there are in these Places Trees of the same Kind, that afford no *Manna*. Moreover the same Author tells us, that the *Manna* runs chiefly out of that Part where the Footstalks of the Leaves are inserted into the Branches; for in these Parts the Vessels being thinner and finer, are the more easily divided; wherefore he does with very good Reason observe, that *Manna* never drops out of the Leaves of this Tree, unless it is at Noon, or about the hottest Time of the Day; because there is a large Degree of Heat required for the fetching of this Juice out of its proper Vessels, and conveying or translating it unto the distant Leaves. In the Kingdom of *Naples* and *Sicily*, *Manna* naturally flows and drops out of the Leaves of the afore said Trees under the Form of a clear Liquor, and afterwards thickens and becomes a little hard; but especially in the Month of *June*, when the Weather is very hot and dry; next Day with a Knife they scrape and pick it off the Leaves, lest it should be dissolv'd and wash'd away by the falling of Rains, or the Moistness and Dampness of Air; then they carefully put it up in Vessels, well glazed; and after that they expose it to the Heat of the Sun, till such Time as it will not stick, nor cleave any more to the Fingers; otherwise it wou'd melt and lose its whiteness.

Manna flows spontaneously from the 21st of *June* to the End of *July*, unless Rains happen to fall; after the Month of *July*, the Country People or Peasants make an Incision into the Bark of the Ash-Tree, even to the Wood; from

from whence the Liquor of *Manna* continues to flow and drop, from Noon time to six a-Clock in the Evening incessantly, which afterwards runs together into thick Lumps, or Clots, but of a darkish Colour. This spontaneous *Manna*, by the *Italians* is call'd *Manna Di fronda*, upon Account that it drops from the Leaves of the Ash-Tree, like sweat in the Dog Days or Heat of Summer. But that Sort of concreted *Manna*, that proceeds from the Bark of those Trees being wounded, is call'd by the *Italians*, *Sporisatella* and *Stoisata*, or *Manna Dicorpa*. This Opinion of *Altomarus* has been defended by *Gropius*, *Labellius Casalpinius*, *Costæus*, *Cornelius Consentinus*, *Boccone*, and others; who have given more Credit to their Eyes, than to Authority.

Manna is approv'd of, when it is fat and a little clear, of a sweet Taste like Sugar, which is biting to the Tongue. Chuse that which is fresh and light, from a white Colour inclining to be a little brown, and when the Clots or Lumps, being broken, look as if they were sprinkled with Syrup. That is to be reject'd which is dry, and as it were spongy, without any manner of biting Taste; and that is good for nothing, that is nauseous, impure and adulterated.

The *Calabrian Manna* is esteem'd; but besides that, there is a Sort of it sold in the Shops, call'd the *Larch* or *Brianson Manna*; because it flows from *Larch* Trees growing nigh *Brianson* in *Dauphiny*, but little us'd because it is much inferior to the *Neapolitan Manna*. *Calabrian Manna* purges moderately, from one Ounce to two or three; it allays the Acrimony of the Humours, and is very useful in bilious Distempers, and others attended with Inflammations, such as the *Hæmorrhoides*, *Pleurisy* and *Peripneumony*. It is seldom prescrib'd dry, or by itself, but very often in Potions, &c. As for Example: Take an Ounce or two of this *Manna*, and dissolve it in five or six Ounces of warm Water, Broth, Whey, or the like; to which you may add, if you please, an Ounce of Syrup of Succory with Rhubarb, of Roses purgative or Violets, for a Dose. When Patients are afflicted with vomiting or a Disposition to it, take of *Calabrian Manna* two or three Ounces, Tartar *Emetick* eight or ten Grains, dissolve them in a Quart of Whey, and let the Patient drink this by Cupfulls, now and then taking a little warm Broth betwixt.

Monfieur *Charas* and others likewise agree, that the true *Manna* is not found upon all Plants, Trees, Rocks, and Earths promiscuously as some believe, but only upon the ordinary *Fraxinus* or Ash-Tree, and upon the *Ornus* or wild Ash. That it is gather'd from the Ash or wild Ash is evident; for that upon some large Tears, the very print of the Leaf upon which they grow is to be seen, and oftentimes Ash-tree Leaves are found mix'd with it.

That which comes from the Body of the Ash, and issues voluntarily and freely, as also from the biggest Branches of the Tree, is the purest and fairest, and comes forth in a crystalline Liquor, beginning to distil in *June*, forming itself into Tears bigger, or lesser, as the Part of the Tree is more or less full of it; this is gather'd the next Day after it is distill'd forth, for in that Space of Time it hardens by little and little, and becomes white; this if it shou'd meet with Rain and Wet, will melt and come to nothing. They take the Bark from it with a thin pointed Knife, putting it into glazed earthen Pots or Pans, then spreading it upon white Paper, they expose it to the Sun, till it ceases to stick to the Fingers, lest it should dissolve by Addition of any superfluous Moisture, and lose its Whiteness: This gathering continues about six Weeks.

In the next Place is that which is forced, which is drawn forth when the former *Manna* ceases to flow voluntarily: They wound the Bark of the Trunks to the Wood itself with sharp Instruments, and so from Noon till Evening you will see the *Manna* flow from those Wounds which is sometimes clotted together at the Bottom of the Tree, like little Sticks of Wax. This they gather the next Day after the wounding, and it is yellower than the former, and therefore not so much esteem'd, being apt to grow brown if kept any Time, yet nothing less Purgative.

Thirdly, there is *Manna* of the Leaf. This flows voluntarily from the Leaf or Leaves of the Ash like little Drops of Water, and appears in the Nature of a Sweat upon the nervous Part of the Leaf, during the Heat of the Day, and extends itself all over the Leaf; but the Drops are bigger at the Stalk, than at the End or Point of the Leaf, and
harden

harden and become white in the Sun as the former, being something larger than Grains of Wheat. In *August* the great Leaves of the Ash will be so loaden with these Drops, as if they were covered with Snow: This is as purgative as any of the rest.

Manna is an excellent purge for Children, and others that are of weak Constitutions, and abound with sharp Salt Humours; it is temperate, inclining to Heat, mollifies or softens the Throat and Wind-Pipe, opens Obstructions of the Breast, Lungs, and other Bowels, purges watry Humours, and keeps the Belly soluble; being an excellent Thing for such as are apt to be Costive. *Hoffman* says, it ought not to be given crude, but boiled in some proper Vehicles, not being less flatulent than *Cassia*, and therefore shou'd not be administer'd without Correctives; it is adulterated with Sugar Penids roll'd in Leaves of Herbs, as also mix'd with Sena, &c.

There is a Spirit of *Manna* made by Distillation in a Retort. Mr. *Charas's* Spirit of *Manna* is prepared thus: Put *Manna* into a Retort, filling it two Parts in three full, distil in Sand; first, with a gentle Fire, then increasing by Degrees; distil to Dryness, cohobate the Liquor and repeat the Distillation, so will you have a spirituous Water containing all the Best of the *Manna*, which is not only an excellent Sudorifick, but a wonderful Specifick against all Sorts of Agues or intermitting Fevers, giving it at the Beginning of the Fit; Dose from two Drams or more in Carduus Water. *Schroder's* Spirit of *Manna* is thus made: Dissolve *Manna* in *May Dew*, and cohobate till it sublimes to the Head of the Alembick like Snow; so the Mercury of the *Manna* being brought to the fluid Nature of a Spirit, becomes a Solutive for Minerals.

3. Of Brianfon Manna.

THE *Manna* of *Brianfon* is a white dry *Manna*, but as it is of no Use and little of it sold, I shall therefore not dwell long upon this Subject. This *Manna* flows from the large Branches of the *Larix* or *Larch-Tree*, for which Reason it is call'd *Manna Laricæa*, and it is to be met with plentifully in the Hills of *Dauphiny*, especially about *Brianfon*, from whence it takes its Name.

Besides the *Brianfon Manna*, there are other Sorts; the scarcest and most valuable of which is the *Mastich Manna* from the *Levant*, or that of *Syria*: This is a *Manna*, which in Colour comes near that of *Calabria*, and is in Grains like *Mastich*, whence it was so call'd; this flows from the *Cedars* of *Lebanon*, as hath been observ'd before.

This *Manna* is very scarce in *France*: tho' I have seen about three Ounces, which was affirm'd to me to be true, which was of the Colour and Figure already describ'd, of the Taste of a *Raisin*, bitter and unpleasant: As *Fuchsius* says, the Peasants of Mount *Lebanon* eat it. This Variety of Tastes probably proceeds from its Age, or the Change of the Climate: The People of *Mexico* eat it as we do Bread.

4. Of Liquid Manna.

THE *Liquid Manna* is a white *Manna* that is glewy like white Honey; it is to be met with upon certain Plants garnish'd with Leaves of a whitish green, of the Size of that Weed that grows plentifully among their Vines in *Persia*, and about *Aleppo* and *Grand Cairo*, whither it is brought in Pots, and sold to the Inhabitants, who use it, as we do *Calabrian Manna*.

This Liquor is very rare in *France*. In the Year 1683, a Friend of mine who had been in *Turkey*, made me a Present of about four Ounces, which I keep to this Day, and which was, when given me, according to the Description I have made of it; but as Time destroys all Things, the Colour is chang'd to a grey, and it is become a Syrup of a good Consistence, and of a reddish brown; and that which is most remarkable, is, that the Taste is sweet, Sugar-like and pleasant, and that it is not turn'd Sharp.

There is to be met with, besides, in the *Asia major*, upon several Trees like the Oak, a *liquid Manna*, especially near *Ormus*, whence it is brought into the Towns in Goat Skins, where they make so considerable a Trade of it as to transport it to *Goa*: This *Manna* is of the same Figure and Colour with the former, only that it will not keep so long.

Manna is a white or yellowish concrete Juice, which inclines much to the Nature of Sugar or Honey, melting or dissolving easily in Water, of a sweet, Honey-Taste, and a faint weak Smell; it flows either with Incision, or without, in the Nature of a Gum, from the Trunk and large Branches and Leaves of the Ash-Tree, both wild and cultivated.

The finest and most pure *Manna* flows without Incision in *June* and *July*, when the Sun is the hottest; it drops in crystalline or fine transparent Tears, almost like Gum Mastich, some larger and some less, according to the Nature of the Soil and the Trees that it grows upon. In a Day's Time it hardens by the Heat and grows white, unless it happen to rain that Day, for then it is all spoil'd. They take it from the Place when it is condens'd, and dry it in the Sun again, to render it whiter and fitter for Carriage.

The second Sort of *Manna* is taken from the same Trees in *August* and *September*. When the Heat of the Sun begins to decrease, then they make Incisions into the Bark of the Ash-Trees, and there flows a Juice which condenses into *Manna*, as the first Sort; there runs a greater Quantity than the first, but it is yellower and less pure; they remove it from the Tree and dry it in the Sun. In rainy or dripping Years, they make very little *Manna* from the Trees; because it liquefies and spoils by the Wet, which is the Reason that some Years the *Manna* is dearer than others. *Pomet* distinguishes *Manna* into three Sorts, which have been describ'd in their proper Places.

When *Manna* is kept it loses much of its Beauty, and does not lose a little of its Virtue. Several People believe that the older it is the more purgative it grows, which I cannot at all understand, and therefore advise you not to use the red or brown decay'd and soft *Manna*, which sometimes you meet with at the Druggists, but take the purest you can meet with: It is a gentle Purger and proper for the Head, from an Ounce to two Ounces. The Word *Manna* comes from the Hebrew Word *Man*, which signifies a Kind of Bread, or something to eat; for it has been received among the Antients, that the *Manna* was a Dew of the Air

condens'd upon certain *Calabrian* Plants, resembling that which God rained down upon the *Israelites* in the Desert for Food.

5. Of Gamboge, or Gum Gutta,

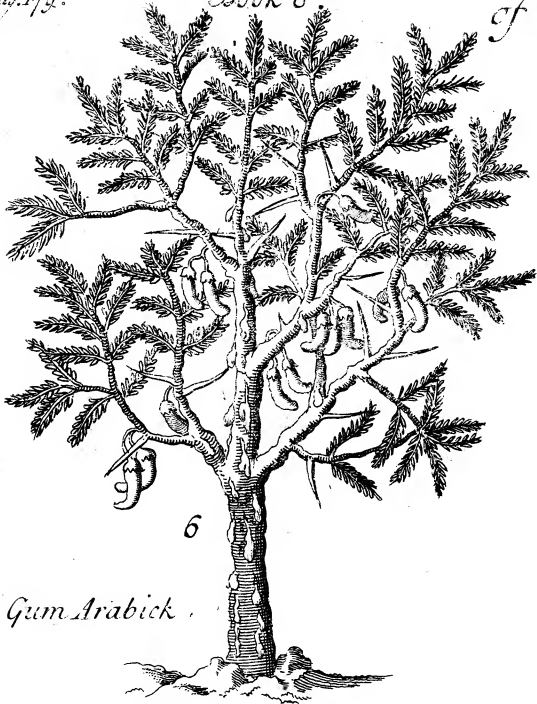
Gum Gutta, or *Gutta Gamba*, *Gamboge*, *Gamandra* or *Peruvian Gum*, *Pomet*. is a Gum that flows from the Trunk of a creeping Plant, that is of such a particular Nature, that it has neither Leaves, nor Flower, nor Fruit: And produces nothing but a Quantity of prickly or thorny Branches, which arise one among another, according to the Figure represented in the Plate.

The People of *Siam*, and the adjacent Countries, cut the thick Trunk of the Plant; from whence proceeds an inspissate milky Juice of a moderate Consistence, which after it is left some Time in the Air, thickens and grows yellow, and then the People roll it up like Paste, and afterwards make it in Cakes as we have it brought to us. The Peasants about *Odia* or *India* the Capital of *Siam*, bring it to Market to sell, as our Country People bring Butter.

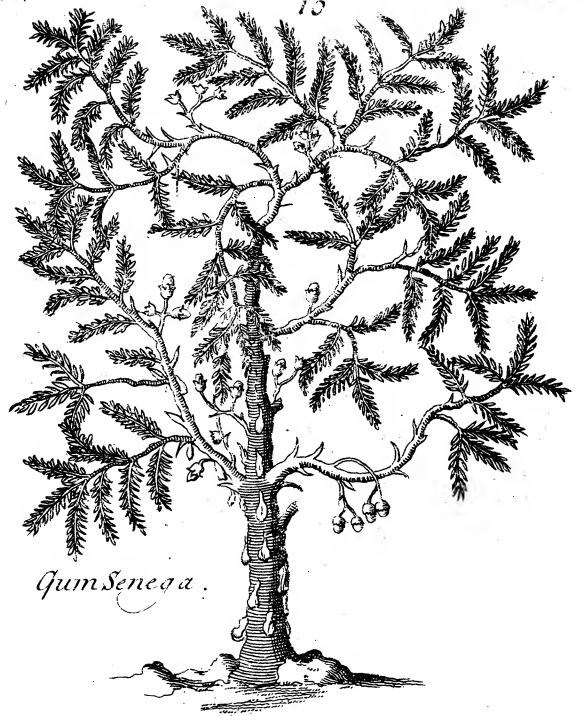
It is most commonly brought into *Europe* from *Peru* and *China*, and other Places of the *East*, being of a pure fine Body like *Aloes*, but of the Colour of the finest Turmerick, being a good yellow inclining to an Orange Colour, without Rubbish or Filth in it, fine and clean in round Rolls or Cakes, and easily dissolving in Water, being almost all of it Tincture. That it abounds with *Sulphur* plainly appears, not only by the chymical Resolution of it, whereby a large Quantity of Oil is extracted from it, but also from that bloody Colour, which the Solution acquires, when Lime-Water is pour'd upon it; seeing the very same Colour will be produc'd in Lime-Water, if you boil common Sulphur or Brimstone along with it; and that *Gum Gutta* is not altogether destitute of a pungent or sharp Salt, manifestly appears by its producing a greenish Colour, quite different from that of a red upon the blue Paper.

Gamboge ought to be chosen of a bright yellow Colour a little inclining to red, clean and free from Sand, and which being chew'd dyes the Spittle of a yellow Colour, and

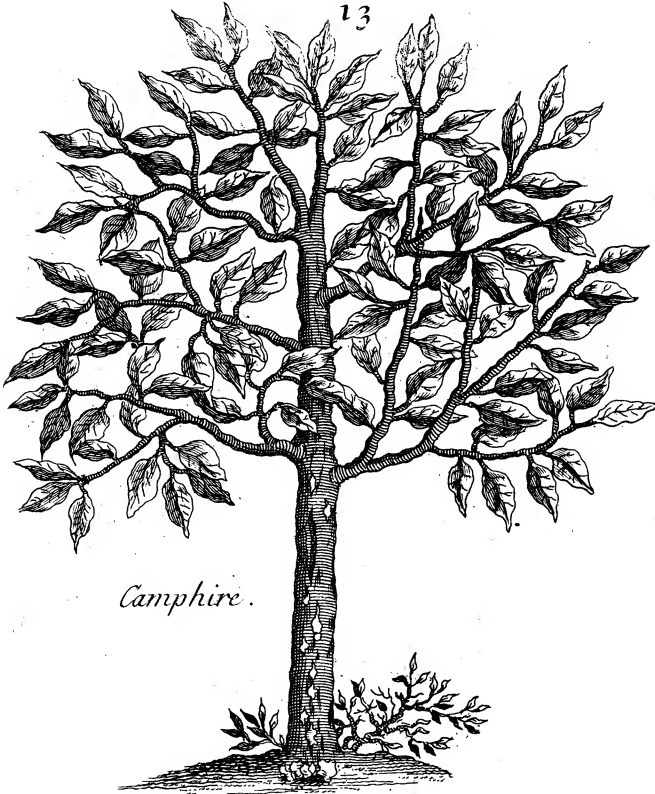
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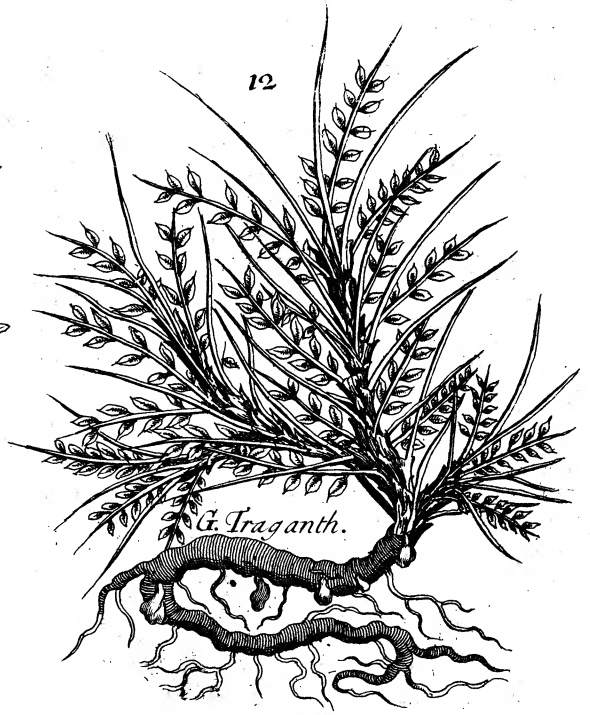
Gum Arabick.



Gum Senega.



Camphire.



G. Fraganth.

being held to the Flame of a Candle, is apt to take Fire. It is prescrib'd crude or unprepared, from three Grains to six or ten; but it will do better in a *Magistery* as follows: Take what Quantity you please of *Gamboge*, dissolve it in Spirit of Wine tartariz'd, then pouring Water upon it, a Powder of a noble yellow Colour will precipitate or fall to the Bottom: This is given from six to ten Grains by itself, or in an Ounce of Pulp of *Cassia* for a Bolus. Others dissolve it in Vinegar or Spirit of *Sulphur* or *Vitriol*, and so make an Extract. *Gum Gutta* is us'd in the Catholick Extract of *Sennertus*, in the cholagogue Extract of *Rolfinchius*, in the hydropick Pills of *Bontius*, in the hydragogick Electuary of Mr. *Charas*. Lastly, the Pills of *Gutta Gamandra* of the *London* Dispensatory borrow their Names from it.

This was doubtless, the Gum *Monardus* us'd against the Gout: It both vomits and purges admirably, carries off watery Humours, and is chiefly us'd against Dropsies, Cachexia's, Gouts, Scabs and Itch. *Rolfinchius* says, it suffices to give this Gum crude, being finely powder'd and sprinkled with Spirit or Oil of Anniseed, and so dry'd again. 'Tis an incomparable and beneficial Cathartick for purging ferous and watery Humours, and may be given to a Scruple in Substance in strong Constitutions.

There is a yellow staining Colour to wash Maps and Pictures with, made of this *Gamboge*. Take an Ounce thereof and put it in Water enough to dissolve it, and it makes a good Colour for Pen or Pencil; if you add a little Gum Arabick, it will be so much the better; being dissolved likewise in clear Spring Water, it yields a very beautiful and transparent yellow by the Addition of a little Alum to it, which will both brighten and strengthen the Colour.

Gummi Gutta, Gutta Gamba, Gut-Lemery. ta Gamandra, &c. or *Gamboge*, is a resinous Gum brought us from *India* in large Rolls or Cakes that are hard, but brittle and extremely yellow: The Gum flows by Incision from a Sort of thorny creeping Shrub, that runs up a-height, and winds itself about any neighbouring Trees: The Trunk of it is thicker than a Man's Arm; and the *Indians* by cutting of it, gain a concremented Juice, which being of the Consistence

of a PASTE, they mould into what Form they please. Some Authors hold that the Plant which produces this Gum, is a Kind of *Lathyrus*, and that the Leaves are as thick as those of the *Barba Jovis*, or the greater Houfleeck. It ought to be chose dry, hard, brittle, clean and of a deep Colour: It purges strongly upwards and downwards, and ignorant People should not be too busy with it.

6. Of Gum-Arabick.

THE *Gum-Arabick, Theban, Baby-lonish*, or the *Egyptian* Thorn call'd *Pomet. Acacia*, which is the Name of the Trees which produce it, is a whitish, transparent Gum, which flows from several little Trees that are very prickly, whose Leaves are so small, 'twould be difficult to count them; and that grow in the happy *Arabia*, from whence it is call'd the *Arabian Gum*. This is brought to *France* by the Way of *Marseilles*: But since the *Gum Senega* has been brought us, the true *Gum Arabick* is become so scarce at *Paris*, that you can hardly meet with any.

Chuse such as is white, clear, transparent, and the dryest and largest Drops that can be got, especially for Treacle, which is the chief Use of it. This Gum is us'd with good Success for several Infirmities of the Lungs, and to soften the Sharpness of Coughs; for which Reason several People make it the Basis of the Liquorice Juice, especially at *Blois*, tho' very improperly; not only because it will not answer, but because they pay dearer for that which is worth nothing, and where they use *Gum Arabick*, there they likewise use *Senega Gum*.

Gummi, Arabicum, Thebaicum, Babylonicum, Achantinum, Saracenicum, is a Gum that is brought to us in large Tears, or white Pieces, inclining sometimes towards a yellow, clear, transparent, and glewy in the Mouth, without manifest Taste: It flows by Incision from a little thorny Tree, call'd *Acacia*. This is a noble Tree growing in *Egypt*, and cultivated in several Gardens of *Europe*, having Sprigs and spreading Roots, and a Trunk rising six Fathom Height, solid, full of Branches

ches and Boughs, arm'd with strong and stiff Thorns or Prickles; the Leaves are small and fine, growing by Couples on each Side of a Nerve or Rib, that is two Inches long: The Thorns or Prickles are of a bright green Colour, a quarter of an Inch long, and the twelfth Part of an Inch broad; out of whose Wings the Flowers come forth in round Heads, resting upon a Foot-stalk an Inch long; they are of a golden Colour, single-leav'd, of a fragrant Smell; and from a small narrow Pipe, enlarging themselves to a wide-mouth'd Cup with five Notches, adorn'd in the middle with a numerous Train of Threads, or small Chives, and a Colour inclining to a reddish, two Inches long, and bending or crooking, after the Manner of a Bow, in whose Cavity are several Partitions, distinguish'd with fungous or spongy Membranes, of a whitish Colour, containing Seeds that are of an oval Figure, flat and hard.

The greatest Part of the Gum we call *Arabick*, that is in the Druggists Shops, comes not from *Arabia*, but is only a Gum that is like it in Figure and Property, that is brought from *Senega*, or rather a Collection of several aqueous Gums, found upon several Sorts of Trees, as Plums, Cherries, &c. all which are in some Measure, pectoral, moistening, cooling, agglutinating and sweetening; proper for Rheums, Inflammations of the Eyes, Looseness, &c. The true *Gum Arabick* falls by little and little from the Trees, especially in Time of Rain; and agglutinates or sticks together in large Pieces, that are fine, clear, white and transparent; and this is call'd *Gum Turick* that is us'd by the Silk Dyers.

7. Of Turick Gum.

THE *Turick Gum*, or that of *Turis*, is no other than the true *Gum-Arabick*, fallen from the Trees in a rainy Season and mads'd together; which is brought from *Marseilles*, where it is freed from the great Lumps, that weigh sometimes more than five hundred Weight, which happens from their close Stowage in the Ships that bring 'em over. Chuse the dry, clean, bright and transparent *Gum*, and the whitest you can

get: This *Gum* is much us'd by the Silk Dyers.

8. Of the Vermicular Gum.

THE Vermicular, or Worm-like *Gum*, is one of the *Arabian* or *Senega Gums*, which falls from the Trees twisted, and remains in the Figure or Shape of a Worm, from whence it takes its Name. Chuse the white, clear, and transparent, in little Windings; the dry and true *Arabick*, especially for the Treacle, which is the principal Intention of it.

9. Of English Gum.

THE *English Gum* is a white *Arabick*, or *Senega*, dissolved in a little Water, and reduced into the Nature of Paste, after having spread it upon a Stone oil'd, of what Thickness you please, and then leaving it to dry a little; that is to say, to the Consistence of *Flanders Glue*; after that you may cut it as you please, and dry it. This *Gum* is made to curl Hair, and upon that Account is call'd the curling and *English Gum*, because the *English* first made it.

10. Of Gum-Senega.

THE *Senega Gum*, which we commonly call *Gum-Arabick*, and which is sold at this Time in our Shops, is a *Gum* which flows from the Trunk and large Branches of several Trees, furnish'd with Thorns and very small green Leaves, and white Flowers, from whence arises round and yellow Fruit resembling Figs. These Trees grow plentifully in several Parts of *Africa*, in *Guinea*, &c. from whence this *Gum* is brought from *Senega* by the Blacks, or the white Men, that come from the Mountains, and who carry them on their Back, or on Camels, in Panniers made of Palm-Leaves; from whence they are sent by the Merchants to several Ports of *France*.

11. Of the Country Gum.

THIS is such as the Peasants bring to *Paris*, which they gather from their Fruit-Trees, as Plums and Cherries, that come forth

forth from the Trees in the same Manner with the former, and are so much like some of them in Colour, Form, Substance and Nature, or Disposition, that they are not to be known afunder; so that many People believe that they are all but one and the same thing, however they have all one and the same Quality and Operation, and are us'd to cure Coughs, Colds, Catarrhs, Hoarsenesses, Shortness of Breath, &c.

12. Of Gum-*Tragacanth*.

THIS *Gum*, which we usually call *Pomet*. *Traganth*, or *Tragacanth*, is a white curl'd *Gum* made like little Worms. The Shrub which belongs to it, is small and prickly, supplied with very little Leaves of a whitish Green, which the People of *Marseilles* call *Fox-Beard*, or *Goat's-Thorn*. This *Gum* flows by the cutting of the Trunk, and the thick Roots of these little Shrubs that grow numerous in *Syria*, especially about *Aleppo*.

This Shrub has Roots, according to *J. Baubinus*, that dive deeply into the Ground, friggly, and of a brown Colour, sending forth several Twigs, running and spreading along the Surface of the Earth, in a round Figure or Circle, with coupled Leaves growing upon a Rib, ending in a sharp Thorn or Prickle. They are of a roundish Shape, of a whitish Colour, and soft. The Flowers are papilionaceous, of a whitish Colour, inclining to a blue, and running together in round Heads; unto which succeed Cods, that are cover'd with white Hairs, and distinguish'd into two Apartments, in which are contain'd Seeds of the Shape of a Kidney. There is nothing that grows more frequently upon the Sea Coast, about *Marseilles*, and upon *Harper's Point* or *Cape*, nigh *Toulon*, than this Thorn. This *Gum* issues out of the wounded Roots of this Thorn, running together in Lumps of different Sizes, some bigger and some less; some very clean and clear like *Ising-Glass*; others again looking more blackish and foul: Both this and *Gum-Arabick* thicken the Humours, and moisten; but they are chiefly us'd for the Incorporation of Powders, and are dissolv'd in *Rose-Water*, and the like, and a *Mucilage* extract-ed thence.

Tragacanthum, or *Dragacanthum* *Gum-Traganth*, is a white, shining, *Lemery*. light *Gum*, in little long Pieces, slender and curled, or winding, in the Nature of Worms: They cut by Incision the Root and Trunk of a little Shrub, call'd by the same Name *Tragacantha*, or *Spina Hirci*, *Goat's Thorn*: It bears several hard Branches, cover'd with Wool, and furnish'd with white Thorns, and very small thin Leaves, rang'd in Pairs, and ending in a whitish Thorn. The Flowers grow on the Tops of the Branches, join'd several together, that are leguminous, and like those of the little Broom, but white. After they are gone succeed Pods, divided each into two Partitions, full of Seeds, the Size of that of Mustard, and the Shape of a little Kidney: The Root is long and stretches wide; it is as thick as one's Finger, white and woody.

13. Of *Camphire*.

C*Amphire* is a resinous and very *Pomet*. combustible *Gum*, of a penetrating Smell, and easy to dissipate into the Air, because of the Sulphur and volatile Salt, of which it is compos'd; which flows from the Trunk and large Branches of several great Trees, that have Leaves like those represented in the Figure hereof, whose Original is in my Hands, which was given to me by *Mr. Tournefort*: These Trees grow plentifully in the Isle of *Borneo*, and other Parts of *Asia*, and in *China*.

The Inhabitants of the Places where these Trees grow, cut the Trunk, from whence flows a white *Gum*, which is found at the Foot of the Tree in little Cakes, and which is brought into *Holland* to be refin'd. This *Gum*, as it comes from the Tree, and as it comes out of the Country, is call'd *Rough Camphire*; which, to have its requisite Quality, ought to be in brittle Pieces; and being clean'd shou'd be like white Salt, of the Smell mention'd before, the driest and least impure that may be.

This rough or unrefin'd *Camphire* is sometimes to be met with at *Rouen* and *Paris*, from whence it is sent to *Holland* to be refin'd, because no Body else will take the Pains or trouble to do it but the *Hollanders*.

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I wonder what all our Chymists have thought on, that they never yet have inserted into their Books the Manner and Way of Refining *Camphire*: Yet nevertheless some believe that the *Camphire* we sell is just the same as is drop'd from the Tree, which is wide of the Truth, since the rough *Camphire*, as it comes from the Tree, is in Pieces of different Sizes, and more like white Salt that is very dirty; and that we sell is in Cakes made in cover'd Pots, that is white, clear, and transparent; which lets us understand it has been work'd, and could not come so from the Tree: And for the Satisfaction of the publick, I will lay down the Manner of refining it, which was never told me by any Person, but as I discover'd it by Experience.

They refine or purify rough *Camphire* by putting it into a Matras, or other subliming Vessel, after it is pounded, and after half the Vessel is fill'd with the Powder, they stop it lightly; then they place it upon a gentle Fire, and presently the more subtil Parts of the *Camphire* rise and cling to the Top of the Vessel; and when all is sublimed, they find it fine, white, transparent, and thick, according to the Quality of the unrefined *Camphire* that was employ'd. After Sublimation they meet with a *Caput Mortuum* at the Bottom of the Vessel that is of no Value. There adheres to the refin'd *Camphire* a *Camphire* that is extremely white, and all in little Grains, which is likely what would not incorporate as the other. Likewise, as the rough *Camphire* is common enough among us, I know no Necessity we lie under, to let it all pass thro' the Hands of the *Dutch*, to make it either useful for Medicine, or other Purposes; as Fireworks, or the like. As to its Virtues, Mr. *Lemery* says, the Oil is very valuable for the Cure of Fevers, being hung about the Neck, in which scarlet Cloth has been dipp'd: This Oil is made by the Assistance of Spirit of *Nitre*, that makes it of an Amber Colour; and this is wonderfully recommended in Pains, and where the Bones are carious.

Others are of Opinion, that the *Camphire* of the Shops, is obtain'd from a Tree that rises the Height of a Man, being furnish'd with a Number of Branches and Boughs, spreading far abroad, and bearing Leaves that grow very thick, and close by one ano-

ther, not much unlike the Leaves of the common Bay-Tree, being bright, smooth, and somewhat curl'd and wav'd about the Edges; of a dark green Colour, a sharp aromack Taste, and of a strong vehement Smell: But none as yet has given a perfect or accurate Description of the Flowers of this Tree; yet it is certain that a Fruit succeeds to the Flowers coming out of a longish Cup: Within this Fruit there is enclosed a round Shell of a blackish Colour, inclining to a brown, but not very hard, containing a fourish Kernel, cloven in two, being fat, of a biting aromack Taste, but not unpalatable. This Tree grows plentifully in the Country of *Japan*. *Camphire* is extracted from the Roots of this Tree; they cut the Roots into small Pieces, and throwing them into a Brass Kettle, they cover it with a Lid that is broad at the Bottom, and tapering, sharp or narrow at the Top, like the Head of an *Alembick*, and putting the Kettle over the Fire, that volatile Salt, the *Camphire*, ascends and cleaves to the Cover or Lid. This *Camphire*, at first, is of a fordid whitish Colour, and very foul; but after the *Hollanders* have refin'd it by the help of Fire and Glass Vessels, it is so order'd and elaborated, that it becomes transparent.

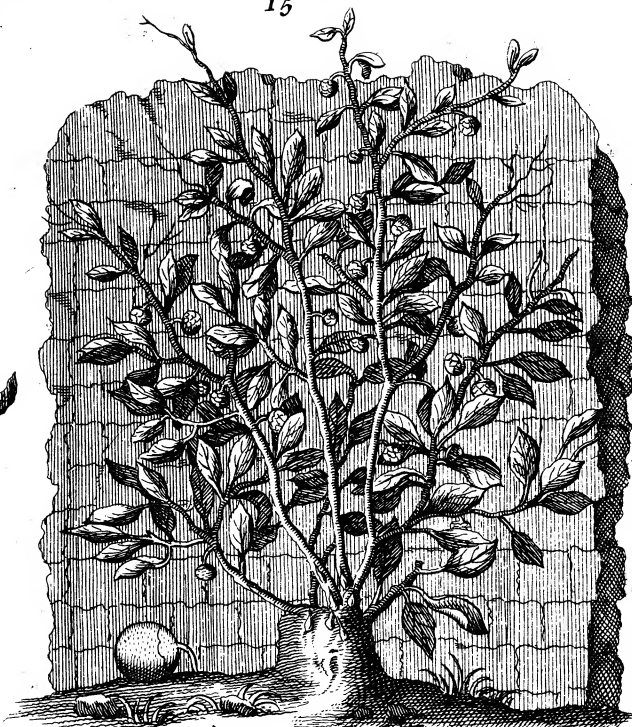
Some say that *Camphire* sometimes flows naturally or spontaneously from the Trees, or else by making deep Incisions into them; but the best *Camphire* is drawn from the Roots of the *Cinnamon-Tree*, as others aver: Chuse such as is white, transparent, brittle, dry, of a biting pungent Taste, and that smells like *Rosemary*, but much stronger: It is a true oleaginous volatile Salt, abounding with Sulphur, whence it easily dissolves in Water and Spirit of Wine. This Medicine provokes the Courses, and assists wonderfully in Suffocations of the Womb: Besides its Faculty of subduing *Hysterick Distempers*, it is also anodyne, procures Sleep, and resists Putrefaction; upon which Account it is often prescrib'd in malignant Fevers, and after the Use of Emeticks, to refresh and restore the fainting and drooping Spirits. Spirit of Wine camphorated, may be taken inwardly to a Spoonful, and outwardly it powerfully resolves, discusses, and not only prevents, but also cures a *Gangrene*. An Oil is prepar'd from it besides that mention'd, by dissolving

14



Benjamin.

15



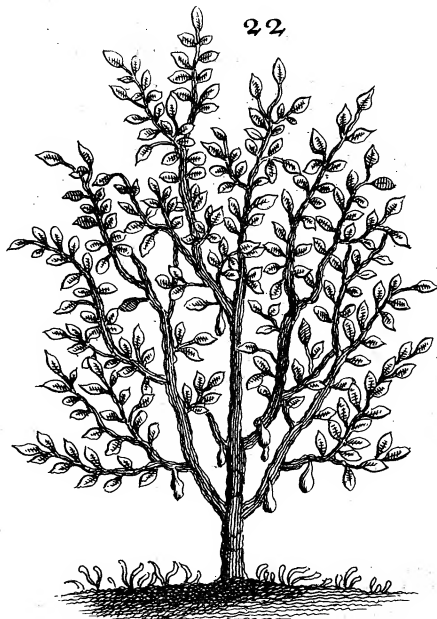
*The Storax Tree y' creeps upon
y' Wall.*

20



Myrrh.

22



Asa Fatida, or Devils dung.

solving it in the highly rectify'd Spirit of Turpentine, which is an efficacious Medicine against Rheumatism, Sciatica, or Hip-Gout: It is used in the white Troches of *Rhazes*, the Ointment of *Cerusse*, in the red deficcative Ointment, in the Cerate of *Sanders*, the Styptick Plaister of *Paracelsus*, &c.

Camphora seu Capbura, or *Camphire*. *Lemery*. is a Kind of white light Rosin, that is very volatile, combustible, of a strong penetrating Smell, that flows from the Trunk and large Branches of a Tree resembling the Cherry Tree, that grows in the Isle of *Borneo*, and in *China*: This *Camphire* is found at the Root of the Tree, where it is form'd into Pieces or Lumps of different Sizes, which is call'd rough or unpolish'd *Camphire*; this is refin'd by subliming it over a gentle Fire, as hath been already hinted.

There are some who affirm the *Camphire* to be a Gum that distils Drop by Drop, from a great Tree much like a Walnut-Tree in *China*, and in the Islands of *Japan*, *Fava*, *Borneo*; from which last Place, the best is said to come, and other Parts of the *East-Indies*, from whence it is brought to us in *Duppers*, and Cakes unrefined; which when purified, is of a white Crystalline Colour and a strong odoriferous Smell, volatile in Quality, and ready to dissolve in oily and spirituous Bodies: Being set on Fire, it is almost unextinguishable, burning not only in the Air, but Water, and therefore is a proper Ingredient for all Sorts of Wild-Fire.

That which is brought out of *China*, is in little Cakes, but is not accounted so good as the *Bornean*. It is so very subtle and volatile, that it is difficult to keep it from losing itself even in Quantity and Substance, unless it be close stop'd up in Glass Bottles: This is an excellent Remedy for Hysterick Fits and Vapours, being smell'd to, us'd Clysterwise and given inwardly from three Grains to six in any convenient Vehicle; it is also good in continual and intermitting Fevers, whether Putrid, Malignant or Pestilential, being given inwardly, or hung about the Neck; because being of such subtil Parts, it insensibly enters into the Pores, and causes a Rarefaction and Perspiration.

There are several Preparations of *Cam-*

phire, but not one of them exceed the pure Substance itself, or a bare Dissolution of it, because of the Purity and Fineness of its own Body: As the Oil, simple and compound, the essential Spirit, the *Camphire* terebinthinated, Troches, and the like, which rather debase than exalt this noble Medicine to a higher Pitch of Excellency: It is certain this abates Lust, resists Inflammations, and prevents Gangrene; the two first of which are apparent from the great Power this has to overcome the Force of the *Cantharides* inwardly taken, and to render them so far from being dangerous, that they become the most efficacious Remedy in Practice.

14. Of Benjamin.

THIS is a Gum that flows from the Trunk and large Branches *Lemery*. of a great Tree, by the Incisions made into them; the Figure of which is agreeable to that drawn of it under this Head, and which grows plentifully in *Cochinchina*, chiefly in the Forest of the Kingdom of *Lao* and *Siam*: By Reason the Attendants of the Ambassadors of *Siam*, brought a great Quantity to *Paris*, where it was sold at a good Price.

The Description of *Benjamin* will not fail to surprize those who have never seen *Benjamin* as it came from the Tree, and stuck to the Bark, having seen no other at *Paris*, but a Quantity of different Sorts of *Benjamin*; the first of which Kind is that we call the *Benjamin* in the Tear, or gross Mass, which is usually clear and transparent, of a reddish Colour, mix'd with white Spots, as Almonds that are beat, whence it is call'd the *Amygdaloides*, or Almond *Benjamin*; this is the best Sort, and is said to come from *Sidon*, and *Samarina*; but that which is brought to us comes from the *East-Indies*, from *Sunnatra*, and *Siam*, *Malabar*, *Surat* and *Fava*.

The second is the greyish, call'd *Benjamin* in Sorts, which, if good, ought to be clean, of a good Smell, full of white Bits or Spots, as resinous and little loaded with Filth as may be; but have nothing to do with the black, which is Earthy and full of Dross; and beware of the Artifice of having them all mix'd

mix'd together that they may fell the better. This Gum was not formerly us'd inwardly, either by the *Indians* or *Europeans*, but since Chymical Phyfick has been in Vogue the following Preparations are made from it, as a Tincture, Magiftery, Flowers, Cryftals and Oil. The Flowers according to *Lemery*, are made by putting the *Benjamin* into an earthen Pot, covering it with a Cone of Paper and tying it round about under the Border; then fetting it into hot Afhes or Sand; and when the *Benjamin* is heated the Flowers will afcend. Shift the Cone, and fweep off the Flowers every Hour or two, and keep them in a Bottle clofe ftopp'd. Note, that *Benjamin* being very full of volatile Particles, eafily fublimes over the fmalleft Fire, and the Flowers afcend in little Needles, very white; but if you give never fo little Fire more than you fhould do, they carry along with them fome of the Oil, which will make them yellow and impure; you muft therefore perform the Operation gently to have the Flowers fair, which will have a very pleafant Flavour and Acidity.

Thefe Flowers are, without doubt, the moft effential Part of the *Benjamin*, whose principal Virtues are as well to fubtilize bad Humours and expel them through the Pores of the Skin, as to loofen and expel the thick and vifcous by the ordinary Ways, chiefly thofe of the Breaft and Lungs: Dofe from three Grains to ten in any proper Liquor. They are profitable in vehement Catarrhs, Coughs, Colds, Afthma's, and Obftructions of the Lungs; procure Sweat excellently in venereal Cafes, given in a Decoction of *Guajacum*, and fortify a weak Stomach. From thefe Flowers a Tincture is likewife extracted with Spirit of Wine tartarized, whose fuphureous Parts have a good Agreement with the volatile Salt of the *Benjamin*; fo that this Spirit not only extracts a Tincture from the Flowers, but from the buttery Subftance of the Gum, much more pure and fubtle, and which will work in lefs Quantity than the Tincture drawn out of the crude or grofs *Benjamin*.

Benzoinum officinarum, *Ben fu-Lemery*. *daum*, or *Afa dulcis*, the *Benjamin* of the Shops, is a refinous Subftance running together into large Lumps or Clots, being bright, fhining, of a brown

Colour, without Filth or Dregs; brittle, and eafily crumbled into Bits, adorn'd with feveral white Flakes or Specks, like the inner Subftance of Almonds, inflammable or eafily taking Fire, and odoriferous, or yielding a fragrant Smell.

Benjamin is moft esteem'd of when it is very clear, and almoft transparent, of a light brown Colour, inclining to red, and plentifully furnifh'd with white Flakes; that which is black is not fo much valued: This is brought from the *East-Indies*, but more particularly from *Sumatra* and the Kingdom of *Siam*. The *Benjamin Tree* is large, tall and beautiful, as *Garcius ab Horto* relates, bearing the Leaves of the *Citron*, or *Lemon-Tree*, but smaller, and not fhining fo much, being whitifh upon their under Side.

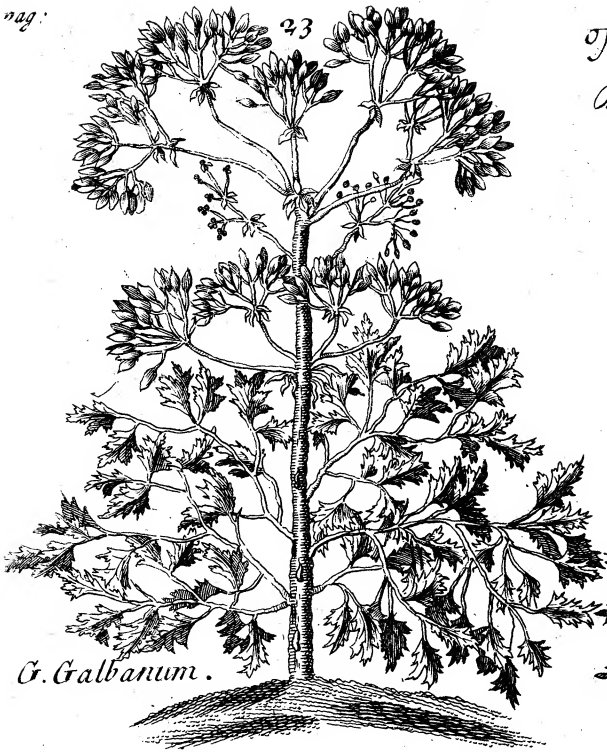
A Tree bearing the Leaves of the *Citron* or *Lemon-Tree*, and dropping *Benjamin*, which feems to answer the Description of *Garcius*, was not many Years ago fent out of *Virginia*, by Mr. *Banifter*, to the Right Reverend *Henry* Lord Bifhop of *London*, which grows now in the Royal Garden at *Paris*, being the Gift of the aforefaid Bifhop. It flourifhes in the Beginning of the Spring, but has not produc'd any Fruit as yet. *Benjamin* promotes Expectoration, and is of great Force and prevalence in the *Afthma*, or Stoppage of the Lungs, and a lingering phtifical Cough; but chiefly the Flowers of it, which being frefh and new made, may be given from fix Grains to twelve: They are likewife endued with a Virtue to provoke Urine and Perfpiration, and the following is proficuous in a Pleurify. Take *Carduus*, and red Poppy Water, of each three Ounces; Flowers of *Benjamin*, ten Grains; of the Oil of *Cinnamon*, two Drops; Syrup of red Poppies, one Ounce; make a Potion to be repeated according to the Nature of the Difcfe, twice or thrice in twenty-four Hours.

15. Of Red Storax.

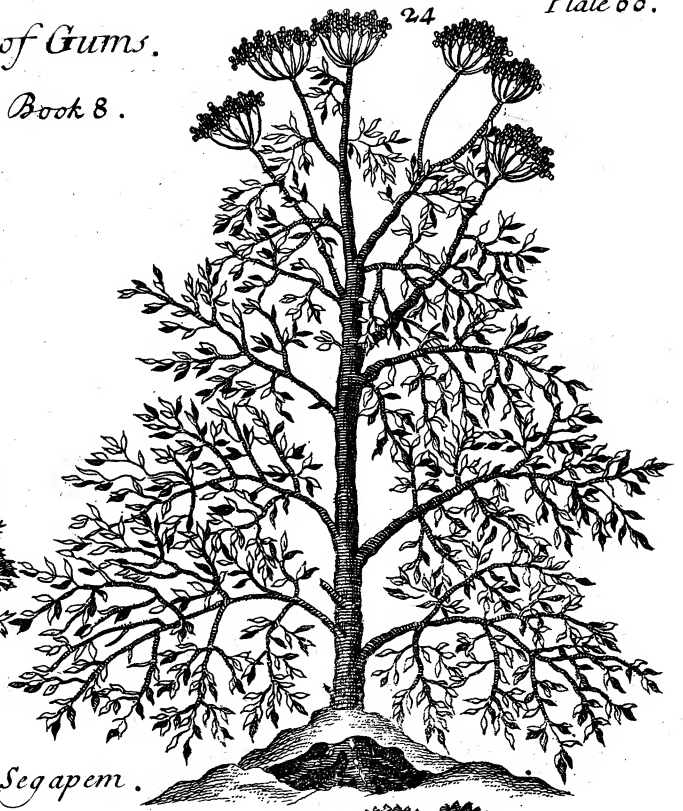
THE *Red Storax*, or *Frankincense* of the *Jews*, which is brought *Pomet*, very common among us, is a Rofin iffuing from the Trunk and thick Branches of a Tree that is of no great Height, but whose Leaves refemble thofe of the *Quince Tree*,

of Gums.

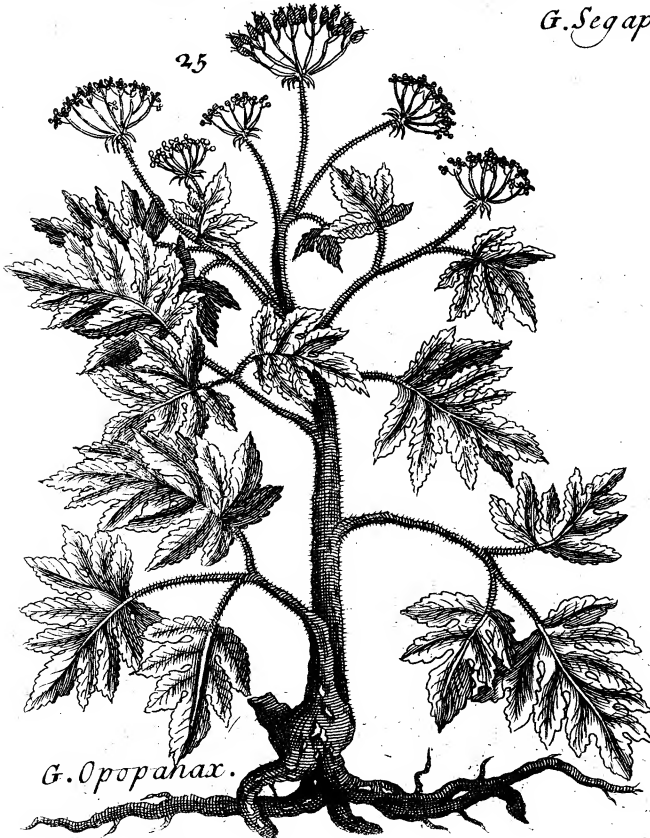
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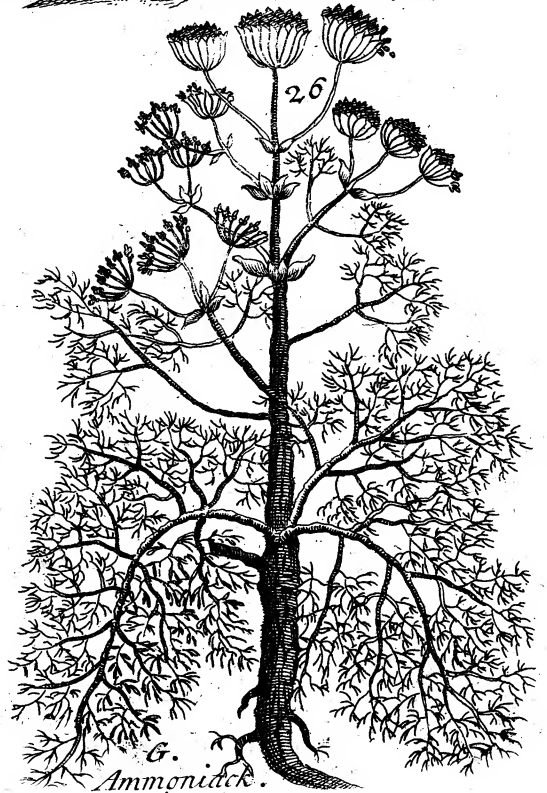
G. Galbanum.



G. Segapem.



G. Opopanax.



G. Ammoniac.

Tree, only that they are smaller, and the Fruit of the bigness of a Filbert, in which is contain'd a white Almond or Kernel that is oily, and of a Smell entirely like the *Storax*. And tho' this is not to be met with but by Accident, it gives occasion to several to believe that the *Storax* comes from these Nuts.

This Gum is brought us by the way of *Marseilles*, from several Parts of *Syria* and the *Levant*, where those Trees grow plentifully. Chuse that which is run together in Lumps or Clots, of a red Colour, with some small whitish Lumps interspers'd, sweet, and of a fragrant smell; but reject that which is dry, black, branny, or foul, and without Smell, but like the liquid *Storax*; as also refuse the *Storax* in the Cake or Roll, which is a Composition of liquid *Storax*, and abundance of other Druggs of little worth; as also that which is in Dust, but nothing else but the *Saw-Dust* of the Wood. *C. Bauhinus* says, it is about the bigness of the Olive Tree, and grows in the Woods of *Provence* in *France*, between *St. Magdalen* and *Toulon*: In its Trunk, Bark and Leaves, it resembles the *Quince-Tree*. The Flowers grow upon small Twigs or Scions that last but one Year, being not much unlike the Flowers of the *Orange-Tree*; but single leav'd, having their lower Part fistulous, and their upper Part starr'd with a hollow Cup, and Bell-fashion'd, containing a round globous Pointal, that passes away into a Fruit of the Bigness and Shape of a *Filbert Nut*, being thick and pulpy; at first of a sweetish Taste, but afterwards turning bitterish, in which is contain'd a Stone or two that is very hard, inclining to a white Kernel.

16. Of Cane Storax.

THE *Cane Storax*, or that in Tear or Grains, which we have from *Marseilles* or *Holland*, is a reddish Mass, full of white Grains or Bits, and sometimes that are separated, that is to say, that is all in white Tears within, and reddish without, of an indifferent Consistence, of a sweet fragrant Smell, almost like Balsam of *Peru*.

Storax Calamita is of a resinous Substance, fat, clammy, soft in handling, of a most fragrant Smell, and a reddish Colour: The Best

is that which is in Grains, and with some white Fragments in it, or yellowish, with a very sweet Scent, and that yields like Honey when softened. That is worse which is mix'd with Bran, but that which is mix'd with Sawdust, or is black and mouldy, or without Scent, is worst of all and naught. *Matthi-olus* says, it is a concreted Rosin from a Tree, dry and sweet, and is call'd *Storax Calamita*, from the *Calami* or *Canes* brought from *Pamphylia* with it.

Mr. *Charas* says, he believes that the *Storax* which is brought to us, and which they pretend to bring out of the *East*, is not the true *Storax*; the high Price at which it has been sold for these many Years, has encourag'd the Villany of those Cheats, and the Trials which he had made thereof, had convinc'd him. It cannot, says he, be counterfeited with *Galbanum* or *Ammoniacum*, because of their strong Scent, whereas *Storax* is very pleasing and odoriferous; but doubtless, it may be adulterated with the white Tears of Benjamin, or some resinous Gum without Scent, or which may easily be outscented by the *Storax*: To which purpose, continues he, I have thought fit to publish what I have experimented, *viz.* That having *Storax* in Tears by me, whose Smell, Taste, Colour, Form and Body were such as are required in the true *Storax*, I undertook to soften one Tear in my Hand, intending to incorporate it afterwards with other Druggs of a resembling Substance: I was astonish'd when I found all the good Scent of the *Storax* in my Hand to be lost, and the same Tear not fit to impart any Scent or Virtue to the aromatick Balsam I was making: Therefore trusting neither to the *Storax* made up like Bowls, which is encreas'd with liquid *Storax*, nor to the other full of *Saw-dust* which is sold in the Shops; I chose a *Storax* of a very delicious and fragrant Scent, full of Grains or little Tears and free from Dirt, out of which I extracted the Gum thus: Take of this *Storax* eight Ounces, put it into a Pipkin with a Pint of White-wine, place it over the Fire, and stir the whole gently with a *Spatula* till it is sufficiently dissolv'd; put it out immediately hot in a strong Bag, tye it hard just above the Gum, and press it out between two hot Plates; so will you have about two Ounces of pure Gum, both

fair and fragrant, and every way exceeding all the Sorts of *Storax* in Tears.

It is emollient, digestive, cephalick, neurotick and pectoral; cures Coughs, Catarrhs, Hoarfeness, Heaviness, Barrenness and Hardness of the Womb: Taken with Turpentine as a Pill, it opens the Belly, and after an excellent manner eases the Pains of the Stone, and takes away all Obstructions of Urine by Sand, Gravel, &c. Outwardly it is vulnerary, discusses Tumours, eases all Sorts of Pains and Aches, and stops Catarrhs, used as a Fume. The Tincture of *Storax* has all the Virtues of the Gum, stops *Gonorrhœa's*, and is said to be a Specifick against Barrenness in Women: It is a Cordial against fainting Fits, and also good in Diseases of the Head, Brain and Nerves. The Pills made up with this Gum and *Chio* Turpentine have all the Virtues of the Gum, stop Gleetings in Men and Women, ease Pain in making Water, and remove all Obstructions of Urine. Dose from a Dram to two Drams. There is an acid Spirit drawn from it that is aperitive and very penetrating, and the yellow Oil is good against Palsies, Numbness, Convulsions, &c. either inwardly taken to three or four Drops, or outwardly applied to the Part affected: The red Balsam made of the *Storax* has the same Virtues, but is not so subtil and pure, and so is seldom given inwardly.

17. Of Liquid Storax.

Pomet. THE Liquid *Storax* is compos'd of four Ingredients dissolv'd together; which are *Storax*, a kind of Turpentine, Oil and Wine, beat up in Water to the consistence of an Ointment, of a greyish Colour like Potter's Clay. Chuse your Liquid *Storax* as grey as may be, that has the *Storax* Smell, of a good Consistence, and as little of Filth and Dirt as may be: Its Use is in Surgery, especially for an Ointment that bears its Name, and is much us'd in the Hospitals, especially *Hotel Dieu* in *Paris*, where it serves them very successfully in the Cure of the Scurvy, Wounds and Gangrene: The Perfumers use it but seldom, if they can get the other *Storax*.

This is a fat Balsam-like Substance, much thicker than *Venice* Turpentine, of a strong

Smell, and of a whitish Colour, which is kept in Water, because of its Clamminess; it is brought us from the *Streights*; that this *Storax* differs much from the other, is apparent. *Matthiolus*, *Dioscorides* and *Baubinus*, are of Opinion, it is the Composition before describ'd; but *Serapio* will have it to be an Exudation from the Kernels or Fruit of the Tree: *Avicen* will have it from the Bark, and *Gerard* a Liquor or Gum that falls from the *Storax-Tree*, and will never be hard: *Parkinson* saith, that none of the Ancients have made Mention of any such Thing, and says, it is assuredly some other Thing, of which, as yet, we have no Knowledge: But whether we know the Original of it or no, it is less Matter, since we know the Thing; and by manifold Trials, the medicinal Uses thereof. Inwardly taken, it opens Obstructions, discusses Wind, expels Vapours, helps hysteric Fits, eases the Colick, and provokes Urine: Dose from half a Dram to a Dram, in Pills or a Bolus. Outwardly, it is good against Sciatica, Palsy, Contraction of the Joints and Nerves, Bruises, Wounds, Ulcers, &c. made into a Balsam or Plaister.

18. Of Pastiles.

THE Pastiles for burning, are a Composition of *Benjamin* and *Pomet. Storax*, dissolv'd together over a small Fire as quick as may be: They are form'd into Tables of what Shape you please, and are in Goodness according to the Materials of which they are made; as some add Musk, Civet and Ambergrise: In short, they are made richer and meaner, as the Maker will afford; but the most usual Additions are *Liquid Storax*, *Rhodium* and *Laudanum*; and to make 'em black they seldom use any thing else than Charcoal: Mr. *Charas* mentions three Sorts, which may be found in his Book of Chymistry, Page 1057, where he calls them *Trochisci Odorati vel Aviculæ Cypræ*.

19. Of Virgin Milk.

BESIDES the *Virgin Milk* made with *Lytbarge*, we make another *Pomet. Storax*, from Tincture of *Benjamin* and

Storax, which is what the Surgeons and Barbers use, by reason of its pleasant Smell. This Tincture of *Benjamin* and *Storax* is call'd *Virgin Milk*, because when it is put into Water, it will turn it white as Milk. Those who would have their *Virgin Milk* fine, use Balsam in the Shell, and *Storax* in Tears; to which they add Musk, Civet and Ambergrise. There are some who value not the Smell add Myrrh, because they suppose it good for taking away red Spots in the Skin. This Tincture ought to be very fine, red, clear, and very fragrant, smelling the least of the Spirit of Wine that is possible.

Styrax or *Storax*, is a fragrant Lemery. resinous Gum, whereof there are three Sorts: the First is call'd *Styrax ruber*, or the *Red Storax*; and by some Thus *Judæorum*, the *Jewish Frankincense*, because they believed that it was the *Frankincense* which the *Magi* carry'd to the Saviour of the World. This Gum is in the Mass reddish or yellow, which they draw by Incision from a Tree of a moderate Height, call'd *Styrax Arbor*, by *Gerard* and *Ray*, and *Styrax folio Mali Cotonei*, by *C. Baubinus* and *Tournefort*. This Tree is like that of the Quince, but the Leaves are much smaller, oblongish, firm, green without, whitish within, supplied with a great deal of Wool: The Flowers grow upon the Branches, collected several together; each of which, according to *Mr. Tournefort*, is a Funnel open at the Top, and cut into several Parts, dispos'd round, that makes a jagged Cup of several Points: When the Flower is gone, there appears the Fruit of about the Size of a Filbert, that is white and covered with a fleshy Rind, the Taste something bitterish; and under this Rind or Shell, are two or three hard strong Kernels, full of a soft oily Seed, that has a Smell like the Gum *Storax*, and an unpleasant Taste: The Gum ought to be chose neat, soft, fat, of a sweet, pleasant, aromack Smell; that which is too dry, is sometimes full of the Saw-dust of the Wood of this Tree, and other Impurities.

The second Sort of *Storax* is nam'd *Calamita*, because it is often brought in Reeds to preserve its Beauty and Smell: Sometimes it is brought us in reddish Lumps, full of white Specks; sometimes in separate Tears, which

if fine you ought to chuse, or else such as come in clean small Bits, that are reddish without, and white within, and that smell like Balsam of *Peru*: These two Sorts contain a good deal of Oil, and some volatile Salt; are proper to strengthen and refresh the Brain, Nerves and Stomach, resist malignant Humours, and mollify the Hardness of the Spleen, Glands, &c. The third Sort is *Liquid Storax*, which is an oily, viscous, gross Matter, having the Consistence of a thick Balsam, being made up of several Bodies incorporated together; and is emollient and very resolute, and revives the Brain by its Smell, but is seldom apply'd otherwise than externally.

20. Of the Abyffine Myrrh.

MYRRH is a resinous Gum that flows from a little Shrub that *Pomet*. is very thorny; by Incisions that are made, into clear transparent Tears of a white Colour, that in growing older become of a deep red. These small Trees, whose Leaves come near in likeness to the young Elm, grow plentifully in the *Happy Arabia*, *Egypt*, and *Africa*, especially amongst the *Troglodytes*, from whence it derives its Name, as well as that from *Abyssinia*; because they gather a great deal in the Kingdom of the *Abyssines*, or *Presters John's* Dominions. Chuse the finest Tears, of a golden yellow Colour, clear and transparent, apt to crumble, light, bitter to the Taste, of a strong Smell, pretty disagreeable; and also that which is the true *Stacte Myrrh*, or that in Tears, that flows spontaneously from the Tree.

They ought to be undeceived who believe, according to what a new Author has advanc'd, that all the *Myrrh* the Druggists sell, has none of the requisite Qualities it shou'd have; and as for the little the Apothecaries sell, it is not worth speaking of; but we may be satisfied there is enough to answer our Intentions, if we get that in small Pieces, Lumps or large red Tears clear and transparent, that when it is broke, has little white Spots in it: This is brought out of *Turkey* and *Æthiopia*, from whence comes the best Kind, being of a bright, yellowish,

or red Colour, somewhat clear, brittle, of a biting and very bitter Taste, a strong Smell, fat, resinous and mark'd within, with white Specks: It is also either firm and solid, which is properly call'd *Myrrha*; or liquid, which according to *Dioscorides* is call'd *Stacte*, which is first so gather'd from the Tree without force, and also press'd from the *Myrrh*, as the Oil of *Liquid Amber* from the Rosin of that Name.

There is prepar'd from it, an Extract, an Oil or Liquor of *Myrrh*, Troches, and an Oil by Distillation: As to the Liquor, *Lemery* says, it is the more soluble Part of the *Myrrh* moisten'd with the Humidity of Whites of Eggs, and the moist Place in which it is made, which is generally a Cellar; and in his Opinion this is the best Oil yet invented: for if it be drawn by Spirit of Wine or Distillation in a Retort, it is so torrifed that it loses its best Parts; whereas *per Deliquium*, what volatile Parts this Gum contains are preserved in their Natural Being, the Humidity joyn'd to it, not being able to alter its Nature.

Myrrh opens and removes all Obstructions of the Bowels, provokes the Courfes, and relieves all, or most Distempers incident to the Womb; being given in a Bole, Electuary or Powder, from six Grains to twenty. *Stacte* is that liquid Part which is found in the Center or Middle of the Lumps or Clots of *Myrrh*, when they are fresh and new, or squeeze'd from the *Myrrh*, as *Dioscorides* teaches. Besides its opening and antihysterick Faculty, it is likewise us'd with Success, in a Quinsy, Hoarseness, Cough, Pleurisy, Fluxes of the Belly and Quartan Agues: Outwardly, in Wounds, Tumours, Gangrenes and rotten Bones: It attenuates, discusses and resists Putrefaction. *Myrrh* has given a Name to the Troches of Myrrh; it is also us'd in *Venice Treacle*, in the Confection of Hyacinth, Pills of Agarick, the Divine Plaister, and in *Oxyroceum*.

Myrrha or *Myrrh* is a resinous *Lemery*. Gum, that flows by cutting a thorny Tree that grows in *Arabia Felix*, *Egypt*, and *Æthiopia*, in the *Abyssines* Country, and amongst the *Troglodytes*; for which Reason the best is call'd *Myrrha Troglodytica*. It ought to be fresh, in fine clear Tears, light, and of a golden yellow, or reddish Colour, having little white Specks

within, like those upon the Nails, of a fat Substance, a strong Smell, and not very pleasant, the Taste bitter and acrid; but as this Gum so chose is rare, it ought to be reserv'd for internal Uses, and the common may serve for Plaisters, Ointments, &c. It is aperitive by Urine, and a little astrigent by Stool, provokes the Courfes, and hastens the Birth, is an excellent Vulnerary and proper in Ruptures, both internally and externally apply'd. The *Myrrh* which the wise Men of the East presented to our Saviour, was likely a Drugg different from ours; for it is represented to us as a very precious aromattick Perfume, instead of which our *Myrrh* is common, and has neither Taste nor Smell that is agreeable. Some hold that it was the *Stacte*, of which I shall treat in its Order; others will have it to be the *Storax*: Others again pretend that it was a very scarce and fragrant Gum or Balsam, which had then the Name of *Myrrh*, and which is now unknown to us by that Name; but this is a Matter too difficult to decide here.

21. Of the Myrrha Stacte, or Liquid Myrrh.

THE *Stacte* or *Liquid Myrrh*, is that which was presented to our Lord and Saviour by the *Magi* or *Wise Men*, and which the Ancients call'd *Stacten*, or *Myrrha Stacte vel Electa*, whose Scent was very grateful; as is observ'd in the third Lesson of the Office of the Virgin, where it is said in express Words, *Quasi Myrrha electa dedi suavitatem odoris*. It was a fat unctuous Liquor, which is met with in Myrrh newly fallen from the Tree, as that which falls from young Trees, without Incision. But as at present this precious Merchandise or Commodity is altogether unknown to us; several Persons have invented an artificial *Liquid Myrrh*, by dissolving it in Oil, which they call the *Stacte Unguent*. Others make it thicker, and give it the Name of *Artificial Stacte*.

Stacte, *Stacten*, *Myrrha Stacte*, or *Liquid Myrrh*, is a Kind of Balsam or gummy Liquor, that is of a fragrant Smell, and collected from under young Trees that produce this *Myrrh*, and which drops from

it without cutting. The Ancients preserv'd this Drugg as a precious Balsam, and believed with just Reason that it was that Kind of *Myrrh* spoke of in the Gospel, and which the *Magi* brought to the Saviour of the World at *Bethlehem*, with Gold and Frankincense. This has the same Virtues with the other *Myrrh*, but more efficacious: Tho' the *Stacte* that we have brought us by the Merchants is oftentimes artificial, being made by dissolving *Myrrh* in Oil, and mixing a little Wax with it, to give it a Consistence.

22. Of *Assa Foetida*.

Pomet. **A** *SSA Foetida* is a Gum that flows during the Heats from the Trunk of a small Shrub, whose Leaves are like Rue, that grows plentifully in the *Indies*, especially about the City of *Utard*, where it is call'd *Hught*. It also comes from *Persia*, *Affyria* and *Libya*. There are some Authors who say, that the *Assa Foetida* which comes from *Persia* flows from a Shrub whose Leaves resemble those of Radish. The Natives of the Place cut the Trees just to the Roots, from whence runs a white Gum inclining to red, of a very stinking Smell; for which Reason the *Germans* call it *Stercus Diaboli*, or *Devils Dung*.

They chuse the *Assa Foetida* in Clots or Lumps, full of white Tears, dry, and which being fresh cut, will be of a yellowish white, that in a little Time after changes into a fine red, tending to a violet Colour, and whose Smell may be born with; and meddle not with that which is fat, nasty, full of dirt and Ruffles that come along with it. Likewise reject such as is black, and of such a disagreeable Smell, as it is scarce possible to bear it: This Drugg is of some Importance in Medicine, but more us'd by the Farrier than the Physician.

There are several other Names that *Assa Foetida* goes by; as the *Syrian Juice* or *Liquor*, the *Median*, *Persian*, &c. The greatest Part of it that comes to *France*, is brought from *London*, from whence we have it very full of Dirt, in the same manner as it is now sold in *Paris*; just as we have Oil of Turpentine brought us sometimes from *Provence*. They have such vast Quantities of *Assa Foetida* now and then in *London*, besides other

Druggs, that they have great Ware-Houses fill'd with these Kinds of Commodities.

Assa Foetida is a Gum in great yellow Clots, of a strong unpleasant Smell, that drops out of the Trunk of a Shrub, whose Leaves have a great resemblance to those of Rue: But *Bon* assures us, that it is press'd out of the Roots of a certain Plant growing in the Kingdom of *Persia*, not far from the Sea-Coast: And that there are two Kinds of this Plant, the first being a Sort of a Shrub bearing Twigs and Branches very much resembling the Willow or Osier: The *Assa Foetida*, says he, is press'd out of the Chives or Flowers of this Plant, being cut small and bruis'd, which afterwards is dry'd and harden'd. The second Kind of *Assa Foetida* is press'd out of the Roots of a Plant that sends forth very thick and stinking Stalks, bearing Leaves like those of *Spurge*. That of the Shops is a reddish Gum, consisting of whitish, and sometimes Carnation and violet-colour'd Drops, being of a bitter biting Taste, and a strong, vehement, rank Smell, like Garlick or Leeks; that is the best which is brought out of the Eastern Parts, in clear, pure, transparent Drops: It is adulterated with Meal or Flower of *Sagapenum*. This Gum is cephalick, splenetick, hyfterick and vulnerary; but chiefly us'd in Obstructions and Suffocation of the Womb, Obstructions of the Liver, Spleen and Lungs. It has been found a Specifick in the Epilepsy, Vertigo, Lethargy and other Diseases of the Head: Dose from half a Scruple to a Dram in Pills or otherwise.

This Gum will dissolve in Water, Vinegar or Wine, and therefore consists most of aqueous Parts, and has very little of Rosin in it; for which Reason it is not so often us'd with Spirit of Wine, as with aqueous Menstruums. *Schroder* says, if any be troubled with the Epilepsy, he ought presently to fit with his Head over the Fumes of *Assa Foetida*; this is generally taken inwardly in Pills or Tincture.

23. Of Galbanum.

G *Albanum* is a Gum that flows from the Root of a Plant which the Botanists call *Ferula Galbanifera*, or the

Pomet.
Fennel-

Fennel-Gyant, bearing the *Galbanum*, whose Leaves are, according to the Figure describ'd, taken from the Original which I have in my Hands, given to me by Mr. *Tournefort*: On the Top of the Stalks grow flat Seeds of the Size and Thickness of our Lentils, as is to be seen in the common *Galbanum*, where there is enough of it to be met with. This Plant flourishes in *Arabia Felix*, *Syria*, and throughout *India*.

We bring two Sorts of *Galbanum* from *Marfeilles*; to wit, that in Tears, and that in the Mafs: The first ought to be chose in fine Drops, yellow within, and of a golden Colour without, bitterish in Taste, and of a very strong Smell. The other Sort in the Mafs ought to be chose dry, clean, the most furnish'd with white Tears, and the least fetid that is possible: It is a Drugg much us'd in Physick, as well internally as externally.

Galbanum ought to be chosen fat, inclining to a reddish Colour, consisting of several whitish and shining Lumps which will not dissolve in Oil, but easily in Water, and is of a pungent bitter Taste, and of a strong Smell: It powerfully brings down the Courfes, cures the Suffocation of the Womb, expels the After-Birth, and helps to fetch away a dead Child. The Fumes of *Galbanum* are very prevalent against hysterick Fits or Vapours, and is given in Substance from half a Scruple to half a Dram. A Plaister made of *Galbanum* is very properly and profitably apply'd to the Belly or Navel in hysterick Fits or Vapours; or else the Navel may be anointed with the Oil in the same Cases. The *Galbanet* of *Paracelsus* being an effectual Medicine in a Palsy and Colick, is prepar'd after the following Manner: Take *Galbanum* one Pound, Oil of Turpentine half a Pound, Oil of Lavender two Ounces, dissolve and digest them in a Retort, with a sufficient Quantity of powder'd Lime; and keep the Liquor for Use. *Galbanum* outwardly apply'd, resolves and discusses Tumours; upon which Account it is apply'd by Way of a Plaister to venereal Bubo's, and helps to discuss all Sorts of schirrous Tumours.

Galbanum is a Gum whereof we have two Sorts, the one in yellow Tears or Drops, of a strong Flavour and unpleasent Smell, of a bitter Taste

and a little acrid. The other is in a large fatty and glutinous Mafs, full of Stalks and Drofs, and of a very stinking odour. Both Sorts flow by Incision from the Root of a Kind of Fennel-Gyant, which grows in *Arabia*, about the Height of a Man; the Stalk is chick and full of Pith, the Leaves broad and large, resembling those of Parsley: The Flowers grow in Tufts or Clusters, compos'd usually of five Leaves, made like a Rose at the End of the Cup; when the Flower is gone, the Cup becomes a Fruit, consisting of two very large Seeds, that are oval, flat and thin, like those we see come over with the *Galbanum*.

That which has Grains, or some Seeds in it, that is yellow, pure, fat, heavy, and not sticky, yet with some Branches or Bits of the *Ferula* in it, is to be chosen, which is not too dry, or moist, and flames when burnt: It softens, dissolves, discusses, and yet extracts Things forth of the Flesh; is chiefly us'd against Vapours, Fits of the Mother, and Obstructions of Liver, Spleen and Womb. It dissolves Tumours and Nodes, gouty Swellings and Pains, being apply'd Plaisterwise to the Parts afflicted.

Cleans'd *Galbanum* is dissolv'd as some other Gums are in any Liquor, as Water, Vinegar, Juice or Wine; dissolve it in the Liquor, or strain and inspissate, but observe that some hang it in a Cloth over the Vapour of a Bath, and so let it drop out; but others put it into hot Water, and cast off the Rubbish which swims at the Top. Oil of *Galbanum* is made by a Retort with Vinegar; the Tincture by Spirit of Wine acuated with Spirit of Nitre.

24. Of Gum Sapagen.

THE *Sapagenum*, likewise call'd *Pomet*. *Serapinum*, because of its Smell that is almost like that of the Pine, and by the *French*, *Gum Seraphin*, flows from the Trunk of a Plant whose Leaves are very small, and the Seeds resembling those of *Galbanum*, except that they are less: These grow plentifully in *Persia*, *Media*, &c. from whence they are transported to us and all other Parts of *Europe*. Choose your *Sapagen* in fine Tears, clear and transparent, of a strong

strong Smell agreeable to the Pine; outwardly of a yellowish or reddish Colour, inwardly the whitest and least full of Dirt and Filth that can be. This enters into several *Galenical* Compositions. Mr. *Wormes* a *Danish* Physician says, in a Book of his, that it is admirable for the Falling Sickness and Palsy; I know, by my own Experience, that it is excellent for *Asthma's*, taken about the Size of a Pea at Bed-time, and the same Quantity in the Morning rising.

This Gum is of a thin Substance, and attractive, drawing forth Splinters, Thorns, &c. gotten into the Flesh; it has, as *Hoffman* affirms, a peculiar magnetick Quality, *qua In-festina dislocata in Iliaca Passione ex Hernia, in pristinum reducit locum*; for which Reason he made it the chief Ingredient of the magnetick Emplaster: It is also us'd in Disaffections of the Womb, and being apply'd, it cures the Sty in the Eye-Lid. It purges Water and all gross Humours from the Stomach, Guts, Womb, Reins, Head, Nerves, &c. Is good in Dropsies, Convulsions, Palsies, Numbness, Weakness and Obstructions; besides which, it is excellent in Pleurifies, to ease Pains, and dissolve hard Tumours of the Spleen; Dose, from one Dram to two Drams; but because it is apt to disturb the Stomach, it is corrected with Ginger, Cinnamon and Mastich.

Sagapenum, Serapinum, Sacoponi-Lemery. *um*, is a Gum reddish without, and whitish within; of a strong unpleasent Smell, of an aerid Taste, that flows by Incision from a Sort of Plant that is of the Nature of Fennel: Chuse *Sagapenum* in Drops, that are pure, neat, and bright; it yields Abundance of Oil and volatile Salt, and will dissolve in Wine, Vinegar, and in Juice of Plants, but had better be reduc'd to Powder, when us'd in Compositions that require its Dissolution: This Gum is incisive, penetrating, aperitive, a little purgative, sudorifick; opens Obstructions of the Spleen, Mesentery and Liver; assists Respiration, and strengthens the Nerves; is good in Epilepsy, Palsy and Asthma; to provoke Urine, and the Terms, and to suppress Vapours; Dose, ten or sixteen Grains in Pills. There is a Spirit and Oil made from it, after the manner as from *Galbanum*: The acid Spirit has all the Virtues of the Gum, but with this

Advantage, that it is more penetrating; for which Reason it is successfully given against Obstructions of the Womb, &c. The Oil is good for the same Purposes, but is mostly us'd against Vapours, being smell'd to or appointed upon the Nostrials: It is seldom given inwardly, except in Fits of the Mother, to four or five Drops in some proper Vehicle.

25. Of Gum Opopanax.

WHAT we most commonly call *Opopanax*, is a Gum that flows according to some Authors, from a Fennel Plant, call'd *Panax Heracleus*, or *Hercules's All-heal*, that is brought us from the *Streights*, and sometimes from the *East-Indies*, tho' great Quantities grow in *Macedon, Achaia*, and other Parts of *Greece*, having Leaves almost like those of the Fig Tree, which are divided, or partition'd into five Parts; the Stalk is very high, and pretty woolly, producing at the Top a great Tassel or Bunch, with yellow Flowers; and after that a Seed, that is burning upon the Tongue, but of a strong Smell; the Roots are white, a little bitter, and cover'd with a pretty thick Bark. From the Cutting of this Plant, the liquid *Opopanax* flows, and is white at first, but when it is afterwards dry'd, it becomes, by degrees, of a golden Colour on its Surface. There are three Sorts brought from *Marseilles*, viz. that in Tears, that in the Mass or Lump, and that flatted or squash'd down.

The first Sort ought to be chose in fine Drops, white within, and of a gold Colour without; of a strong Scent, and an unpleasent bitter Taste, the dryest and least full of Dirt that can be got. The second Sort, that is in the Lump, ought to be as full of Tears, and as near the Colour and Smell of the first as is possible. The flat Sort is that call'd the Companies *Opopanax*, and which several sell for that in Tears, tho' it is easy to know the Difference, because the true is in little round Drops, and the flat Sort of the Breadth and Thickness of one's Thumb; take Care to avoid that which is black and soft, for it is naught. This Gum discusses Wind, purges Flegm, which is thick and tough,

tough, from the remote Parts, as from the Womb, Joynts, &c. opens the Breast and Lungs, softens Tumours, and taken in at the Mouth by Fume cures Catarrhs, and the falling down of the *Uvula*. It is reckon'd an excellent Thing against an old Cough, Sharpness of Humours, difficulty of Breathing; and being drunk an Hour before the Fit of an Ague, it takes away the cold Fit; especially if the Stomach and Back-Bone be anointed with the Oil thereof, or volatile Spirit; both of which possess all the Virtues of the *Gum*.

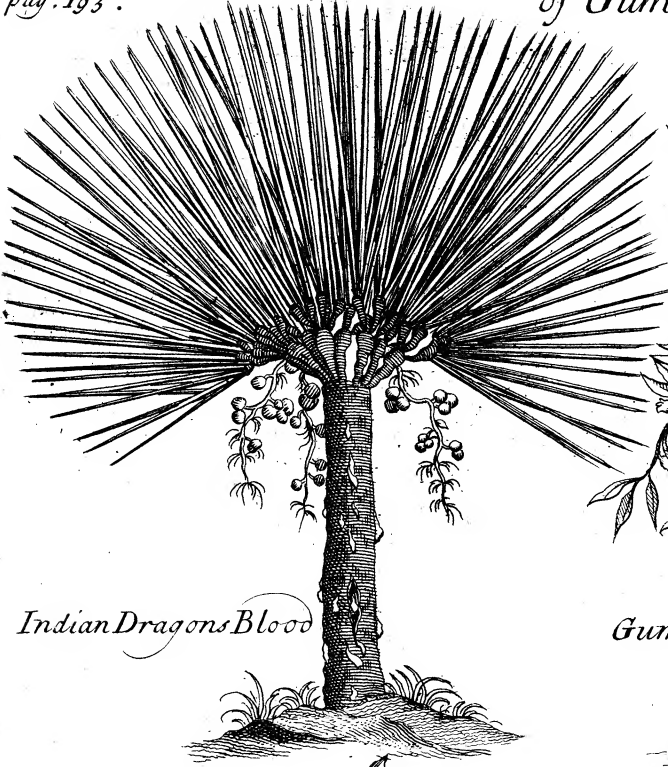
Opopanax is a yellow *Gum* that *Lemery*. is drawn by Incision from the Stalk and Root of the *Spondylium*, or wild Fennel, that grows in *Macedon*, and other Parts of *Græce*. This Plant is call'd *Spondylium Majus*, sive *panax Heracleus quibusdam*; the greater *Spondylium*; or by some *Hercules's All-heal*, according to *J. Baubinus*, *Ray* and *Tournefort*: The Stalk is high and woolly; the Leaves like those of Figs, rough to the Touch, divided into five Parts; the Flowers grow in Clusters upon the Tops of the Branches; they are small, white, compos'd each of five unequal Leaves, dispos'd like the *Flower-de-lis*: When these are gone, they are follow'd by Seeds joyn'd two and two together, flat, large, oval, hollow, or cut at the Top, strip'd along the Back, of a yellowish Colour, a strong Smell, and poignant Taste; the Root is long, white, full of Juice, odoriferous, a little bitter to the Taste, cover'd with a thick Bark: The *Opopanax* drops from the said Root in a white Liquor, which thickens as it dries, and grows yellow upon the out Parts. Chuse it fresh, clean and pure, in large Drops, that are yellow without, and white within, fat and pretty brittle, of a bitter Taste, and a strong unpleasent Smell; it affords a great deal of Oil and volatile Salt, is emollient, attenuating, digesting, expels Wind; is proper in hysteric Cases, and to resist Putrefaction.

26. Of Ammoniacum, or Gum Ammoniack.

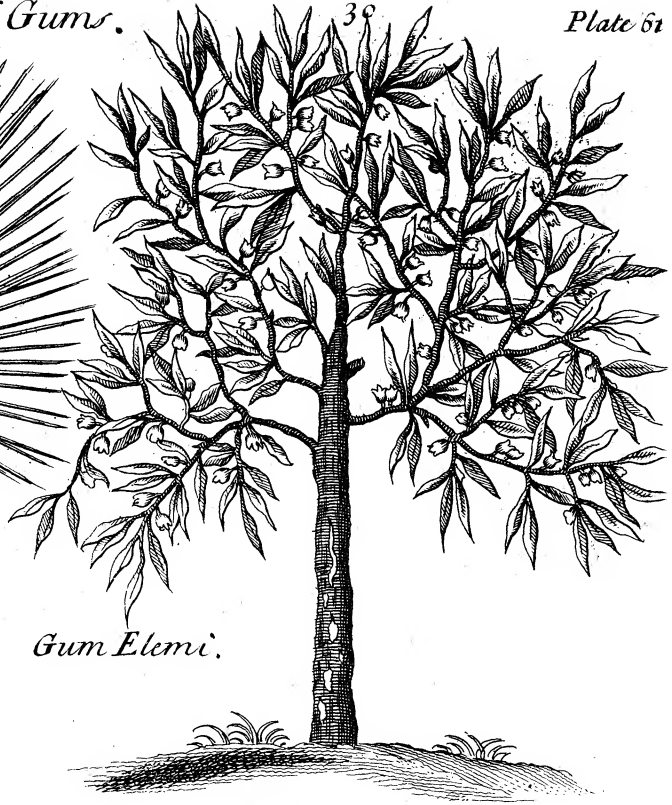
Pomet. THIS is a *Gum* that flows in white Tears, from Branches or Roots that are cut or slash'd, of a Sort of

Plant of the Fennel Kind, that grows in abundance in the Sands of *Libya*, especially about that Place where sometime the Temple of *Jupiter Ammon* stood. This *Gum* is brought us in large Lumps, wherein we find a great many white Drops or Tears, as well on the Out-parts as within. It is of a tolerable grateful Smell, inclining towards that of *Opopanax*. Chuse this *Gum* with the finest, dry, white, round Drops, of a bitter Taste, unpleasent enough; and that the Mass or Lump, be as full of Tears, and as clean as is possible. It is us'd in several topical Medicines; and *Monsieur de Meurve*, in his pharmaceutick Dictionary, attributes great Virtues to it, whereto the Reader may have Recourse. It is emollient, and wonderfully discussive, us'd ordinarily to discuss hard Tumours in Womens Breasts with great Success: An Extract of it takes off Roughness from the Wind-pipe, thickens thin and sharp Rheums, which fall down upon the Lungs, and is us'd in Pectorals for the same Purposes. There is, besides this, an Oil, volatile Salt, and Spirit of *Ammoniacum*, according to *Lemery*, in which Processes you have not much Difference from those of *Charas*, only that the last requires the *Retort* to hold eight Times the Quantity; *Lemery* but three Times. *Lemery* also says, there is no Need of adding *Alcalies* in Rectification, because they rather hurt and spoil these Kinds of Spirits than make them better.

This *Gum* is purified by dissolving it in Vinegar, then straining it thro' a Cloth, and thickening; but if you distil it, this Work is not only needless and vain, but detrimental; because a good Part of its volatile Spirits and Salt, will be evaporated and lost; in which consist its greatest Virtues; whilst others will be fix'd by the Acid, by which the Elevation of the volatile Particles will be hindered; for which Reason this Purification is to be avoided in Distillation. This Spirit opens Obstructions, and is us'd with Success in the Scurvy, Dropsy, and the Jaundice, as also for Stoppage of Urine, but particularly in Diseases of the Womb: Dose from eight Drops to twenty in Rhenish Wine, or the like. The Oil is given for the same Purposes, from two Drops to six, with double refin'd Sugar, &c.



Indian Dragons Blood



Gum Elemi.

28



Canary Dragons Blood .



Ammoniacum Gummi, vel Gummi Lemery. mi Hammoniacum, sive Gutta Ammoniacum, Gum Ammoniack, is a yellowish Gum on the Outside, and white within, of an unpleasant Smell, almost like *Galbanum*, inclining to a bitter Taste. It flows in white Tears from the Branches and Roots that are cut off of a sort of Fennel called *Ferula Ammonifera*, or the Fennel-bearing *Ammoniack*, that grows plentifully in the Deserts of *Lybia*, especially about that Part where the Temple and Oracle of *Jupiter Ammon* stood. Some call this Plant *Metopion*, from being very porous. The best Gum is in fine neat Tears, almost like *Olibanum*, dry, white, brittle. It softens before the Fire, is easy to reduce to Powder, of a little bitterish Taste, and an unpleasant Smell. The Druggists sell that in the Mass or Lump, loaded with a great deal of Filth, that serves to make Plaisters of. This Gum yields plenty of essential or volatile Oil; some Flegm and Earth. It attenuates, resolves, digests, is aperitive, proper for Hardness of the Spleen, Liver, and Mesentery, opens Obstructions, provokes Womens Courfes, and is us'd both internally and externally.

27. Of Indian Dragon's Blood.

THE *Indian Dragon's Blood* is a Gum that distils or drops from the Trunk of several Trees, whose Leaves are like Sword-Blades, of half a Foot long, and of a green Colour; at the Bottom of which grow round Fruit, of the Size of our Cherries, that are yellow at first, afterwards red, and of a beautiful Blue when ripe; from which, having taken off the first or outward Skin, it appears like a Sort of *Dragon*, which has given Occasion to have it nam'd, tho' very improperly, *Dragon's Blood*; since it is the Gum of a Tree, and not the Blood of any Creature, as some believe still.

The Inhabitants of the Country cut the Trunks of the Trees, and there presently flows a fluid Liquor, that is as red as Blood; which hardens as soon as the Sun is gone off it, and forms it self into little brittle Tears or Crumbs, of a very fine red Colour. When the first sort is fallen, there drops another, which is sometimes brought us wrap'd up

in the Leaves of the same Tree, of the Figure and Size of a Pigeon's Egg; but at this time it comes folded in the same Leaves, of the Length and Thickness of one's little Finger; and sometimes also of the Size and Shape of the *Sebesten*. Chuse *Dragon's Blood* in little Tears that are clear, transparent, and very brittle. The best sort is very scarce in *France*, not to be met withal at present, but what comes in little Reeds or Flags, which ought to be dry, and easy to break; and that when scor'd on Paper, or hot Glass, will leave behind it a beautiful red Stain; upon which Account, antiently, they us'd it to paint Glass red. It comes likewise in the Mass, which is like that in Tears, but the fine is difficult to be met with.

Hoffman thinks that which is in Drops, and is the very finest sort, is made from the coarser, by dissolving of it, depurating it from its *Fæces*, and inspissating; and that those Drops are first extracted with Spirit of Wine, because being infus'd, or digested in Spirit of Wine, it yields a delicate blood-red Colour; but in Water, Oil, or other Liquors, scarcely any Tincture at all. It is good to stop all sorts of Fluxes, whether of Blood or Humours, whether Defluxions from the superior Parts, or Fluxes of the Bowels or Womb, the bloody-Blux, Whites, and *Gonorrhæa*, being inwardly given, from half a Dram to a Dram, mix'd with Conserve of red Roses, or some other proper Vehicle. It is good against Spitting of Blood, and stops Catarrhs, being of a drying, binding, and repelling Property. Being finally ground, it is us'd by Goldsmiths for Enamel, by Jewelers to set Foils under their precious Stones, for their greater Lustre. By Painters, Varnishers and Japanners, to make Varnish or Japan, by mixing it with common, or Shell-Lac, or Seed-Lac Varnish.

28. Of Dragon's Blood of the Canaries.

THIS *Dragon's Blood* is likewise a Gum that flows from the Trunk *Pomet.* and large Branches of two different Trees; after having been cut, the one of which has a Leaf like the Pear-Tree, but a little longer, and the Flowers bear a Resemblance to Tags at the End of long Laces, of a very fine Red. The Leaves of the other

come nearer to the Cherry, and the Fruit is yellow on the Edges, of the Bigness of an Hen's Egg, in which is found a Nut of the Shape of the Nutmeg, which contains an Almond or Kernel, of the same Figure and Colour.

These Trees grow plentifully in the *Canaries*, especially in the Island of *Porto Santo*; likewise in the Isle of *St. Laurence*, where these Trees are call'd *Rba*, that is to say, *Blood*, and their Fruit *Mafontra*, or *Voafontra*. The Natives of *Madagascar* make an Oil of the Kernels, which serves them to cure Burns, Erysipelas's, and other Diseases that proceed from Heat. The Islanders cut the Trunks of these Trees, from whence drops a red Gum, which they make into Balls, of different Sizes. Some soften the *Dragon's Blood* by means of hot Water, and so put it into Reeds, in the same manner as those which come from *India*. Some People melt this Gum, into which they put little white light Sticks, and when they are cover'd with Gum, they take them out, and dry them, to clean the Teeth withal; and these are usually brought over by the *East-India* Company. That which is further to be observ'd, as the Reason why the Inhabitants call this Gum *Dragon's Blood*, is, because the Tree that bears it is call'd the *Dragon Tree*; which, according to *Clusius*, appears to be a kind of *Date-Tree* that is very full, having a very thick Trunk, about five Yards high, and sending forth several Branches or Boughs that are naked, or bare of Leaves. The Fruit is of a round spherical Figure, of a yellow Colour, and about the third Part of an Inch thick, containing a very hard Kernel, like a Date. The Trunk of the Tree is very rough, and full of Clefts and Chaps, pouring forth a Liquor, during the Heat of the *Dog-Days*, which afterwards thickens or congeals into red-colour'd Drops or Tears, call'd *Dragon's Blood*; which tho' it hardly dissolves in aqueous or oily Liquors, yet ought to be reckon'd among the Gums and Rosins.

29. Of false or counterfeit Dragon's Blood.

Pomet. THE *Dutch* now bring us a sort of *Dragon's Blood*, which is in flat Cakes, of a very deep red, and

shining as well on the Outside as the Inside, pretty brittle, which being broke, is of a very fine red Colour; and when burnt, smells like *Spanish Wax*. This *Dragon's Blood* is nothing else but a Mixture of the true *Dragon's Blood* with other Gums; which is so apparent, it is easy to discover, by breaking the Cakes, and casting it hot upon Palm Mats. We have brought from *Holland*, besides this, another sort of *Dragon's Blood*, made of *Gum-Arabick*, or that of *Senega*, with a Tincture or Dye of the *Fernambourg Brazil*; therefore I would advise every Body not to make use of either of these two sorts of *Dragon's Blood* as partaking of nothing but the aforesaid Gums either in Colour or Smell, and being opposite to the Properties of the true *Dragon's Blood*.

Sanguis Draconis, or *Dragon's Blood*, is a gummous Juice, congealed or coagulated, dry, brittle, and of a red Colour like Blood, drawn by the Incision of a large Tree in the *Indies*, call'd by *Clusius*, *Draco Arbor*, or the *Dragon-Tree*. It is of the Height of the *Pine*, thick and furnished with several Branches. The Wood is very hard, cover'd with a Bark of a tolerable Thickness, and soft. The Leaves are large, shap'd something like the *Flower-de-lis*, being of the Length and Figure of a Sword Blade, and are always green. The Fruit grows in Bunches, the Size of a small Cherry, round, yellow at the beginning, red afterwards; and when they are ripe, of a fine blue Colour, and a little acid to the Taste. *Monard* and several other Authors write, that when the Skin is taken off from this Fruit, there appears underneath the Figure of a Dragon, as it is represented by the Painters, with Wings expanded, a slender Neck, a hairy or bristled Back, long Tail, and Feet arm'd with Talons. They pretend that this Figure gave Name to the Tree. But I believe this Circumstance fabulous, because I never knew it confirm'd by any Traveller.

The finest and best *Dragon's Blood* is that which drops first from the Tree in little Tears, that are clear, transparent, and easy to break, of a resplendent Red; but this is very scarce, and not brought us in War-Time; so we are forc'd to content ourselves with the second sort, [*describ'd already by Pomet.*] The true *Dragon's Blood* yields a suffi-

sufficient Quantity of Oil, and a little essential Salt. It is very astringent, agglutinative, drying, stops Hemorrhages, Fluxes of the Belly, deterges and consolidates Wounds, strengthens luxated Joints, and is proper for Contusions, us'd both inwardly and outwardly.

30. Of Gum Elemi.

Pomet. **G**UM *Elemi* is a white Rosin inclining to be greenish, that flows by Incision from the Trunk and large Branches of a Tree of a moderate Height, whose Leaves are long and narrow, of a whitish green, silver'd on both Sides; with a red Flower that rises from a little Cup, of the Colour of the Leaves, and the Fruit of the Colour and Shape of our Olives; which is the Reason why these Trees are call'd *Wild Olive-Trees*. There are abundance of these Trees in *Æthiopia* and *Arabia Felix*, from whence this Gum is brought us in Cakes of two or three Pounds Weight a piece, wrap'd up in Leaves of the *Indian Canes*, whence it is call'd *Gum Elemi* in the *Cane*. Chuse such as is dry, nevertheless soft, of a white Colour, tending to green; the Smell sweet and pleasant enough. And take care it be not a factitious Turpentine, made up with Oil of Spike, call'd *Galipot*, as happens too often; which may be easily found out, as well by its great Whiteness, as its ill Smell, inclining to Turpentine; and that it is always wrap'd up in the Leaves which are found among the Clove-Wood.

This Rosin adulterated is call'd, from those who make it, the *Americans Gum Elemi*, serving them as a good Pretence to cover their Knavery. The true *Gum Elemi* we have from *Holland* or *Marseilles*, is a natural Balsam for curing of Wounds, for which reason it is very properly made use of in *Arcæus* his Leniment. There is a large Tree found in the *American* Islands, the Wood whereof is white, and the Leaves like those of the Bay, but that they are a great deal larger. This Tree is so loaded with Rosin, that it yield to fifty Pounds Weight of white Gum, altogether like the *Galipot*, only that is not so stinking. And as this Rosin is but as yet little known among the Merchants, tho' common among us; so they often sell this *Galipot* sometimes for *Gum Elemi*, some-

times for *Gum Animæ*, and other sometimes for *Tacamabaca*; so they chiefly call it *American Galipot* in that the Smell and Shape resemble it, and it is troublesome to distinguish the Difference.

This Rosin comes in Barrels of different Weight, wrap'd up in large Leaves; for which, as yet, we have learn'd no Name. We sell, besides, two other sorts of *Gum Elemi*; one whereof is like common Rosin, which has neither a sweet nor aromack Smell, and which is cover'd with Leaves that cling to the Clove-Wood. The other sort of *Gum Elemi* is of an Ash-Colour, inclining to brown, and in great Pieces that are dry and brittle: But as it is impossible to distinguish the Difference in these two sorts of Gums, I shall say nothing further. Nevertheless I must say, I believe that it is nothing but the impure or foul Gum, which may have its good Qualities recover'd, by refining over the Fire; which I dare not yet affirm, not being certain of it.

Gummi Elemi, sive, Resina Elemi, is a kind of gummy and resinous *Lemery*. Substance; for it dissolves in Oil, and is inflammable. There are two kinds of it, *viz.* the true Gum, call'd also, the *Æthiopian*; and the bastard, or spurious, call'd the *American Gum Elemi*. The true, or *Æthiopian Gum Elemi*, is a Rosin from a whitish Colour, a little inclining to a green, moist and rough, run together in Lumps or Clods of a long and round Shape, for the most Part inflammable, of a pleasant Taste, and smelling something like Fennel. Those Lumps are brought over to us wrap'd up in a large Leaf, appearing to be a kind of *Indian* Reed. Bastard or *American Gum Elemi*, is a sort of white Rosin, not much unlike *Pine Rosin*, inflammable, and of a strong Smell, flowing plentifully out of a certain kind of Tree, bearing Leaves like the Bay-Tree, call'd *Cleban*. *Parkinson* saith it is a yellowish Gum, clear and transparent, which being broken, shows more white and gummy within, quickly taking Fire, and melting thereat, and of a kind of quick Smell and Taste. If it is like *Ammoniacum*, or *Gum-Arabick*, or is black, it is good for little or nothing. This Gum is of singular Use in all Wounds and Fractures of the Head and Skull, and to be mix'd with Leniments and Balsams for

that Purpose. It also emollient, digestive, and is anodyne, dissolves Tumours, and opens Obstructions. The Spirit, Oil, and Balsam are distill'd by the Retort in Sand, as hath been taught. The acid Spirit, which contains the volatile Salt of the mix'd, suppresses Vapours and Fits of the Mother, opens the Passages of the Urine, tempers the Heat thereof, prevents breeding of the Stone, and is a good Pectoral. The Oil and Balsam are accounted, by some, specific in the Gout, Palsy, and Convulsions. They cure Ulcers, chiefly of the Fundament, heal and cleanse all Wounds, &c. as well old as new, easing Pain, resolving Contusions, and dissolving Swellings.

31. Of Gum Tacamahaca.

GUM Tacamahaca is a resinous, liquid and transparent Gum, that flows from the Trunk of large thick Trees, that grow plentifully in *New Spain* and *Madagascar*, where they are call'd *Harame*, which are pretty like our Poplars. These Trees are furnish'd with green Leaves, almost like those of the *Box-Tree*; after which come red Fruit, of the Bigness of our green Nuts, in which is contain'd a fragrant Balsamick Rosin. The Natives cut the Trunks of these Trees, whence distils a white crystalline Liquor, of an agreeable Smell, that hardens some time after it is fallen, and that serves for the Cure of cold Humours to abate the Tooth-Ach, but particularly to caulk Vessels and Ships with, and the Wood serves for Planks.

The Inhabitants of *St. Laurence* have a Custom to put the first that falls from the Tree, without Incision, into little Shells cut in two, which they cover with a great Leaf, as a sort of Palm Leaf; and that is what some Authors mean, when they speak of *Gum Tacamahaca* refin'd; which to answer the requisite Qualities, ought to be dry, reddish, transparent, of a strong Smell, inclining to that of Lavender; of a Taste something bitterish; and this is what we call *Tacamahaca* in the *Shell*. That which falls from the Tree by cutting, is what we have brought in the Mass or Lump, and sometimes in Tears, in the Figure resembling *Indian Frankincense*, which is to be chose as full of white Drops, clean, dry, and as near the Smell of

the former as can be got. It much resembles in Colour, *Galbanum*, with white Spots like *Ammoniacum*, strong in Scent and Taste, and very sticking, for which reason it is us'd to put in binding Plaisters. It is very good to soften Tumours, and ease all manner of Pains in the Head, Nerves, Joints and Womb. It is inwardly given from half a Dram to a Dram against Vapours, but most commonly against Pains, for which it is so famous amongst the *Indians*, that they use it to all Pains whatsoever, if not attended with any great Inflammation.

Tacamahaca, vel *Tacamaca*, is a kind of hard, clear, fragrant Rosin, that is drawn by Incision from the Trunk of a great, thick, unknown Tree; call'd by *Parkinson* and *Ray*, *Tacamahaca*; by *J. Baubinus*, *Tacamahaca Populo similis fructu colore Pæoniae*; or that like the Poplar Tree, with Fruit the Colour of the Peony. It resembles much the Poplar Tree; the Leaves are small and indented: the Fruit the Bigness of a Nut, of a red Colour, resinous, odoriferous, and contains a Stone almost like that of the Peach. This Tree grows plentifully in *New Spain*, and several Parts of the *West-Indies*, being gather'd from the Tree after wounding.

We have two Kinds of it, one of which is brought over in Shells, that is soft and whitish, of a very pleasant fragrant Smell, the other in Lumps, and comes in Chests, which is nothing near so good, but for the most Part is very foul and drossy: Both yield a deal of exalted Oil and volatile Salt. The *Gum Tacamahaca* is digestive, resolute, neurotick, anodyne, cephalick, drying, being apply'd externally. There is an acid Spirit, Oil and Tincture made from this Gum, which open Obstructions of the Womb and Mesentery; are anodyne and stomachick, taking a few Drops in any generous Liquor; or the Oil is good externally to smelt to, and anoint old running Ulcers with, to cleanse and heal them, as well as to discuss hard Knots and Tumours.

32. Of Gum Ivy.

GUM Ivy is a liquid Rosin which hardens as it flows. This Gum abounds in the *Indies*, *Italy*, *Provence*.

and

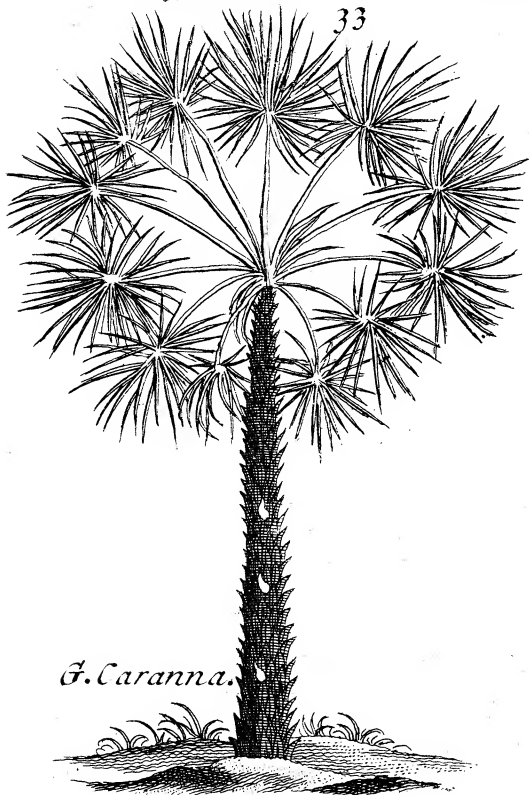


G. Tacamahaca.

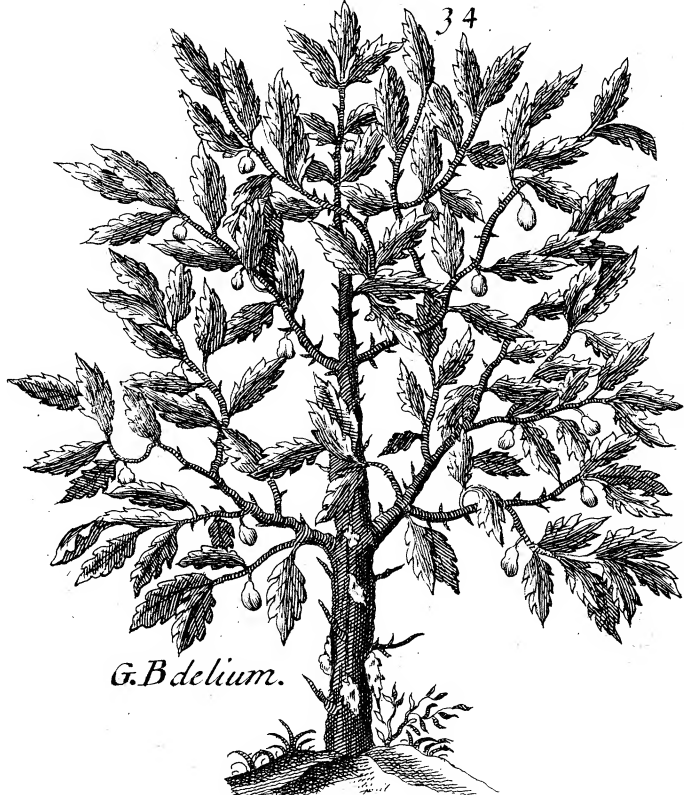


G. Ivy.

Ivy climbing up a Bay.



G. Caranna.



G. Bdelium.

and *Languedoc*, from the great *Ivy* that creeps or climbs upon Trees and Walls. Being at *Montpelier* in the Year 1680, and walking in the King's Garden, I perceiv'd an *Ivy* there that climb'd up a Bay-Tree, having on the top-Branch a Piece of Gum of the Bigness of one's Finger, which I begg'd of Mr. *Chicanneau's* Son, which he gave me; and after I had examin'd it, I found it like Glue, of a red Colour, a strong penetrating Smell, and unpleasant enough. After having kept it some time; it grew dry, brittle, and of a yellowish Colour, just as we have it come from *India* by *Marseilles*. Chuse the best dry'd, clearest, of a balsamick Smell; and take care that you be not impos'd upon with the *Gum Alouchi*, which is sometimes sold in its stead, especially when dear. This is reckon'd proper to make the Hair fall, and for the Cure of Wounds.

Hedera Arborea, or the *Ivy-Tree*, *Lemery*. is a Shrub, or Tree, whose Branches, creep up and cling to the next adjacent Trees or Walls, and insinuate themselves into the Cracks thereof, and into the Chinks of Stones, where they will fix a deep Root. The Bark is wrinkled, Ash-colour'd, and the Wood hard and white. The Leaves are broad, large, corner'd, thick, smooth, green all the Year, and shining, of an astringent acrid Taste. The Flowers grow at the Extremity of the Branches, compos'd each of six strip'd Leaves, of a grassy Colour, succeeded by round Berries, that are a little fleshy, and as large as those of Juniper, dispos'd in Clusters, of a black Colour when ripe. They contain each five Seeds, furrow'd on the Back, and flat on either Side. The *Ivy* grows generally upon Walls, and yields abundance of Oil, and some essential Salt. It is deterfive and vulnerary. The Leaves are applied to Issues and Cauteries to cleanse them from their *Sanies*. They are likewise boil'd in Decoctions for the Ear-ach and Tooth-ach.

There is another sort of *Ivy*, call'd *Hedera Poetica* by *C. Baubinus* and *Tournefort*, and *Hedera Dyonisias* and *Chrysocharpos*, because the *Ivy*-Berries are of a Gold Colour. The Leaves of this are not so angular, but only sharper towards the Top, less thick, hard and fleshy than those of the other *Ivy*, and not of so deep a Colour. The Berries are of a fine Gold

Colour. This Species of *Ivy* is rarely met with in *France*. The Antients made Crowns of it, with which they crown'd their Poets, from whence it is call'd *Hedera Poetica*, the *Poets Ivy*; *Hedera Dyonisias*, aut *Baccica*, because they made use of this sort of *Ivy* in their publick Rejoicings, and Feasts of *Bacchus*.

They make Incisions in the Trunks of the larger *Ivies* in the hot Countries, as *Italy*, *Languedoc*, and *Provence*, to make the Gum or Resin flow, which hardens in a little time; and which they call *Gummi Hederae*, or *Gum-Ivy*. It ought to be of a reddish yellow, transparent Colour, of a strong Smell and an acrid aromattick Taste. The greatest part of it that is sold by the Druggists comes from *India* by *Marseilles*. It yields a good deal of Oil and Salt, and is us'd externally to the same Intentions as the former, and is sometimes put into the Ointment of *Althaea*.

33. Gum Caranna.

THE *Caranna* is a Gum that flows from the Trunk of several Trees, *Pomet*. like the Palm Tree, which are plentiful in *New Spain*. This Gum is brought us in the Lump, wrap'd up in Reed Leaves. It ought to be soft as a Plaister, of a greyish Colour, inclining to green, of a sweet Smell, and something aromattick.

Some Authors observe, that the *Caranna* is white, which I easily believe, when it is newly fallen from the Tree. It is also of the Colour aforesaid, except by Reason of its Age; and the whiter it is, the more valuable: But have nothing to do with several hard Gums that are offer'd in its stead, because of its Dearness. This Gum applied in a Plaister upon the Head, is admirable to abate the Pains thereof, as well as those of the Joints. And this Gum has such fine Qualities, that it is usually said, *What Tacamahaca cannot cure, Caranna can*.

The *Americans* compose a Balsam from this Gum, which they use with good Success for the Cure of Wounds and Hemorrhoids in this manner: They take fine Turpentine half an Ounce, liquid Amber three Ounces, Balsam of *Copal*, *Tacamahaca*, *Caranna*, of each two Ounces; Mastich, Myrrh, Aloes, Frankincense, Dragon's Blood, Sarcocolla, of each a Dram and half, Dissolve the

GUMS

Gums and Rosins upon the Fire, and after incorporate them with the Powders. *Gum Caranna* is mightily commended for its Faculty of discussing or asswaging hard Tumours: It is also apply'd to the Temples upon small Plaisters or Patches in the Head-Ach, or to prevent and restrain the falling down of the Humours upon the Eyes and Teeth. There is also prepar'd from it an excellent antipodagrick Plaister to be apply'd to gouty Swellings.

It is call'd *Caranna Gummi*, or *Lemery*. *Caragna*, from *Cartagena* the Place of its Production in the *Spanish West-Indies*, where it is in great Plenty, flowing out of a Tree cut or wounded. It is a hard Rosin, clammy but not glutinous, softish and tough, of a dark olive Colour, inclining a little to a Musk Colour. It comes forth soft, but condenses afterwards, not much unlike *Tacamabaca*, but more odoriferous and sweeter, and of something a brighter Colour; it comes wrap'd up in its broad fibrous Leaves like Reeds.

It is a famous Cephalick, Neurotick, Arthritick and Vulnerary; eases all manner of Pains in any Parts of the Body, proceeding from a cold and moist Cause, strengthens weak Limbs, and is accounted excellent to stop Defluxions from the Glands, being apply'd Plaisterwise to the Temples. It eases the Spleen, and dissolves the Hardness thereof, mollifies Swellings, and cures green Wounds, chiefly of the Nervess and Joynts: Dose inwardly from a Dram to two Drams. There is a Spirit, Oil and Balsam made from *Caranna*: The volatile Spirit is aperitive, and opens Obstructions of the Reins, &c. Dose from ten Drops to twenty in any proper Liquor. The Oil is good against Lameness, Pains, Aches, Convulsions, &c. anointed upon the Parts affected. The Balsam is excellent to heal and consolidate Wounds, to strengthen the Nerves, &c.

34. Of Gum Bdelium.

Pomet. **B***Dellium* is a Gum of which the Ancients spoke variously; some saying that it flows from the Trunk of a thorny Tree, whose Leaves are like those of the Oak, and the Fruit like the wild Fig,

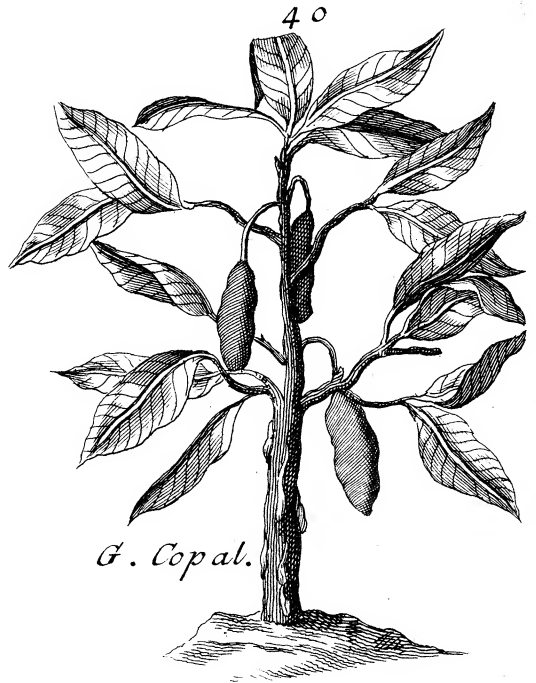
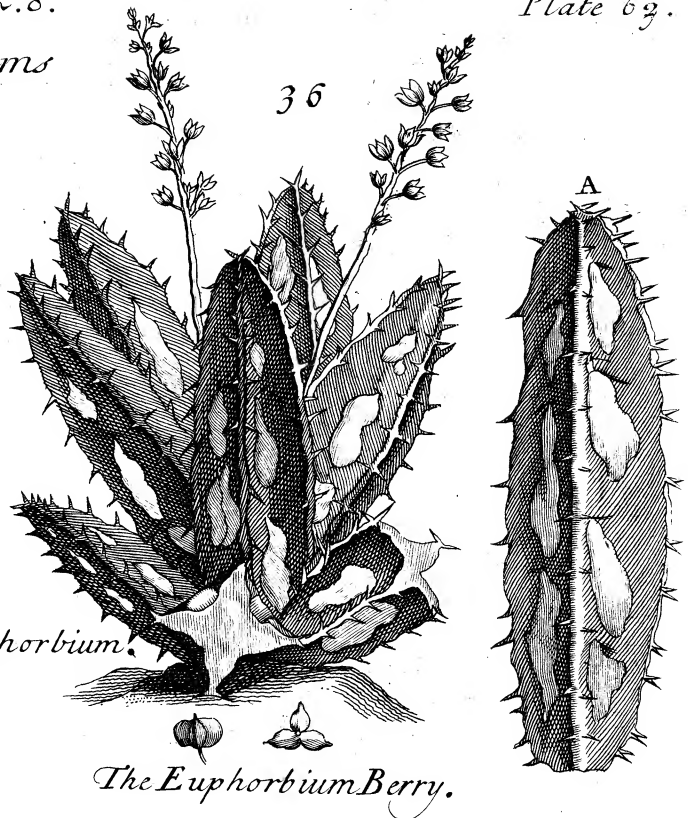
of a pretty good Taste; and others will have it resemble that which bears the Myrrh, and that these Trees abound in *Media*, *Arabia Felix*, and the *East-Indies*, and is likely to be that *Bdelium* which we have brought at this Day from *Marseilles*, which is no other than the Gum *Alouchi*; which some will have to be the true *Bdelium*, which is chose in clear transparent Pieces of a reddish grey without, and the Colour of *Englisch* Paste within; and that when lick'd by the Tongue, turns of a yellow Colour.

Bdelium is a yellowish or reddish Gum, that flows from a thorny-Tree call'd *Bdelia*, growing in *Arabia*, *Media*, or the *Indies*. They say that it bears Leaves like those of the Oak, and a Fruit resembling the Wild-Fig, of a pretty good Taste. This Gum is brought us in Pieces of different Sizes and Shape, but the finest is usually oval, or in fashion of Pendants for the Ears, neat, clear, transparent, reddish, fragrant, and that easily softens, of a Taste inclining to bitter, it yielding a good deal of Oil and volatile acid Salt; is digestive, discussive, sudorifick, drying, aperitive, serviceable in the Empyema, to provoke the Terms, hasten the Birth, and to resist Poison; us'd both externally and internally.

35. Of Gum Sarcocol.

S*arcocol* is a Gum that flows from a little prickly Shrub, whereof *Pomet*. the Leaves are like *Palta Sena*, of a white Colour tending to a yellow: Almost all Authors say, that these Shrubs grow in *Persia*; but two Friends of mine at *Marseilles* writ to me in *July* 1692 after this manner, that *Sarcocolla* was a Gum that is gather'd in the Deserts of *Arabia*, the Tree being little and very thorny; chuse that in Tears or Grains, of a white Colour, inclining to yellow or red, of a sweetish Taste, attended with an unpleasant Bitterness.

This Gum is wonderful in its Kind, in that it flows from a Tree without Incision, and by Incision in Tears or Drops of different Colour and Bigness, being white, yellow and red; and when they are dry, are granulated or in Grains, as they are brought



to us from *Marseilles*. There is besides another Sort of *Sarcocol*, which is in the brown Lump, and looks like a Composition; but I take it to be nothing but the damag'd Gum, that ought to be thrown away, and that is very full of Dirt, and other Filth, to which it is much subject. This is very proper for curing of Wounds, which made the *Greeks* call it *Sarcocol*, which signifies *Flesh Gum*. It is consolidating and repelling, us'd chiefly to heal Wounds, stop Fluxes in the Eyes, and clear them from any Clouds, Films, Pearls, &c. that may hinder the Sight. It is good to purge the Head, and therefore profitable against Coughs, Shortness of Breath, especially in Persons that are flegmatick. Outwardly it is us'd against Inflammations of the Eyes, and to heal Ulcers in the Ears. The Fume thereof from Charcoal, receiv'd up the Fundament, cures the Piles, and other Diseases of those Parts.

Sarcocolla, or *Flesh-Glue*, is a *Lemery*. granulated Gum, in very small Bits that are spongy, of a yellowish Colour, tending to white, resembling the broken Pieces or Remains of a Gum, or of Frankincense that have been grossly powder'd. We have it brought us from *Arabia*; where, as some say, it comes from a thorny Shrub, whose Leaves are something like *Sena*.

Sarcocol is of such a brittle Nature, that it moulders down into a gross Powder only by shaking or handling it; wherefore it is commonly brought over to us in small Grains, not much bigger than Poppy Seeds; yet sometimes we meet with some that are bigger and thicker. They are of several Colours, *viz.* white, brown, and red, of a bitter Taste, with a certain nauseous Sweetness: and being chewed between the Teeth, they become tough; being held to the Flame of a Candle, they first boil or fry, and then send forth a clear Flame. It stops and prevents the Defluxion of Humours upon the Eyes, and takes away Spots, or white Specks over them, being steep'd in Asses or Womens Milk. Moreover, *Sarcocol* agglutinates Flesh, and conduces to the consolidating of spongy Wounds. There is an excellent Eye-Water made of *Sarcocol*, steep'd in Nurfes Milk, with Mucilage of Quince Seeds made with Rose-Water.

36. Of Euphorbium.

Euphorbium is a Gum that flows from among thick prickly Leaves, in the *Pomet*. Nature of a Shrub-Tree, that is found in great Quantities in *Libya*, upon Mount *Atlas*, and in *Africa*. The Antients have writ variously upon the Nature of *Euphorbium*, and of the Manner of gathering it. Some saying that it flow'd by means of wounding the Ends of the Plant with Iron Instruments, from whence came a Smell that was very mischievous, and likewise that the Leaves were cut, by which means there came forth a white Juice, like Milk, which was receiv'd in Sheep-Skins: And others will have it that it was a thick Juice, from a Green of about the Size and Shape of our Cucumber. But those who have seen it, as well as myself, can attest it is no such thick Juice, as suppos'd, but the Gum of a Tree. And besides, I can assure you 'tis so from the Sight of the Leaf, which is the Length and Thickness of one's Thumb, of a quadrangular Shape, each Corner of which is found full of sharp Thorns, at the Bottom of which is the *Euphorbium*, which is gain'd without any Incision, according to the Figure mark'd A. Chuse the newest, of a white Colour, inclining to Gold; the least full of Dirt, the dryest and cleanest that is possible.

There is abundance of little Berries to be met withal in *Euphorbium*, made in the Shape of a Priest's Cap, very light, of the Colour of *Coriander*, in which is contain'd a little round Seed, like a Pin's Head, which some have assur'd me is the Seed of a Plant which brings forth the *Euphorbium*. This Drug is not much us'd in Medicine, because of its immoderate Heat, and great Acrimony; but much more by the Farriers, being very good for the Farcy and Wind-Galls in Horses. The *Africans* use this Gum internally, but they wash it first in Poppy-Water, to abate the Heat of it.

Euphorbium being reduc'd into a fine Powder, which is a very difficult Task to do, is enclos'd in a hollow'd Quince, which being cover'd over with a Paste, is bak'd in an Oven. It ought to be corrected with Vinegar,

gar, Juice of Lemons, or four Pomegranates; or else with the Flegm or Spirit of Vitriol. By a chymical Analysis it yields a great deal of Oil of a most stinking Smell, and a hot burning Taste; moreover, an acid Flegm, and a sharp, concreted, volatile Salt are extracted from it. *Euphorbium* purges violently from five Grains to twelve, and is us'd against the Dropsy and lethargick Distemper. The Pills of *Euphorbium* of *Quercetan*, are prepar'd from it, being good against intermitting Fevers. It is us'd in the Pills of Nitre of *Trallianus*, in *Mesue's* Pills of *Hermadaetyls*, in the great or *Roman Philoninum*.

Euphorbium, so call'd from *Eulemery*. *phorbis*, Physician to King *Juba*, who first introduc'd it into Practice, and with it cur'd *Augustus Caesar*. This is a yellowish Gum in little brittle Pieces, very acrid and burning to the Taste. It flows by cutting from a Sort of *Ferula* that bears the same Name. The Bark is hard and thorny; the Leaves about the Length of a Man's Finger, and thick, of a quadrangular Form, garnish'd at each Angle with a great number of little Thorns. It grows in *Libya*.

It is yellow and clear, in hollow Drops as big as Pease, and almost like *Sarcocol*, and is in Bladders as clear as Glass. Chuse that which is white, bright, pure, or yellow and sharp, which, with a small Touch makes the Tongue burn. It is the better for being old, Age abating its Sharpness, which whilst fresh is not to be us'd. *Dodoneus* saith it is the Gum of a Plant. *Dioscorides* affirms, that it proceeds from a kind of *Libyan Ferula*, being cut. It is adulterated with *Gum Sarcocol*, and Juice of *Tithymal* or *Spurge*. It purges ferous and watery Humours, but is violently inflaming. It is administer'd with great Caution in Dropsies, Gouts, Palsies, and Green-Sickness; for it powerfully opens the Womb, provokes the Terms, and brings away both Birth and After-Birth.

37. Of Olibanum, or Male-Frankincense.

Pomet. THE *Olibanum*, which we usually call the *Male Frankincense*, is a Gum that flows, by Incision, from

the Trunk of several Shrubs which are found plentifully in the *Holy Land*, and in *Arabia Felix*, where they grow in great Quantities, especially at the Foot of Mount *Lebanon*; and by Corruption of the Language, *Olibanum*, and *Frankincense*, because the Antients made use of it for an Incense to their Gods. From *Arabia Felix* they transport it by the *Red Sea* to *Egypt*, from whence it comes to *Grand Cairo*, from *Grand Cairo* to *Alexandria*, where it is imbark'd for *Marseilles*. Several Persons write, that when they cut the Trunk of the *Frankincense-Tree*, and it begins to drop, no body, save one that is reputed holy in the Family, may be permitted to gather it. Chuse the finest white Tears, inclining somewhat to a gold Colour, which being chew'd, makes the Spittle white as Milk, and is of a bitter unpleasant Taste, throwing such aside as is full of Dust, and Leaves, and little yellow Pieces, to which it is very subject. Its use is for several Compositions, as well chymical as *Galenical*.

This *Olibanum* drops from the Tree plentifully, in roundish Drops, some bigger, some less; scarcely any of them exceeding the Size of a Horse-Bean, and it falls pure, without either Bark, Wood, or any other Thing sticking to it; and is of a yellowish white, of which the whiter it is, the more it is esteem'd. This resinous Gum strengthens the Bowels, stops Fluxes and the *Gonorrhœa* in Men, with the *Fluor Albus* in Women, taken from one Dram to two in Jelly of Isinglass. It is cephalick, cardiack and pectoral, comforts the Head, and revives the Memory, suppresses Melancholy and the Vapours, and abates vehement Coughing, Hoarseness and Catarrhs. The Fume taken up the Fundament, cures the Piles.

38. Of Moca Frankincense.

THE *Frankincense* of *Moca* is nothing else but a kind of *Olibanum* in little Tears, or in the Mass, much loaded with Dirt, of a reddish Colour, something bitter to the Taste, that is brought into *France* by the *East-India Company*; upon which Account it is call'd the *Company's Frankincense*, *Olibanum*, or *Indian Frankincense*.



G. Cancamy.



Balsam of Judea &c.

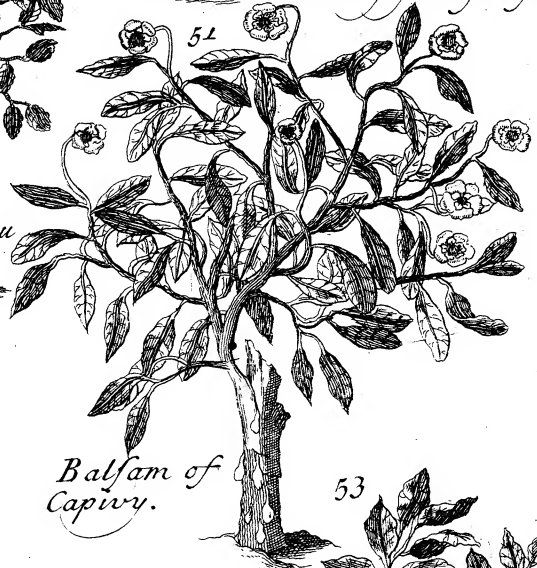
A Janissary Guarding a Balsam Shrub



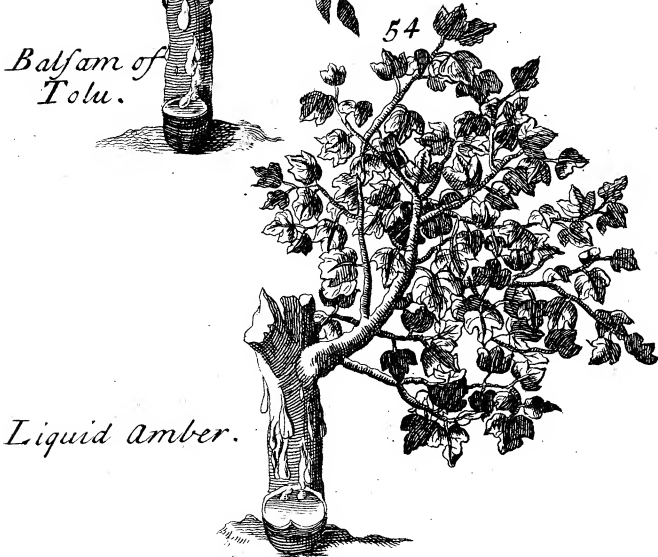
Balsam of Tolu.



Balsam of Peru



Balsam of Capivy.



Liquid Amber.



New Balsam.

cense. They never sell it but to counterfeit the former, for the true *Bdellium* tho' never fo improper.

39. Of the Manna of Frankincense.

THES E are little round Grains, *Pomet.* that are clear and transparent, which is to be found in the *Olibanum*, and which ought to be us'd for the same purposes and after the same manner as *Olibanum*.

Thus, or *Frankincense*, is a Kind *Lemery.* of white or yellowish Rosin, which yields a great Smell and Perfume, when thrown into the Fire; it is drawn by Incision from a little Tree, the Leaves whereof are like the *Lentisk*, and which grows plentifully in the Holy Land, especially about Mount *Libanus*. They call this Tree *Thus*, or *Arbor thurifera*; the Tree bearing *Frankincense*.

The first that flows from the Tree in clear pure Tears or Drops they call *Olibanum Melax*, *Thus Masculum*, or the *Male Frankincense*; that which falls confusedly on the ground, and is sometimes mix'd with the Pieces of the Bark of the Tree, or with some other Impurities, is the common *Frankincense* which some call *Female Frankincense*; it is in the Lump, yellowish, soft, fat, very apt to take Fire, and odoriferous. That which is call'd the *Manna of Frankincense* is the *Olibanum* in small Grain or Seed, that is round and pure, carrying the Colour of fine *Manna*. This Sort yields abundance of Oil and volatile Salt. The *Olibanum* is deterfive, a little astringent, sudorifick, proper for Diseases of the Breast, for the Pleurisy, to strengthen the Brain, for the scouring of the Guts, being taken internally, and us'd externally to deterge and consolidate Ulcers: The common *Frankincense* is deterfive, and desiccative being mix'd in Ointments, Plaisters and Perfumes.

The *Bark* of the Tree, from whence the *Frankincense* flows, is call'd *Thymiana*, *Thus Judaeorum*, or the *Frankincense* of the *Jews*. It is call'd *Thymiana* from smelling sweet in burning, because they burn this Bark in the Churches, & their Houses, to perfume them. It ought to be chose thick, fat, or resinous; smooth, fresh and fragrant; it is deterfive and drying.

40. Of Gum Copal.

TH E *Gum Copal*, which we call *Oriental Copal*, is a clear, transparent Rosin, of a golden Colour, that flows from the Trunk of several Trees, of a moderate Growth, adorn'd with green Leaves, as express'd in the Figure; and with a Fruit that is like our Cucumbers, of a dark grey Colour, in which is to be found a Meal, or Flower, of a very good Taste. *Pomet.*

Chuse this Rosin in fine Pieces, of the most beautiful yellow Colour, and largest Size that can be had, that is easy to break or crumble; and which, when put into the Fire, melts presently, and yields a Smell like that of *Olibanum*. This Rosin is very seldom brought into *France*, because its Use is little known, altho' it is often met with in both the *Indies*. But in the Room of this, we have another *Gum Copal* brought from the *American* Islands, which some improperly call *Karabe*. This *Gum* flows, without cutting, from the Trunk and Branches of several large Trees, like our black Poplars, that grow plentifully upon the Mountains of the *Antilles*, from whence it is brought along the Rivers, by means of the great Rains and Torrents of Water that pass by the Roots of these Trees, where this Gum falls naturally. Its Use is to make Varnish of, with Spirit of Wine, and to sell instead of the true *Karabe*, tho' very improperly, because it is scarce any thing like it; smells little when burnt, and is no ways useful to allay the Vapours: Besides, it is so like the *Gum Senega*, that there is nothing but the Colour, and the not dissolving in Water to discover the Difference by.

41. Of Cancamum, or Gum Cancamy.

TH IS is a Drug that is controverted even to this Day; some affirming it to be *Gum Lac*, others *Myrrh*, *Benjamin*, or *Turmerick*. But Mr. *Brisot*, a Physician at *Paris*, at his Return from his Voyage to the *West-Indies*, brought into *France* a *Gum* of four different Colours, which a great many People scarcely believe;

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notwithstanding *Dalechamp*, and others, have mentioned it; but I can attest the Truth of this, having a Piece by me of the Size of one's Finger, where the four Sorts of *Gums* are sticking together.

The Tree that bears these four Sorts of *Gums* is of a moderate Height, and the Leaves like those of *Myrrh*, that grow every where in *Africa*, *Brasil*, and in *St. Christophers*, from whence this Piece came, which was given me by a Friend of mine the 30th of July 1686, who went thither with a Person of the first Quality. That which resembles Amber, being burnt, dissolves, and has the Smell of *Gum Lac*; the second, which is black, melts as the other, and has a much sweeter Smell; the third, which is like Horn, is almost without Smell, as well as the fourth, which is the *Gum Anime*: But since we have none comes to *Paris* but the *Anime* Kind, chuse such as is white, dry, brittle, and of a good Smell. This Gum is very little us'd in Medicine, tho' endow'd with a great many good Qualities, being a natural Balsam. Some would put off, tho' very wrong, *Gum Anime* for *Gum Elemi*.

Gummi Copal, *five Pancopal*, is a *Lemery*. whitish soft Gum, of a very good Smell, of a white yellowish Colour, and fragrant, brought from *Hispaniola*, and other Places of the *Spanish West-Indies*. Some Authors have thought this Gum and *Gum Anime*, to be all one. They may possibly be comprehended under one *Genus*; but I am confident that *Copal* is a Species different from the other; for *Copal* is a fine, clear, transparent, white Gum, in somewhat greater Pieces, and very odoriferous, tho' not altogether so sweet as the *Anime* is; and with this *Copal* it is that the *Indians*, instead of Incense, perfume their Sacrifices in their Temples, as the *Spaniards* observ'd when they first came among them.

Now *Gum Anime* is also a whitish Gum, and is the fatter. *Gum Copal* is more pure, clear and white, and not so fatty as the other; so that of the two, the *Copal* is indeed the more excellent in Substance; but the *Anime* is the more odoriferous, and to be chosen before the *Copal*, if it be for a medicinal Use; but the *Copal* is to be chosen before the *Anime*, if for any other Purposes.

Cancamum is a very scarce Gum, which is

clotted together, and resembles several sorts of Gums or Rosins united, or sticking close one to the other, as one entire Gum. Some will have it to be a Species of Amber, others of *Gum Anime*; some of *Benjamin*, and some again of *Lac*; whereas all the *Cancamum* we know comes from *Arabia*, and most of the others are unknown there; so that it rather appears to be a singular Species or Kind of it self, and the true Rosin of a Tree growing in *Arabia*. As to its Virtues, Experience confirms that it strengthens the Stomach and Bowels, kills Worms, and opens Obstructions of the Spleen. You may make a good Varnish by dissolving it in Spirit of Wine tartariz'd, or good Spirit of Turpentine, as you make Varnish of *Gum Anime*, or of *Sæed* and *Shell Lac*.

42. Of Gum Lac in the Stick.

THE natural *Gum Lac*, or that in the Stick, is a reddish Gum, that *Pomez.* is hard, clear, and transparent, which is brought us adhering to little Sticks or Reeds, of the Thickness and Length of one's Finger, from the Kingdom of *Pegu*, whence it is brought in Quantities.

This Gum, according to the Relation of the *Sieur Rousseau*, who was a long Time in the *Indies*, especially in *Persia* and *Pegu*, where they gather this *Gum Lac*, says, that in those Parts there is a vast Quantity of Insects, like our common Flies, that gather together the Dew which is found on several Trees after the same manner as we observe our Bees; and when they are full of this Dew, they discharge it upon whatever they meet with: So that the Inhabitants of those Places stick a great many Branches of Trees, Sticks or Reeds, as we do here in the Ground for Pease, or the like, to run upon; so that the Flies may discharge their Loads of Dew upon those Sticks, and the Sun dry them to a Gum that is hard and dry, just as we see it; which is not unreasonable to suppose, since all the *Lac* we have brought over, sticks upon different Pieces of Wood, and likewise upon little Reeds. Besides, it is easy to see that this Gum does not flow from these little Pieces of Wood on which it is found sticking; because there are no Footsteps or Appearance from whence such a Matter should proceed.

proceed. That which makes the Beauty and Goodness of this *Gum*, is the Quantity of Flies that are in it; for the said *Sieur Rousseau* has assured me that the Head of these Flies put into Spirit of Wine, makes the most beautiful red imaginable; and that it was the Tip or some Part of these Flies that made them be call'd, with just Reason, the Animal *Co. lineal*, and not the *Mestick Cochineal*, which we have treated of before.

When this *Gum* is in Perfection, they gather these small Sticks loaded with *Lac*, which they keep to make a Tincture of, and to trade with several Nations, especially with the *Dutch* and *English*, from whence we have it, which is what we call *Stick-Lac*, or *Lac in the Cane*. Chuse this *Gum* clear and transparent, well melted, the least full of Sticks, black Gum, and other Filth, to which it is very subject; and which being chew'd, tinges the Spittle red, and boiled in Water, with any Acid, produces a fine scarlet Colour. 'Tis with this Dye that the *Indians* stain their Linen, and the People of the *Levant* what we call *Turkey-Leather*; and the *Indians* make the Wax we name from thence *Indian Wax*. The *Dutch* and *English* make Scarlet of it.

When the *Dutch* and *English* would make the *Stick-Lac* good, they grind it slightly in a Mill, and that which passes thro' the Clothes, they make use of for Dying. The Remainder, which is the worst, they make a Tincture of, by the Assistance of some Acid, to extract it; and afterwards dry this, and then form it into Balls, such as are brought to us, and which we call *Lac in Grain*; which being well dissolv'd, approaches the nearest to the Quality of the *Stick Gum* that can be.

When those People afore-nam'd would make the *Gum Lac* flat, they take such *Lac* from the *Cane* as is mention'd before; and when it is melted, they cast it upon a Marble, and make it flat and thin, as we now see it. The *English* have brought into *France*, for many Years, a large Quantity of the finest *Gum Lac*, made in the Shape of Ears, whence it has received the Name of *Ear Gum*. As to the Choice of *Gum Lacs*, the principal Thing is to have them well melted, or dissolv'd; for all the *Gum Lac* that is not dissolv'd is good for nothing but to be thrown away; especially that design'd for *Spanish Wax*, which is the

chief Use of it. As for the flat Sort of it, it ought to be shining, clear, transparent, the least rugged, of the highest Colour, and the thinnest that may be. As to the third Sort, which is fit for nothing but *Spanish Wax*, the Dye having been drawn off, it ought to be the least burnt, and best dissolv'd; for the Gum in grain is almost entirely an Abuse; for it is a Hazard to meet with it melted, for which Reason the Makers of sealing Wax grind it again lest it should not melt.

Lacca, or *Gum Lac*, is a hard, red, clear, transparent Resin, which *Lemery*. is brought us from *Bengal*, *Malabar*, *Pegu*, and several other *East-India* Provinces, adhering to little Sticks, about the Length and Thickness of one's Finger. They pretend it is made from the great wing'd Ants, or a kind of Flies resembling our common Flies, which draw a Juice from the Substance of certain Trees, and discharge the same upon the Boughs of others, or else upon Sticks or Reeds, set up for that Purpose; which being dry'd into a Gum, [as before describ'd in *Pomet*,] is call'd *Stick Lac*. You ought to chuse such as affords the highest Colour, neat, clear, a little transparent, that will melt upon the Fire when it is lighted, yields a pleasant Smell, and being chew'd tinges the Spittle of a red Colour; and likewise boil'd in Water with any Acid, strikes a beautiful scarlet Dye. This *Gum* yields abundance of Oil, a little volatile Salt, some Earth and Phlegm; it is incisive, penetrating, deterfive; it purifies the Blood, excites Sweat, and Womens Courses; facilitates Respiration, resists the Malignity of Humours, and strengthens the Gums.

They sell at the Druggists a flat *Gum Lac*, which differs not from the other, but as it is separated from the Sticks, dissolved and cast upon a Marble, it looks like Glass of Antimony. They have likewise *Lac in Grain*, or little Bits; but usually it is not so good as the other, because there remain the grosser Parts of the Gum, after the *Dutch* and *English* have taken the scarlet Tincture off from it. This *Grain Lac* is us'd for sealing Wax. The *Indian* sealing Wax is made of the *Gum Lac* melted or liquefied, and colour'd with Vermilion, and is much better than that made in *France*, because it is compos'd of choice

Gum Lac; instead of which, that of *France* is generally of the worst *Lac in Grain*, *Rosin* and *Vermilion*. The black sealing *Wax* is ting'd or colour'd with *Smoak Black*; the yellow with *Orpiment*, &c.

They give the Name of *Lac* to several Kinds of dried Pastes or *Crayons*, which the Painters use to paint in *Miniature*, and in *Oil*. That which is call'd fine *Venetian Lac*, is made with *Mestick Cochineal*, which remains after drawing off the first *Carmin*: These they prepare better at *Paris* than *Venice*, and make them up in little, soft, brittle *Troches*, of a deep red Colour. That which is call'd *Dove colour'd Lac*, or *flat Lac*, is made with Shavings of *Scarlet*, boil'd in a *Lixivium* of white *Pot-Asbes*, *Chalk* and *Alum*, which they form a *Paste* of, and make into *Tablets* to dry; the best is made at *Venice*. There is a certain *Tincture* made of *Brazil Wood*, the Painters call *Liquid Lac*.

43. Of Indian Wax.

THE *Indian Wax* is made of *Gum Pomet. Lac*, melted and colour'd with pale *Vermilion*, and afterwards form'd into round or flat *Cakes*, in the manner as we now have them. Chuse such as are well mix'd, smooth, the least full of brown Spots, and of the deepest Colour you can get. This *Wax* is of no other Use than to seal *Letters*, and ought to be that which bears the Name of the true sealing *Wax*, and not that which is mix'd and traded with at *Paris*, which is no other than the *Grain Lac*, ground and incorporated with melted *Rosin*, and by the Addition of a little *Vermilion*, is that sold amongst us. And as this *Wax* is of a base Colour, it is a Sign they put in very little *Vermilion*, but only cover their *Sticks* over slightly with a good shining *Red*; which Cheat is easy to discover by breaking the *Sticks*, and seeing that they be of the same Colour within as without. I wonder why this Kind of *Wax* should be so falsely call'd *Spanish Wax*, since the *Spaniards* never make it, but are entirely ignorant of it. There are several other sealing *Waxes*, made of other different Colours, as black, yellow, &c. besides perfum'd *Wax*, that is made by

adding a little *Civet* or *Musk* to the Composition.

44. Of Balsam of Judæa, or Balm of Gilead.

THE *Balsam* of *Judæa*, which we usually call *Opobalsamum*, *Pomet. Egyptian Balsam*, or *Balsam* of *Grand Cairo*, is a liquid white *Balsam*, that flows during *Summer* from the *Trunk* of a *Shrub*, that bears *Leaves* like *Rue*, and white *Flowers* shap'd like *Stars*; in the middle of which rise little *Berries*, that are sharp at the *End*, in which is a small *Kernel*. This little *Fruit* we call *Carpobalsamum*, it sticks to the *Branches* by means of a small *Stalk*, is green at the beginning, and grows brown as it ripens.

Jericho was once the only Place in the *World* where this true *Balsam* was to be found; but since the *Turks* were *Masters* of the *Holy Land*, they have transplanted this *Shrub* into their *Gardens* at *Grand Cairo*, where they are guarded by several *Fanisaries*, during the *Time* the *Balsam* flows. A *Friend* of mine, who has been at *Grand Cairo*, assur'd me, that they cou'd not get a *Sight* of these *Shrubs*, which are defended with very high *Walls*, as well as *Soldiers*, from any *Christians* entering. And as to the *Balsam*, it is almost impossible to get any upon the *Place*, unless it is by means of some *Ambassador* at the *Porte*, to whom the *Grand Signior* has made a *Present* of it, or by the *Fanisaries*, who watch this precious *Balsam*; by which we may understand, that what several *Cheats* pretend to sell for true *Balsam*, is nothing but white *Balsam* of *Peru*, which they prepare with *Spirit* of *Wine* rectified, or with some *Oils* distill'd.

But as it is met with sometimes in the *Inventories* of the great *Lords*, so in 1687, there happen'd to be a *Quantity* sent from *Madam de Villefavin*, which was found to be about fourteen *Ounces* of this *Balsam* in two *leaden Bottles*, as it came from *Grand Cairo*, which was sold to a *Person* who let me see it; we found it to be very hard, of a golden yellow Colour, and a *Citron* Smell. But since that a *Friend* of mine gave me one *Ounce*, which he brought himself from

Grand

Grand Cairo, and was of a solid Confidence, like that of Turpentine of *Chio*, and of the smell aboveſaid, which is the true Sign of its Goodneſs.

45. Of Carpobalfamum.

Pomet. **T**HE *Carpobalfamum* is as I have ſaid the little Berries of the Balfam-Shrub, which, to have their due Qualities, ought to be new, and of an aromattick Taſte, and a pretty pleaſant Smell, eſpecially when they are new. They are of ſome medicinal Uſe, but principally for the great Treacle wherein they require no other Preparation than to be choſe true, and freed from their little Stalks, empty Shells, and ſuch as are Worm-eaten amongſt them.

46. Of Xylobalfamum, or the Balfam-Wood.

Pomet. **T**HIS is the Trunk and Branches, ſtripp'd from the Leaves and Seed of the Balfam-Shrub, which we have brought in little Fagots, from *Cairo* to *Mariſilles*; and they bind this Wood up every Year now, becauſe the *Turks* love rather to make profit of it, than burn it. Chufe your Balfam-Wood in little Rods, full of Knots, of a reddiſh Bark without, and a white Wood within, the moſt refinous and aromattick that can be got. The chief Uſe of it is in Troches, without any other Preparation than the Choice aboveſaid.

47. Of Balfam. of Mecha.

Pomet. **T**HE *Turks*, who go a Pilgrimage every Year to *Mecha*, bring from thence a certain dry white Balfam, in Figure reſembling white Copperas calcin'd, eſpecially when it is ſtale. The Perſon who made me a Preſent of about half an Ounce, aſſur'd me, that he brought the ſame from *Mecha* liquid, and that the Smell is the ſame as obſerv'd before. The ſame Perſon likewiſe did teſtify to me; that it was as good as Balm of *Gilead*.

There is a Tincture and Spirit of Balm of *Gilead*; the Tincture is a great Secret in the

venereal Diſeaſe; the Spirit is of great value, by reaſon of its balfamick Aſtrictions, being beneficial to the nervous and membranous Parts; for it contains a volatile, ſubtile, and deterſive Salt, which mundifies ſtrongly, by which it takes away the Viſcoſities, Impurities, and other Diſeaſes of the Lungs, Ureters, &c.

Balfamum Judaicum, Gileadenſe, verum Ægyptiacum, Syriacum, de Lemery. Mecha, the true Syrian Balfam or Balm of *Gilead*; this proceeds from a ſmall Tree or Shrub that grows no where but in the Valley of *Jericho* in *Gilead*, and in *Arabia Felix*; but ſince the *Turks* have been Maſters of that Part of the World, they have tranſplanted theſe Trees into other Parts, where no Chriſtians are permitted to approach, by the Command of the Sultan, who has appointed Soldiers to guard every one of theſe Trees perpetually. This Tree riſes to the Height of Shrub-Trefoil, bearing a few Leaves like thoſe of Rue, or rather like the Leaves of the Maſtick Tree, being always green, and conſiſting of three, five, and ſometimes of ſeven Wings. The Branches are odoriferous, refinous, and tough. The-Flowers are of a white Colour, inclining to a Purple, not much unlike thoſe of the *Egyptian Thorn*, or *Acacia*, of a very fragrant Smell. The Seeds are yellow, contain'd in Cods that are of a blackiſh Colour, inclining to red, being of a ſweet Smell, a pungent and bitter Taſte, pouring forth a yellow-colour'd Moiſture like Honey. The Fruit of this Tree is call'd *Opobalfam*; and the Liquor iſſuing from it is call'd in the Shops, the Liquor of *Opobalfam*; and the Wood of the Tree *Xylobalfam*, or *Balfam-Wood*, which is cephalick and ſtomachick, reſiſts Poiſon, and drives away any Contagion. It is preſcrib'd in ſeveral pharmacetical Diſpenſations, and may be us'd inſtead of yellow Sanders, or Wood of Aloes. The *Carpobalfam*, or Fruit thereof, is alexiterial, proper to ſtrengthen the vital Parts, to excite the *Semen Virile*, to cure the Biting of Serpents, and other venomous Creatures; but as it is ſcarce, *Cubebs* are us'd in its ſtead.

There flows, in Summer-time, from the Trunk of this Balfam-tree, being cut, or the Boughs lopp'd off, a liquid Roſin that is white

white and fragrant, call'd, in *Latin*, *Opo-balsamum*, *Balsamelaon*, *Balsamum de Mecha*, *Balsamum verum Syriacum*, *Balsamum album Aegyptiacum seu Judaicum*. As this *Balsam* is scarce, dear, and precious, it is apt to be mix'd and adulterated. It ought to be of a Consistence very near like that of Turpentine, of a whitish Colour, inclining to yellow, transparent, of a penetrating and pleasant Smell, the Taste a little bitter and acrid. It yields abundance of Oil that is half exalted by the volatile acid Salt. If for Curiosity one make a Distillation of it, in the first Place we shall find an ethereal Oil, then a yellow Oil, and at last a red Oil, such as is to be met with in Distillation of Turpentine. But as this *white Balsam* is a natural Drug so exalted, that it stands in need of no Assistance from Chymistry, it is much better to use it in its natural State. To know if this *Balsam* is true and fresh, pour some Drops of it into a Glass of Water, and it will spread itself delicately upon the Surface, and afterwards be easily collected together by the End of a Stick entirely from the Water; but if this *Balsam* be old, tho' it be true, it gains a firmer Consistence and Solidity, so that it does not swim or float upon the Water, but will precipitate to the Bottom.

This *white Balsam* is the most essential Part of the Tree, and is the most valuable Medicine to fortify the Heart and Brain. The Dose is from two Drops to five or six. And it is likewise given inwardly to deterge and consolidate Wounds, strengthen the Nerves, and to heal Ulcers of the Lungs, Consumptions, Catarrhs and Phthisicks, so that there is scarce a better thing in the World. The Ladies use it for a Wash, and mix it with a little Oil, and the four cold Seeds to soften the Roughness of the Skin; besides which, it takes away Pimples and Blotches in the Face. Some dissolve it in Spirit of Wine, or *Hungary Water*, and so mix it with Snail Water, or Bean Flower Water, to make a Virgin's Milk or Wash of.

48. Of Balsam of Peru.

Pomet. **W**E fell at *Paris* three sorts of *Balsams* by the Name of *Balsam of Peru*; to wit, the *White*, which is

call'd, the *Balsam* by *Incision*; that in the Shell, which is call'd the *dry Balsam*, and the *black Balsam*. This first is a white Liquor, altogether like that of which I shall treat in the Chapter of Turpentine, that distils from the Trunk and large Branches of certain Shrubs, whose Leaves are agreeable to those represented in the Figure of *Balsam of Peru*, which Tree grows plentifully in *New Spain*, &c. The second is the *Balsam* in the Shell, which drops from the Branches that are cut, at the Ends of which hang little Flasks or Baskets, to receive a kind of Milk that falls into 'em after the same manner as the Vines yield a clear Water. When these Baskets are full, they place others in their room, continuing so to do till the Trees will yield no more; then they expose, or set these Baskets in hot Places for some Days that the Milk may congeal or harden, and change its Colour. The third is the *black Balsam*, which is made by boiling the Bark, Branches and Leaves of these little Trees in Water; and after they are boil'd some Time, by taking the whole from the Fire, and gathering off the Fat that swims at Top, which is of a blackish brown Colour, and is what we call *black Balsam of Peru*.

The first, being that which distils from the Branches, is a hard Balsam, which, to have its requisite Perfection, ought to be reddish, the most fragrant and dry that may be. Its Use is for several Particulars, which may be of service, as well in Medicine, as to make Virgins Milk, being more abundantly odoriferous than that which is made of *Benjamin* and *Storax*. Several Persons have assur'd me, that the *Balsam* in the Shell was a Composition of *Benjamin*, *Storax*, and *Balsam of Peru*, which I never cou'd find to be true from several Tryals that I have made. But I will say this, that there is a Balsam of Monsieur the Governour of *Berne*, which I shall communicate to the Publick, because of its many great Virtues.

After that the Branches will drop no more, they cut the Trunk, and from thence flows a white Humour that is as clear as Milk, and is what we call the *white Balsam*, which, to be right and true, ought to be white, and as like the *Balm of Gilead* as may be. This Balsam is of no other Use, that I know,

but

but for Wounds, or to sell instead of the true *Opobalsamum*; tho' there is a vast Difference, in that the true white *Balsam of Peru* has a Citron Smell, which is not to be met withal in the white *Balsam of Peru*.

Balsamum Peruvianum, seu Indilemery. *cum*, or *Balsam of Peru*, is a natural Balsam, whereof there are three Sorts or Species. The first, call'd the *dry Balsam*, is a Sort of hard, reddish, fragrant Rosin, which is brought us in the Shell. [*Produd' as describ'd in Pomet.*] The second is a liquid, white, smelling Rosin. And the third is a black odoriferous Balsam, which is the most common, and most in use of all the others, as well in Physick as for Perfumes. It ought to be viscous, and of a Turpentine Consistence, of a blackish brown Colour, a sweet and agreeable Taste, having some Analogy to *Storax*. These Balsams are proper for the Brain and Stomach, to drive malignant Humours off by Perspiration, to deterge and heal Wounds, to strengthen the Nerves, and to resolve cold Tumours. The Dose from a Drop to four or five.

49. *The Manner of making artificial Balsam of Peru.*

Pomet. FINE Turpentine, Gallipot, or white Frankincense, of each one Pound; Oil of *Ben*, *Olibanum*, *Labdanum*, *Gum Elemi*, of each six Ounces; Lavender Flowers and Nutmeg, of each four Ounces; Spikenard, Wood of Aloes, of each two Ounces; Myrrh, Aloes, and Dragon's Blood, of each one Ounce and half; the little Valerian Orrice, long Birthwort, *Acorus Verus*, Mace, Benjamin, Storax, of each one Ounce; Zedoary, Galingal, Cloves, Cinnamon, Castor, and Mastich, of each six Drams: Powder all the Drugs grossly, then melt the Turpentine, Frankincense, Gum Elemi, and Oil of Ben over the Fire, and when they are dissolved, incorporate the Powders; and when they are made into a PASTE, put them into a Glass Retort, whereof one Part is empty; and after it is well luted and dried set it upon a Sand-Furnace; and when the Matter begins to heat, there will flow a clear Water, then an Oil of the Colour of Gold, at last a black Balsam, tending to

red, which some would have to be what we sell by the Name of *Black Balsam of Peru*. The Water is proper to be taken inwardly, by those who have the Falling Sicknes, Convulsions, Weakness of the Stomach, and to correct Wind. The Oil is good for the Palsy, Nerves that are wounded, Pains in the Joints, rubbing them with it hot. As to the *Balsam*, it has the same Virtues with that of *Peru*.

50. *The Balsam of the Governour of Berne, which was given me by Mr. Pimodan, the King's Lieutenant of Toul in Lorrain.*

TAKE dry Balsam, one Ounce; Storax in Tears, two Ounces; *Pomet.* Benjamin, three Ounces; Aloes Succotrine, Myrrh, Olibanum in Tears, Roots of *Bobenia* Angelica, Flowers of St. John's Wort, of each half an Ounce; Spirit of Wine one Quart; beat all together, and put them into a Bottle well stopp'd, which hang in the Sun in the Dog-Days.

The Virtues of this Balsam, according to the Original given me by the said Mr. Pimodan.

First of all it is an admirable *Balsam* for the Colick, taking four or five Drops of it in a Glass of Claret. It is also sovereign in the Gout, applied to the Part affected, with a Feather or Cotton. For the Tooth-Ach it is wonderful, apply'd to the Teeth with Cotton that has been steep'd in it. It cures all Sorts of Ulcers, Cancers and Shankers; cures the Biting of venomous Creatures and mad Dogs; is good to prevent the Marks of the small Pox, by rubbing the Pimples as they appear upon the Face. It is excellent for the Piles, Inflammations of the Eyes, Pains of the Stomach, and likewise to provoke the Terms, taken five or six Drops in hot white Wine.

51. *Of Balsam of Copyba, or Capivy.*

THE *Balsam of Capivy* is brought us two ways, to wit, in a clear Oil, *Pomet.* and a thick Oil. And this Difference

arises

arises only from the Difference of Time in which it flows from the Tree; for that which comes from the Incision that is made from the Tree, whose Figure is represented in the Plate herewith, is a clear Oil, that is white, and of a resinous Smell; and after that distils another Sort, that is of a golden Colour, and thicker, which gives it the Name of a *Balsam*. This is usually brought from *Portugal* in earthen Bottles, sharp and narrow at the End, in which is found a great deal of Moisture, which occasions it to separate, and makes this Balsam whitish like Curd. The Natives know not a better Remedy for all Sorts of Wounds, than their *Colocai*, for so they call this Balsam; and the *Brazilians Copaiba*, the *Portuguese Gamelo*; in short, it is a very admirable Medicine, both internally and externally us'd, being a Specifick in the *Gonorrhœa*, and Womens Whites. The Natives found out the Virtue of this Balsam by means of certain Hogs in those Parts, who presently, when they were wounded, would strike their Teeth against the Trunk of these Trees, from whence the Balsam would flow out into their Wound; and this they would continue to do 'till they were perfectly well. The Wood of the Tree serves them to die red with, as well as that of *Brazil*.

Balsamum Copaku, Copau, Copal-Lemery. Iyva, Copais, Campais, Gamelo, or Balsam of Capivy; it is a natural Balsam flowing from a Balsam Tree, about *Surinam* in the *West-Indies*, hot and bitterish to the Taste, of an aromack Smell, and clear, transparent Body, like *Venice Turpentine*, but equal in Goodness and Virtue to most other natural Balsams. It comforts and warms a cold Stomach and Bowels, dissolves and enters into the whole Mass of Blood, depurates it from all its Feculencies, is an admirable Vulnerary, and a very good thing against the Scurvy; opens Obstructions, and provokes Urine powerfully: It strengthens a weak Back, stops Fluxes of all Kinds; in a word, provokes Sweat, and cures most Diseases which are to be remedied by sweating, doing whatever any other natural Balsam or Turpentine will do. Dose from twenty Drops to forty, twice a Day.

52. Of Balsam of Tolu.

Balsam of *Tolu* is a Resin that flows from the Trunks of several Trees, by means of cutting 'em. *Pomet.* These Trees are found in great Quantities in a Province of *New Spain*, which is betwixt *Cartagena* and *Nomen Dei*, call'd *Tolu*. The Inhabitants of those Parts tie at the Bottom of the Tree little Vessels made of black Wax, or else a *Calabash*, to receive the Balsam; and when this Liquor falls, it hardens, and becomes much about the Consistence and Colour of *Flanders Glue* newly made.

This Balsam is very scarce in *France*; but those who want it, procure it from *England*, where it is very common. Chuse that which is fresh, of a sweet penetrating Smell, like Balm of *Gilead*; for when it grows stale it is a dry Balsam. The same Virtues are assign'd to this as to other Balsams, but more particularly for internal Uses, this not being in the least apt to vomit.

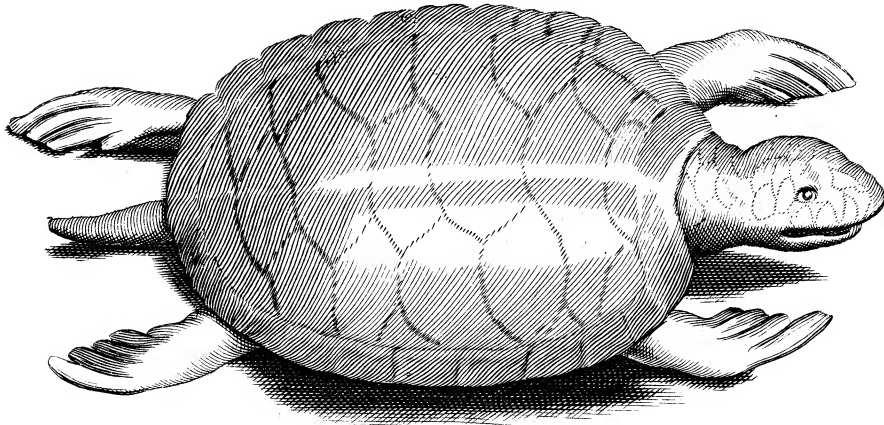
Balsamum de Tolu is a balsamick resinous Liquor, of a reddish Colour, inclining to that of Gold; being of the Consistence of Turpentine, very clammy, and sticking fast to any thing; when it grows old it grows dry and solid, and will break into Pieces almost like Aloes. It is of a very fragrant and pleasant Smell, reviving the Senses, much resembling the Smell of Lemons and Jessamin Flowers, but stronger, and not so faint and weak. It is more esteem'd than the Balsam of *Peru*, and reckon'd almost as good as the Balm of *Gilead*. It attenuates, dissolves, is pectoral and vulnerary. Outwardly it cures old Aches and Pains of the Head and Joints. It stops Catarrhs, helps Defluxions, strengthens the Weakness of the Bowels, discusses Tumours, and cures Contractions. It is us'd in the Tincture, Spirit, and volatile Oil, as those of the Balm of *Gilead*, &c.

53. Of the New Balsam.

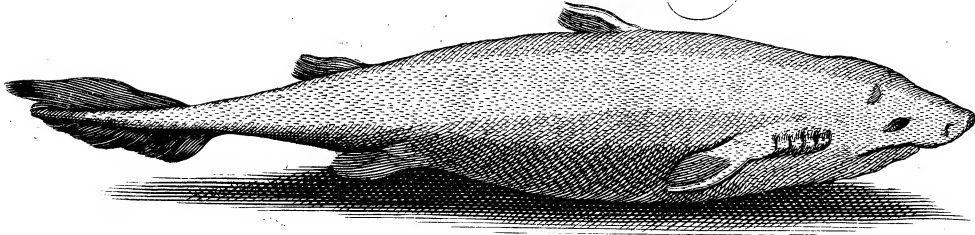
THE *New Balsam* in Colour and Shape is very like that of *Tolu*, *Pomet.* but of a much less agreeable Smell.

This

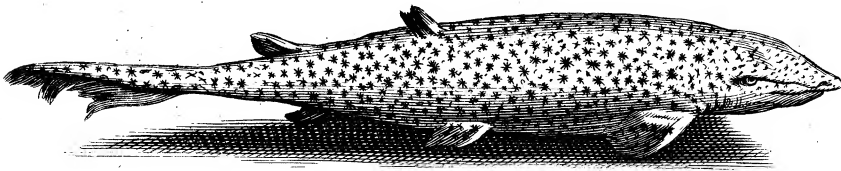
of Animals .
36
The Sea Tortoise .

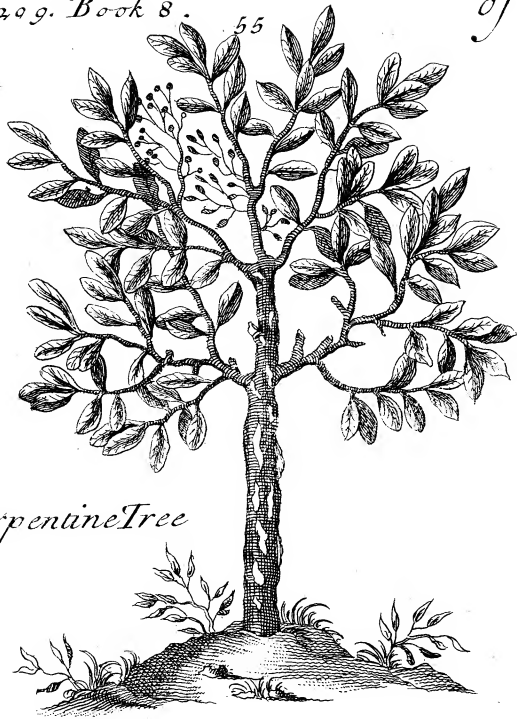


37
The Sea Dog.

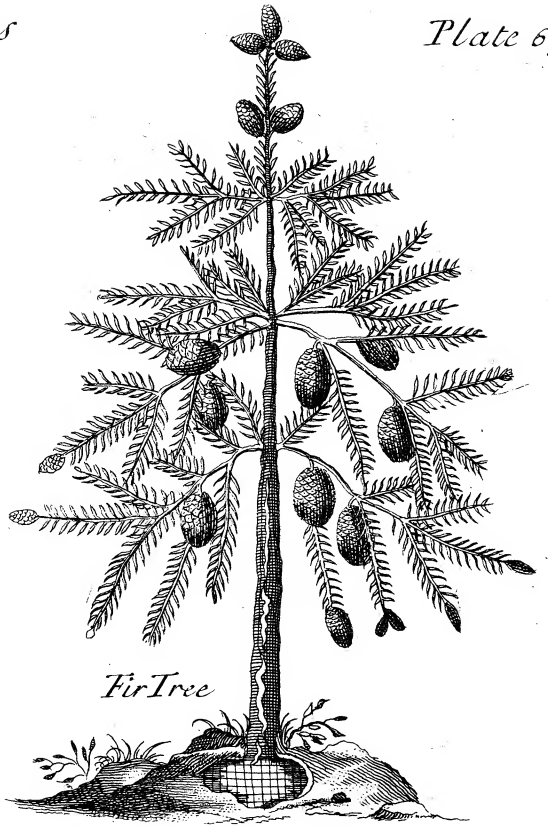


The Roufette .

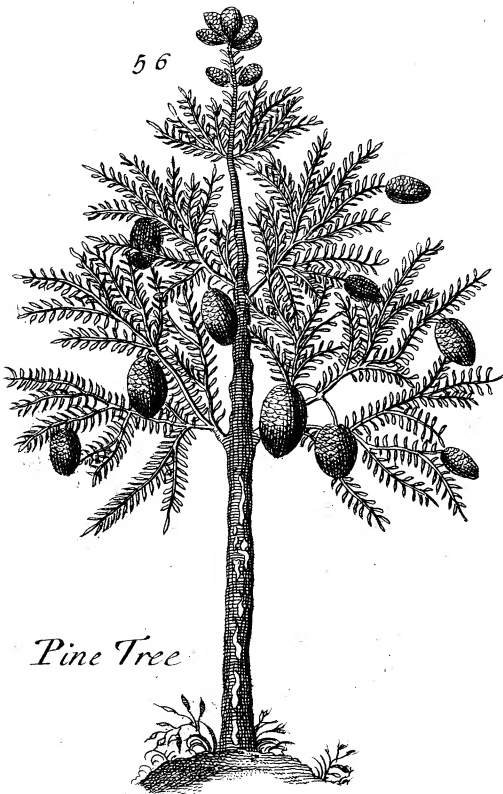




Turpentine Tree

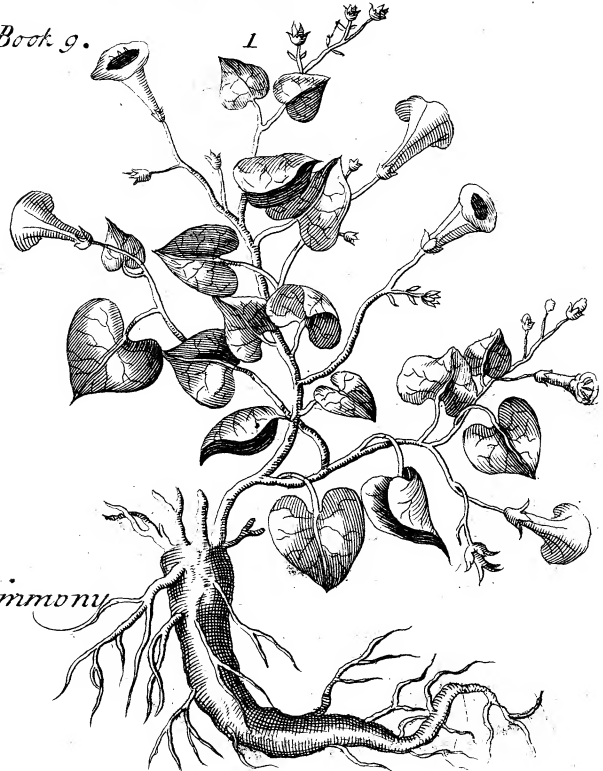


Fir Tree



Pine Tree

Book 9.



Scammony

This *Balsam* is made after the same manner as the Oil of Bays, from little red Fruit that comes in Clusters, upon a Kind of Tree, the Leaves whereof are very large and broad, green above, and greenish underneath, that grows in the *West Indies*, especially in the Island of *St. Domingo*. This *Balsam* is so very scarce in *France*, that there is very rarely any of it to be seen.

54. Of Liquid Amber.

Pomet. **L**iquid Amber is a liquid Rosin, clear and reddish, which flows from the Trunk of very thick and large Trees; the Leaves whereof are like those of Ivy, and which grow plentifully in *New Spain*, where they are call'd *Osocol*. The *Indians* cut the Bark of these Trees, which is large, and very thick, and so they afford a Rosin, which when it is in any reasonable Quantity, they send into *Spain*, where it is sold by Barrel, as they do fine Turpentine; and sometimes it is very common in *France*, tho' at present it is scarce. Chuse that which is clear, of a good Smell, inclining to that of *Ambergrise*, which gives it the Denomination, and of a pale yellow. When it grows old it thickens, and is of a redder Colour. It is an exquisite Balsam for curing of Wounds, especially the *Fistula in Ano*.

We sell two sorts of *Liquid Amber*; the one in clear Oil, which, for its Consistence, is call'd, Oil of *Liquid Amber*; and the other in Oil of the Consistence of Turpentine, which from thence is call'd, *Balsam of Liquid Amber*: But the Difference is no other than according to the Time the one or the other falls from the Tree; for that which falls first is always the clearest, and so ought to be prefer'd to the other. And as *Liquid Amber* is scarce, they make use of Oil of *St. John's Wort* in its Place, which is made with the Flowers put in Oil Olive, and set in the Sun during the Dog Days. These Flowers give a fine beautiful red Colour to the Oil. Some People add, very properly, fine Turpentine and Saffron. The older this Oil is made, the more Virtue it has in it. Besides this, they make another Oil of a blue Colour, with Camomile Flowers, after the same manner as the former.

Liquid Amber is a natural Balsam, or a liquid Rosin, as that *Lemery.* of Turpentine, clear, reddish, or yellowish, of a pleasant Smell, almost like *Ambergrise*. It flows by Incision from the Bark of a fine large Tree, that grows in *New Spain*, which the *Indians* call *Osocol*, or *Osocol*; the Leaves resemble those of Ivy; the Bark is thick, of an ash Colour, and very odoriferous. They gather this liquid Rosin, and bring it to us in Barrels; but sometimes they leave it to dry in the Sun, where it hardens like common Rosin. This Consistence makes it easier to transport than the other, but the Smell is not fragrant, because the Heat of the Sun exhales some of the more volatile Parts. The Trees which produce the *Liquid Amber*, perfume with their fine Smell the Places where they grow. This *Liquid Amber* is an excellent Balsam, it mollifies and consolidates, is good against the Hardness of the Womb, Rheumatism, Sciatica, and the Weakness of the Nerves.

55. Of Turpentine

Turpentine is a clear, transparent, resinous Liquor, that flows from *Pomet.* the Incisions that are made on the Trunks of several Trees, as we shall see afterwards. We usually sell three sorts of *Turpentine*; to wit, the *Turpentine of Chio*, the *Turpentine* from the Pine Wood, and the *Bourdeaux Turpentine*. There are several others besides these to be met with in the Shops, which are nothing else but false Names given them, according to their Adulterations.

The first and the dearest of all the *Turpentine*s is that of *Chio*, which flows from the Trunk and large Branches of a Tree of a moderate Size, call'd the *Turpentine Tree*, which grows in the Isle of *Chio*, in *Cyprus*, *Spain* and *France*. These Trees bear green Leaves, with Flowers and Fruit, as express'd in the Figure. As to the Fruit, they are of two kinds, the one of the Size of our Nuts, and the Shape of *Pistaches*, and the other like the Juniper Berries. But as we have no sort of Trade either with one or the other, I shall say nothing further

of them, but refer the Reader to such Books as treat of them. As for that which is the *Turpentine* of *Chio*, it ought to be of a solid Consistence, without any kind of Taste or Smell, of a white inclining to a green, and the least subject to stick in the Teeth, or to the Fingers, that is possible; and take care of the Pine-Wood *Turpentine*, which some sell for the true *Chio Turpentine*; which is no great Difficulty to find out by its strong Smell, and because it sticks to the Teeth. This *Turpentine* is very little us'd in Physick, because of its Dearness; but there are some curious honest Apothecaries who make use of it upon most Occasions.

The second *Turpentine* is that we falsely sell for *Venice Turpentine*. This flows first of all without Incision, from Pines and Fir-Trees during the great Heats; and this *Turpentine*, or rather natural Balsam, is call'd by the *Lionnoise Bijon*; but the little we have brought us is not worth speaking of, for the Merchants of that Country know how to dispose of it to better Advantage, in that they sell it for true white Balsam of *Peru*; which is quite contrary to what *M. de Furet* observes, who says, that the *Bijon* is a Drugg the Apothecaries substitute in the room of *Turpentine*, which is a great Error for many reasons: First, because a Pound of *Bijon* is worth more than six Pounds of *Turpentine*. Secondly, because there are very few Apothecaries or Druggists in *Paris* that know what it is. And in the last Place, I believe, if we wanted ten Pounds of *Bijon* in *Paris*, we should be at a great deal of Trouble to get it, whereas we might meet with many thousand Pound Weight of *Turpentine*.

To return to our pretended *Venice Turpentine*; I say, when the poor People, who wait in the Fir-Woods, see that the Trees will drop no more of their own accord, they cut them, from whence flows a clear Liquor like Water, of a yellowish white, and that as it grows older, thickens, and becomes of a Citron Colour. When they make their *Turpentine Harvest*, which happens twice a Year, to wit, in Spring-time and Autumn, they bring it to *Lyons* in Casks, or in Goat-Skins, to sell to the Merchants, of whom we buy it; therefore we may be satisfied, that what is call'd *Venice Turpentine*, is the fine *Pine* or *Fir Turpentine* of *Lyons*. Chuse that

which is clear, and the whitest that can be got, and beware of what is counterfeited with Oil of *Turpentine*, which may be easily known by its Colour, Smell, and Consistence, and by steeping a Piece of Paper therein, and burning thereof. If there be any Addition of the said Oil, it will yield a black stinking Flame; on the contrary, if it is natural, it affords a resinous Smell, and will not burn so swift. This *Turpentine* serves for many Uses, as well in Physick as for the Artificers, especially for making Varnish.

The Third is the common *Turpentine*, to which some give the Name of *Bayonne*, or *Bordeaux Turpentine*. This is white, and thick as Honey, and comes most from *Bordeaux*, *Nantz*, or *Rouen*. This *Turpentine* flows not from the Trunks of Pines or Fir-Trees, as most People believe; but is made from a white hard Rosin, which we call *Galipot*, and the Mountaineers *Barras*. As to the true *Venice*, *Cyprus*, or *Pisa Turpentine*s, we have none brought us; and what we do sell by the Name of *Venice-Turpentine* is, as I have said before, that of *Lyons*: For the *Cyprus* they substitute that of *Chio*; for the *Pisa*, the common *Turpentine*, made with the Oil of *Turpentine*, and a little Verdigrise, to give it a greenish Cast; which is very improper for three Reasons: The first, because the true *Turpentine* of *Pisa* is of a yellowish white; the second, because the Counterfeit is able to spoil other Druggs, because of the Oil, which will not agree with all sorts of Work; the third, because it is greenish, which is contrary to *Pisa Turpentine*, that is yellow.

I have been the more particular upon this Head, that sick People, and Workmen, as well as Apothecaries and Surgeons, may not be impos'd upon with artificial *Turpentine* for the natural, but that they may hereby know the genuine and the true from the false and adulterate. As to the *Straßburg Turpentine* it rarely comes amongst us, but is frequently sold in *Holland*.

56. Of common Frankincense, or Rosin of the Pine Tree.

WE sell two sorts of this, one under the Name of *Galipot*, or white *Frankincense*, and the other under that

that of mix'd or marbled *Frankincense*; these differ not but in Colour. The first, which is white, is a Rosin, that flows by Incisions, that are made in the Pines, from whence it takes the Name of the *Gum*, or *Rosin*, of the *Pine Tree*; and when it flows in a fine Season, it is neat and white; and sometimes it is marbled or speckled, which when it is so, and the *Frankincense* fine, the Hawkers sell it for *Benjamin*, tho' it is very different from it, in that the *Benjamin* is of a good Smell, and the spotted *Frankincense* stinks extremely, and is of no other Use, that I know of, but to sell instead of *Benjamin*.

They dissolve the white *Galipot*, and when it is melted, they put it into Barrels, or half Barrels, which contain from three hundred and fifty, to seven hundred Weight, and after sell it under the Name of the gross or common *Turpentine*, which ought to be clear, and as little mixture in it as may be. As *Turpentine* is a Rosin which is more or less clear, there are Barrels of this Commodity to be met with, where there are sometimes fifty Pounds of this *Turpentine* as clear as Water, that swims at top, which is frequently sold for *Venice-Turpentine*, which may be known by its brown Colour.

The common *Turpentine* is much in use to make Ink for the Printers, and for the Farriers, and to make coarse Varnish, which they do by melting common *Turpentine* with Oil of *Turpentine*; but this is a Composition they are forc'd to make in private or bye Places, for fear of Fire. They distil *Turpentine* in great Alembicks, and there flows a Water first, then a white Oil, then a red Oil, which is a true natural Balsam, as well for the Cure of Wounds, as that of Chilblains. But as this white and red Oil is not much us'd, we do not deal in it; and instead thereof we drive a considerable Trade in the Oil drawn by the Alembick from *Galipot*, as well as that which flows from the Tree. This Oil is made plentifully in the Forest of *Cuges*, about four Leagues from *Marseilles*, and in the Neighbourhood of *Bourdeaux*. This Oil is what we call *Ætherial Oil*, Spirit, or Effence of *Turpentine*; that which remains in the Alembick, is what we call black Pitch.

Oil of *Turpentine*, to promote its Sale, and make it serviceable upon all Occasions,

shou'd be clear and white as Water, of a strong penetrating Smell; yet this is a mischievous Commodity, and great Cheats in it, besides the risque of Fire, and the little Profit there is got by it, which is the Reason why so many People will not deal in it. This Oil is also useful for several sorts of People; as Painters, Farriers, and others. It is likewise a true natural Balsam, and very proper for all sorts of fresh Wounds. Several Persons have assur'd me, that the Oil of *Turpentine* which comes from *Marseilles* in white Iron Bottles, was made with aromatick Herbs, as Thyme, Rosemary, Lavender, and the like; and, that this Oil was call'd Herb-Oil; but I could never have this confirm'd to me by several Letters that I have received from *Marseilles*; but on the contrary, every one has assur'd me that it was made with *Galipot*, or white *Frankincense*.

They dissolve this *Galipot* with a little Oil and some common *Turpentine*, and make what we call *fat Pitch*, or *white Burgundy Pitch*; because they pretend that the best and first of this is made at *St. Nicolas in Lorraine*, which is quite contrary at this Day; for the best of this Kind comes from *Holland* or *Strasbourg*, from whence it is brought. It is observable that this Commodity comes not but in private, or by stealth, being counterband Goods. I believe that the sort of Pitch which we make in *France* has more Smell, and is of a less Body, and whiter than that of *Strasbourg*, because we put in more Oil and *Turpentine*, and the *Dutch* use nothing but the *Galipot*. The Use of this Pitch is for several sorts of Work, and of some small account in Physick, because it is attractive; but it is a very troublesome Plaister, sticking close to the Skin, and may be taken off with warm Oil, or Beer and Butter.

They make, besides this, with *Galipot* boil'd to a Consistence, what we call Pitch Rosin; but that which we sell is made of *Galipot* gather'd at the Roots of Trees. In a Word, that which is boil'd, after having melted it, is thrown into Vessels, to form it into large Cakes of an hundred Weight and upwards, such as we now see them in. The finest *Rosin* comes from *Bayonne* and *Bourdeaux*, which ought to be dry,

fair, the least full of Water and Sand that can be.

The Arcançon, which we falsely call *Colophony*, or *Rosin*, is also of some little Use in Physick, but more abundantly for several sorts of Works; this being hot, they throw into it a sufficient Quantity of *Tar*, in order to give it a black Colour, and then it becomes what we call black Pitch, of which we have two sorts, which differ only according as they are hard or soft. The best black Pitch, as well as *Rosin*, is what we have from *Norway* and *Sweden*, but especially from *Stockholm*. We sometimes make black Pitch in *France*, but it is nothing so fine as that of *Stockholm*. The Uses and Virtues of the former so well known, it would be very trifling to insist upon them. There is drawn from black Pitch, by means of a Retort, a reddish Oil; which for its Excellence, is call'd Balsam, or Oil of Pitch. This is very good, and is pretended to be equal to the natural Balsams. They melt black Pitch, and afterwards dip a Wick of Flax, Hemp, or the like in it, which be sell by the Name of Links, and is us'd sometimes to black Shoes withal.

There is another black Pitch, which the Ancients call *Zopissa*, and is properly what the Mariners call *Pitch* and *Tar*, and which serves them to pitch their Vessels with. This *Zopissa* is a Composition of black Pitch, *Rosin*, Suet and *Tar* melted together; and this is what is sold for true Ship Pitch, and us'd as such by the Apothecaries in their Compositions where this is required.

57. Of Tar or Liquid Pitch.

Pomet. THIS is a clear fat Liquor that flows from the Trunk of old Pines. When they would kill or destroy the Tree, the *Swedes* and *Norwegians* make an Incision, and then cut the Bark round the Tree. The Bark of the Pines being cut, instead of yielding a white Frankincense or Galipot, they yield a black Liquor, which is the *Tar*; and presently, as soon as all that is fallen, the Trees die, and are good for nothing but to burn.

This may help to undeceive several who believe, as many Authors have vouch'd, that *Tar* is made by burning of the *Pines*; for

for it is certain that all the *Tar* we now sell is made as already mention'd, and not by means of the Pines that are burnt. That which is found clear, is improperly call'd, Oil of Pitch. The *Tar* is much us'd by the Mariners, Farriers and Shepherds, to mark their Sheep, as well as to defend them from Diseases. Chuse such as is natural and clean, not such as is made with Oil and Pitch, but the true *Stockholm Tar*.

It is genetally brought to us from *Denmark*, *Norway*, *Finland* and *Swedeland*; but there is much of it made in *New-England*, *Virginia*, *Carolina*, and other Parts of *Florida*. It is the produce of all resinous Trees, first taken from the Cedar, and afterwards from the Larch-Tree, Fir-Tree, and Pitch-Trees; but now chiefly from the Pine-Trees. It cures all Sorts of Scabs, Itch, Tettars, Ringworms, and other Vices of the Skin. *Tar* is better than Pitch, because in boiling the Pitch loses the more subtle and fiery Parts, and therefore is proper for Coughs, Phthysicks, Hoarseness, and other Humours that fall upon the Lungs. *Tar* and Bees-Wax make a Plaister that is discutive and anodyne, good against the Gout, and all manner of old Aches and Pains. The Spirit is very diuretick, opens all Obstructions, and resists the Scurvy.

58. Of Colophony, or Rosin of Turpentine.

THE true *Colophony* is made of fine *Turpentine* boil'd in Water, *Pomet.* till it comes of the solid Consistence of *Rosin*, by which Means it is made portable. They ought to be undeceiv'd who believe it to be, and call it brown Pitch, since the true *Colophony* is the *Turpentine* of the true Pine-Wood, made hard by boiling. One may know when this *Turpentine* is boil'd enough, by taking it out of the Water, and seeing that it hardens and is brittle. This is what the Apothecaries heat and make into Pills, with Liquorish Powder for Clap Pills.

It is call'd *Colophony*, as pretended by some, from a Town in *Ionia*, call'd by that Name, from whence it first came, and in *English*, *Rosin*. It is clear, yellow, or black, and when dry, brittle; and therefore will easily beat

beat to Powder, brought to us, for the most Part, from *France*. Chuse that which is clear and sweet, and which being burnt smells like Frankincense. Some is made in *England* from *Turpentine* distill'd; for after the Oil of *Turpentine* is drawn off, the *Colophony* or *Rosin* remains at bottom; the less Oil you draw off, the whiter you have your Rosin, the more Oil, the blacker is the remaining *Colophony*.

It is emollient, glutinative and healing, given inwardly it strengthens a weak Body, eases Pain, helps Ulcers in the Reins, Bladder, or Neck thereof; gives Relief in the Gout, fills Ulcers with Flesh, and skins a Sore. Given inwardly in Powder, from one Dram to two Drams. It cures the running of the Reins in Men, and the Whites in Women, and takes away the Weakness and ill Temperament of the Womb.

59. Of Varnish.

Pomet. WE sell six Sorts of *Varnish*; to wit, the dry *Varnish*, which is made of Oil of Spike, fine Turpentine, and Sandarac melted together. The Second is white *Varnish*, call'd *Venetian Varnish*, which is Oil of Turpentine, fine Turpentine, and Mastick melted together. The third is Spirit *Varnish*, which is compos'd of Sandarac, white Karabe, Gum Elemi and Mastick. The fourth is golden *Varnish*, which is of Linseed Oil, Sandarac, Aloes, Gamboge and Litharge of Gold. The fifth is *China Varnish*, which is of Gum Lac, Colophony, Mastick in Tears, and Spirit of Wine. The sixth is common *Varnish*, which is nothing else but common Turpentine dissolved in Oil of Turpentine, as observ'd, speaking of Turpentine before. There is another *Varnish*, some of the Religious make; but as we do not deal in it, I shall not trouble myself or the Reader about it. As to the Use of *Varnish*, that is best known to the Workmen, whose Business it is to deal in the several Sorts, whereby they understand which is the properest for their particular Use.

Lemery. *Terebinthina*, or Turpentine, is a liquid Rosin, or a viscous, gluey, resinous, oily, clear transparent Li-

quor, having the Consistence and Quality of natural Balsams, which they draw by Incision, or without Incision, from several Sorts of Trees, that grow in the hot Countries, as Pine, Fir, &c. We use two Sorts of Turpentine in Physick. The first is call'd *Chio Turpentine*, because it is produced in the Isle of *Chio*. This is most esteem'd, and dearest, but it is scarce. It flows by the Incisions made on the Trunk and large Branches of the Tree. Its Consistence is thick and pretty hard. Chuse the cleanest, most transparent, and of a whitish green Colour, having a little Smell, and being almost of an insipid Taste.

The second sort is call'd clear Turpentine, It is abundantly more liquid or thin, finer or more fragrant than the former: It flows without cutting, and likewise with cutting, from the same sort of Trees, but is brought us from *Dauphiny*, &c. That which flows without Incision, is by the Peasants of the Country call'd *Bijon*: It is a sort of Balsam that is of a Consistence, Colour and Virtue, almost like that of white Balsam of *Peru*. The Turpentine that flows by cutting, is that usually call'd *Venice Turpentine*; which tho' none of it comes from thence, but from other Parts of the Country, is the most commonly us'd in Medicine, being close, neat, clear, fine, white and transparent, of the Consistence of a thick Syrup, of a strong and unpleasant Smell, and the Taste something bitter. All the Turpentine yield a great deal of Oil, and volatile, acid, or essential Salt. They are very aperitive, proper for the Stone, and for Colicks, Ulcers of the Kidney and Bladder, Retention of Urine and Gonorrhoea. Dose from half a Dram to a Dram. It gives the Urine a Violet Smell, and creates sometimes Pain in the Head.

It is nam'd *Terebinthina*, or Turpentine because this Liquor flows from a Tree call'd *Terebinthus*. That which flows from other Kinds of Trees is call'd by the same Name from their Resemblance. *Terebinthus*, vel *Terebinthus vulgaris*, the common Turpentine Tree, or *Terebinthus angustiore folio vulgarior*, or the more common Turpentine Tree with the narrow Leaf, is a Tree of a middle Size, as to its Height, cover'd with an Ash-colour'd Bark: The Leaves are oblong, firm,

firm, always green, like the Bay, but much smaller, rang'd several on a Side, which end in a single Leaf: The Flowers are dispos'd in purple Clusters, that are full of *Stamina* or Threads, that are charg'd on their Tops: The Flowers leave no sort of Fruit after them, the Fruit rising upon Stalks that bear no Flowers: They are thick Shells, like Juniper Berries, pretty hard, viscous, or resinous to the Touch; of a greenish blue Colour, tinging the Hands, each of them inclosing an oblong Seed. This Tree is very resinous, and the Wood hard, like that of *Lentisk*. It bears like the Elm a Bladder, or Bag, fill'd with a fat Liquor, where Flies engender. It grows in the Isle of *Chio*, *Cyprus*, *Spain*, *Languedoc*, *Dauphiny*, and other warm Countries; and when it is pretty full of *Turpentine*, and no Incisions are

made, the Rosin of the Turpentine grows thick, hardens, and produces Obstructions that stop the Course of the Circulation of the nutritious Juice; then the Tree falls into a kind of Suffocation, for it swells and bursts. To prevent this Accident, they make Incisions or Slashes, at the bottom of the Trunk of the Tree, which is like bleeding in the Foot, by which they make the Turpentine flow, which before caus'd so great a Repletion. They likewise cut the Trunk and other large Branches of the Tree, which has the same Effect as bleeding in the Arm; and under these they place earthen, or other Vessels, to receive the Turpentine that flows. This Tree affords a great deal of Oil and essential Salt. The Bark, Leaves and Fruit are astringent, and proper to stop the griping of the Guts, and to provoke Urine, &c.

BOOK the Ninth.

Of JUICES.

THE Word *Juice* signifies a liquid-Substance, which makes up one Part of the Composition of Plants, and which communicates it self to all the other Parts to serve for their Nutrition and Growth; and this *Juice* is to Plants, just as Blood is to Animals. The *Juice* is further taken for a thick Liquor which they draw from Vegetables, or the Parts of them, and, by the Means of the Sun or Fire, reduce into the Consistence of liquid Electuaries, or solid Extracts, in such a Condition, as to preserve or keep them for a Considerable Time. I don't pretend to speak of liquid *Juices*, but only such as are fit for Carriage, and which we trade in. I shall begin with *Scammony*, as being the dearest *Juice*, and most us'd of any we

have, and in which are committed the greatest Abuses.

I. Of Scammony.

S*cammony* is a thick Juice of the Root of a Plant that creeps along Trees and Walls, whose Leaves are green, and made in Form of a Heart; after which come white Flowers, shap'd like Bells. This Figure of the Flower is the Reason why some write that the *Scammony* Plant was a fifth Kind of *Volubilis* or *Bindweed*. Some will have it that the *Scammony* we now sell is the Juice thicken'd, by Assistance of the Fire, and drawn by Expression from the Root of the said Plant, that grows plentifully in several Parts of the *Levant*, but

but especially about *Aleppo* and *St. John a' Acre*, from whence the best *Scammony* is brought us; which when right, ought to be true *Aleppo*, light, grey, tender, brittle, resinous, and when crumbled between the Fingers, will appear greyish, attended with a bitter Taste, and a faint unpleasent Smell; and reject such as is heavy, hard, and blackish.

As to those who purchase great Quantities and wou'd buy pure *Aleppo Scammony*, let them take care that it be the same within as without; for I can assure them I have seen in this *Scammony* Pieces of Wood, Coal, &c. put into the middle, so that there has not been above the Thickness of one's Thumb of fine *Scammony*. I no longer doubt but the *Lewantines* roll up in the *Scammony* they make, Charcoal, Stones, and other foreign Bodies, which we meet with either by Chance, or that were put there maliciously and designedly, by those that work it up, and afterwards cover it with a Paste of fine *Scammony*, after the same manner as the Sealing Wax Makers do, as mention'd in the Chapter of *Gum Lac*.

It is easy to judge by this Description, that *Scammony* is not made by the Sun, as several believe: Besides, a Friend of mine, a Surgeon at *Marseilles*, who dwelt a long time at *Aleppo*, confirm'd me in this Opinion. They make from the *Aleppo Scammony*, by the help of Spirit of Wine, according to Mr. *Lemery's* Prescription, a Rosin of *Scammony*, which has more Virtues than it; yet as this is dear, and there is but little Consumption in it, I shall not trouble my self to say any thing more of it. *Scammony* is with good reason call'd one of the Pillars of Physick; for it is one of the most famous Catharticks or Purgers in the World, admitting of various Preparations: As, 1st, *Diagrydium*, or *Scammony* prepared and corrected with the Juice of Quinces. 2dly, *Scammony* sulphurated. 3dly, *Scammony* vitriolated. 4thly, Extract of *Diagrydium*. 5thly, Extract of *Scammony*. And, 6thly, Syrup of *Scammony*, which is made with Sugar and Spirit of Wine over a Fire. Besides which, we have the *Cornachine Powder* made of *Scammony*, Cream of Tartar, and Antimony diaphoretick. All the Preparations of *Scammony* are prevalent against old contu-

macious Diseases; such as Gout, Scurvy, Dropsy, Cachexia, Rheumatism, Obstructions, Headachs, Apoplexies, Relicks of the Venereal Disease, &c. *Scammony* is not proper to give in Fevers, or to old and weak Persons, Children, or breeding Women, being sharp and biting, and apt to inflame, by reason of its acrid Quality. This gentle Preparation of *Scammony* may be given almost in any Case, or to any Constitution, being a Marmalade of *Scammony*. Take *Scammony* and Turbith, of each four Ounces; extract them with Spirit of Wine, till they are almost dry; add this to six Pounds of Marmalade of Quince, which hath not above one Pound and a half of Sugar in it.

2. Of Smyrna Scammony.

BESIDES the *Aleppo Scammony*, we sell, tho' very preposterously, a *Pomek*. black, heavy, softish *Scammony*, that is full of Stones, Shells, and other exotick Bodies; in a word, the very Reverse of *Aleppo Scammony*; for which Reason it ought not to be meddled with, any more than the grey, light, brittle sort, that is nothing else but a Composition of Rosin, with some other violent Purgatives, in order to promote the Sale of it. I think my self oblig'd, in order to undeceive the Publick, to let them know that the great Cheats committed this way, in sophisticating of Medicines or Druggs, are not done by the general Merchants, or the wholesale Dealers, but the little retail Traders, who impose their pernicious Commodities upon honest well meaning People, without Honour or Conscience. And to shew the Malignity of some of these ill Druggs, I shall give you the Certificate Mr. *La Tour*, Physician of the Faculty of *Montpellier*, upon the Subject of *Scammony*.

“ It happen'd, as I was preparing half an Ounce of a Drugg that was sold to me for *Scammony*, that after the Preparation was done, the Syrup turn'd of a green Colour, like the Juice of Herbs, which made me think the Drugg was nought: Experience confirm'd me in this Opinion; for having given some to a little Dog, his Body swell'd
“ up,

“ up, and he remain'd sick five or six Days
“ without ever purging at all.

Sign'd the 16 Sept. 1693.

De la Tour Physician at Montpellier.

Scammonium vel *Scammonia*, or *Lemery*. *Scammony*, is a concrete resinous Juice, or a greyish brown Gum, that flows by Incision from the Root of the great exotick Bindweed, call'd *Convolvulus Syriacus*, and *Scammonia Syriaca*, according to *Morison* and *Tournefort*, the *Syrian* Bindweed. This Plant bears several long Stalks, winding, creeping, and clinging to and about the adjacent Shrubs. The Leaves are large, pointed and triangular, in the Shape of a Heart, smooth, of a fine green, hanging upon short Stalks. The Flowers grow in the Juncures of the Leaves in Form of Bells, of a purple or a whitish Colour, fair and pleasant to the Eye. When they are gone, a Fruit that is almost round and membranous succeeds them, containing in its Cavities black corner'd Seeds: The Root is long and thick as one's Arm, of a greenish brown without, and white within, supply'd with Fibres, full of a white milky Juice, as all the Plant is, and of a strong Smell. It grows plentifully in several Parts of the *Levant*, but especially about *Aleppo*, in fat Land. When the Juice is taken from the Root, they thicken or inspissate it by the Heat of the Fire, to give it a solid Consistence.

The best is clear, like Gum or Rosin, thin, quickly dissolving, friable, or breaking easily, not very heavy, of a greyish black, turning white or milky by the Touch of the Tongue, and not much inflaming it. The thick heavy and very black, is either the Juice of the whole Plant, or adulterated. If the latter, it is commonly done with the Juice of Tithymal, which you may easily know by its Heat, and its Mixture with other droffy Substances. It is strongly purgative, evacuates bilious, acrid, serous, or melancholy Humours. The Dose from four Grains to sixteen.

3. Of Opium.

Pomet. **O** *Opium*, which the *Turks* call *Amphiam*, is a Liquor white as Milk, that flows from the Head of black

Poppies, by the Assistance of Incisions made thereon. This Liquor being dropp'd from the Plant, grows thick, and changes its white Colour into brown, as we see that of the true *Opium*, which is in such Use among the *Turks*, that they subsist by it for two or three Days, without taking any other Food or Nourishment. And when they go to fight, they take it to excess, that it may animate them, or at least make them insensible of Danger.

There is yet another Sort of *Opium* that flows from the Head of the black Poppies, without any Incision, and which in falling coagulates and grows brown by the Heat of the Sun; and it is this thicken'd or concreted Juice, which is preferable to the other. Now the Word *Opium* is derived from the *Greek* Word *Opon* or *Opion*, that signifies Juice. There is a third sort made by Incision from the Heads of the white Poppies. This Juice thickening, as that of the black, is call'd by the *Turks* *Measlack*. But as these three Sorts of *Opium* do not reach us, I shall proceed no further with them, but only describe that which is brought us. Now that which we call and sell for *Opium* is a blackish Mass which the *Turks* and the People of the *Levant* send us, and is a Juice made by Expression from the Heads and Leaves of Poppies, and afterwards is reduc'd to the Consistence of an Extract, by the Help of Fire, and then form'd into Cakes of different Sizes; and to render it carriageable, is wrapt up in Poppy Leaves, as we have it now brought to us.

There is another *Opium*, which the *Turks* make from the Juice of a Plant they call *Glaucium*, which is like the horn'd Poppy that they mix with the Juice of Poppies, and make a Mass of altogether. And this is so true, that the *Opium* we now sell is no other than the Juice made by Expression, and not the Juice which flows naturally from the Poppy Heads.

And as the Ancients made no doubt but that *Opium* was a thick Juice made by Expression, so they gave it the Name of *Mecanium*. With all the Diligence I have been capable to make use of, I have not found it possible to meet with white *Opium*, notwithstanding what some modern Authors have affirm'd. I cannot believe that they ever



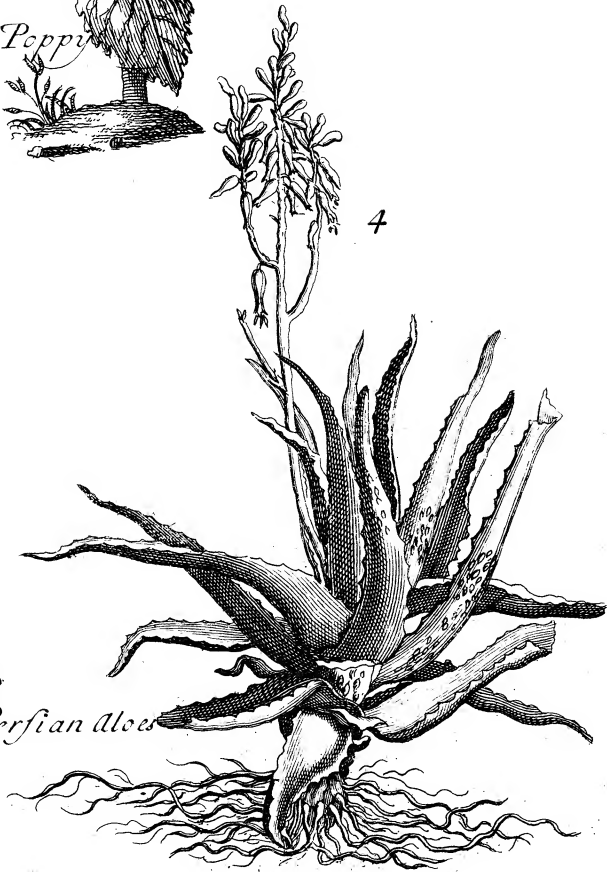
White Peppery.



Black Peppery.



Glaucium



Persian Aloe

3

3

4

ever seen any, since it is probable that the *Opium* flows from the Head of white Poppies like Milk, and must change its Colour by being expos'd to the Air as it hardens; therefore I think my self oblig'd to detect the Errors of others, and let the Publick know the Truth of Things, and that such Authors only write from the Relation of other Men.

As to the black, hard, yellow, or soft *Opium*, it is no Novelty to meet with any of them, because there is scarce a Cask or Barrel of *Opium*, where there is not black, or yellow, or hard, or soft to be met withal; for every Body knows that the thicker and older any Juice is, the more it will dry and blacken. If it is yellow it is owing to its being boil'd and dry'd. And as to what they say that the white comes from *Grand Cairo*, and that the *Turks* keep it for themselves, I have enquired of People that have liv'd a long Time there; but they all have observ'd, that the *Opium* they saw at *Grand Cairo*, and which the *Turks* use, is brown.

The Opinion of Mr. *Furetiere* ought to be rejected, when he says that *Opium* is made by beating the Juice in a Mortar; and when it is thicken'd, forming it into Troches. Raw or crude *Opium* is not much us'd in Physick; but the Extract which is made by Water, or Spirit of Wine, as directed by Mr. *Charas* and *Lemery*, which is what the Apothecaries call *Laudanum*. There is another call'd *Laudanum Opiatum*, which a Composition of *Laudanum*, Extract of Saffron, Magistery of Pearl and Coral, Oil of Cloves, Karabe, Musk and Ambergrise; the whole being compos'd into an Electuary. But as this is made in the Apothecaries Shops, the Druggist has no Trade with it. Some make an Extract about *Paris*, and other Places, from black and white Poppy Heads, which they call simple *Diacodium*, to distinguish it from the Compound. Besides which, there is the Syrup of *Diacodium*, which every Apothecary's Shop is furnish'd with.

There are several famous Preparations besides, as *Crollius's* Extract, that of *Opium* with Henbane; *Quercetan's* Extract of *Opium*; *Hartman's* Laudanum; *Paracelsus's* specifick Anodyne; Pills of Hound's-Tongue; Pills of *Storax*, *Philonium Romanum*; liquid *Laudanum*; that of *Paracelsus*, of *Helmout*; *Willis* and *Sydenham*; *Schroder's* *Laudanum*

with *Storax*, as follows. Take *Opium* dry'd on a hot Plate, two Ounces; *Storax Calamita*, *Labdanum*, of each one Ounce; Oil of Cloves, thirty two Drops; mix them in a hot Mortar, and make Pills as big as Pease, from three Grains to five. *Opium* is narcotick, hypnotick and anodyne; it composes the Hurry of the Spirits, causes Rest and Insensibility, is comfortable and refreshing in great Watchings, and strong Pains; provokes Sweat powerfully; helps most Diseases of the Breast and Lungs; as Coughs, Colds, Catarrhs, and Hoarseness; prevents or allays spitting of Blood, vomiting, and all Lasks of the Bowels; is specifick in Colick, Pleurifies and hysterick Cases. Dose, from half a Grain to three or four.

The true *Opium* is a gummy Tear that flows from the Head of the *Lemery. Egyptian* and *Grecian* Poppies; but now we sell none of the true Sort; because the *Turks* keep it from us, and will not permit the Transportation of it, but send in its Stead the *Meconium*, which is a Juice made by Expression from the Heads and Leaves of the same Poppies, and reduc'd by Evaporation to the Consistence of an Extract. They make it into Cakes in different Sizes, and wrap it up in the Poppy Leaves to keep it moist, which we improperly call *Opium*; yet has nothing of the fine Virtues of the true Kind, but is made answerable to it in some Degrees.

The best is heavy, compact, clean, viscous, of a blackish brown, inclining to a red Colour, bitter, and a little acrid to the Taste. The most esteem'd is that of *Thebes*, that is brought from *Aleppo* and *Smyrna* in *Turkey*, wrap'd up in Leaves; the other from *Persia* and *Surat* in the *East-Indies*, being far inferior to the *Theban*, or *Turkey* Sort; not having so strong a Smell, nor being any thing so clean. That which the *Turks* use they gather from the white Poppy gently cut; and they take it daily from half a Dram to a Dram, to enliven them, and raise their Spirits.

Authors make three Sorts of it; as *First*, The pure from *Cairo* or *Thebes*. *Secondly*, The black and hard from *Aden*. *Thirdly*, The yellow and softer Sort from *Cambaia* and *Decan* in the *East-Indies*. Yet we generally, at this Time, reckon but two Sorts, viz. the

Turkey or *Theban*, which is weighty, of a good Confidence, thick, and more solid than the *Indian*; of a lively, fresh, reddish Colour, almost like fresh Aloes, of a strong poppy Scent, of an acrid bitter Taste, that will burn and flame; soft, easy to cut, and be dissolv'd either in Water, Wine, or Spirit of Wine, and is pretty clean from Dirt, Recrements or Filth. Secondly, The *Indian Opium*, which is softer, yellower, lighter, not of so good a Body, and much fouler, being in every respect inferior to the former.

It is proper to allay fermenting Humours, to excite or procure Sleep, to calm or appease Pain, to stop Looseness and Vomiting, to provoke Sweat; and is good in Inflammations of the Eyes, and Tooth-Ach; Dose from half a Grain to two Grains. *Opium* procures Rest, by its viscous and sulphureous Particles, which being convey'd into the Channels of the Brain, by the volatile Parts, agglutinates and fixes the animal Spirits, in such a Manner, that it stops, for some Time, their Circulation, from the Swiftnes of their former Motion; so that during that Obstruction, or Tye upon the Spirits, Sleep ensues; for the Senses are, as it were, fettered or lock'd up by the viscous or agglutinating Property of the *Opium*.

4. Of Aloes.

Pomet. **A**loes is a Plant that is bigger, more or less, according to the Soil it meets with, which has given occasion to some People to say, that it rises as high as as some of our largest Trees; which is not altogether false; for there is found in *Spain*, especially in the Mountains of *Sirna Morena*, *Aloes* Plants of an excessive Height; the Leaves whereof are so thick, hard and sharp, that some of them will saw a Man asunder, In the middle of the Leaves rises a Stalk, according to the Figure describ'd, that contains a white Seed, extremely light, and half round.

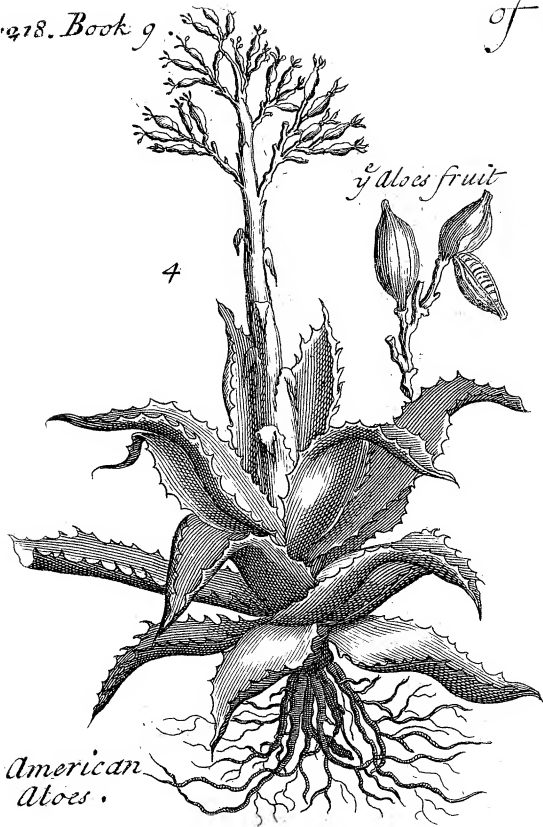
I shall not employ my Time to relate what a great many Authors have said concerning the *Aloes* Plant, that it flowers not of a hundred Years; and that when the Flowers blow they make a great Noise, which is al-

together false, since we have seen the *Aloes* Plant blow several Times in the Royal Garden at *Paris*; and when the Flower opens it is done without any Noise, or at least so small, that it is difficult to discover; and it is easy for me to prove what I advance from that Phrase, which is in the *Hortus Regius Parisiensis*, Page the 8th, in the Article of *Aloes*, in these Words: *Floruit in Horto Regio, Anno 1663, & 1664, quod ignotum hactenus fuerat Lutetia, idque nullo strepitu, nulla subitanea Floris eruptione, ut perperam multi fabulantur.* It flower'd in the Royal Garden in the Year 1663 and 1664, which was never known before in *Paris*, and that without any Noise, or sudden Eruption, as several had imagin'd. But I shall only say, that Abundance of People were surpriz'd that I should affirm that *Aloes* produc'd its Fruit in Clusters, as represented in the Cut; but what I advance answers to that given me by Mr. *Tournefort*, who gather'd the same upon a Plant in *Spain*. He had besides, in his Hands; about half an Ell of Lace four Fingers deep, and of a reddish Colour, which is made of a Silk which they draw from the Leaves of this Plant.

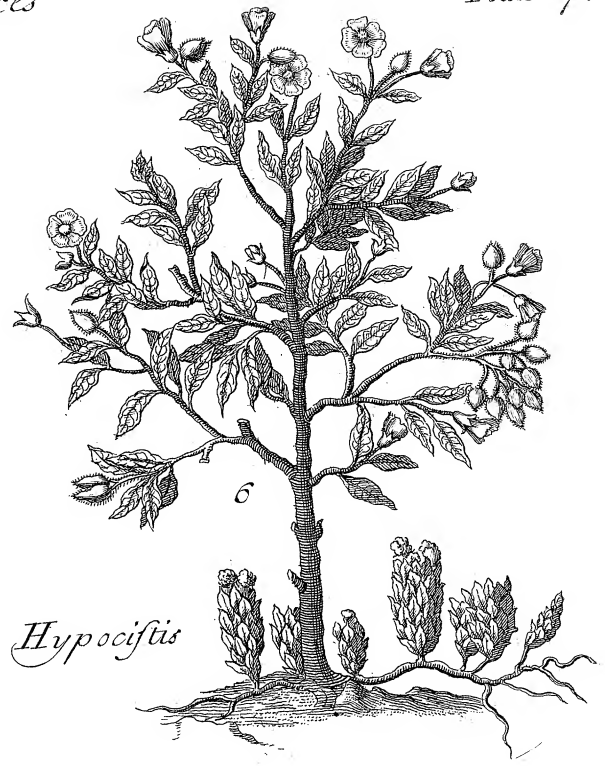
This Description of *Aloes* is entirely different from that made by Mr. *Furetiere*, who confounds the Tree of the *Aloes* Wood, with the Plant which produces the *Aloes*, as I have observ'd in the Chapter of *Aloes Wood*. But at present we sell three Sorts of *Aloes*, according as they are finer or coarser; and likewise in regard to the Places whence they come, and where they are made. The finest or purest is the *Succotrine Aloes*, because the *Aloes* is a concreted Juice, which the *Latins* call *Succus Concretus*, or because the best comes from the Island *Succotora*, or *Socotra*, near *Moco* in the *East Indies*. The Inhabitants of that Island draw this Juice from the Root of the Plant; and after it has settled, they pour it off by Inclination, into a Vessel capable to bear the Fire; and when it is reduc'd into an Extract, they put it in very fine Bladders for Conveniency of Carriage, and in that Condition, it will keep a long Time, as we find.

Chuse the finest, clearest, smoothest *Aloes*, that when broken is transparent, and being powder'd yields a fine golden yellow Colour, that is of a bitter Taste, without Smell;

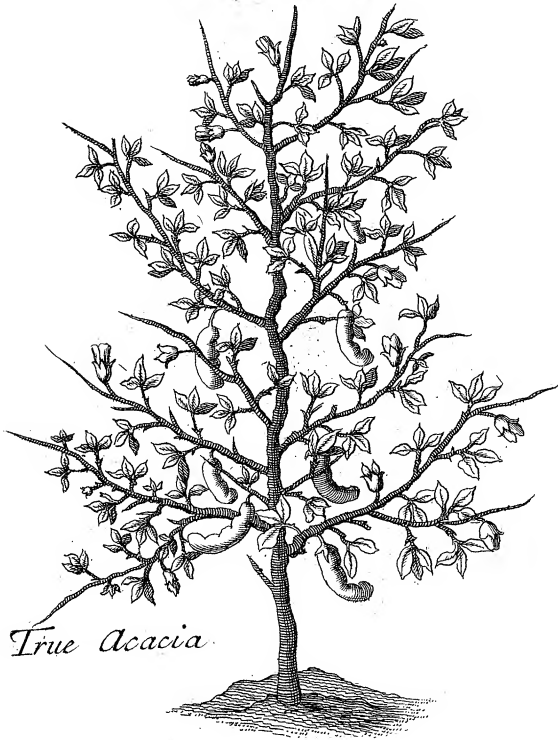
the



American Aloe.



Hypocistis



True Acacia



German Acacia.

the smallest, thinnest, lightest Bladders are esteem'd the best. The *Succotrine* Kind is said to be fit for medicinal Use, without any other Preparation; but the following Extracts are much more gentle, and proper for all the Intentions of Physick. Dissolve the purest *Aloes* in Juice of Roses or Violets; then digest, strain, and coagulate with a gentle Fire, to the Consistence of an Extract or Pill, which is called the *Frankfort* or *Angelick* Pill: The last of which Names is very incongruous, because the *Angelick* Pill is a Composition of several Ingredients mix'd together, of which *Aloes* is indeed the Basis.

Jo. Bauhinus delivers the Method of collecting the three Kinds of *Aloes*, distinguish'd into *Succotrine*, *hepatick* and *caballine*, or *Horse Aloes*, after the following Manner. They take the Herb call'd *Aloes*, being first cut in Pieces, then bruising, they press out the Juice of it, which they put up into a Vessel of a long and round Shape, letting it stand for the Space of twenty five Days; in the mean while they take care to clear off the useles Scum, and throw it away; as also the upper Part of the Juice, until such Time as some Difference appears in its Colour and Consistence. The purer Part of this Juice, being concreted, is call'd *Succotrine Aloes*; the remaining Part of it, being of a little darker Colour, is call'd *hepatick Aloes*; and from the Dreggs, or Settling of it, is made that Sort of *Aloes*, call'd *Caballine*, or *Horse Aloes*.

At *Paris*, in the Beginning of the Spring, according to the Relation of *Fab. Columbus*, they obtain a most pure *Aloes*, by cutting off the Leaves of the common *Aloes*, and hanging them up by a small Thread, and then putting a Dish or Platter under them, a yellowish and exceeding bitter Juice drops out of them into the Dish; which afterwards coagulates into a pure and clean Sort of *Aloes*, which loosens the Belly, destroys Worms, and subdues a preternatural Acid. It likewise removes Putrefaction, or prevents it, being given in Substance from half a Dram to two Scruples. It is also good in Obstructions of the Womb and the green Sicknes; and particularly prevalent in restoring a dejected Appetite.

Aloes is seldom or never prescrib'd in Po-

tion, by reason of its intense Bitterness; but is often prescrib'd in Pills, being the Basis of all, or most of those purging Pills, to be met with in Authors and Dispensatories. In the City of *Goa*, as *Garcias* relates, they give *Aloes* well bruise'd, and mix'd with Milk, to those that are afflicted with Ulcers in the Kidneys or Bladder, and void purulent Urine, and by that Means they are cured in a little Time. You must forbear the giving *Aloes*, or any Medicines containing *Aloes*, to those that are subject to the bleeding Piles, and the overflowing of the Courses, as also to such as are subject to a spitting or vomiting of Blood, and to Women with Child, unless it be first corrected as hereafter taught. But, on the other hand, it may be given properly and successfully enough to Persons subject to Melancholy, the Jaundice, and other Distempers, wherein the first Passages are tainted with vicious Crudities.

Aloes consists of two Parts, or different Substances, whereof the one is saline, or a saltish Substance, the other is sulphureous: The saltish Part is dissolv'd by watery Menstruums, such as common Water, distill'd Waters, and the Juices of Plants. The sulphureous Part is dissolv'd by Spirit of Wine, or any other inflammable Liquid. They commonly make use of the Juice of Roses, or Violets, to dissolve it in; but it is far better in fair Water; for by that means the saline Part is wholly separated from the gross sulphureous Part, which is viscous, and like a Jelly; nay, it appears to be nothing else but the grosser Part of the Jelly of the Leaves mentioned before. This gross Substance adhering too closely to the Intestines, is apt to produce a fruitless Desire of going to Stool, commonly call'd a *Tenesmus*, and sometimes bloody Stools; for by its opening the Mouths of the Arteries, answering to the hemorrhoidal Veins the Blood is poured forth. Wherefore, its Extract prepared with Water is a great deal better than the crude *Aloes*; and more advantageous and proper than the *Aloes Rosat*, &c.

Some prescribe *Aloes* toasted, by which Means it is depriv'd of its harsh Sulphur. This has been found by Experience to be very helpful in all Sorts of Fluxes of Blood. When *Aloes* is dissolv'd in the Juices or De-

coctions of Plants, it is called, the Infuccation of *Aloes*, or *Aloes* infuccated: Wherefore, according to the different Intention of the Physician, it may be dissolv'd in the Juice of *Asarabacca*, Infusion of *Sena*, and the Tincture of Scammony or Jalap, that its purging Faculty may be augmented. By a chymical Refolution, *Aloes* affords a large Quantity of Oil, but a very inconsiderable Quantity of urinous Spirit.

5. Of Hepatick Aloes.

Within these few Years last past, *Pomet.* we have brought from the *American* Islands a thick Juice, which the *French* make from the Root and Leaves of the *West-India Aloes*, as describ'd in the Cut of it, with its Flower and Fruit. This *Aloes* is brought us in Gourds or Calabashes of different Sizes and Weight; that is to say, from two Pounds to a hundred, and more, which is very extraordinary; yet I have been satisfied of the Truth of this, by those who have seen Gourds of this *Aloes* of an hundred and two Pounds Weight.

Chuse such as is of a Liver Colour, from whence it takes the Name of Hepatick, from the *Greek* Word *Hepar*, which signifies Liver. There are two Sorts of it, the Hepatick properly so call'd, and the Caballine. The Hepatick is the finer Sort of the two, and is given both to Men and Horses: It is of a lighter Liver Colour, fine and clear, and not very fetid in Smell. The Caballine is the coarser Sort, black, hard to be broken, and often adulterated. This is *Horse Aloes*, and ought not to be given to Men: And the common hepatick *Aloes*, sold in our Shops is scarcely any Thing else but the Caballine, of a strong fetid Smell, and very coarse: Besides, this is the *Barbadoes*, or *West-India Aloes*, which is of a fetid Smell, but much finer, and is brought over in Gourds, Pots, and Casks. That in Gourds is the best and the finest: That in Pots indifferent, but not so good as the other: That in Casks is moist, and the worst of all.

Aloe vel Aloes, is the thick or *Lemery.* concreted Juice of a Plant, call'd by the same Name, that grows of several Sizes, according to the Soil and Cli-

mate. They are to be met with in *Spain*, and many other hot Countries. The Leaves proceed from a Root that is long, large, very thick, fleshy, firm, indented, sharp on the Edges, fat and full of Juice. There rises from the Middle a large Stalk, which carries on its Top white Flowers deeply slash'd in, or divided into six Parts, which are succeeded by oblong, or as it were, cylindrical Fruit, divided each lengthways into three Partitions full of flat Seeds. The Root is of the Shape of a Stake fix'd in the Ground; all the Plant is extremely bitter, and grows in the Southern Climates; as *Egypt*, *Arabia*, *Spain* and *America*.

Some Naturalists say, that the *Aloes* Plant flowers not but from one hundred Years to another. That when the Flower opens or blows it makes a Report like a Gun, and that the Stalk rises up all at once, and grows prodigiously in a little Time. But this is not confirm'd from the Royal Garden at *Paris*; and on the contrary, the *Aloes* has been seen there to flower without any such Prodigy. The *Aloes* is divided into three Kinds, as before; the *Succotrine*, the *Hepatick*, and the *Caballine*. All the Kinds are purging, and the Body is made up of a watry Part, and a refinous. In the watry Part the purging Faculty resides. The refinous is of no Use for this Purpose, but rather of ill consequence, being that which induces Gripings. For this Reason it is always wash'd or cleansed before it is us'd, and then it may be taken with Ease and Safety. This is to be observ'd, that *Aloes* is not to be given too often, nor in too great a Quantity, lest it fret the Stomach and Bowels; nor to such as are troubled with a Flux of the Womb or Belly, or such as have a bloody Flux, or Women with Child; nor to such as are hectical, or have burning Fevers, or are of a hot and dry Habit of Body, or who are emaciated, lean, and wasted away; nor to Children of thin, lean, hot and dry Constitutions; especially in hot Weather, when the Air is in an extream dry Temperature.

6. Of Hypocistis.

THE *Hypocistis* is a thick Juice *Pomet.* made from a kind of a Spring or Bud, that arises from the Root of an Under-shrub

der-shrub, call'd *Cistus*, very common in *Provence* and *Languedoc*, from whence we bring the *Hypocistis* we sell. Mr. *Charas*, and after him Mr. *Meuve*, have well describ'd the Shape and Colour of this young Shoot, as well as the Shrub that bears it; the Figure of which I thought sufficient to give you, as engrav'd from the Original.

Chuse *Hypocistis* that is boil'd to a good Consistence, like Juice of Liquorice; that is to say, firm, of a shining black, the least burnt, the most astringent to the Taste that may be, and that which is true. I name the true *Hypocistis*, because Mr. *Meuve* says, that the Apothecaries, who wou'd deceive the World, generally use the Juice of the Root of Goats-beard dry'd in the Sun. But I can never believe this for three Reasons: First, because the *Hypocistis* is an Extract that is sold very cheap; as well because the Buds are very common in *Provence*, as by reason they yield a great deal of Juice. The Second is, because the Extract of the Root of Goat's-beard sells for more than the true *Hypocistis*. And the third is, because Mr. *Charas*, from whom Mr. *Meuve* pretends to copy, makes no mention at all of it.

This Juice is cold and dry, therefore it thickens and binds strongly, and is us'd chiefly to stop all Fluxes of the Belly, Womb, and Stomach. It stops vomiting and spitting of Blood, from Bruises. *Acacia* is often us'd instead of it, but is not so effectual and good. This Juice is depurated by dissolving it in Water or Wine, and inspissating; it is made up into Rolls or Troches to stop spitting of Blood, and Fluxes, Catarrhs, &c. The Tincture checks a *Gonorrhœa*, and the Whites; heals a Corrosion of the Bowels, occasioned by the Sharpness of Humours. A Lohoch made of it, with Wine and Honey, is chiefly us'd against Ulcers in the Lungs, Stomach, and Bowels.

Hypocistis, is a Kind of *Orobanchemery*. *che*, or a Sort of Sprig or Shoot that grows, in Spring-time, upon the Foot or Root of the *Cistus*, which is very common in hot Countries, as *Provence*, *Languedoc*, &c. and bears Leaves that are almost round, hairy, rough, whitish, and the Flowers purple. The Shoot grows about half a Foot high, of an Inch or two's Thickness, and sometimes more, being round, and

much larger at Top than at the Bottom; brittle, and of a yellow Colour, full of Juice, having certain Rings or Knots from one Place to the other, like Water Lilly Root. They cut this little Plant towards *May*, when they bruise and draw from it, by Expression, an acid Juice, which they evaporate over the Fire, to the Consistence of an Extract, that is hard and black as Juice of Liquorice; but in Shape of little Cakes, for the Convenience of Carriage. This is call'd, according to the Plant, *Hypocistis*, which ought to be fresh, heavy, black, without the Smell of Burning, of an acrid astringent Taste. It contains a great deal of acid essential Salt, intimately mix'd with Earth and Oil. It is proper to stop Looseness and Vomiting, and to put into any strengthening and binding Plaisters.

7. Of the true *Acacia*.

THE true *Acacia* is a thickned Juice, according to several Authors, that comes from the Fruit of certain Trees, that bear the Gum Arabick, whose Figure is represented in the sixth Chapter of *Gums*, Page 179. But as I am not certain in that, I shall content my self to assert, that what we sell for true *Acacia* is a thick Juice, reduc'd to a solid Consistence, which is brought us from the *Levant*, in round Balls of different Sizes, wrapp'd up in very thin Bladders, as well to hinder it from running, as to make it convenient for Carriage.

Chuse that which is boil'd to a good Body, of a dun Colour, that is to say, of such a brown as is inclinable to red; first, because such a Colour is a Sign that it is well boil'd; and, in the next Place, it is a Token that the Fruit was full ripe. The Juice ought to be smooth, shining, of an astringent Taste, something unpleasant. It is very little us'd, and therefore not much brought up by the Druggist and Apothecary, who, if it is call'd for, generally uses the *German Acacia*, which is made of the Juice of Sloes, boil'd to the Consistence of a solid Extract, then put in Bladders, as the *Egyptian* Sort, which it is like in the Form, but not in the Colour; for the true is of a brownish or dark red,

as aforesaid; and the German *Acacia* black as the finest Juice of Liguorish. See a further Account of this from Lemery of the *Acacia*, Chap. 17. B. 7. Page 132.

8. Of Roucou or Rocoe.

Pomet. **T**HE *Roucou*, which the *Indians* call *Achiotl*, or *Urucu*; the *Dutch*, *Orleane*; and we, *Roucou*; is a Meal or Flower which the Inhabitants of the *Leeward* Islands, and *St. Domingo*, make from a little red Grain or Seed, which is found in a Husk or Shell, whose Figure is here represented, mark'd A, which was engrav'd after the Original, which I have in my Hands.

The Shrub which bears the *Roucou*, produces, according to Father *du Terre*, from the Root several Shoots that grow into Shrubs, and divide themselves into several little Branches: The Leaves are very like those of *Lilac*, and bear twice a Year several Clusters of Flowers, that are white, mix'd with red, and in Shape like those of black *Hellebore*. The Flowers are full of a vast many little *Stamina*, or yellow Threads tipped with red: At the Fall of the Flowers come dark-colour'd Buttons all hair'd, or bristled with fine little brown Points, which do not prick at all. When they are ripe there is in the Middle two double Seeds or Kernels, entirely furrounded with a kind of Vermilion, or liquid red Dye, which the Natives call *Roucou*: 'Tis with this they paint themselves when they travel abroad; but before they use it, it is mix'd with certain Oils which they draw from some Seeds.

The *Europeans* do it with Linseed Oil; they beat it in a Mortar with this Oil, and after they have reduc'd it to a Mass, they send it into *France*, &c. where they use it to colour Wax yellow, when it is too pale, and likewise to give a Colour to Chocolate. There are those likewise who beat it in a Mortar without Oil, and make it into a Mass, or into Cakes; which being dissolv'd in Urine, makes a red Tincture, which stains as well as the best Dye in *Europe*, and is a very good Commodity.

This Account of *Roucou* is quite different from that of the *Sieur Francis Roufseau*, who wrote me Word it was a Tree of

eight or nine Foot high, whose Leaves were like those of the Peach-Tree; after which came Husks or Shells, much like the Chestnut Shell, furnish'd with little Prickles throughout; within it is a little red Seed, which they bruise in a Mortar, or on a Stone, and that they put into a Vessel of Water. In short, the *Roucou* is made in those Islands after the same manner as we make *Starch*, not according as Mr. *Meuve* has describ'd, but just as our *Starch-Makers* work; and after it is made into Cakes, and dry'd, it is brought hither.

This last Relation of the *Sieur Rousseau* is much juster than the first; for as much as the Cods or Husks I have, exactly agree with his Description. Besides, it is easy to see by the *Roucou* which we sell, especially when it is good, that it was never steep'd in Oil, in that the good Smell of the true *Roucou* makes it distinguishable from any Mixture. Again, we ought to undeceive those who believe that the *Achiotl* is made as the *Sieur Blegny* describes it, when he says, that it is the thicken'd Juice which is drawn from the Fruit of the *Achiotl*, which is a Fruit Tree of *America*. That this Fruit is a red Seed or Grain, which is found in great Plenty, in large round Husks or Shells: That when they take this Seed from the Husks, they stamp or beat it in a Mortar, and then press out the Juice, which they set afterwards in a hot Place to evaporate the Moisture; and when it grows thick almost like Paste, they work it into several Forms or Shapes; which being thoroughly dry, are properly what is call'd *Achiotl*: For, on the contrary, it is certain that the *Roucou* is made like *Starch*, and that it is impossible to draw a Juice from it, since the Matter out of which it is made, is a reddish downy Substance, which is found sticking to the Seed that is in the Husks, which they cannot separate without Water, in the same Manner as our *Starch-Makers* separate the Meal from the Bran to make *Starch* of; and not any Juice express'd, or drawn from the Grain, as that Author would have.

Chuse such *Roucou* as is of an *Orrice* or *Violet* Smell, the dryest and highest colour'd you can get. *Roucou*, of this Kind, is that which ought to be call'd *Achiotl*; for the chief Part of that we sell is moist, foul, mouldy, &c. so that in a Word, it is unfit

Roucou

of Roucou Husk or shell

The Negro's making
Roucou



to be given inwardly, mix'd in Chocolate, or otherwife. It is much us'd by the Dyers; they also colour Wax with it. There was brought formerly from these Islands, and also from *Holland*, a *Roucou*, in little Cakes, of the Shape of a Crown-piece, which was endow'd with a great many Excellencies, and very good for internal Uses; which is quite contrary to what we have brought at this time, which is in great square Cakes, like *Marseilles* Soap, or in round Balls, and which is sometimes so base and stinking, that it is almost impossible to bear it.

The savage *Americans* cultivate the Shrubs that bear the *Roucou* with great Industry, because of the many Uses they make of them: Such as, First, to adorn and furnish their Gardens, and from thence to cover or thatch their Houses. Secondly, being a hard dry Wood, it serves for Fuel. Thirdly, the Bark serves them for Cordage, and to make Linen. Fourthly, they put the Leaves and Root into their Sauces, to give 'em a relish, and to tinge 'em of a Saffron Colour. Fifthly, from the Seed they make the *Roucou*, as well to paint their Bodies when work'd in Oil, especially on great Days of Rejoicing, as to exchange for other Commodities with Advantage. This gives me an Opportunity to speak of an Extract of Buckthorn Berries, which is made by pressing out the Juice, and mixing it with white Wine, and a little Alum; and then extracting the Salt with Spirit of Vinegar, and abstracting all to a due Consistency. The Use is a fine Green for Painters in Miniature. There are excellent Extracts made likewise from black Hellebore, Pæony, Tithymal, and wild Cucumbers, whereof *Elaterium* is made. The Syrup made from these Buckthorn Berries, call'd *Syrupus Rhamni Catharticus*, or *de Spina Cervina*, is an extraordinary *Hydragogue*, or Purge for watery Humours, and one of the best strong Purges that is, and therefore good in the King's Evil, Rheumatism and Dropsies. This Syrup ought to be made of ripe Berries, gather'd about the End of *September*, or Beginning of *October*, and then it will be green; but if they be not ripe and yellow, they are not so proper to purge withal. There are some solid extracted Juices besides, that are made portable as the Juice of Liquorice, and some

others, too common to require a Description.

Roucou, call'd by the *Indians* *Achiotl*, or *Urucu*, is a dry Paste, *Lemery*. made from a little red Seed, which is found in a longish Husk or Cod, that has the Shape of the *Mirobalans*, but prickly, almost like those of Chestnuts. Authors are not agreed about this Kind of Tree or Shrub that bears this Fruit; some saying that the Leaves are like those of *Lilac*, and others, Peach Leaves.

To prepare *Roucou*, they bruise or pound the red Seed, then they dilute it with Water, and pass it thro' Strainers, to separate the Bran, or grosser Parts; afterwards they dry this into a sort of Flower or Starch. Chuse the dryest, of a Violet Colour. The Dyers use it chiefly, tho' it is sometimes made use of in Chocolate. If it be pure, it strengthens the Stomach, stops Looseness, helps Digestion, promotes Respiration, and provokes to Urine. The *Rhamnus Catharticus*, or purging Thorn, [*spoke of by Pomet*] is a Shrub that grows sometimes of the Height of a Tree, whose Trunk is of a moderate Size, cover'd with a Bark like the Cherry-Tree, whose Wood is yellow; the Branches furnished with some Thorns that are sharp, like the wild Pear-Tree; the Leaves pretty broad and green, much less than those of the Apple-Tree, surrounded on their Edges with very fine small Teeth; the Flowers are little, and of a Grass green, succeeded with soft Berries, as big as the Juniper, green at first, but that grow blackish as they ripen, shining, and full of a dark colour'd Juice, tending to green, that is bitter, and has within some Seeds join'd together.

This Shrub grows in Hedges, Woods, and other unimprov'd Places. The Fruit is gather'd when ripe, about the midst of Autumn, and is much in use amongst the Painters, Dyers, &c. It yields abundance of essential Salt, Oil, and Flegm, besides an acid Liquor; but a very full Portion of Earth. From these Berries being press'd a purging Syrup is commonly prepar'd in the Shops, with some of the warm Aromatics, which purges pretty briskly, and gripes in its working; and therefore ought to be given a little before Victuals,

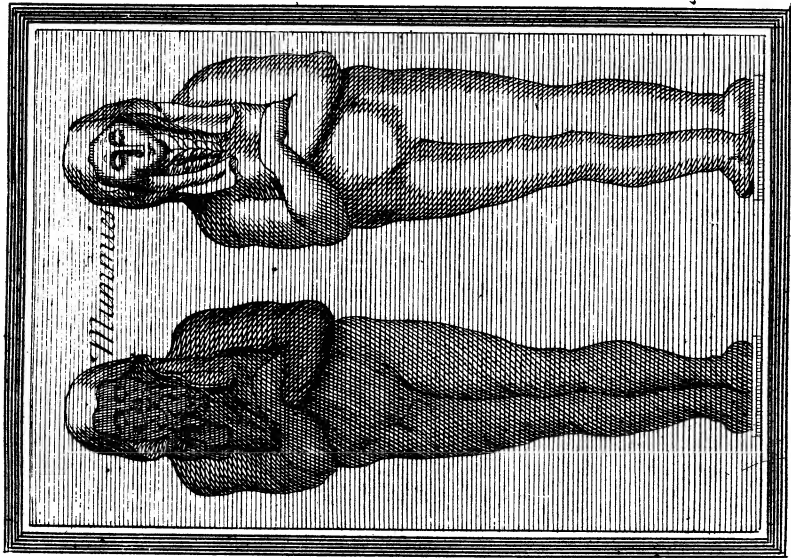
so that its sharper Force, especially in Children and young People, may be a little tied up, and blunted by the Aliment, or Food that is taken. This Syrup is prescrib'd from one Ounce to two, being brisk in discharging watry Humours, and there-

fore is very properly given in the Gout, Cachexy, Dropsy, and Rheumatism. The Powder of the Berries dry'd, may be given from one Dram to two Drams; but it will be a great deal better to boil them in Broth.

End of the Vegetables.

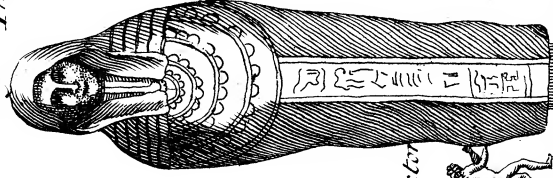
of Animals.

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Mummies

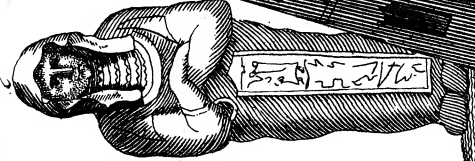
Mummy. The Head part.



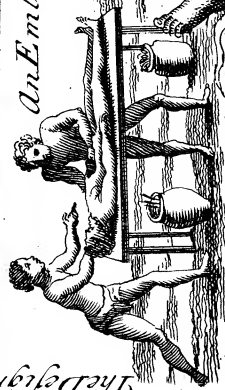
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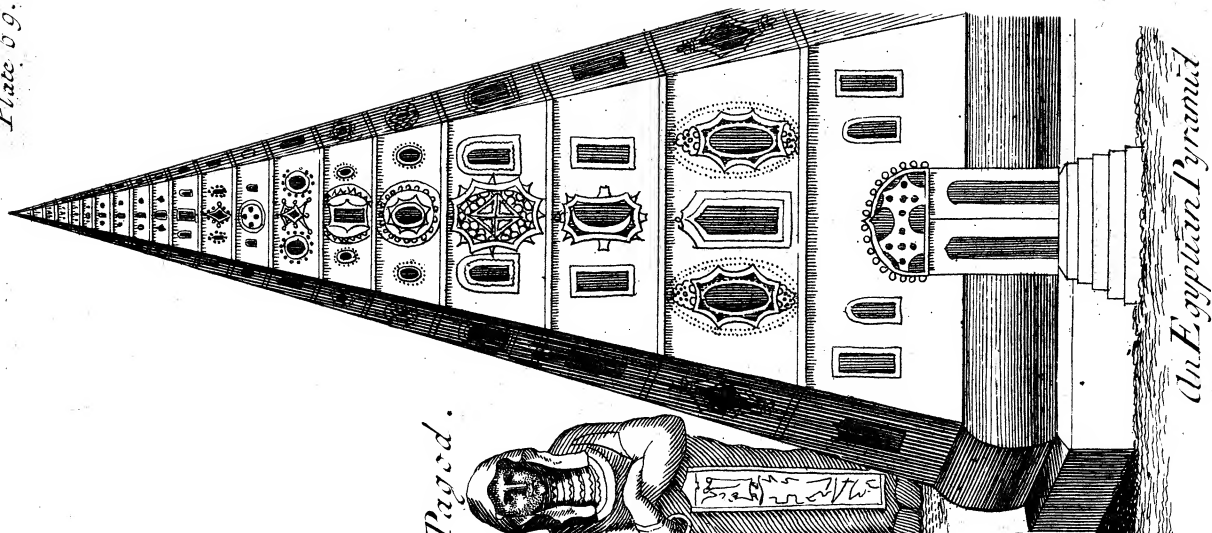
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An Embalmer



The Designer or Overseer.



An Egyptian Pyramid



a Body Embalmed.

POMET's General HISTORY

O F

D R U G G S :

With what is further observ'd by Monsieur
Lemery, Tournefort, &c.

VOLUME THE SECOND.

B O O K I.

Of ANIMALS.

I. Of Mummies.

Pomet.

AMONGST all the Testimonies of Respect, which Antiquity paid to the Bodies of the Deceas'd, that of a decent Burial was always in the most Esteem; by which last and pious Acknowledgment, they were willing to honour and preserve the Memory of those whose Actions had recommended them in their Life-time, and perform'd a Work of Charity, tending to the Consolation of the Living, and the Peace and Repose of the Dead. The wonderful Pyramids of *Egypt*, of which I shall speak by and by; the Obelisks engrav'd and carv'd with such Pains and Industry; the *Mausoleums*; and, in short, all the rich and pompous Monuments, found throughout the World, are certain Proofs of the Piety and Regard of the Antients towards the Dead. But as there are several different Nations and different Religions, so there are

particular Customs in paying their last Respect to the Deceas'd. All the Elements have been Partakers of the Spoils of the Dead, the Earth not having been thought sufficient alone to take care of the Relicks.

History informs us, that the Fire burnt and consum'd the Bodies of the *Greeks, Romans, Gauls, Germans*, and several other Nations: That there were a People who hung their dead Bodies in the Air, upon the Branches of Trees: That the old Inhabitants of the *North* found their Graves at the Bottom of the Ocean, as the *Ethiopians* in the Current of their Rivers; and that the People of the frozen *Scythia* were bury'd in the Snow. But the most antient Kind of Burial was that of interring the Bodies, from whence we have Reason to believe, that *Adam* himself was buried after this Manner.

It was from the *Jews* that the Christians practis'd the Interment of the Dead, making Pits or Graves in subterraneous and retired Places, call'd Tombs, or Catacombs, and most usually Cemeteries, or Dormito-

ries, that is sleeping Places: But before Burial they were embalm'd after a very curious Manner, as shall be shewn. The first and most costly Kind of Embalming was valued at a Talent of Silver, which may be computed at about eight hundred and fifty Livres, at that time of Day; but reckon'd now would amount to eight thousand Livres, or five hundred Pounds Sterling and upwards.

This Embalming was us'd to none but Persons of the first Quality. Three People were us'd to be employ'd in the Operation; one was a Kind of Designer, or Overfeer, who marked out such Places of the Body as were to be opened to take out the Bowels. The next was a Dissector, who, with a Knife, made of an *Ethiopian Stone*, cut the Flesh as much as was necessary, and as the Law would permit, and immediately after fled away with all the Expedition imaginable; because it was the Custom of the Relations and the Domesticks to pursue the Dissector with Stones, and do him all the Injuries they could, treating him as an impious Wretch, and the worst of Men. After this Operation, the *Embalmers*, who were reckon'd as Holy Men, enter'd to perform their Offices; and began first, some to remove the Bowels in the upper Cavity, excepting the Heart and Reins; and others to cleanse the lower Belly, which they wash'd with Palm Wine, or other aromatical Liquors; and during the Space of above thirty Days, they wash'd the Body with Balsam, Gum, or Resin of Cedar, and fill'd it with Powder of Myrrh, Aloes, *Indian Spikenard*, *Bitumen of Judæa*, and other Things of the like Nature; but they never us'd *Frankincense*, which we now call *Olibanum*; either because of the great Veneration they had for that Drugg, or by Reason of its Scarceness. As to the Head, they us'd Iron Instruments, which they thrust up the Nostrils, and pierced the Scull with, to draw from thence the Substance of the Brain; and afterwards they syring'd up precious and odoriferous Liquors.

The second Sort of *Embalming* was reckon'd at half a Talent, which was us'd to the middle Sort of People, where they contented themselves only to syringe the Body, or make Injections of Water, or rather of a Decoction made of Simples, or other Druggs, and Oil of Cedar; and afterwards,

when the Body was thus prepar'd, to put it into Salt for seventy Days; after which Time they took it out, and having open'd the Hole, they drew out the Intestines, which were almost wholly consum'd. This done, they wrapt all the Body in Bandages of fine Linen dipp'd in *Myrrh* and *Asphaltum*; and the *Designer*, which they call'd the *Scribe*, cover'd the Wrappings with a painted Cloth, whereon was represented the Rites of their Religion in *Hieroglyphick Characters*, and the Animals which the Dead lov'd most.

The History of the Beetle.

The Principal of all those Animals, or that for which the *Egyptians* had most Veneration, was the *Beetle*; as well because of its wonderful Birth or Production, as from the Analogy or Resemblance they pretend this Animal has with the Sun, and the strange Instinct in this Creature to continue its own *Species*. For this little Animal breeds without the Aid or Assistance of any Female; for when the Male would produce, he seeks out the Dung of an Ox or Bull, and having found it, he forms a round Ball, of the Figure of the World, which with his hind Feet he turns from *East* to *West*, and turning himself towards the *East*, he imitates the Motions of the World. Having thus roll'd the Ball, he puts it in the Ground, and leaves it there twenty-eight Days, which is the Time that the Moon passes thro' the Signs of the Zodiack; and during that Time he hatches the little Beetles in the Ball; and the twenty-ninth Day, which is the Day of the Conjunction of the Moon with the Sun, and the Time Productions are made in Nature, this little Animals rolls its Ball into the Water, where it opens, and the Beetles get out. It is upon this Account some say, that it is made the Emblem of *Birth*, and the Symbol of Fathers; because these Insects have but one Father, and no Mother. They represent also the World, because of the Ball which they form and turn round; and Man, because there are none but Male Beetles. They are of several Kinds, but those for which the *Egyptians* have the greatest Veneration, are such as have a Head like a Cat, accompany'd with Rays, which give Occasion to
them

them to believe that these Animals have some Analogy to the Sun; and the more, because this Insect has thirty little Paws, made like Fingers, which represent the thirty Days that the Sun makes each Month in passing thro' the Signs of the *Zodiac*. As to the other hieroglyphical Characters, the History of them is too tedious, but they may be seen in *Father Kircher*.

The third Sort of Embalming was for the poorer People, which was made with a Mixture of *Pitch*, and *Bitumen of Judæa*; or rather the Bodies were dry'd with *Lime*, or other Druggs of little Value; and sometimes they us'd *Ægyptian Nitre*, *Salt*, *Honey*, and *Wax*: Sometimes likewise they boil'd the Bodies in Oil to consume the Moisture, which is the only Cause of the Corruption; for the Principle of Corruption is a moist Heat, that introduces itself into the Flesh by the Dissolution of Parts, and by the Mixture of heterogeneous Bodies, which possess the Spaces which the Heat opens and enlarges. The Air, which is hot and moist, is the most common Dissolvent of all Bodies, and the only Way to preserve them, is to defend them from the Air; to which we may add, that the Air being full of an infinite Number of Insects, which we cannot perceive, because of their Minuteness, they are these little Insects that adhere to the Flesh and prey upon it; and as they easily increase, there are Seasons wherein all the Air is full of them, especially in Time of the Plague, and other malignant and contagious Diseases: And it hath been observed, by Microscopes, that what we call a *Gangrene* is nothing else but a vast Number of little Insects eating the Flesh, as Mites do Cheese. Therefore there is no other way of keeping Flesh, but by excluding these Animals, which is done by Means of Honey, Oil, Spirit of Wine, and some other Liquors, that fetter and entangle these Insects.

But the Curiosity of the antient *Ægyptians* went much further, because of the great Veneration they had for their deceas'd Relations, which they suffer'd not to be interr'd or convey'd out of their Sight, but rather fought out Ways to have them continually before their Eyes, to the End that they might imitate their Actions; that is to say, live according to the Honesty and Integrity of

their departed Friends, having such Regard to their Actions as to make them the Rule of their future Conduct.

For which Reason, when any of their Kindred died, they manag'd them so exquisitely, and dry'd them after such a Manner, that their Bodies became as hard as Marble Statues, which they call'd, in their Language, *Gabbaras*, which signifies *Mummies*; and their Art of preparing them was so nice, that nothing in them was disfigur'd. They would paint their Faces of several Colours, and sometimes with Gold, after they had been embalm'd, their Arms lying a-cross, the one upon the other, and bound about with fine Linen, which had been before dipt in aromatical Gums; and then they put upon the Head a Napkin, like a Woman's Coif, that hung down on both Sides upon the Breast, and behind upon the Shoulders. They had besides, under the Chin, a twisted Neckcloth, that served to squeeze their Cheeks together, and tie their Jaws close, so that they could not fall; and thus they appear'd rather like Persons asleep than dead.

If by any Sickness they were disfigur'd, they clap'd over their Faces Masks of Pasteboard, or of painted Cloth, resembling the dead Person, and embellish'd or adorn'd with several Colours. On the contrary, if the Person was not disfigur'd, they left the Face and Ears naked, and so painted them as they pleas'd. The Dead being thus order'd, they were put in great Cases of Glass made on purpose, according to the Grandeur of the Person; afterwards they plac'd them in the most elevated or highest Part of their Houses. And this they reckon'd such a valuable Pledge and Token of their Faith, that if any of them happen'd to want Money, he could not give a better Security than the embalmed Body of his Relation; and that which made it esteem'd so, was, that they would spare no Pains to pay the Money again; for if by Mischance the Debtor could not redeem this Pledge, he was reckon'd unworthy of civil Society, which engag'd him indispensably to find out Ways to recover his Kinsman in the Time limited, otherwise he was blam'd by all the World.

The same *Ægyptians* were besides at a great many other Expences for preserving their Bodies: For after they were embalm'd, (tho'

not dry'd) with several precious Druggs, and wrap'd about with a great deal of fine Linen; and sometimes they us'd above two hundred Ells of Bandage, so that nothing was seen but the Face, and sometimes nothing at all; they were likewise put up in Boxes or Coffins of precious Wood, which the Dead had caus'd to be made while living, together with the Body of the Idol or Pagod, which they worshipp'd in their Lifetime. The Idols or Pagods were made of Gold, and Silver, and other Metal; but most usually of the Clay of the Country, with hieroglyphical Characters, which denoted the Quality of the Dead, the Charge of the Embalming, the Time of their Death, and the Place from whence they came.

After they had shut up the Coffins of their deceas'd Friends, they carry'd them with great Pomp into the Places which they had caus'd to be built in their Life-time, as is to be seen at this Day by the Pyramids of *Ægypt*, which are two or three Leagues from *Grand Cairo*. And Historians relate, that *Cheemis*, King of *Ægypt*, made one, where one hundred thousand Men were employ'd for twenty Years, which was of a square Figure, and about fifteen Foot deep; and the Face or Front, on each Side of the Basis, was eight hundred Foot broad, and of the same Height, in which was a perpetual Lamp. We may see, by this, what Care was taken of the Dead; and we ought to undeceive those who are so credulous as to believe, that those are true *Mummies* which are brought us to sell again as a Commodity, being only Bodies pitched over.

Besides these pretended *Mummies*, and the former, we meet with another Sort; as those of *Africa*, which are call'd white *Mummies*, and are nothing else but the Bodies of those that are drowned in the Sea, which being cast upon the *African Coast*, are bury'd and dry'd in the Sands, which are very hot; and tho' they have been lusty Men in their Lives, after they have lain some Time there, they weigh not above thirty Pounds, and are then in a Condition of keeping for ever. There is one in *Paris*, in the Cabinet of Mr. *Boudet*, Nephew to Mr. *Boudet*, the King's Physician. These *Mummies* are little us'd, because they are both dear, and have little or no Virtue in them.

We may daily see the *Jews* carrying on their Rogueries, as to these *Mummies*, and after them the Christians; for the *Mummies* that are brought from *Alexandria*, *Ægypt*, *Venice*, and *Lyons*, are nothing else but the Bodies of People that die several Ways, whether bury'd or unbury'd, that are afterwards embowell'd, and have their several Cavities fill'd with the Powder, or rather Sweepings of Myrrh, Caballine Aloes, Bitumen, Pitch, and other Gums, and then wound about with a *Cerecloth* stuf'd with the same Composition. The Bodies being thus prepar'd, are put into an Oven to consume all their Moisture; and being likewise well dry'd, they are brought and sold here for true *Ægyptian Mummies* to those who know no better, and don't understand that the *Ægyptians* put so great a Value upon their Dead, and what they did in this Kind was to preserve the Memory of their Friends, and not to make a Trade of. To prove what I say, I shall relate what Mr. *Guy de la Fontaine*, the King's Physician, and after him *Ambrose Parry*, have said.

The *Sieur Guy de la Fontaine*, being at *Alexandria* in *Ægypt*, went to see a *Jew* in that City, who traded in *Mummies*, that he might have ocular Demonstration of what he had heard so much of. Accordingly, when he came to the *Jew's* House, he desired to see his Commodity of *Mummies*; which he having obtain'd with some Difficulty, the *Jew* at last open'd his Magazine, or Store-House, and shew'd him several Bodies pil'd one upon another. Then, after a Reflexion of a quarter of an Hour, he ask'd him what Druggs he made use of? and what Sort of Bodies were fit for his Service? The *Jew* answer'd him, That as to the Dead he took such Bodies as he could get, whether they dy'd of a common Disease, or of some Contagion: And as to the Druggs, that they were nothing but a Heap of several old Druggs mix'd together, which he apply'd to the Bodies; which after he had dry'd in an Oven, he sent into *Europe*; and that he was amaz'd to see the Christians were Lovers of such Filthiness.

But this is very different from what the ancient Physicians believ'd, when they prescrib'd *Mummy*. But as I am not able to stop the Abuses committed by those who sell this

this Commodity, I shall only advise such as buy, to chuse what is of a fine shining Black, not full of Bones or Dirt, of a good Smell, and which being burnt, does not stink of Pitch. This is reckon'd proper for Contusions, and to hinder the Blood from coagulating in the Body; but its greatest Use is for catching Fish.

Some Authors will have it, that the Fat mix'd with *Bitumen* that flows from the Tombs, makes the true Mummy; and others say that it is the preserv'd Flesh, which was made by a *Jewish* Physician, who wrote, That the said Flesh, thus preserv'd and embalm'd, serv'd for the Cure of several Diseases. They have likewise given the Name of *Mummy* to several natural Bitumens; as that of *Judæa*, and those which flow from several Mountains of *Arabia*, and other hot Countries: But those Appellations are very improper, they being fat, viscous, stinking Humours, that breed in the Entrails of the Earth.

Of other Preparations made from Human Bodies.

Besides the *Mummy* that is met withal in the Shops, we sell human Fat or Grease, which is brought us from several Parts; but, as every Body knows in *Paris*, the publick Executioner sells it to those that want it; so that the Druggists and Apothecaries sell very little: Nevertheless they vend a Sort that is prepar'd with aromatical Herbs, and which is without Comparifon much better than that which comes from the Hands of the Hang-Man. This *Aleps*, or *Axungia*, is reckon'd very good for Rheumatifms, and other Diseases proceeding from a cold Cause. Besides the Fat, we sell the fix'd and volatile Salts of the Blood, Scull, Hair, and Urine, and other Chymical Preparations, to be found in Mr. *Charas's Royal Pharmacopœia*, &c. which those who desire to know further about these Preparations, may have recourse to.

Man's Grease is emollient, discuffive, anodyne, and antiparalytick. It is good against the Gout, and contracted Nerves, made into an Ointment, as follows: Man's Grease, two Pounds; Gum Elemi, half a Pound; Bees-Wax and Turpentine, of each one

Pound; Balm of *Gilead* or *Peru*, four Ounces; mix, and make an Ointment, by melting all together. Man's Skull is a specifick Medicine in the Cure of the Falling-Sickness, and indeed of most Diseases of the Head, taking of the crude Powder, rasp'd from the fresh Bone of the Skull, one Scruple or two, in any proper spirituous Liquor. The Oil and volatile Salt are for the same Purposes, but in less Quantities.

Of the Moss upon the Human Skull.

The *English* Druggists, especially those of *London*, sell the Heads or Skulls of the Dead, upon which there is a little greenish Moss, which is call'd *Ufnea*, because of its near Resemblance to the Moss that grows upon Oaks; and as Mr. *Charas* stay'd a considerable Time in *England*, and saw great Plenty of 'em, I have only related what he told me on this Subject. This Moss is an Excrefcence that grows two or three Lines high, on the top of and round Mens Skulls who have died violent Deaths, and lain some Time on the Ground, or hung on Gibbets, or the like. It only begins to grow when the fleshy Substance about the Skull is wasted away. The *English* Druggists generally bring these Heads from *Ireland*; that Country having been remarkable for them ever since the *Irish Massacre*. You may see in the Druggists Shops of *London*, these Heads entirely cover'd with Moss, and some that only have the Moss growing on some Parts; and we ought not to be surpris'd at the Growth of this Moss on the Skulls of dead Men unburied; since we daily see the Hair of the Head, Beard, and some other Parts of the human Body, grow after Death, as long as there is any Moisture left to supply Nourishment to the Part; and that the same thing happens to the Nails is evident; but whether it will hold as to the Teeth, as some pretend, I dare not venture to affirm. The same Druggists send to foreign Countries, especially *Germany*, these Skulls cover'd with Moss, to put into the Composition of the sympathetick Ointment, which *Crollius* describes in his *Royal Chymist*, and is very available in the Cure of the Falling-Sickness. The Skulls of Criminals newly hang'd, stripp'd of the fleshy Membrane,

Membrane, and the Brains taken out, being well washed and dried, and separated with a Saw from the lower Part, is what the Druggists sell by the Name of *Human Skull*.

A Mummy is a dead Body of a *Lemery*. Man, Woman, or Child, which is embalm'd and dried. The first Mummies were taken from the Burying-Places of the antient *Egyptians*, near the Pyramids, where the finest were to be seen a few Leagues from *Grand Cairo*. This embalming was made with Balsams, Resin of Cedar, *Jew's Pitch*, Myrrh, Aloes, and several other aromatical Ingredients, capable to dry up the Humidity or Moisture of the Flesh, to stop the Pores, and prevent the Air from entering, and to resist Putrefaction. We use at this Day almost the same Druggs for embalming dead Bodies; but whether it was that their Druggs were better than ours, or that they had a more perfect Method of embalming than we have, or that their Burying-Places were drier, more impregnated with Salts and Bitumen, or less subject to Putrefaction, their embalm'd Bodies lasted vastly longer without Corruption, than those we do at present, if we dare believe Tradition; for they pretend to shew us *Egyptian Mummies*, of near four thousand Years Duration; whereas we take a great deal of Pains in these latter Ages, to preserve them two or three hundred Years.

And here it may not be improper to give an Account of the modern Way of embalming, from Mr. *Dionis's* Course of chirurgical Operations. Embalming is an Operation almost as antient as the World, and which has been practis'd in all Ages; and either out of a venerable Regard to their Relations, or a Principle of Religion, Men have always endeavoured to preserve their Dead, of the Truth of which *Arabia* and *Egypt* have furnish'd an infinite Number of Instances; but at present we embalm none but the Rich and Great, whose Relations only are willing to be at that Expence.

Mr. *Penicher*, a *Parisian* Apothecary, has given us a Treatise of Embalming, according to the Practice of both the Antients and Moderns, which consists of several learned Enquiries on this Subject: He relates the Stories of the Embalming of *David*, *Alexander*, and several others; wherefore I refer

you to him for the Satisfaction of your Curiosity; but talking indeed like an Apothecary, he gives us so many Sorts of balsamick Powders, that he would very much puzzle us which to chuse, if we did not know that they are almost all alike. He further pretends, that it is the Apothecary's Right to preside in Embalming; that the Composition and Application of the balsamick Matters belongs to him; and that the Surgeon is present for no other End than to make the Incisions, and fix on the Bandages which he prescribes; but daily Practice overthrows what this Author pretends to advance. 'Tis the Surgeon only which embalms; 'tis he who is charged with the whole Operation; and after the Apothecary has prepared what he requires, he is not to concern himself any further in it, unless he will attend as one of the Surgeon's Apprentices or Assistants, to hand to him what he has Occasion for.

Mr. *Penicher* cites as a President for Embalming, that performed on the Dauphiness. We are not to be surpris'd if his Relation is not exactly just in several Circumstances; he transcrib'd it from a Memorial which the Apothecary to that Princess gave him; and its Author believing Pharmacy so much above Surgery, that the latter could not dispute it, has by this Memorial taken all advantageous Hints which seem'd to him to favour his Opinion. But having performed that Embalming myself, none can be a better Evidence in this Case; the particular Relation of which, to avoid Repetition, I forbear here, because the Method which I shall lay down, of performing a compleat *Balsamation*, will inform you of all that pass'd at that of the Dauphiness.

After the Opening of the Body, and the drawing up, and signing of the Relation of the Particulars to be observ'd with regard to the Body, the Physicians and Surgeons withdraw, leaving to the operating Surgeon the Care and Direction of the Embalming; wherefore, all depending on him, he causes to be brought into the Chamber where the Corps is, all the necessary Ingredients and Instruments for that Operation; and which we know to be of three Sorts: First, those which the Plummer is to make; secondly, what belongs to the Surgeon; and, thirdly, those which relate to the Apothecary.

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The Plummer being sent for, comes to take the Surgeons Order about the Size of the Coffin; because if he should content himself with taking Measure of the Body, that Case would prove too little to hold it after embalming: He bespeaks of him a leaden Barrel to put the Entrails into; and also a leaden Box made of two Pieces, to shut, to contain the Heart after it is embalm'd; ordering him to bring all of them to the Chamber where the Corps is, at the Hour which he appoints. The principal part of the Surgeon's Apparatus consists in Bands; for the Instruments are the same which are us'd in opening of the Body. The Surgeon then is to prepare five Bands; two of three Fingers Breadth, and four Ells long, to bind the Arms; two of four Fingers breadth, and six Ells long each, to bind the Legs and Thighs; and one yet broader and longer, to perform the necessary Circumvolutions about the Body. 'Tis the Apothecary's Business to furnish, first, the aromatical Plants well pulveriz'd in a Mortar; secondly, the Gums and odoriferous Druggs beaten to a fine Powder; and, thirdly, a Liniment to rub over and anoint the Body.

The first or coarsest Powder, which serves to fill the great Cavities, and to be put in with the Entrails, is compos'd of four or five and twenty different Plants; to which end we make use of the Leaves of some of them, the Roots or Flowers of others, and the Rinds, Barks, or Seeds of others. The most proper, and the most easy to be gotten, are the Leaves of Laurel, Myrrh, Rosemary, Sage, Balm, Wormwood, Marjoram, Hyssop, wild Thyme, Basil; Roots of Orrice, Angelica, Calamus Aromaticus; the Flowers of Roses, Camomil, Melilot, Lavender, Lemon and Orange Peel; the Seeds of Anise, Fennil, Coriander and Cummin: To all which, when well powdered, are to be added so many Pounds of common Salt, as to encrease the whole to thirty Pounds Weight. Of the other, which is the finest Powder, there must be ten Pounds, and it is to be compos'd of ten or twelve odoriferous Druggs, which are proper to preserve the Body for the Space of several Ages; they are Myrrh, Aloes, Frankincense, Benjamin, Storax Calamita, Cloves, Nutmegs, Cinnamon, white Pepper, Sulphur,

Alum, Salt Petre; all which are to be well powdered, and pass'd thro' a Sieve. The Liniment is to be compos'd of Turpentine, Oil of Laurel, liquid Storax, and Balsam of Capivy, by reason that of Peru is so scarce, that it alone would cost more than all the embalming Ingredients. Three Pounds of this Liniment are sufficient to make the necessary Embrocations. Besides these three Articles, the Apothecary is to provide three or four Pints of Spirit of Wine, five or six great Bundles of Tow and Cotton, two Ells of the broad Cerecloth, and a large Bundle of coarse Cord. The Surgeon, provided with all these Preparations, is ready to begin the Embalming, which he executes in the following Manner.

Having ordered to be set near him the leaden Barrel, the Surgeon takes some Handfuls of the coarser Powder, and spreads it over the Bottom of the Barrel, and above that spreads Part of the Entrails; then lays another Row or Bed of that Powder, and then another Lay of the Entrails, thus continuing on *Stratum super Stratum*, till he has laid into the Barrel all the Parts which were contained in the Head, Breast, and Belly, except the Heart, which he separates, and puts to soak in Spirit of Wine, till he has finished the whole Body. When he embalms that in particular, he must remember to end with a Lay of Powder, and if the Barrel is not full, he is to fill it up with a Bundle of Tow; but if the Plummer has made it too high, the Operator is to order him to cut off all of it that is too long, that the Cover being foldered on, no Part of it may remain empty.

The three Venters or Cavities being thus evacuated, we are to wash them with Spirit of Wine, before we fill them up; which done, we begin with the Head, filling up the Skull with the Powder and Tow mix'd together; and having got in as much as it can contain, we put it again into its Place; and before we sew the hairy Scalp over it, we put betwixt them some of the finer or balsamick Powder. We pour some Spirit of Wine into the Mouth to wash it, and then fill it with the same Powder and Cotton; we do the same to the Nostrils and Ears, and then with a Pencil or Brush we embrocate the Face, Head and Neck, with a Lini-

ment;

ment; and after strewing the fine Powder on all those Parts, we form a Crust over the whole Superficies. With the Powder and Tow the Operator fills up the Breast and Belly, which is now but one large Cavity; for in taking out the Entrails he has before taken out the *Diaphragm*, which separated them one from another. He is not here to be sparing of his Powders, which must prevail in this Part, the Tow being only made use of to bind and keep them together. He returns the *Sternum*, and after having cover'd it with the fine Powder, which he also thrusts betwixt the Ribs and Tegument, he performs the Suture with a Needle, from the Neck to the *Os Pubis*, and a transversal one, from one of the lumbar Parts to the other. With a Pen-Knife we make around the Arm four large Incisions of half a Foot long each, and as deep as to the Bone, and as many on the Wrist; these we wash with Spirit of Wine, and fill with the odoriferous Powder. We cover the Arm with the Liniment with the same Pencil, and gently strow over it the same Powders, which easily stick on by reason of the Liniment. We then take a Band; with which we begin at the Hand, rolling it very tight up to the Shoulder, where 'tis to end and be fastened. Whilst the Operator is thus employ'd about one Arm, an Apprentice is to do the same to the other, conformable to this Example.

The same Operation is to be performed to the Thighs and Legs, with this Difference only, that the Incisions are to be longer, deeper, and more numerous than in the Arms. These Parts, thus cut, look like *Switzers Breeches*. After they have sufficiently imbib'd the Spirit of Wine, they are to be fill'd with aromatical Powders; the Liniment apply'd to them, and the Powders over them, the Operator rolls on the Band on one Thigh, whilst a Servant applies another on the contrary: These two Bands begin at the Feet, and terminate at the Groin. We then turn the Body to make the like Incisions on the Back, at the Region of the Reins, and on the Buttocks; and if the Corps be fat, we are also to do the same around the Belly and Breast. The Lotions, Embrocations, and Application of Powders, are ended with the Belly-Band, which is strong, very broad, and long, and beginning at the lower Belly,

so perfectly rolls over the Body, that no Part of it is left uncovered.

The Body thus enamell'd, we lay it on a Cerecloth, in which we wholly enclose it; cutting it close so as to come close over all the Parts without folding it; and with a Cord, which is to be ten or twelve Ells long, we begin to straiten it about the Neck, to form the Figure of the Head, that it may be accommodated to that of the Coffin. We run it several Times around the Body, each Circumvolution at the Distance of half a Foot from the other, and draw it as tight as we would a Pack to be sent by the Carrier. The Body is then put into a Linen Shroud, which with a String we tie at each of its two Extremities, leaving about a Handful beyond each of the Ligatures. We then call for the Coffin, ordering it to be brought near to the Table where the Body is; and if 'tis a Princess of the Royal Family, the Lady of Honour is to take hold of the Handful of the Shroud which is left at the Head, and the Lady of the Wardrobe of that at the Feet, and they lay the Corps into the Coffin, which last Service they claim as their Right.

If the Surgeon has any balsamick Powder left, he strows it in the Coffin, and fills the vacant Spaces with Bundles of aromatical Herbs, which he is to have ready provided for that Purpose; which done, the Plummer fixes on the Lid of the Coffin, which he folders on as expeditiously and neatly as he can. Whilst he is foldering the Coffin, the Surgeon embalms the Heart; he takes it out of the China Vessel in which he put it, washes it several Times in Spirit of Wine, and fills its Ventricles with the finest balsamick Powder, reserv'd expressly for that End; then encloses it in a Bit of Cerecloth, wholly sprinkled with the same Powder; he binds and fastens it with the same Cord, shaping this small Bundle in the Figure of a Heart, and so putting it up in the Box. The Coffin being foldered, we lay it on two Feet in the Middle of the Room, and cover it with a Pall, and lay on the Coffin the Box which contains the Heart, which we cover with Crape, and leave both of them to be carried to their destin'd Sepulchre.

Some of the Antients pretended to have invented a Way preferable to all others, which was

was to take out generally all the Flesh, and leaving only the Skin and Bones, to substitute in their Place aromatick Druggs and Powders; tho' this is not to preserve the Body, but only the Skin and Skeleton from Putrefaction. Some Moderns propose to us easier Ways, of which there are several Sorts, with which Mr. *Penicher* has fill'd his Book; wherefore I shall forbear the Recital of them here, and content myself in acquainting you that the History of Embalming, which I have just laid before you, is that which I have performed on the Dauphiness, and several Persons of the first Quality, being that which I take to be the best of them all. I have heard of antient Sepulchres of Plaister, in the Middle of which the Body was placed, and also cover'd with Plaister; that in these sort of Graves, the Bodies kept for a long Time, without emitting any ill Scent, because the Salt Petre which is in the Plaister resists Putrefaction; and the Plaister imbibing the stinking Serosities which issue from the Body, stops the offensive Exhalations. This Fact may put some upon reducing it to Practice; which in my Opinion should be done the following Way: The Person resolv'd to try this Experiment, is to order the making either of a leaden or wooden Coffin, proportioned to the Bulk of the Body, which is to be laid into it stark naked; when having ready three or four Hods of Plaister strain'd thro' a Sack, so that it may reach to the Edges, the Corps must be wholly buried in Plaister. By this Method we may keep a Body several Days in the House, and then lay it in a Vault design'd for the Dead, without the Danger of any ill Scent; and in my Opinion, 'tis impossible to embalm a Body with more Ease, and less Expence.

2. Of the Unicorn.

Pomet. THE Unicorn is an Animal which our Naturalists describe under the Figure of a Horse, having in the Middle of his Head a spiral Horn, of two or three Foot long; but as we know not the real Truth of this Matter to this Day, I shall only say, that what we sell under the Name of the Unicorn's Horn, is the Horn of a certain Fish, by the Islanders called *Narvual*,
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or the Sea-Unicorn, as you will find when we come to treat of Fish. This Horn was formerly in great Esteem, because of the mighty Virtues attributed to it by the Antients, especially against Poisons, which is the Reason that so many great Personages have been very fond of it; so that it has been valued at its Weight in Gold.

Ambrose Paræus, in a little Treatise which he composed of the Unicorn, says, That in the Desarts of *Arabia* he found wild Asses, which they call *Campburs*, carrying a Horn in their Front, with which they used to fight against the Bulls, and which the *Indians* made use of to cure several Diseases, especially venomous or contagious ones; and that the *Arabs* near the *Red Sea* had another Animal among them, which those People call'd *Pirassoupi*, that has two Horns, long, freight, and spiral, which the *Arabs* make use of when they are wounded, or bit by any venomous Creature. They let it infuse six or eight Hours in Water, which they drink to cure them. He says, that this Animal is of the Size of a Mule, which also it resembles in its Head; and that the Body is hairy like a Bear, a little inclining to a fallow Colour, and the Hoof divided or cleft like the Deer's. *Johnston* says, in his Treatise of Animals, that there are several other Unicorns, to which the Reader may have Recourse.

The Kinds of Unicorns come now to be considered; That it is a Beast having but one Horn, all agree; but because several Kinds of Beasts have also but one single Horn, it is some Question which of these five must be the true. There is, 1st, The *Orix*; or one-horned wild Goat. 2^{dly}, The one-horn'd Ox. 3^{dly}, The Hart with one Horn. 4^{thly}, The one-horn'd Hog. And, 5^{thly}, the one-horn'd Ass. The first is certainly but a kind of one-horn'd wild Goat, by the Description of it differing not much from a Goat. It resembles a Roe, having a Beard under its Chin, of a palish white Colour, cloven hoofed, with one Horn growing out of the Middle of its Head. They are bred in *Egypt*, *Ethiopia*, and many other Parts of the World, some of which are as large as Oxen. Their Horns are not only strong and sharp, like the Horns of an Unicorn and *Rhinoceros*, but also solid, and not hollow or porous, like the Horns of Harts. This Creature is said
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not to value the Barking of the Dog; the Foaming of the Bear; the Bellowing of the Bull; the Cry of the Panther, or the Roaring of the Lion.

The one-horn'd Ox, Bull, or Cow, is bred in *Ania*, of various Colours, Intermix'd one with another, having a whole round Hoof, like a Horse, and but one Horn growing out of the Middle of the Forehead: It is also bred in *India*, where the whole Species eat Flesh, and are whole-hoof'd, and single-horned, which grows out of the Middle of their Foreheads. Some of them are said to be as high as Camels, and their Horn four Foot long. There are in *Ethiopia*, a kind of a purple Colour, which have but one Horn growing out of their Heads, which turns up towards their Backs.

The *Unicorn Hart* is a Beast bred also in *India*, whose Feet resemble an Elephant's, the Body a young Horse, and its Head a Hart's; out of the Middle of which grows a Horn about three Foot long. It has a roaring Voice almost like a Bull, but much shriller.

The *Unicorn Hog* is so called from his Head, being like a Boar's or Hog's Head, found, as some Authors say, in the Dominions of the *Great Cham* of *Tartary*. This Species of *Unicorns* is somewhat less than Elephants, having Hair like Oxen, Heads like Hogs, Feet like Elephants, a sharp and thorny Tongue, and a Horn in the midst of its Forehead, wherewith he destroys both Man and Beast. Had this Horn grown out of its Snout, it would have been a *Rhinoceros*; but as it does not; it must be taken for one of the Kinds of *Unicorns*.

The one-horned *Afs* is the *Indian Afs*, which equals in Bigness a Horse; all white on the Body, but purple-headed and blackey'd, having one Horn in his Forehead, near three Foot long, whose upper Part is red or black, the Middle black, and the nether Part white. In these the great People of *India* drink, adorning them with all kind of precious things, believing that those who drink in these Horns are freed from any sort of deadly Poison or Infection. This *Afs*, or *Unicorn*, exceeds all others of the Kind, both in Stature, and Body, and Swiftness of Foot. They are so strong that no Horse can stand before

them; and fight with their single Horn like Bulls.

The true *Unicorn*, if you dare believe *Ludovicus Vertomanus*, who says he saw two of them at *Mecha* in *Arabia*, which were kept within the Verge of *Mahomet's* Sepulchre, is of a Weasel Colour, with the Head like that of a Hart, the Neck not long, and the Mane growing all on one Side; the Legs slender and lean, like the Legs of a Hind; their Hoofs cloven like Goat's Feet, and the hinder Legs all hairy and shaggy on the Outside. Of all the other five the wild *Indian Afs* comes nearest to this Description; for the true *Unicorn* and he agree in these four things: 1st, that both of them have one Horn in the Middle. 2^{dly}, That both of them are bred in *India*. 3^{dly}, In that they are both about the Bigness of a Horse. 4^{thly}, In their Celerity and solitary Life in the Mountains. But herein they differ; 1st, In that the one-horned wild *Indian Afs* is whole-hoofed, and not cloven, as the *Unicorn* is. 2^{dly}, That his Colour is white on the Body, and purple on the Head; whereas the *Unicorn* is of a Weasel-like Colour. 3^{dly}, That his Horns are purple, black, and white; whereas the *Unicorn's* Horn is wreath'd in Spires of an Ivory Colour. In the Year 1553, a great *Unicorn's Horn* was brought to the King of *France*, valued at twenty thousand Pounds *Sterling*. That which was presented to King *Charles* the First, of *England*, is suppos'd to be one of the greatest that ever was seen in the World; it was seven Foot long, weigh'd thirteen Pounds, and was in the Shape of a Wax Candle, but wreath'd within itself in Spires; hollow about a Foot from its Root, growing taper by little and little towards the Point, of a polish'd Smoothness, and the Spires not deep, but like the Windings of Woodbine, and the Colour not perfectly white, but somewhat obscure.

Some in *Poland* have been found five or six Foot long, being very sharp and smooth: Others in the Rivers, but less pure, outwardly blackish, and inwardly of a pure white; a third and fourth Sort of a solid hard Substance, so that one would take them to be Stone; and many other Sorts have been found in that Country. But that these, or any of the others, were true *Unicorns* Horns,

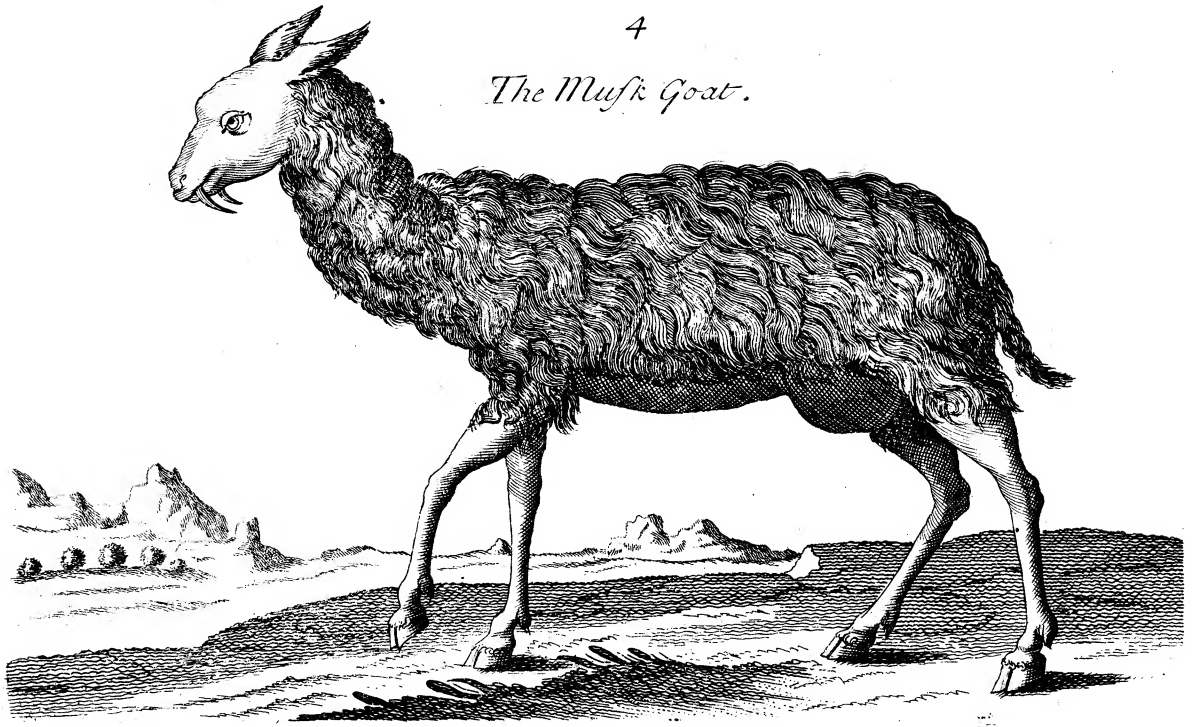
3

The Animal y bears y Bezoar
or y Bezoar Goat.



4

The Musk Goat.



Horns, none of our Authors have yet made appear; and if all the Circumstances be considered, it is much to be doubted whether any of them were the right or not; for as much as the Druggists or Apothecaries were never known to have or sell the true, that which is commonly sold being from five to eight Foot in Length, and more, very sharp-pointed, running taper all along, and twisted or wreath'd, of the Colour of Ivory, but of a much finer Grain, and very white within. Yet this Horn is not produc'd by a four-footed Beast, but comes from a Fish called the *Sea Unicorn*, and is brought from *Davis's Straights* near the *North Passage*.

Authors have ascribed almost incredible Things to it, the chiefest of which are, to resist all Manner of Poisons, and to cure the Plague, with all Sorts of malignant Fevers, the Biting of Serpents, mad Dogs, &c. and is chiefly used as a Cordial, for which Purpose a Jelly is made of it, together with a little Cochineal and Saffron; and the Shavings boil'd in Broth, &c. after the Manner of Shavings of Hart's-Horn.

3. Of the Bezoar.

Pomet. THE *Bezoar*, which the *Indians* calls *Pozan*, is an Animal that produces in his Stomach, or in a Bladder, a Stone that is called by that Name, to which they attribute great Virtues, which made it heretofore highly valued, and to be sold at a great Rate, as is at this Day the right and true oriental *Bezoar*; as well because there is a great deal of Trouble in meeting with the natural Stone, as that certain Persons have found out the Secret of counterfeiting it, by reason these Animals do not produce any considerable Quantities; and besides several of them have none at all: We ought then to be well inform'd of the Nature, Shape, and Distinction of these Stones, above any other Drugg; therefore I shall relate to you what *Mr. Tavernier* says concerning *Bezoar*.

Bezoar comes from a Province of the Kingdom of *Gokonda* lying on the North East. It is found in the Dung that is in the Maw of the Goats that browse on a Shrub, the Name of which I have forgot. This Plant bears little Buds, about which, and the Ends

of the Branches which the Goats eat, the *Bezoar* forms itself in the Belly of these Animals. They take their Shape from that of the Buds and the Ends of the Branches, which is the Reason they are of so many different Figures. The Peasants, by feeling of the Belly of the Goat, know whether there is any *Bezoar* there, and so sell it according to the Quantity that is therein. To know which, they rub their two Hands under the Belly of the Goat, and press the Maw or Stomach along on both Sides, so that what is therein may fall into the Middle of the Maw; and they can perceive exactly, by feeling, how much *Bezoar* there is.

The Rarity of *Bezoar* is in the Size; for the small Sorts have not so much Virtue in them as the large; but in that there is oftentimes a Cheat, because there are People who powder and mix *Bezoar* in a certain Paste compos'd of a Gum, and something else of the Colour of *Bezoar*, and form it up in the same Manner as we see the natural *Bezoar*; but we may discover this Fraud chiefly these two Ways: The first is, to weigh the *Bezoar*, and steep it some Time in warm Water; and if the Water does not change it's Colour, or the *Bezoar* lose its Weight, it is true and natural. The other Way is to run a sharp Piece of red hot Iron against the *Bezoar*; if the Iron enter, and it fry, it is a Sign of its Mixture, and that it is not natural. Besides, the larger the *Bezoar* is, the dearer it is, and rises in Proportion as a Diamond: For if five or six *Bezoar* Stones weigh one Ounce, that Ounce will be worth from fifteen to eighteen or twenty Livres; but if it be one Stone of an Ounce weight, it will sell for a hundred Livres. I have sold one of four Ounces and a Quarter for two thousand Livres.

There are a great many *Bezoar* Stones taken from Cows, both in the East and Western Countries, and they are so large as to weigh seventeen or eighteen Ounces; of which Sort I have seen one that was presented to the great Duke of *Tuscany*; but they have nothing near the good Qualities of the true *Bezoar*; six Grains of which will do more than thirty of this. As to the *Bezoar* that is found in Apes, as some believe, it is so strong, that two Grains will perform

more than fix of that of the Goat; but it is very scarce, that Sort of the Ape Kind being particularly to be met with in the Isle of *Madagascar*. This Sort of *Bezoar* is round, whereas the other is of various Forms, according as it is shap'd from the Buds and Ends of the Branches which the Goats eat. As these Stones which are produced from the Ape are a great deal scarcer than the others, so are they abundantly dearer, and more sought after; and when one is found of the Size of a Nut, it is sold sometimes for a hundred Crowns. The *Portuguese*, above all other Nations, drive a great Trade with *Bezoar*, because they are always upon their Guard, or watching one another for fear of Poison.

But as I cannot altogether agree with this Relation of Mr. *Tavernier*, I chuse to subjoin what Mr. *Du Renou* has observed of *Bezoar*. It is a very active Animal, says he, that skips from Rock to Rock, at his Ease, and is very fierce; so that when he is closely pursued, he sometimes kills the *Indian* Hunters. The Hoof or Claws of his Feet are divided neither more nor less than the Goats; the Legs are pretty thick; the Tail short, and turn'd up; the Body hairy as that of the He-Goat, but shorter, and of an ash Colour, inclining to red, or rather of the Colour of the Hind's Belly; the Head is shap'd like the Goat, and armed with two black Horns jagged at the lower Part, and turn'd backwards. What I shall relate here is true; I having seen two of these Creatures at the Marshal *Vitry's* Castle, besides what is further confirm'd from the *Sieur Renou*: What I gained was the four Feet, the Horn, and the thin Membrane that invests the *Bezoar* Stone. As to the Horn and the Four Feet, they agreed exactly with the Relation made by the *Sieur Du Renou*. As to the Membrane mentioned before, that is one of the greatest Curiosities that has been seen a long Time in *France*, by the Account of the most intelligent People.

This Membrane marked in the Plate A, is of the Size of a Goose Egg, supply'd on the Outside with a rough short Hair, of a dun Colour, which being cut asunder appears to enclose a Shell mark'd in the Cut B, that is thin and brown, which makes a Covering for another Shell, that is white,

that is marked C, where this Stone is contained, to which they give the Name of *Bezoar*, which we may see is contrary to what all Authors have wrote of it. And I should not have had the Confidence to have advanced this, if I had not had the Original in my Hands; which makes it plain, that there can never be more than one *Bezoar* Stone at a time in the Belly of this Animal, because of the Bigness of this Membrane: And 'tis likely the great Number of these Animals that have no *Bezoar* at all in them, occasions their Scarcity and Dearth.

However, if you would have the finest and best oriental *Bezoar*, you must chuse that which is shining, of a pleasant Scent, tending to that of *Ambergris*, smooth to the Touch, and which rubb'd on Paper done with Cerusse, makes it become yellow. The less it is broken to Pieces, and full of Bits irregularly shap'd, the better; and take care that the false be not mix'd with the true, especially when 'tis bought in large Pieces; for the more shining, large, intire, and round it be, the more it is valued. But as to the particular Figure or Shape, it is of no Consequence, for its physical Use, whether it be long, round, crooked, or twisted, smooth, rough, white, yellow, or grey; but the principal Colour that is usually to be met with, is the Olive Colour.

The Use of *Bezoar* was formerly very common, but at present we scarce know what it is, by reason of the Iniquity of the Times, and its extravagant Price, or that it grows out of Fashion; for Medicines have their Modes as well as Clothes; notwithstanding which, this is a Preservative from pestilential Air, and a Remedy for the Small-Pox, Measles, or other contagious Diseases. It is reckoned also proper against Vertigo's, Epilepsies, Palpitation of the Heart, Jaundice, Cholick, Dyfentery, Gravel, to procure Labour Pains, and against Poisons. Dose from four Grains to twelve. The *Jews* call this Stone *Bell-Zaard*, which signifies the Master, or Overcomer of Poison.

Of Occidental Bezoar.

The occidental *Bezoar* differs from the Oriental, in that it is usually much larger, being found sometimes of the Size of a small Hen's

Hen's Egg. It is likewise of diverse Colours, but most commonly of a light Grey. It is made up of several *Laminae*, or Crufts, laid one over another like the former, but much thicker, and being broke, appears as if it had been sublimed, in that one sees a great many little Needles shooting like those in Salt of Lead, and the Bottom is soft, and very smooth, of a reddish grey Colour.

This *Bezoar* is brought from *Peru*, where it is found in some Goats, Harts, or those Animals that produce the *Bezoar*. And as they are but rarely met withal in the Belly of these Animals, that makes it, that very few are brought into *France*. It has also a very sweet Smell, and is much stronger than the *Oriental Bezoar*. And because this *Bezoar* is very scarce, the *Dutch* and other Nations make it with a grey Paste, which they form into round Balls of what Size they please. And I can assure you that I have seen one of the Bigness of a Tennis-Ball, that was in the middle of a gilt Silver Cup, so fix'd, that it could not be remov'd, to the End that it might be infus'd in the Liquor put in the Cup, in order to give a Flavour to it before they drink it.

Bezoar is a Stone taken out of *Lemery*. the Belly of certain Animals in the *East-Indies*, of which there are several Sorts. I have here mention'd four that are of Use in Physick. The first Kind, or that most commonly us'd, is call'd, *Lapis Bezoar Orientalis*, or the *Oriental Bezoar*. It is found in Balls of different Sizes and Shapes; for some are as big as a Wall-nut, others as a Nutmeg, others as a Hazel-Nut, and some as a large Pea: Some are round, others oval, flat, or bunch'd. The Superficies of all of them are smooth, polish'd, shining, of an Olive or grey Colour. Their Substance, when broke, divides like *Laminae*, or Scales, that are form'd successively by different Accessions of saline Humours, which petrify in the Belly of the Animals, after the same manner as Stones are form'd in the Channels of a Current of the Waters, which continually leave behind them certain Salts, which coagulate and form themselves into a hard Cruft or Stone. The *Bezoar* is produc'd in several Parts of the Belly of a wild Goat in the *East-Indies*, which they call, in *Latin*, *Capricerua*, because they partake of the Deer

and the Goat. The Inhabitants otherwise call them *Bezoar*, from whence the Name of *Bezoar* arises.

This Animal is very nimble, so that he will skip from Rock to Rock; and is dangerous to the Hunter; for he will defend himself, and sometimes kills the *Indians* that pursue him. The Head resembles that of the He-goat. The Horns are very black, and are bended almost to his Back. The Body is coverd with an Ash-colour'd Hair, inclining to red, much shorter than that of the Goat, and nearest to the Deer's. The Tail is short, and turns up again. The Legs are pretty thick, and the Feet are cleft like those of the Goat. Chuse your *Oriental Bezoar* in one whole Stone, that is smooth, shining, and of a pleasant Smell, inclining to *Ambergrease*. They divide into *Laminae*, or Flakes, when broken; of a grey or olive Colour. The largest are the most valued by the Curious, but it is of little Moment in Physick of what Size they are. It contains in it some small Matter of volatile Salt, that is sulphurous and oily. It is esteem'd as a great Cordial, proper to promote Sweat, and drive away malignant Humours. The Dose is from four Grains to ten or a dozen in any Cordial, or other proper Liquor.

The second *Bezoar* is call'd *Lapis Bezoar Occidentalis*, or *Occidental Bezoar*. It is a Stone usually larger than the *Oriental*, but is not so slick and shining, of an ash or whitish Colour. They separate likewise into *Laminae*, but a great deal thicker than the *Oriental Bezoar*, interspersed with a great many small Points on the Inside. This has the same Virtues with the other, but much weaker, being given to half a Dram.

The third Sort is call'd, *Bezoar Porci sive lapis Porcinus*, or the *Hog Stone*. It is almost of the Bigness of a *Filbert*, differently shap'd; and usually of a whitish Colour, inclining something to a greenish, but now and then of other Colours. The Outside is smooth. They find this Stone in the Gall of certain Swine in *India*, in the *Moluccoes*, and several other Parts. The *Indians* call them, in their Language, *Mastica de folio*; the *Portuguese*, *Pedro de Vassar*, or *Piedra de Puerco*; and the *Dutch*, *Pedro de Porco*. It is very scarce, and much valued, so that they sell it in *Holland* for four hundred

hundred Livres, and more. This Stone is sought after by the *Indians* with a great deal of Industry.

They use it as a great Preservative against Poison, and reckon it very proper to cure a Malady they call *Mordoxi*, which comes from an irritated Bile, which causes those that are seiz'd with it to be worse than them that have the Plague. It is likewise us'd for the Small-pox, epidemical Fevers, in hysterical Cases, and for the Stoppage of the Courses. It is pretended to excel *Oriental Bezoar*. When they use it, they let it stand infusing some Time in Wine and Water, that it may impart its Virtue; then they drink the Infusion before Meals: It has a little Bitterness, which is not unpleasant. There are those who have these Stones hung in little gilt Chains, to put into any Liquor for the Infusion. They keep them in little golden Boxes.

The fourth Sort of *Bezoar* is call'd *Bezoar Simiæ*, or the *Bezoar* from the Ape. It is a Stone as big as a Hazel-Nut, round or oval, and blackish. They say it is taken from a kind of Ape that is found particularly in a certain Island of *America*. This Stone is very scarce and dear; so that Mr. *Tavernier* says, that when it is as big as a Walnut, they sell it for above a hundred Crowns. They are esteem'd more sudorifick and proper in malignant and pestilential Cases, than all the other *Bezoars*. The Dose is from two Grains to six. The Signification of the Word *Bezoar*, according to some, is a *Counter Poison*: According to others, the Over-comer, or Master of Poisons.

4. Of the Musk-Cat, or Goat.

Pomet. THE *Musk-Cat* is an Animal which comes very near to the Figure and Colour of a Hind, only it has a longer Body, according to the Skin which I have seen in the Possession of the *Sieur Nicholas Rondeau* at *Roan*. There are a great many of these Animals in the Kingdoms of *Tunquin* and *Boutan*, and in divers Parts of *Aja*.

That which they call Musk is a corrupted Blood, which is collected under the Belly of this Animal, after the Manner of an Impostume; and when it is ripe, the Beast, by

Instinct, goes to rub himself against a Tree to break it. And this corrupted Blood being dried in the Sun, acquires a strong Smell that is very disagreeable, which it ought to retain when it is pure, and has not come into the Hands of the *Jews* in *Holland* and other Places, or of other Persons, who sophisticate it with Earth, dried Blood, and other Contrivances.

They are much abus'd who are made believe that those are the Cods of the Animal; and that he gelds himself when he is pursued, as knowing that he would be taken for his Testicles. But this has been imagin'd, because the People who put it into Bladders, cut them out in that Shape. Others would have it that the Musk is bruised Blood, which is produc'd over all the Body of this Animal, by breaking it with Clubs; and that they afterwards wrap it up in Pieces of the Skin, which they cut and sew into the Fashion of Cods. But since both these Originals of Musk seem very odd and fanciful, I think it best to relate what Mr. *Tavernier* has written in his second Volume, Page 316. that the Reader may incline to which Opinion he likes best.

“ The best Sort and greatest Quantity of
“ Musk comes from the Kingdom of *Bou-*
“ *tan*, from whence they carry it to *Pat-*
“ *na*, a principal City of *Bengal*, to traf-
“ fick with the People of that Country. All
“ the Musk that is sold in *Persia* comes from
“ thence; and the Merchants who trade in
“ Musk, had rather that you should give
“ them yellow Amber or Coral for it, than
“ Gold or Silver, because those are the
“ two Things of greatest Esteem amongst
“ them.

“ After they have slain this Creature,
“ they cut the Bag which is under the Bel-
“ ly, about the Bigness of an Egg, and lies
“ nearer to the genital Parts than the Navel;
“ then they take the Musk out of the
“ Bladder, which at that Time is like clot-
“ ted Blood. When the Country People
“ would adulterate it, they put the Liver
“ and Blood chopp'd together instead of some
“ of the Musk they take out. This Mix-
“ ture produces in the Bladders, in two or
“ three Years Time, certain little Animals
“ which eat up the good Musk; so that
“ you shall find a great deal of Damage
“ when

“ when you come to open them. Other
 “ Peasants, when they have open'd the Blad-
 “ der, and taken out as much Musk as they
 “ can, so as not to be perceiv'd, put in
 “ small Bits of Lead to render it more weigh-
 “ ty. Merchants who buy and transport it
 “ into other Countries are more easy unde-
 “ this Deceit than the other, because those
 “ little Animals don't engender in it; but
 “ the Cheat is still more difficult to be dis-
 “ cover'd when they make little small Pur-
 “ ses of the Skin of the Belly of the Ani-
 “ mal, and sew them up so neatly with
 “ Threads of the same Skin, that they seem
 “ to be real Bladders, and fill these Purfes
 “ with that which they have taken out of the
 “ real Bladders, together with the fraudu-
 “ lent Mixture they would add to it, which
 “ the Merchants can have no Knowledge
 “ of. It is true, that if they tie up the
 “ Bladder as soon as they have cut it off,
 “ without giving Air and Time for the Per-
 “ fume to lose a little of its Force by Eva-
 “ poration, whilst they draw out that which
 “ they would take from it, it would follow
 “ that when any one put the Bladder to his
 “ Nose, Blood would burst forth imme-
 “ diately by the Force of the Perfume,
 “ which ought of Necessity to be tempered,
 “ to render it agreeable, without hurting
 “ the Brain. The Perfume of this Animal,
 “ which I brought to Paris was so strong,
 “ that it was impossible to endure it in the
 “ Lodging; it gave all the People the Head-
 “ ach, so that it was remov'd into the Out-
 “ House, where some of my Servants cut
 “ the Bladder; which however did not
 “ hinder the Skin from retaining some of
 “ the Perfume. They don't begin to find
 “ this Animal till about the 56th Degree;
 “ but in the 60th there is great Number,
 “ the Country being full of Forests. It is
 “ true, that in the Months of *February* and
 “ *March*, when these Creatures have en-
 “ dur'd much Hunger in the Climate where
 “ they are, by reason of the Snows that fall
 “ in great Quantities, so as to be ten or
 “ twelve Foot deep, they come from the
 “ North, Southward to the 44th or 45th
 “ Degree, to eat the Blades of the green
 “ Rice; and it is at that Time the Country
 “ People lay Nets for them in their Pas-
 “ sage, and kill them with their Staves and

“ Arrows. Some People have affirm'd to
 “ me that they are so lean and feeble, thro'
 “ Hunger, that they suffer themselves to be
 “ run down. There must be a prodigious
 “ Quantity of these Creatures, since each
 “ has but one Bladder; and the largest
 “ commonly being no bigger than a Hen's
 “ Egg, cannot furnish above half an Ounce
 “ of Musk; so that sometimes there must be
 “ three or four Bladders to make one Ounce.
 “ The King of *Boutan* fearing lest these
 “ Tricks which are play'd with the Musk
 “ should spoil the Trade for it, (since it can
 “ be had from *Tunquin* and *Cochin-china*,
 “ where it is dearer, because it is not taken in
 “ such large Quantities,) has some time since
 “ commanded that none of the Bladders
 “ should be sew'd, but all brought open to
 “ *Boutan*, which is the Place of his Residence,
 “ there to be inspected, and seal'd with his
 “ Seal. All those which I bought were of
 “ this Kind. But notwithstanding all the
 “ King's Precautions, the People have a cun-
 “ ning way to open them, and put in their
 “ small Bits of Lead, (as I have said) which
 “ the Merchants endure the more patiently,
 “ because it does not spoil the Musk, but
 “ only deceives them in the Weight.

Musk is to be chosen in very dry Blad-
 ders, where the Skin that covers it is very
 thin, and there is but little Hair upon it, be-
 cause there are some, where there is more of
 the Skin and Hair than the real Commodity.
 Let it be of a brown Colour, which is
 the Mark of the right *Tunquin* Bladder,
 which is much more esteem'd, and better
 than that of *Bengal*, which is cover'd with
 Skins that have white Hair upon them.
 When the Musk is separated from its Cover,
 that should be made Choice of, which is of
 a dark Colour; of a strong and unsup-
 portable Smell; of a bitter Taste, and has
 as few hard and black Clots in it as is pos-
 sible; and being put upon the Fire, will
 burn and be consum'd. Yet this last Mark
 is not of general Use, but serves only to
 discover that which is mix'd with Earth;
 for the Fire will not manifest the Falsity
 of that which is counterfeited with Blood.
 Others will have it, that the right Musk
 ought to have an Oiliness when press'd
 with the Fingers. But as this is a Commo-
 dity very difficult to be known, and the
 most

most cunning are deceiv'd in it. It has given Occasion to many Persons to mix it, and therefore one ought not to strive for a good Pennyworth, but to buy it of honest Merchants, and reject all the Sorts of Musk which Persons carry about to sell, both in and out of the Bladders, it being nothing but Dirt; whereas to cover their Roguery, they pretend to sell it cheap, because they brought it out of the Country themselves, or that they have stole the Customs, which are indeed very high upon it; or that they are Mariners, and the Captain has given it to them for their Wages, and by that Means put off their false Druggs, selling more for twenty Pence than an honest Merchant can afford for twenty Shillings. I say then, that as for that which is mix'd with Earth it is easy to know it; because if a little be put upon lighted Charcoal, if there is any Earth it will remain; but, on the contrary, if it be mix'd with the Blood and Liver of the Beast, there will remain only a little whitish or grey Duft; which yet is to be rejected, as well as that which is of a pleasant Smell, because it does not get that agreeable Scent, but by the Addition of some Druggs that open the Parts of it.

The Use of Musk is not very frequent in Physick, because 'tis very improper for Women; but 'tis much us'd by the Perfumers; and if the Demand for it be not so great as formerly, it is because Perfumes are not so much in Use as they have been heretofore.

Moschus, or *Musk*, is a Kind of *Lemery*. bilious Blood fermented, coagulated, and almost corrupted, which is taken from a thick Bladder, or Pouch, as big as a Hen's Egg, which is found under the Belly towards the genital Parts of a wild four-footed Animal, call'd, *Moschus*, *Moschius*, *Dorcacas Moschi*, *Capreolus Moschis*, *Gazelli Indica*. They say it is of the Shape and Colour of a Hind; is produced in the Kingdoms of *Boutan*, *Tunquin*, and several other Parts of *Asia*. It frequents the Woods and Forests where they hunt it; and when they have kill'd it, they cut out the Bladder, or Cod, which is under the Belly; then they separate the coagulated Blood, which they dry in the Sun, and reduce to a Kind of light Moss, almost powder'd, of a dark reddish Colour.

This acquires a strong difagreeable Smell. They then wrap it up in Bladders for Transportation. And this is the Musk we use.

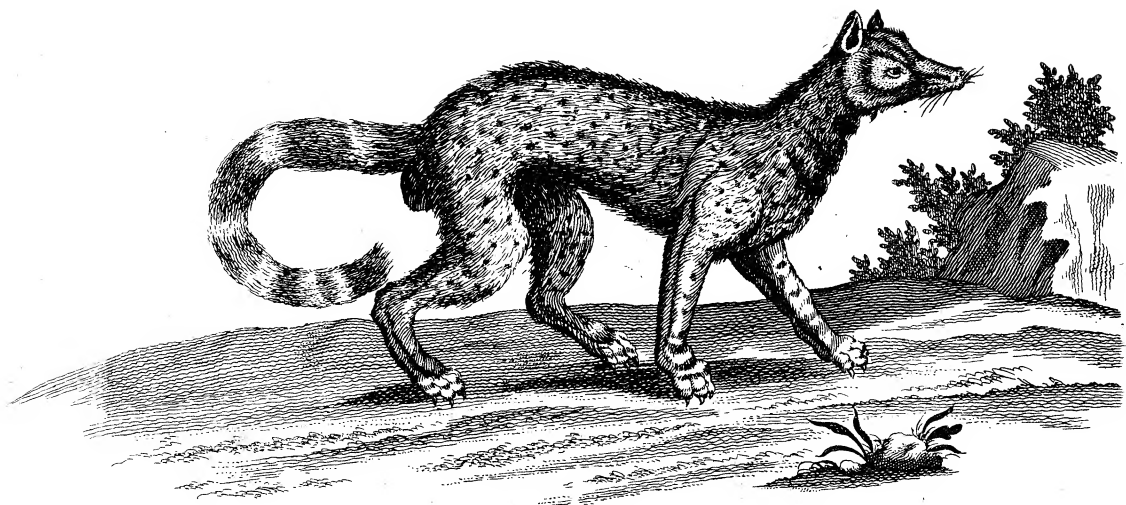
There are a prodigious Number of Animals that yield Musk, chiefly in the Kingdom of *Boutan*. They catch them usually at Spring-Time, or in the Beginning of Summer: For after they have been almost starv'd, during the Winter, because of the Snows that fall in those Countries, ten or twelve Foot deep, they come to seek for Food; their Blood being then in a great Heat, and violent Fermentation. The Musk they then get is likewise strong and spirituous, which is the Reason they do not expose it for some Time to dry in the Air, lest it should quite destroy the Smell. They cannot take a great deal of Musk from any one of these Animals, because they have but one Cod a-piece, which does not yield above three Drams of Musk dry'd. They say that that Bag, during the Rutting of this Creature, has an Abscess form'd in it; which when fully ripe makes the Beast itch and rub himself against Stones, Rocks, and Stumps of Trees, 'till he breaks it; and it is this Corruption that when it is spilt and dry'd in the Sun becomes Musk.

There is no Impossibility in this Story; but yet it is not to be thought, as most of the Naturalists, both ancient and modern, have done, that all the Musk we have is taken from these Abscesses. For is it likely that they can follow the Track of the wild Beasts, through the Woods and Forests, to gather up this Matter which they have thrown sometimes into Places inaccessible, into Mire or Sands? If we had no other Musk but that, it would be much scarcer and dearer than it is; besides, a dry'd Abscess would be of another Colour than Musk, for it would be of a light Grey.

When you buy Musk in the Bag, you should chuse that which is dry; let the Bag be thin, and little Hair upon it; for the more Hair and Skin there is, there will be the less of the Musk. Let the Hair be of a brown Colour, for that is the Mark of *Tunquin* Musk, which is most esteem'd. The Musk of *Bengal* is wrapt up in Bags, with white Hair upon them.

When the Musk is separated from the Bag, it must be kept in a leaden Box, that the Coolness

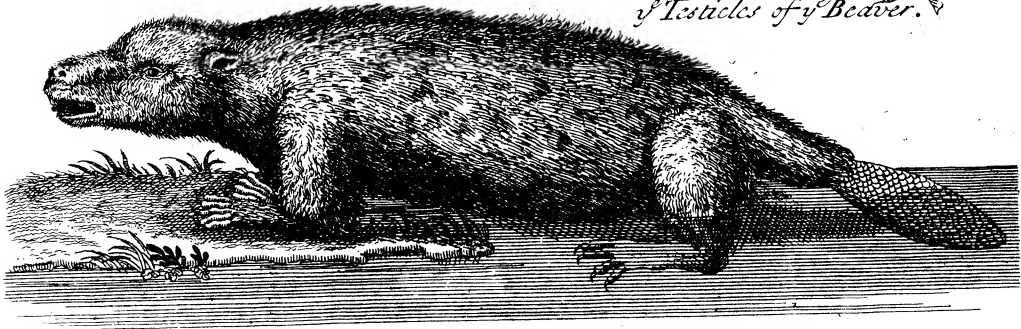
of Animals
5
The Civet Cat.



6
The Beaver.



of Testicles of a Beaver.



Coolness of the Metal may hinder it from growing too dry, and losing its most volatile Parts. That Musk is to be made choice of that is sufficiently dry, of a reddish Colour, strong Scent, and a bitter Taste. It is almost all Sulphur, or Oil and volatile Salt. It has very little Earth in it. The Scent is nauseous and disagreeable when you smell to a great deal of it at a Time, but sweet and pleasant when some few Grains are mixt with a Quantity of other Ingredients. The Reason of the Difference is this; when it is in a larger Quantity, the Parts evaporate so much, that they oppress and tire the Olfactory Nerve; whereas, on the contrary, when there are but a few volatile Particles, they only affect it with an agreeable Titillation. Musk has been us'd much more amongst the Perfumers and Confectioners, than it is at present. People are afraid of it now, because it raises the Vapours, especially in Women.

It fortifies the Heart and Brain, refreshes the decay'd Spirits; it resists Poison, dissolves and rarifies gross Humours, increases Seed, and expels Wind. The Dose is from half a Grain to four Grains. It is good for Deafness, being put into the Ear, with a little Cotton. They apply it to the Womb, to allay the Vapours in hysterical Fits, upon the rising of the Womb, called the Mother.

Of the Civet-Cat.

Pomet. THE *Civet* is a thick unctuous Liqueur, found in a Pouch which is under the Tail, and near the *Anus* of a Beast like a *Spanish Cat*, but much more fierce, and very voracious. This Animal has from hence the Name of the *Civet-Cat*, and is very common in *China*, the *East-Indies*, and likewise in *Holland*.

Authors differ extremely concerning the Nature of this Animal, and that which we take from it. But as it is not my Purpose to repeat what they have written, I shall only relate what I myself have practis'd upon a *Civet-Cat* that I kept alive a Year together, whose Figure I have given you. It was brought from *China* by a Person in the Retinue of the Ambassadors of *Siam*, who

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gave it to one of my Friends, who made a Present of it to me in the Year 1688. Having kept this Creature some Days, I perceiv'd that the Wall and Bars that enclos'd it were cover'd with an unctuous Moisture, thick, and very brown, of a very strong and disagreeable Smell: So that during all the Time I kept this Animal, I took Care to gather the Civet out of the Pouch every other Day, not without some Trouble and Hazard, because it put the Creature to some Pain or Apprehension of it; and having done so for some Months, I had about the Quantity of an Ounce and a half; but tis certain, that if the necessary Care had been taken, and the Beast could be hindred from rubbing itself, I might have got a great deal more; but I neglected it, because the Colour of the Drugg did not please those I shew'd it to, though it was well scented, and as good at least as that which is brought from *Holland*.

There is no Reason, therefore, to think that the Civet is the Dung or Sweat of this Animal, as some have believed, and told us, that the Animal affords no Civet 'till it has been well beaten; and that the more it is enrag'd, the more Civet it lets down under its Belly, and between its Thighs; which is contrary to the Truth, as may be remark'd from what I said before. And as to the white Colour of that which comes from *Holland*, the Reason of it is because the *Dutch*, who make a great Trade of *Civet*, feed their *Cats* with Milk and the Whites of Eggs.

Besides the *Civet* from *Holland*, there comes some from *Brazil* which is brown, agreeable both in Smell and Colour to that I gather'd from my Animal; and they give it the Name of *Guinea* or *Brazil Civet*.

There is a third Sort called *Occidental Civet*, of which, because it is so common, and has no Relation to this Chapter, I shall say nothing; and therefore remit the Reader to the several Authors that have treated of it.

That *Civet* is to be chose which is new, and of a good Consistence, that is, that it be neither too hard nor too soft, of a white Colour, of a strong Smell, and very disagreeable. This Commodity is as difficult to be known as Musk. It is for this Reason the *Hollanders* put little printed Certificates

D

cates

cates upon their Pots of *Civet*, to give it the Credit of being pure and not falsified; and that it is such as it came out of the Pouches of the *Civet-Cats*; but the best Way is to buy it of honest Merchants, without relying upon the printed Papers, or the Colour, since it may be of a gold Colour, and yet be good; for if it be kept a little Time, though the Pots be never opened, the Top, how white soever it were before, will become yellow, and of a gold Colour, and as it grows old will be still the browner.

Many Persons affirm, that if a Paper is rubb'd with *Civet*, and one can write upon it, it is an infallible Mark that it is natural, which I have found to be false, having tried it several times. But besides, the Care must be taken to have it from honest People; one must look whether in keeping it does not grow musty and decay'd; because that which is mix'd will grow mouldy, both at Top and Bottom, especially if any Air get to it, and will have a rank Scent, and very disagreeable. When this happens to People who have falsified it, and it becomes unfit for Sale, as well for its ill Colour as its Smell, which is different from the right *Civet*, they colour it with some Druggs, and so pass it off under the Name of *Guinea Civet*, which will easily be found out by its reddish Colour, which they commonly give it, and not trusting to the *Dutch* or *French* Prints they put upon it, which serve only to cover their Knavery, and to get twenty or two and twenty Livres for that Commodity, which does not stand them in perhaps forty Pence.

Civet is of very little Use in Physick, but is most in Request with the Confectioners and Perfumers, where it serves to perfume and give a Scent to other Ingredients. This Drugg is to be us'd with a great deal of Discretion; for if one exceeds, though never so little, the just Quantity that should be us'd, instead of a pleasant Smell, it renders one that is very disagreeable.

Zibethum, Zibetha, Civeta, Zepetium; in *English*, *Civet*, is a liquid Matter, or congeal'd Liquor, unctuous, of a Scent that is very strong and unpleasant. The Beast from whence it is taken is called in *Latin*, *Hyæna, Catus Zi-*

bethicus, Felis odoratus, in *English* the *Civet-Cat*. It is a Creature much bigger than a Cat, and less than a Badger, having something in it that resembles a Fox; the Face is sharp like a Martin, with a black Nose; its Ears short and round; its Eyes blue; the Leg and Foot black, more broad and open than a Cat's, but the Claws not so crooked, nor hid in the Feet, but its Teeth are more terrible; it has Spots all over the Body; the Hair of the Legs and Feet is very fine and soft, but in other Parts harsh, and standing upright. It is a neat and cleanly Beast, and therefore the Place it is kept in must be wash'd every Day. Merchants buy the young ones, and breed them tame, feeding them with Bran, Rice-Milk, hard Eggs, Bread, Flesh, &c. so that a Cat that is large and gentle, may come to be valued at between four and eight Pound Sterling.

The best *Civet* is said to be made in *England*; but great Quantity is sent from *Holland*, with printed Certificates into all Parts of *Europe*. The best is of a clear, fine, lively whitish Colour. The *West-Indian, Barbadian, and African Civets* are next in Goodness; but the blackest is the worst, which generally comes from the *East-Indies*.

It is a valuable Commodity, so that an Ounce when pure has been valued at forty Shillings. It is often adulterated with Ox-Gall, Storax and Honey. It is much to be preferred to Musk, because the Scent is finer. It is of a subtle and clear Nature, and contains a great deal of Oil and volatile Salt. It comforts the Spirits, and is good against all Diseases of the Head, Brain, and Womb. The following Mixture is good to perfume Cordial Waters and Powders, for the fore-mentioned Intentions. Take one Ounce of *Civet*, Musk in fine Powder, six Drams; Ambergrease two. *Civet* put up in a Pessary, or Piece of Sponge, prevails against hysterical Fits and Vapours; put into the Ears with a little Cotton, it helps the Difficulty of Hearing. If that Mixture be ground with an equal Quantity of the Yolk of an Egg, it so opens its Body, as to make it mix exquisitely with an aqueous Substance; also with twelve or sixteen Ounces of Spirit of Wine, you may draw a most admirable Tincture for the aforesaid Purposes; and being anointed upon the Glands, just before

Coition, it is said to cause Impregnation, and cure Barrenness. *Civet* is anodyne and good for the Cholick in Infants, if applied to the Navel.

6. Of the Castor, or Beaver.

Pomet. **T**HE *Castor* or *Beaver*, call'd by the *Latins*, *Castor* or *Fiber*, is a four-footed Animal, placed amongst the amphibious Creatures that live equally on the Land and in the Water. At Land it feeds upon divers Fruits, Leaves, and Barks of Trees, and especially of the Willow-Tree; and in great Rivers upon Shell-Fish, and such other Prey as it can catch. This Variety of Food is the Reason why its hinder Parts to the Ribs have the Taste of Fish, and that they are eaten as such upon Fasting Days; and all the rest has the Taste of Flesh, so that it is not used but at other Times.

The *Beaver* has a Head almost like that of the Mountain Rat, but a little bigger, and proportionable to the Bulk of his Body, which is thick and gross, much about the Size of a Pig of six Months old, and pretty large Teeth; the under standing out beyond their Lips, three Fingers Breadth; the upper about half a Finger, being very broad, crooked, strong, and sharp, growing double, very deep in their Mouths, bending circular, like the Edge of an Ax, and are of a yellowish Red. They take Fishes upon them as if they were Hooks, and will gnaw asunder Trees as thick as any Man's Thigh, being able to break in Pieces the hardest Bones; where he bites he never loses his Hold'till his Teeth meet together. The Bristles about their Mouths are as hard as Horns, their Bones, are solid, and without Marrow; their fore Feet are like a Dog's, and their hinder like a Swan's. Their Tail is cover'd over with Scales, being like a Soal, about six Inches broad, and ten Inches long, which he uses as a Rudder to steer with, when he swims to catch Fish. And tho' his Teeth are so terrible, yet when Men have seiz'd his Tail, they can govern the Animal as they please. The *Beaver* of *Dantzick* has Hair upon four or five Inches of the Tail, and the rest scaly.

The *Beavers* make themselves Houses of square Timber, which they gnaw down with their Teeth, almost as even as if it were sawed, and almost as equal as if it were measured. They lay these Pieces a-cross, and each is let down by large Notches into the other; so that having dug a Hole for their Foundation, they build several Stories, that they may go higher or lower, according to the Rise or Fall of the Water.

I shall not dispute the Existence of those little Testicles, furnished with all the other Vessels and Instruments necessary for Generation, which the Royal Academy have discovered some Years ago in the Thighs, and near the Groin of the *Beaver*. But having never seen these little Testicles placed in the Rank of Druggs, nor any Thing sold for *Castoreum*, but that Part of the Animal which the Ancients called *Fibri Testes*, without troubling myself whether these are true Testicles or no, since this Treatise is not about Generation, it will be sufficient to give a just and exact Description of those Parts of the Animal, since I know no other so apt to be sophisticated as they.

That which we call *Castoreum*, is a fleshy Substance, contained at the Bottom of two pretty large Pouches, equal, distinct, placed Side-ways, one by the other, and wrapt in one common Bag, fix'd below the Fundament of the Animal between the two Thighs, covered by a common Skin that encloses the whole Body, and there outwardly representing two Testicles, like those of a Boar; which tho' they lie within, yet may be distinguished without the Skin, and taken in the Hand, altho' they don't hang down as the Testicles of other Creatures. Having opened the hairy Skin, you meet with the common Pouch, and in that the two others distinct from one another, which contain the Matter which we call *Castor*.

The Custom is to tie these two Pouches as they are found, and hang them in the Chimney till they are well dry'd, and the Matter contained in them be grown hard, and the outward Pouch has contracted a brown Colour.

When these internal Pouches are opened, there is found in the lower Part a Matter fleshy, solid and pulverisable, of a Colour like Cinamon, intermix'd and ty'd together

with Fibres and Membranes, exquisitely interwoven, and of a Scent that is extremely strong. There is likewise found in each of these lesser Pouches, a little above the fleshy Matter, another Pouch, distinct, but much less, and fastened to that which encloses it, which contains an oily Moisture, of a Scent as strong as the former. This being new is like the best Honey before 'tis coagulated, but is of the Colour and Substance of Suet as it grows older.

These are the true Marks of the *Castor* that is sold, to be us'd in Treacle, Mithridate, and divers other cephalick and hysterical Compositions; and these I can avouch to be true, having bought and sold a great deal, and knowing that no Person of Understanding will contradict me. But I can speak with more Certainty upon what M. *Charas*, who dwelt near the *Rhosne*, and those Places where these Animals are taken, has assured me; that he bought of a Peasant's Daughter the Pouches of a *Beaver*, just taken from the Body, which he hung up in the Chimney, being then of the Colour of Fleth, and appearing like Testicles, which Shape they retained when dried; that they then weigh'd fourteen Ounces; and being cut open, had all the inward Parts, as I have described them: That he afterwards got a live *Beaver* from the same Place, which a Country-Man brought him in a Tub, which was in all Things conformable to the Description I have given; and especially as to the Pouches, which being situated in the same Place as those of a Boar, were of so large a Size, that they were more than an Handful. The *Beavers* being of different Sizes, their Pouches are proportionable; so that when they are dried, we have them from four to sixteen Ounces.

These Animals are bred in the *Rhosne*, the *Lifere*, the *Oise*, in *France*, in *Spain*, *Savoy*, and *Italy*. There are a great many taken along the *Elb*, and the great Rivers of *Germany* and *Poland*; as likewise in *Lithuania* and *Muscovy*, the Lakes of *Canada*, and *Hudson's Bay* in *America*; but it is almost a general Rule, that the Fur is finer, longer, and softer, according to the Coldness of the Region they are bred in.

The Dearness of *Castor*, and the Avarice of wicked Persons, have induc'd People

to counterfeit it, which they do by mixing the Powder of the true *Castor* with Gums that there is no Necessity of naming, and putting them in the Skins which have contained the Testicles of Lambs and Goats; then they hang them in the Chimney, and pass them off for true *Castor*. But it is easy to discover the Cheat, by cutting the Pouches, and looking for the Marks I have given you; of which the most essential is, that you will find none of the Fibres and small Skins so naturally intermix'd in them. And whereas the true *Castor*, when pounded, will pass through a Silk Sieve, and leave several little Membranes upon the Silk; the Gums won't pass, but remain clotted, without any Appearance of the little Skins before-mentioned.

I shall pass over that which several considerable Authors have reported of the *Beaver*, that being pursued by the Hunters, he bites off his own Testicles, and leaves them for his Ransom; seeing he can no more bend his Body, so as to come at them with his Teeth, than a Boar can do; and besides, being always near great Rivers, it is easy to escape by plunging into the Water.

Castor diversly prepared is recommended in Diseases of the Brain and Womb, both inwardly and outwardly. The oily Substance is likewise us'd in Ointment, and in the Composition of Oil of *Castor*.

There was a *Beaver* dissected in the Academy of Sciences, which was three Foot and an half long from its Nose to the Extremity of its Tail. His greatest Breadth was twelve Inches, and he weigh'd above thirty Pounds. His Colour was brown, and very shining, inclining to a dark Grey. His longest Hair was an Inch and an half long, and fine like the Hair of one's Head; the shorter was an Inch, and as soft as the finest Down; his Ears were round and very short, without Hair within, and outwardly like Velvet. He had four cutting Teeth, such as Squirrels and Rats, and other Creature, have that are us'd to gnaw Things. These Teeth below were above an Inch long; and the upper ones, which come something forward, were not directly opposite, but so disposed as to work in the Nature of Sheers, passing one by another, being very sharp at the End, and cutting like an Ax; their Colour was white without,

without, and of a bright Red within, inclining to a bastard Saffron. It had sixteen Grinders, eight of a Side. The Claws behind were join'd by a Web, like those of a Goose; but those before were without such Membranes, not unlike the Mountain Rat, and they use them for Hands, as Squirrels do. Their Nails are cut sloping, and hollow'd like a Pen to write with. The Tail, as well as the Feet, has more of the Nature of a Fish than of a terrestrial Animal, and tastes like it, being covered with Scales of the Likeness of Parchment, about a small Straw's Breadth, of an irregular hexagonal Figure, which form an *Epidermis*, or Skin that joins them together. It was eleven Inches long, and of an oval Figure, four Inches broad at the Root, and five in the Middle. This helps him in swimming, and to bear his Mortar that he makes use of in building his House, which he has sometimes of two or three Stories. His Testicles were not fasten'd to the Back-Bone, as *Matthiolus*, *Amatus*, *Lufitanus*, and *Rondelet* have told us; but they are hid in the Sides of the *Os Pubis*, about the Groin, and don't appear without, any more than the Yard, nor can they be cut out without killing of the Creature. It had four large Pouches, situated at the lower Part of the *Os Pubis*: The two first were of the Figure of a Pear, and had a Communication with one another; they had an inward Covering, which was fleshy, of an ash Colour, streak'd with a great many white Lines, which had several Folds, like those of the Skin of a Ram's Cod, and two Inches long, where there was a greyish Matter, of a foetid Scent, and very thick; and this is the *Castoreum* so much spoken of.

The *Castor*, or *Castoreum*, of *Dantzick*, being heavier and of a stronger Scent, is preferable to that of *Canada*, which is generally dry, not clean, and has very little Smell. Let the Pouches be weighty and fleshy; and Care must be taken that they be not filled with Honey, or any other Counterfeit, which is easily distinguishable; because they which are so fill'd up, are bloated, smooth, bright, and if press'd a little, send forth a liquid and corrupted Honey; whereas the others, on the contrary, are hard and weighty, and when they are cut, will be full of little

Strings, and have a Smell that is strong and piercing.

The Skin of the *Castor* is esteemed the finest and softest Fur in the World, and is a valuable Commodity for making *Beaver* Hats. In *Poland* they line all Sorts of Garments with it, as making the best Show, and enduring the longest of any Fur. The Hair should be long, soft and silky; and that of the fat *Castor* is preferable to the lean. The Skin being burnt to Ashes, and the Powder applied to the Nose, stops Bleeding.

The Fat of the *Beaver* is us'd as an Ointment against the Palsy, Convulsions, hysterical Fits, Apoplexy, and Falling-Sickness. Take half a Pound of *Beavers* Fat, Oils of *Rosemary*, *Nutmegs*, *Amber*, and *Mace*, of each one Dram.

The general Virtues of *Castor* are in strengthening the Head and Nerves, being prevalent against the Biting of Serpents and mad Dogs. It helps Forgetfulness, caus'd by Sickness, curing Convulsions, Pains and Noise in the Ears from cold Humours, Coughs, Catarrhs, and Distillation of Rheum, provoking the Terms, causing a speedy and easy Delivery to a Woman in Travel, bringing away both Birth, and After-birth, and dead Child. It has been found effectual in Epilepsy, Apoplexy, Fits of the Mother, Gripings of the Belly, and Cholick. It is prepar'd several Ways; but the Powder may be prepared as follows: Take pure *Castor* in fine Powder, two Ounces; *Saffron*, *Pepper*, *Bay-Berries*, *Tartar vitriolated*, *Camphire*, of each one Dram; mix them. The Dose is from one Dram to four Scruples, in any proper Vehicle.

The *Castor*, or *Beaver*, is a four-footed Animal, amphibious, for it *Lemery*. can live by Land or Water. It is about the Bigness of a Pig of six Months old: Its Head is of the Shape of a Mountain Rat: Its Teeth are large, strong, sharp, and cutting: Its Body short and hairy: Its Skin is covered with a very soft Hair, of which they make Hats: Its Tail is about a Foot long, an Inch thick, four Fingers broad, without Hair, scaly, grey, hollow towards the Root, strengthen'd by Joints running into one another: Its Legs are short, those before resembling a Dog's, and the hinder one's a Swan's: It feeds upon Fruit, Leaves,

Leaves, and Bark of Trees, and upon Fish when it is in the Water. It is half Flesh, and half Fish. The first is not reckoned good, but the Tail and hinder Legs are sweet like the Tunny, having a solid Fat. Some of the Tails weigh four Pound, and are accounted a great Dainty both boil'd and roasted.

If you would take hold of a *Beaver*, you must seize on his Tail, and so secure him, that he cannot turn to bite you; and by the Hold you have of his Tail you may govern him as you please.

Amongst the *Beavers* some are accounted Masters, some Servants. They generate in the Beginning of Summer, and bring forth in the End of Autumn. They are cleanly in their Houses; for the making of which, they draw the Timber on the Belly of their Antients, they lying on their Backs. They love their Young. They use their fore Feet like Hands. And their Cry is like that of an Infant. Their Testicles are placed at the lower Part of the Belly, between the Thighs, near the Fundament, but they lie within, under a fleshy Skin, which is hairy, and covers all the Belly; however they may be distinguish'd outwardly, and handled. When they would have these Testicles, they open the fleshy hairy Skin, under which they find the first common Purse, which contains the two others in the Shape of little Purses, or the real Testicles of an Animal; then they tie them by the Neck, and hang them in the Chimney, leaving them till they be dry and hardened, and the outward Purse is of a brownish Colour, and this is what they call *Castor*. If you then open these inward Purses, you will find a Matter which is hard, brittle, of a yellowish brown, intermix'd with many loose Membranes of a strong and piercing Odour; and underneath this Matter there is another Pouch which encloses an unctuous and fattish Liquor, very like Honey, which as it grows old, comes to the Colour and Consistence of Suet, and is of as strong a Scent as the Parts that are more solid.

Some of these Purses are larger, some less, according to the Beast they are taken from. They are best cured by taking them out, cleansing them purely, and drying them well in some shady Place; which when it is well done, they will keep seven Years. It is adulterated by Gum *Ammoniacum*, Blood

and Powder of Kidneys, &c. as also whole Kidneys put up into little Bladders, but may be discovered by being black, mouldy, and not apt to crumble; whereas the genuine is of a foetid, strong, and unpleasant Smell, and of a strong, sharp, biting, and bitter Taste, and of a brittle Substance.

The *Castor* contains a great deal of exalted Oil and volatile Salt; it attenuates viscid Humours, strengthens the Brain, provokes the Terms in Women, allays Vapours, resists Putrefaction, causes Perspiration; is proper for Epilepsy, Palsy, or Apoplexy, and is a Medicine for Deafness.

The unctuous Liquor which is found annexed to the Testicles of the *Beaver* has the same Virtue, and is strengthening to the Nerves.

7. Of the Elk.

THE *Elk* is a wild Creature *Pomet.* that is commonly met withal in the cold Countries, especially in *Sweden*, *Norway*, *Canada*, and other Parts. This Animal is about the Height of a Coach-Horse, or a large Ox; the Head is very thick, the Eyes are bright; the Horns upon the Head are spreading and large, like those of the Deer; the Legs long and slender; the Feet black, and divided at the Hoof, as those of the Ox or Cow; as to the Hair, it is soft, and of a blackish Yellow. I shall not stand to relate what abundance of Authors have said concerning this Animal: I shall only say, that the Name *Eland*, or *Elan*, given by the *Germans*, signifies Misery; as well because that this Animal lives no where else but in desolate Places, as Woods, Forests, and the like, as because he is very subject to the Falling-Sickness; and as soon as he is attack'd with this Disease, he fails not to put his left Foot to his left Ear, to cure himself thereof; which has given Occasion to the Antients to believe that the *Elk's* Claw, or the Horn upon the left Foot, was a Specifick for the Epilepsy.

Of all the Parts of this Animal, there is none used in Medicine but the left hind Foot, for the Reasons aforesaid; upon which Account the Buyer must take care, that what is offer'd to Sale be not the Foot of some other

7
The Elk

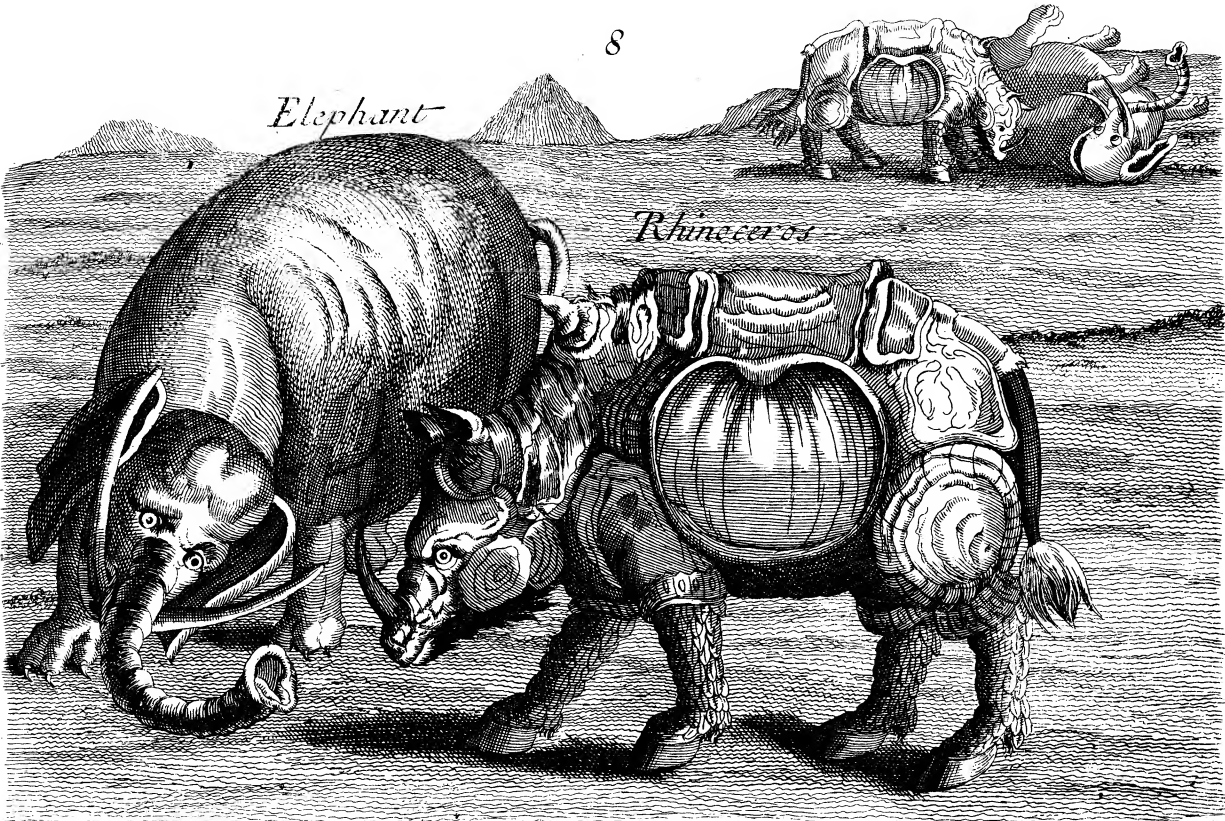


The Elk falling down in an Epileptick fit being pursu'd by 2 Huntsmen.

8

Elephant

Rhinoceros



other like Animal, that is difficult enough to distinguish, unless the Leg or the Skin be with the Foot, to see by the Hair whether it be the left hind Foot. You ought to take care likewise, that it be not worm-eaten, which often happens when they are old; but on the contrary, let the Claw be heavy, black, shining, and very smooth. It is of some Use amongst the Apothecaries for some other Diseases, as well as that named.

Some People eat the Flesh as Venison. The Skins are dressed by Tanners, with Fish-Oil and Alum, to make Breast-Plates of, and to shelter from Rain. They may be known from a Deer or Hart's Skin, by blowing through them; for the Breath will come through, like as in Buff. The Nerves are us'd against the Cramp, by binding the affected Part with them. The Horns are said to be anti-epileptick; but the chief Virtue is said to lie in the Hoof, being worn in a Ring, or hung about the Neck, so as it may touch the Skin. It is inwardly taken in Powder, being rasp'd, or fil'd like Harts-Horn.

Alce sive Alces, or the Elk, is a Lemery. four-footed wild Beast of a large Size, betwixt a Deer, an Ass, and a Goat, having great branched Horns, bending toward the Back on the plain Edge, the Teeth or Branches of them being upwards, solid at the Root, and round like a Hart's Horn, but much broader. They grow as it were out of their Eye-lids, are very heavy, weighing at least twelve Pounds, and are about two Foot long, which Horns they lose every Year. It is headed something like a Horse, has long Ears, a broad Forehead, and an upper Lip so great, that hanging over the nether, it so much falls over, that it cannot eat for it but by going backwards. It is a long-back'd Beast, with a short, or almost no Tail, and a cloven Hoof like the Hart; his Hair is almost of the same Colour, and sometimes of a brown Russet. He has a strange kind of Mane, lying both on the Top of his Neck, and underneath his Throat, where it sticks out like a Beard, or curl'd Lock of Hair.

This is a melancholy Beast, and frequently afflicted with the Falling-Sickness, continuing in the Pangs thereof till the Hoof of the Left Foot touch the Left Ear; where-

with rubbing the Part, the Creature is thereupon immediately deliver'd. In the Northern Climes they live in Herds, and are taken by Hunting; for upon the slightest Wound, they are so timorous a Creature, they immediately fall down, and yield themselves a Prey to their Enemies. In Sweden, Livonia, &c. they are taken, tamed, and us'd for Beasts of Burden; for they are both swift and strong, and serve well to draw in Sledges upon the Ice and Snow, in Russia, Scandinavia, and other Northern Parts.

8. Of the Elephant.

THE *Elephant* is an Animal that in Height and Thickness exceeds all the Beasts of the Earth. It is a very understanding and tractable Creature, being arm'd with a long, fleshy, and nervous Trunk, which serves him instead of an Arm or Hand upon many Occasions. It has likewise the Discretion or Knowledge how to extend and contract his Body upon entering into a Passage several Feet lower than its Body, provided it be wide enough for its Bulk. I don't believe it will be necessary to give a very particular Description of this Animal, because there is scarce any considerable Town in Europe, but where this Creature has been seen; only it may not be amiss to inform you, that the *Elephants* come from the Eastern Parts of the World, but more particularly from the Great *Mogul's* Country. They are the Males only that are arm'd with great Teeth, or Tusks, at the upper Part of the lower Jaws, for the Females are much less; both these are call'd Ivory, of which several fine Works are made; as well as Medicines and other necessary Things for Life.

I shall not trouble myself to give an Account of all that has been writ upon this Subject by the Antients, in Relation to the *Elephant*; but only take notice of some few Things that may be entertaining to the Reader, if they afford him no other Instruction. *Ambrose Parry* gives an Account of two sorts of Dragons which destroy the *Elephants* after this manner: These Dragons wind themselves about the Legs of the *Elephants*, and then thrusting their Heads up their

their Nostrils, they put out their Eyes, sting them, and suck their Blood till they are dead.

Pliny affirms he saw an *Elephant* which learn'd the *Greek Letters*, and was able with his Tongue to write a *Greek Sentence*; and in the Plays of *Germanicus Cæsar*, *Elephants* danc'd after Instruments of Musick, keeping Time and Measure. The *Elephant* is said to have a kind of Religion; for it worships, reverences, or observes the Course of the Sun, Moon, and Stars: For when the Moon shines, they go to the Waters where they may see her; and when the Sun rises, they salute or reverence his appearing, by holding up their Trunk to Heaven in Congratulation for the Light. By a kind of natural Instinct they have some Fore-knowledge of their own Death; and when any of their Kind dies, they cover the dead Carcase with Dust, Earth, and green Boughs. They have a passionate Love to their Masters and Keepers, and seldom forget to revenge an Injury on those that have offended them; as they are always grateful to their Benefactors. *Aynou* saith, an *Elephant* was cheated of the half of his daily Allowance by his Overseer; by chance the Master came and served him, upon which the Beast divided it into two Parts before his Master, laying one of them aside: By this the Fraud of the Servant was detected.

Pliny says, that an *Elephant* which was duller than ordinary, was found by his Master in the Night, practising Things which he had taught him in the Day, with much Difficulty, and many Blows. It is reported they will live two or three hundred Years, if not prevented by extraordinary Accidents. They only breed in hot Countries, and scarcely can bear Cold and Winter Weather. As to their Teeth, they are often found very large. An *Elephant's* Tooth was sold to a *Venetian Merchant* about twelve Foot long, and three Feet Diameter; and it weigh'd so heavy, that he could not lift it. *Vertomannus* saith, that he saw in the Island of *Sumatra* two *Elephants* Teeth, which weigh'd 336 Pounds. When these fall off, which is about every tenth Year, they bury them in the Earth with their Feet.

The Ivory, which the *Latins* call *Ebur*, is the Teeth, or rather the Weapons, or

Arms of the Male *Elephant*; the best and whitest of which come from *Angola*, *Ceylan*, and other Parts of the *East-Indies*. The Trade of Ivory, or *Elephants* Teeth, is very great in *France*, as well as *England*, for many Purposes. There is a Spirit and volatile Salt made from it, by the Retort, which is highly esteem'd in Diseases of the Heart and Brain. It is cold and dry, a pestilential Antidote, moderately binding, and strengthening the Bowels. Take Filings or Rasplings of Ivory, half a Dram; Powder of Man's Skull, Bezoar Mineral, of each fifteen Grains; mix 'em for a Dose in the Epilepsy, or any malignant Fever. Mix'd with *Japan Earth*, and *Jesuits Bark*, it is good for the *Fluor Albus*, Bloody Flux, Weakness of the Back, &c. Likewise *Cochineal* and *Saffron* being added, it becomes an excellent Cordial.

Ivory Black is made of burnt Ivory, that is taken from the Fire whilst it retains its Blackness, is then pounded, and with Water made into little flat Cakes or Troches for the Painters, which, when good, ought to be very finely ground, soft, and brittle. The Apothecaries, or others, which distil Ivory by the Retort, instead of throwing the burnt Ivory that remains in the Retort away, may pound it, and make it into little Cakes, or Troches, as I have said before, and then sell it to those who buy Ivory Black, or else put it upon a good Coal Fire, to reduce it to a white Powder, which is call'd *Spodium*, or burnt Ivory.

Spodium, or Ivory calcin'd to a Whiteness, is burnt for the Purpose, that it may be serviceable in Medicine. The best is that which is white within and without, heavy, easy to break, in fine Shells, the least full of Dirt and Filth that may be. They bruise the *Spodium* upon a Sea-Shell, or Stone, and make it into Troches, which is what we call prepared Troches of Ivory, or *Spodium*. The same Virtues are attributed to these, as to Coral and other Alkali's. The Antients, besides Ivory, burnt Canes or Reeds; and the Canes thus reduc'd to Ashes, were also call'd burnt Ivory, *Spodium* or *Antispodium*. It strengthens the vital Parts, resists malignant Fevers, prevents Miscarriages in Women, helps Conception, cures Vapours and Fits, and likewise kills Worms in Children.

Of the Rhinoceros.

The *Rhinoceros* is a four-footed Animal, of the Size of a Bull, whose Body resembles most the wild Boar. He is so called, because of the Horn that grows out of his Snout, which is black, about a Foot and a half long, hard, pyramidal, solid; the Point or Tip whereof turns up again towards the Crown of the Head. There is also another Horn of the same Colour and Hardness, towards the Middle of the Back, which turns the same Way as the other, but is not above a Hand's Breadth long. This Animal is cover'd all over with strong Scales, besides which, he has two, as it were Targets, upon his Body, like the Wings of a Dragon, coming from his Back down to his Belly. In like manner the Legs are scal'd to the Hoofs, which are parted into four distinct Claws.

This Animal is an Enemy to the *Elephant*, and, in fighting with him, fixes his Horn in the soft Part of the *Elephant's* Belly; for which Cause it is said that an *Elephant* will run from him. When they fight they whet their Horn before-hand against Stones. They are not fierce against Mankind without great Provocations. The Cry is like the Grunting of a Hog. The *Indians* make Bottles of their Skins to put Liquors in. The Powder being infus'd in Wine, or taken by itself to a Scruple, is good against malignant Diseases. The Horn, which is chiefly used as the Unicorn's, is said to be good against all contagious and malignant Fevers; for being a high Alkali, both fix'd and volatile, it encounters and destroys the malignant Acids, which stir up and influence the most pernicious Diseases. 'Tis reckon'd a singular Sudorifick.

Elephas, sive Elephantus, is a Quadruped, esteem'd the biggest in the World, of a monstrous Shape: The Head is great and deform'd; the Mouth so large, that a Man's Head may as easily enter into it, as a Finger into the Mouth of a Dog: Their Eyes are really large in themselves, but appear small in Comparison, and their Ears little, in Proportion to the rest of the Body, not much unlike the Wings of a Bat. The Teeth on either Side are four, to eat with and grind their Food, with two

others, one on each Side, which hang forth beyond the rest. It has a Trunk at the End of the Snout, call'd *Proboscis, seu Tuba, seu Manus Nasuta*, which is a large hollow thing, hanging from his Nose, like Skin, downwards, serving instead of a Hand. When he feeds, it lies open to draw in both his Meat and Drink; by this he receives of his Keeper whatever he gives him, and in Swimming draws through it his Breath. It is crooked; gristly, and inflexible at the Root, next the Nose, where it has two Passages, one into the Head and Body, by which the *Elephant* breathes, the other into the Mouth, by which he receives his Meat. With this he fights in War, and is able to take up a small Piece of Money from the Ground, or any other Place; with this he can draw up a great Quantity of Water, and shoot it out again, to the annoying of his Enemy.

He is said to have four *Venters*, or Bellies, and Lungs four Times as big as an Ox. His genital Member is like that of a Horse, but less; and the Testicles lie inward about the Reins. The fore Legs are much longer than the hind Legs, of short Joints, and of equal Bigness both above and beneath the Knees; the Ankle-Bones are very low; he bends his hind Legs as a Man when he sits, but not both together, and so leaning on one Side, sleeps most commonly against a Tree. Their Feet are round like Horses, and as broad as a Bushel, having five distinct Toes upon each Foot, which are very little cloven, but without Nails. They are for the most part of a Mouse Colour, or darkish brown. The Skin is harder on the Back, and softer on the Belly, without any Covering of Hair or Bristles, unless here and there one scatteringly: It is so tough, that a sharp Sword or Iron cannot pierce it. The Tail is like an Ox's, but without Hair, except at the End. The Sound or Noise they utter has the most Resemblance to braying, and seems as if always hoarse. [*The Virtues of the Elephants Teeth, or Ivory, are fully set forth in Pomet.*]

The *Rhinoceros*, call'd so from carrying his Horn upon his Nose, is a large four-footed Animal, that looks as if he was something of the Boar Kind, only that he is much larger, and more lubberly and dull. His Head is thick, and enclosed in a sort of flat Cowl,

for which Reason, according to the Rev. Father *Le Comie's* Memoirs of *China*, the *Portuguese* have given him the Name of *Moine des Indes*, or the *Indian Monk*. By reason of his Horn so advantageously placed, he becomes formidable to the Bufflers, Tigers, and Elephants, which he engages sometimes. This Animal is found in the Desarts of *Africa*, in *Asia*, at *Siam*, and in *China*, where they feed upon the Branches of hairy and prickly Shrubs and Trees. The Horns, the Nails, and Blood, are all us'd in Medicine, containing in them a good deal of volatile Salt and Oil. They are useful to resist Poison, strengthen and fortify the Heart, procure Sweat, stop Fluxes of the Belly, and are good against all contagious Diseases. The Dose is from a Scruple to two, either in Infusion or Powder, which drunk in Wine, purifies the Blood, and is a good Preservative against infectious Air.

9. Of the Camel.

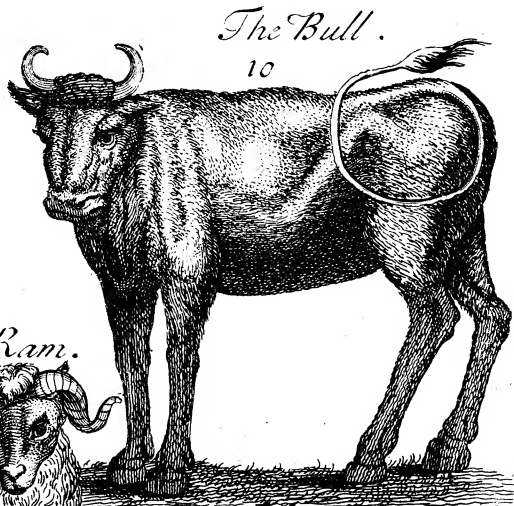
Pomet. THE Camel is a gentle domestic Animal, whereof there are great Numbers throughout all *Africa*, and particularly in *Barbary*, and the Desarts of *Getulia* and *Lybia*, and are the greatest Riches of the *Arabs*. Those of *Africa* are better than the other, because they will travel forty or fifty Days together upon Barley only, and ten or twelve without eating or drinking at all. The Female carries her Burden eleven Months. When the Camels travel in the Caravan, or labour in the Field, the Drivers of them whistle and sing; for the more they encourage these Animals, the better they march. Their Food is Grass, Hay, Thistles, Barley, Oats, Rufhes, and Herbs. There are three Kinds of Camels; those call'd *Hegin* are the biggest, and will carry a thousand Weight. The second Kind are what they call the *Bebet*, that have two Bunches on their Back, and are the best to ride upon; but these are only to be met with in *Asia*. The third they call *Dromedaries*, which are the smallest and finest, and fit for no other Use but riding upon, and are so swift, that they will travel thirty five or forty Leagues a Day, and continue so to do nine or ten Days through the Desarts, with little or no Sustenance.

When these Animals are to be loaded, they strike 'em over the Knees, and upon the Neck with a Stick, and they kneel upon the Ground to receive their Burden; and when they are loaded, upon the Sign being given, they rise presently with it. These Creatures bear Hunger and Thirst with great Patience. Some say they carry Water in their Stomachs a long time to cool them, by means of a large Ventricle, about which they find a considerable Number of Bags inclos'd in the Tunicles or Coats thereof, in which it appears these Animals keep Water in reserve. And hence it is that some Persons affirm, that when the *Turks* go with the Caravan, or to *Mecha*, and Water is scarce, they kill their Camels, to drink the Water they have in their Stomachs. It is from these Animals we have the Hair that is called by their Names, and of which several fine Stuffs are made; the best of which is that on the Back, and the least full of white Hair: In short, the Camel of all Animals is the most gentle, the least chargeable to keep, and which brings the greatest Profit to his Owner.

Of natural Salt Ammoniack.

Sal Ammoniack, or rather *Natural Ammoniack*, is a Salt white within and without, of a saltish Taste, pretty like common Salt, only that it is more pungent. It is brought us sometimes from *Arabia* or *Lybia*; but at present we have very little, by reason the *Venetians* and *Dutch* have found out a Way of making a Composition that near resembles it in its Virtues; but there is a great deal of Difference in the Figure betwixt the natural and artificial.

When the *Turks*, and other People of *Asia* or *Africa*, travel with their Caravans, their Camels, passing thro' the Desarts, urine upon the Sands; and the Sun shining fierce on the Urine, fails not to dry it up, and reduce it into a white Mass; the Truth of which has been testify'd by a Trial made of a Piece which Mr. *Tournefort* gave me the 6th. of *March*, 1693, whose Figure is here represented, and marked A, and which I keep by me as a great Rarity. This Salt is crystalliz'd; that is to say, it appears on the Top like Needles, as in Salt Petre refin'd, and hollow on the under Side, where there



is some Sand, which shews that the Salt is sublim'd by means of the Sun, which raises it above the Sands, that are very hot.

The Antients universally agreed, that there was a natural *Sal Ammoniack*; that this Salt was found in the *Lybian Sands*, and that it was made from the Camels Urine which travelled to the Temple of *Jupiter Ammon*, from whence it took its Name: And others say that it comes from the *Greek Word Ammos*, which signifies Sand; and therefore we ought not, as is commonly done, to call it *Armoniack*, but *Ammoniack*. There is besides this, another *Salt Ammoniack*, or natural *Ammoniack*, or rather more properly speaking, an artificial one, which is made after the same Manner as we make *Salt Petre*, that is, drawn from a kind of Earth, or saltish Scum or Dross that is dug out of old Caverns, and the Chinks of Rocks, which are betwixt *Labor*, *Tbanusseri*, and *Tzerhint*: Yet as these two Salts are almost unknown to us, and that we meet with but very little of them, for this Reason we shall content ourselves with that brought from *Venice* or *Holland*; but the last is chiefly what comes to *Paris*, especially in Time of Peace.

Of artificial Sal Armoniack.

The *Sal Armoniack*, or rather *Acrimoniack*, or, according to some, *Acrimonial*, is a Mass or Composition of several Things, made in Shape of a Pot-lid, which the *Venetians* or *Dutch* make, according to the Relation of several Authors, from human or animal Urine, common, or Sea Salt, and Chimney Soot, boil'd all together, and sublim'd into a Salt, and form'd into Cakes, as we have it now brought to us. Some have assur'd me that *Sal Armoniack* was likewise compos'd of all Sorts of Blood, which I cannot be satisfied in, having never seen it done.

That *Sal Armoniack* is the best which is clearest, whitest, and most transparent, and which being broke, there appear in it as it were Needles, and that which is the driest; but reject that which is very commonly met with, and is black without and within, and which being broke, is almost all grey or black. That which comes from *Venice* is the purest; that from *Antwerp* and *Holland* the most common Sort. The use of it is very

considerable for several Trades, besides the many excellent Preparations made from it in Chymistry. It serves the Dyers, Goldsmiths, Founders, Pin-makers, and almost all that work in Metals, and the Farriers.

In the Sublimation of this artificial Salt, according to the Composition mentioned before, the volatile alkalious Salts of the Urine and Soot, do raise up as much of the Acid, or Sea Salt, as they can hold strictly together, which seems to be fix'd; so that it appears this Salt consists of two different Natures and Properties, to wit, of Acid and Alkali, fix'd and volatile, and accordingly two different Spirits, or Salts, may be drawn from it, *viz.* a volatile alkalious Spirit and Salt, and an acid Spirit and fix'd Salt.

To purify Sal Armoniack.

Dissolve it in a sufficient Quantity of Water, filtrate the Dissolution, and in a Glass Vessel either evaporate till it is dry, by which you will have a pure white Salt, or evaporate till a Pellicle arises; and set it to crystallize according to the usual Way. You may also purify *Sal Armoniack* by Sublimation, thus: Take *Sal Armoniack* in Powder, Sea Salt decrepitated, or rather Smiths Scales; mix them, and put the Mixture into an earthen Cucurbit; and having plac'd it in Sand, fit to it a blind Head; give a gentle Fire at first, and encrease it by little and little, until you can see the *Sal Armoniack* rise up like Meal, and stick to the Head and uppermost Part of the Cucurbit, and continue the Fire till nothing more will ascend: The Vessel being cold, gather these Flowers with a Feather, and keep 'em in a Glass close stopp'd. They are only *Sal Armoniack*, and their Virtues the same with the former, being given only to one Scruple. Thus purified from Sea-Salt, the Flowers are white; but from Iron Scales they are of a yellowish Colour; the latter being much the better, and more successful against Quartans; and both of them are very powerful Agents in all chymical Operations, for extracting the Sulphurs of Metals and Minerals, both by the Help of Sublimation, and otherwise. This *Sal Armoniack* purified is also us'd outwardly against Gangrenes, and to consume superfluous and corrupted Flesh.

it prevails in a Gargarism against the Quinsey and Inflammation of the Throat, and in a Bath it gives Relief in the Gout, especially if Cloths be made wet therewith and applied.

Of volatile Spirit of Sal Armoniack.

Take *Sal Armoniack* and quick Lime in Powder, six Ounces of the first, and one Pound of the latter; mix them in an Iron Mortar; add three or four Ounces of Water of Urine; put them quickly into a Retort, the half whereof is empty; fet it in a Sand Furnace, with a very large Receiver, luting the Junctures close; begin the Distillation without Fire for a quarter of an Hour; then add the Fire, increasing it by little and little, till no more Spirits come forth. Take off the Receiver, and immediately turning away your Nose, put the Spirits into a Glass, which keep close stopp'd for Use, you will have four Ounces of Spirit or better. This is stronger than that made with Tartar, being endowed with the fiery Particles of the quick Lime; which being mix'd with Spirit of Wine, prevents the coagulating; whereas that made with Tartar will cause a *Coagulum* upon the Spot. This Spirit prepared either Way, corrects and hinders Putrefaction, more than most other Things in the World; and powerfully resists the Poison or Venom of the Plague or Pestilence; and is very profitably given against all putrid Fevers. The volatile Spirit and Salt are more subtle and penetrating, and of a kinder Taste and Smell than those which have been extracted out of plain Urine, because they were not fermented and depurated by common Salt. This Spirit is good in all hypochondriacal Cases, Suffocation of the Womb, &c. but chiefly against Diseases of the Head; as Vertigo, Lethargy, Epilepsy, Deafness, Palsy, Trembling, and the like. In a word, it is good in all Diseases proceeding from Corruption, or Obstruction of Humours.

Of the acid Spirit, and fix'd Salt of Armoniack.

After the Spirit is drawn off with Tartar, there remains at the Bottom of the Cucurbit

seven Ounces, and better, of a white fix'd Mass, from which you may distil an acid Spirit, as you do Spirit of Salt; for indeed it is a Kind of Spirit of Salt, or little better; otherwise you may dissolve it in Water, filtre and crystallize, so will you have a very good Salt against intermitting Fevers, given from ten Grains to thirty. This is as agreeable an Acid as any we have; and is very proper to allay the Heat of Fevers, to provoke Urine, and stop the too violent Fermentations of the Blood. There is another Way of making the fix'd Salt, by the Means of Egg-Shells, or quick Lime, which they reduce with the former Mass, into a clear, transparent Body, like Crystal, which is a very good Caustick, but easily runs to Water; for which Reason, those who are desirous to keep it, put it in a Glass Bottle well stopp'd, so that no Air can enter. This fix'd *Sal Armoniack* being reduc'd into a Liquor, is what some call, tho' improperly, Oil of *Sal Armoniack*; and is indeed an Oil *per deliquium*, which several Persons keep for the Refuscitation of Quick-Silver.

Camelus, or the *Camel*, is a very tall tractable Beast, that is of mighty Service to all the People of *Asia* and *Africa*. His Neck is long, the Body very thick and broad, having a Bunch on his Back, and sometimes two. The Tail is like that of an Ass; his Buttocks are small, considering the Bulk of his Body, and the Legs very long. The Female goes with Young eleven, and sometimes twelve, Months; and when the young ones arrive at an Age and Size fit for Service, they load them with Burdens as we do Horses in *Europe*. But as this Animal is very high, so that it is difficult to load them, they are taught, while young, to kneel down upon their Knees to receive their Burdens; and this is the Reason that they become, in Time, so callous and hard, that they have scarce the Sense of Feeling on that Part.

These Camels are the usefulest Creatures in *Africa*. The *Arabs* make great Advantages of 'em, because they will live hard, and endure both Hunger and Thirst with much Ease, and wonderful Patience. These Beasts are great Lovers of Singing, and other Musick; so that those who travel long Journeys with them, sing or pipe all the Way to make 'em

go the faster and more chearfully. There are three Sorts of them; the first, or largest sized, is call'd *Hugium*; the second, more peculiar to *Asia*, is nam'd *Becheti*; and the third is *Dromas* sive *Dromedarius*, the *Dromedary*, which the *Arabs* call *Raguabil*; and is a small, thin, lean Creature, in respect of the others.

All the Parts of the *Camel* yield a great deal of volatile Salt and Oil; the Flesh being eat, provokes to Urine; the Grease or Fat is emollient, softening, and resolutive, proper for the Piles or Hemorrhoids: The Brain being dried and beat to Powder, is good for the Epilepsy. The Gall mix'd with Honey, is reckon'd proper for the Quinsey; the Milk loosens the Belly, procures an Appetite, relieves and gives Ease in an *Asthma*. The Blood is said to be proper to incline Women to conceive, if the Region of the Womb be fomented therewith after the menstrual Flux. The Urine is good to cleanse the Teeth, and make *Sal Armoniac* of. The Dung is vulnerary and deterfive, and the Milk and Flesh good to eat, so that the *Arabs* feed upon them.

10. Of the Bull, &c.

Pomet. THE Bull, Ox, Ram or Wether, are Animals so well known to all the World, that it would be usefess to give a Description of them. There is sometimes found in the Bladder of Oxen, a Stone of the Colour and Shape of the Yolk of an Egg, that is soft, and of divers Crufts like the Bezoar; for which Reason it is call'd the *Ox Bezoar*, or the Gall-Stone, which if good ought to be high-colour'd and well dry'd; for if they are purchas'd when taken fresh from the Animal, they wast considerably in drying. Sometimes this Stone is sold pretty dear, especially if it falls into the Hands of Persons who know its Value. The greatest Use that is made of it is for painting in Miniature, as they use Gamboge. The same Virtues are ascrib'd to this as to *Bezoar*. But as this Stone is to be met with at home, it makes it not so much valued as *Oriental Bezoar*. We likewise sometimes meet with a Cartilage in the Heart of an *Ox*, like that of the Stag, to which they give the Name of the Bone in

the Heart of the *Ox*, which is now and then us'd in Phyfick, instead of that in the Stag's Heart, tho' very improperly.

By the burning of Beef Bones, there is a Black made, call'd *Bone Black*; it ought to be fine, brittle, shining, and well ground; its Use is for Painting. There is a Glue made of the Cartilages, &c. well boil'd in Water, which is cast into Moulds, and afterwards spread out and dry'd. This is then call'd *Bulls Glue*, or strong Glue, of which they make a considerable Trade in *France*, especially of that made in *England* or *Flanders*.

The strong *English* Glue ought to be chose well boil'd, dry, clear, and transparent, of a reddish brown, easy to break with the Fist, not gravelly or foul, but the smoothest and neatest that can be had; rejecting such as when it is melted stinks much; as all the strong Glues that are made at *Paris*, or thereabout, do, which are less valued for any Kinds of Works, than that which is brought from *England*. The *Flanders* Glue ought to have the same Qualities with the former; but not being so much boil'd, they use this Glue for Hat-making, it serving them better than that of *England*, as well as to paint in Water Colours.

The *West-India* Company in *France* bring, especially to *Rouen*, a great Quantity of Ox Hides from *Barbary*, of which the Merchants of *Rouen* make a considerable Business, tho' at *Paris* they sell but few. The greatest Share comes from *Senegal*, with the Gum and the Gold Dust. As the Merchants of *Rouen* are oblig'd to give Credit for three Years to the Tanners, if by Accident any Tanner come to fail or die, and that the Successor of him is not able to pay for his Goods, the Merchant is permitted to open his Tan-Pits, and withdraw his Merchandize. Besides these, we sell Ox-Hides from *Hungary*. The best are the whitest, and the true *Hungarian*, because they are much better than those which are made in *France*. Likewise *English* Calf-Skins, and others without Hair, or dress'd, which comes from several Parts, as well as Flocks and Beasts Hair. Over and above all these, we trade in Beef-Suet, or Tallow, that comes from *Ireland*, which ought to be new and white.

Bos, in *English* the Bull, Ox, Lemery-
or Cow, are sluggish, horned Beasts, which

which chew the Cud, and cleave the Hoof; the Horns of the Bull are short, of the Ox very large. It is a Beast generally known, yet they differ much in their Shape, Size, Horns, and Colour, according to the Variety of Countries where they are brought forth. They yield from every Part a great deal of Oil and volatile Salt. The Flesh of the Bull is coarse and tough to that of the Ox. The Cow's Flesh, if fat, is good Meat; but if old and lean, it is not eatable. The young Bullock's Flesh is fine, but much inferior to the Ox's. Veal is a pleasant Meat, easy of Digestion, loosens the Body, and heals the Bowels in a Bloody-Flux.

The Blood drunk warm is said to cure the Epilepsy; besmear'd upon the Skin warm, it takes away all Foulness; and is also good against the Gout and other Pains. The Fat is emollient, and is us'd in Balsams, Ointments, and Plaisters. It eases Pains proceeding from Colds; cures Kibes and Chilblains, and heals the chapping of the Hands, Lips, Nipples, Fundament, &c. The chymical Oil is good against the Gout, Palfies, Numbness, Contractions of the Nerves and Muscles, Lameness, &c. The Marrow is of the same Effect, but much finer. The Horns are alexipharmack, and by some call'd the *English Bezoar*; the Powder rasp'd from the Horn much exceeding the truest and best *Oriental Bezoar*. Moreover, it is of singular Use in the Falling-Sickness, Fits of the Mother, Convulsions, Palfies, Lethargies, &c. The Hoofs and the volatile Salt thereof are Specificks for all the Diseases the Horns are said to be good against.

The Gall mix'd with the Marrow and Fat of a Hen, and dropt into the Ears, eases their Pain. That of a Bull is sharper and stronger than of an Ox or Cow; and mix'd with Honey is a good Vulnerary, and cures almost all Diseases of the Eyes, if curable. There is no better Eye-Salve than it is. By itself it is a good *Collyry* against Blood-shot, Clouds, Films, Haws, or Pearls in the Eyes. Mixt with *Myrrh* and *Aloes*, it cures Ulcers of the Yard and other Parts, together with the Piles. Mixt with Nitre, it removes Scurf and Leprosy. The Dung is temperate, diffusible, anodyne, &c. The Urine drunk cures the worst Kind of Jaundice and Dropsy, by provoking to Urine; the volatile Salt and

Spirit, are powerful Openers of Obstructions. They find sometimes in the Stomach of an Ox or Cow, a Sort of large Ball like a small Apple, of a round Figure, a little flattish, having usually towards the Middle a round Hole, wherein one may put one's little Finger; it is of a reddish grey Colour. This Ball is made of the Hairs which the Ox or Cow licks off herself, and which in Process of Time stick one upon another 'till they are collected into a Mass. It is reckon'd proper to stop the Hemorrhoids and other Fluxes; the Dose being from half a Scruple to half a Dram, powder'd and taken inwardly. It is likewise us'd externally, like Sponge, to deterge and dry up Wounds.

There is another Kind of this Creature, call'd a *Bison*, which is but a wild Cow, Bull, or Ox, breeding in *Scythia*, *Muscovy*, and *Scotland*; but those in *Scotland* are white. It is call'd *Vacca Paonica* in *Latin*; in *Greek*, *Bison*. They differ nothing from the common Cow or Ox, save that their Mane is like a Lion's; and they have a Beard under their Chin, being much larger than those which are common with us: Those in *Scotland* are of a lesser Kind, and white, where they were once in vast Numbers, but are now mostly destroy'd. Their Flesh, and all their other Parts, were equal in Goodness with the common Sort before treated of.

To the *Bison* we will add the *Urus*, call'd in *English*, the *Ure-Ox*, or *Cow*, but unknown to the *Greeks*. These also are a kind of wild Oxen or Cows, differing little or nothing from our common Ox or Bull, save in their Magnitude or Stature, coming near to the Bigness of an Elephant; when grown up it is a wild untameable Creature, nor can it be made sociable like ours, unless they be taken when Calves, and brought up young. They breed in the Woods of *Hercynia*, in the *Pyrenean Mountains*, in *Prussia*, &c. where they are said to be so wild, cruel, and untameable, as they neither fear or spare Man or Beast. Their Largeness and Strength is incredible. Their Goodness for Food, and Virtue of their Flesh, Milk, Hides, Horns, and other Parts, as also the Flesh of their Calves, differ nothing from our tame ones, nor is their Beef any ways inferior to ours, but is only of a larger Kind.

II. Of the Ram, or Sheep.

Pomet. SHEEP are one of the most necessary Animals for the Use of Mankind, and therefore bred in most Nations of the World, tho' the Difference of Climate makes some Difference in their Colour and Shape. The Sheep of Greece are less than the Sheep of *Aegypt*, and the *Oves Pyrrhica* were like *Boves*, by Reason of their exceeding Largeness, their Name being deriv'd from *Pyrrhus* their Master. The Sheep of *Chios* are very small, and the Rams of *India* not much bigger than our Lambs. In *Spain* their best Sheep have black Fleeces, and all their Sheep bear exceeding fine Wool. Near the *Alps* they are grey, or Honey-colour'd. In *Asia*, *Bætica*, and *Erythraea*, red like Foxes. At *Canusium* they are yellow, or Lion Tawny: And so also at *Tarentum*. In *Istria* and *Liburnia* the Sheep bear Wool so coarse, that it may rather be accounted Hair than Wool. The Sheep of *Apulia* gave the Name of *Lana Italica* for excellent Wool; yet it was short and coarse, good for nothing but to make Garments to ride in, and to wear in rainy Weather. The *French* Sheep are not of the best Kind, but the *Flemish* have a fine, soft, curled Wool; so also have the Sheep of *Miletum*, *Attica*, and *Gadilonea*, reaching to *America*. Those in *Pontus* and *Cappadocia* coarser. In *Scotland* the Sheep bear good Wool; but that of the *English* Sheep excels, in Softness and Fineness, all other Wool in the World, except the *Spanish* Wool; and yet the *Spaniards* had the Sheep which bears that superfine Wool first from *England*. In *Aethiopia* the Sheep bear no Wool at all, but Hair like Camel's Hair. In *Gortynis* the Sheep are red, and have four Horns. In some Parts of *India* both Sheep and Goats are as big as Asses, and bring four Lambs at a Time, never less than three. The *Arabian* Sheep are in Size, Figure, and Colour, like the *English* Sheep; but there are two Sorts amongst them that are distinguish'd by the Length and Breadth of their Tails, being so extravagant both Ways, that the Sheep cannot move from one Place to another without Assistance.

Besides the common Sort of Sheep, there

are two Kinds of wild Sheep, the *Musmon* and the *Subus*. The *Musmon* is not unlike a common Sheep, except in its Wool, which seems to be rather the Hair of a Goat, being the same which the Antients call'd *Oves Umbrica*, the *Umbrian Sheep*. Some will have this to be a Kind of wild Goat, which it does not so much resemble, for it wants the Goat's Beard, and its Horns are absolutely like Rams Horns. They are bred in *Corfica*, *Sardinia*, and *Spain*; and are said to be got between a Ram and a She-Goat, as the *Cinyrus* is between an He-Goat and a Ewe. The Form of the *Musmon* is much like a Ram; his Horns grow from his Head like a Ram's, and bend backwards almost to his Ears; it is exceeding swift of Foot, not much inferior to the swiftest Beast. The Skins of them are so thick, that in the Place where they are bred, they are us'd for Breast-Plates. Those Sheep live on the Mountains, and are admirable Meat, but are scarcely found any where now, but in *Sardinia*.

The *Subus* is a Kind of wild, or rather Water-Sheep, of an amphibious Nature, living both on the Land and in the Water; he eats Fish, which flock about him in great Abundance, but carries no longer in the Water than 'till his Belly is full. This Sheep is of a bright yellow Colour, like those of *Crète*, but its Wool is not so rough. It has two large Horns upon its Forehead, swims well, and is very greedy after Blood. Thus much of the wild Kind, and such as are not common; we shall now return to those that are so.

The Sheep is the mildest and most inoffensive of all the Creatures upon Earth, of which there is no Part but what is profitable and useful to Mankind: The Flesh, Blood, and Milk are for Food; the Skin and Wool both together, and a-part for Cloathing: The Bones for making of Tests or Coppels to melt Gold in; the Guts for Instruments of Musick and Bow-strings; the Horns and Hoofs for Trumpets, and other little Toys, besides their physical Use, and the Dung for manuring of Land. Their Flesh is the universal Food of *Europe*; and in some Countries they make Butter and Cheese of their Milk. As to their Wool, they are very profitable in all Nations, being shorn in the cold Countries once a Year; but in the hotter Countries twice a Year. In some Places they

they are never thorn; but according to the old Custom, they pull the Wool from the Sheep's Back, whence the Name *Vellus*, a Fleece, is suppos'd to come à *Vellendo*, from pulling.

Having thus far given a Description of this Animal, I shall now proceed to shew its medicinal Uses. From the Horns is drawn a volatile Oil, Spirit, and Salt; any of which are efficacious against Diseases of the Head, Brain, and Nerves; as Epilepsies, hysterical Fits, Vapours, &c. From the Hoofs and Urine you may extract the same Preparations. The Dung is a prevalent Medicine against the Jaundice, Dropsy, Cholick, Pleurisy, Spleen, Stone, Gravel, Scurvy, &c. taken either in Powder, Tincture, or Decoction. The Dung made into a Cataplasm with Camphire, Sal Armoniack, and a little Wine, opens, digests, attenuates, and eases Pain. It is excellent in Abscesses about the Ears and other Emunctories, Swellings in Womens Breasts, Pain of the Spleen and Gout.

The Skin, besides its Uses for Leather, Parchment, Size, &c. has some medicinal Uses of considerable Moment. A Lamb-skin newly taken off and applied hot, is an admirable Thing to give Ease in Pain, strengthen any weak Part, and cure a Bruise newly taken. So a strong Broth made of it in Claret, by bathing in it as hot as can be endured, will assuage Tumours, strengthen weak Joints and Limbs, and restore a Wasting of the Parts, from an Atrophy or Consumption; and some say it is powerful enough to remove a *Diabetes*.

The Tallow and Cawl serves for making Balsams, Ointments, and Emplaisters; and the Marrow is good against the Cholick, Gripings of the Guts, and Exulcerations of the same. The *Oesipus* is only the Sweat of the Sheep condensed upon the Wool, and making it greasy. It is emollient, discutient, and anodyne, being useful against Contusions, Strains, and Weakness of the Joints and Limbs. The Guts being cleans'd, dry'd, and twisted, serve for Strings to Bows and Instruments of Musick. A Jelly made of Sheeps Feet, is prevalent in Consumptions, Fluxes, of the Bowels, Exulcerations, and the like.

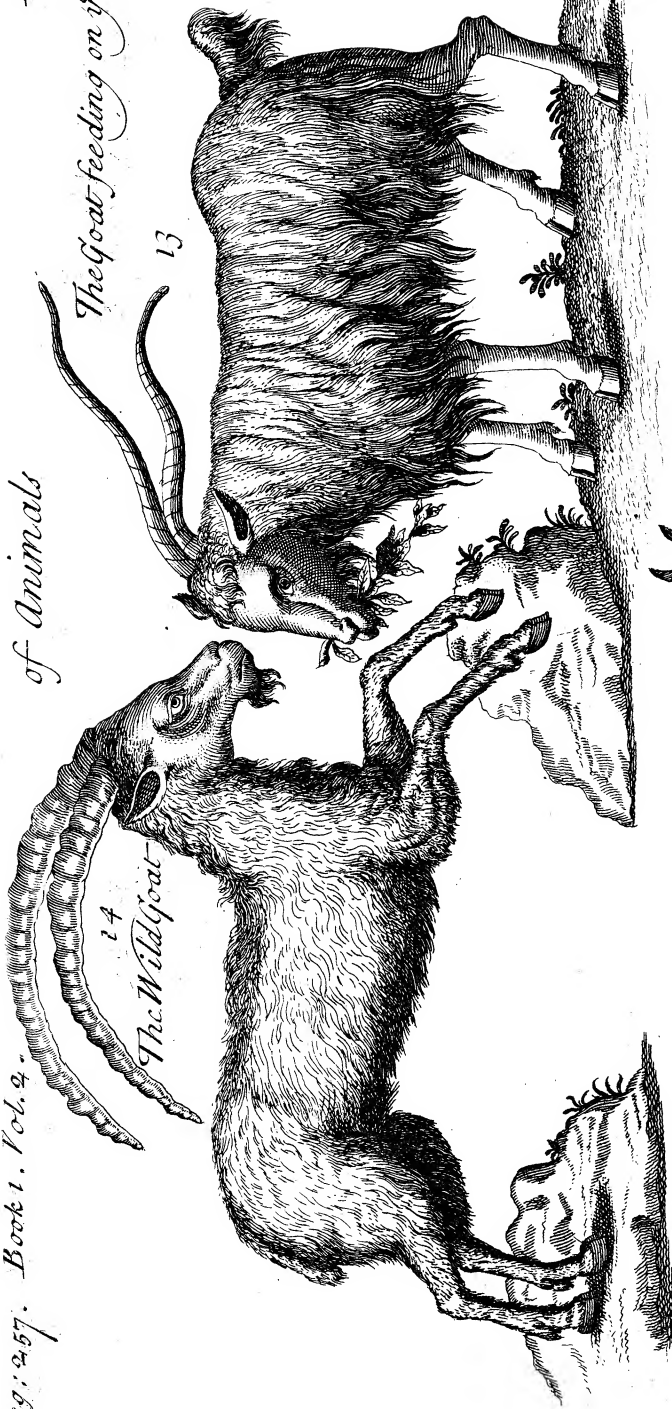
There is a great Trade carry'd on throughout the World with Wool; and amongst the rest, *Persian Wool* is in great Vogue. The best

of which is the softest, and least full of long Hairs; but *Spanish Wool* is reckon'd the finest and most saleable Commodity; of which there are these several Sorts that are esteem'd the most preferable: *Vigonia* and *Segovia Wool* the finest Sort, the small *Segovia* and *Segroen Segovia* of *Castile*, &c. The ordinary Sort of *Navarre* and *Aragon*; the finest white Wool of *Sevil*, *Malaga*, and *Portugal*. Besides these, there are the *German Wools* of *Rostock*, *Stralsund*, and *Anclam*, *Newmark*, *Weydacker*, *Stetin*, *Thorn*, *Dantzick*, *Prussia*, *Lunenburg*, *Bremen*. The Wool that is produced in *Berry*, and the adjacent Parts of *France*, is the longest, and generally the coarsest in *Europe*.

12. Of the Hart, or Deer.

THE *Deer* is an Animal so well known every where, that it would be needless to give a Description of him. I shall only inform you that there are three Kinds understood by this general Word *Deer*, viz. *First*, The Hart and Hind, which are called in *England*, the *Red Deer*; *2dly*, The *Fallow-Deer*; and *3dly*, The *Roe-Buck* and *Doe*. All which are Animals of very long Lives, as may be seen by a Stag's Head kept at the Castle of *Amboise*, of a prodigious Length, which testifies the extreme Age of the Creature that bore it. Some *French* Historians relate, that *Charles* the Sixth kill'd a *Deer* in the Forest of *Senlis*, which had a Golden Collar about his Neck, wherein were engraven these Words, *Hoc Cæsar me donavit*, *Cæsar gave me this*. This answers to a Story that passes in *England*, where it is reported, that King *James* the First, in hunting, took a *Hart* with a Collar, having an Inscription with *Julius Cæsar's* Name thereon. But as to the Longevity of the Creatures, antient Authors have been abundantly more profuse in their Allowances than the Moderns; for it is affirm'd by some of the former, as a positive Truth, that *Agathocles*, King of *Sicily*, hunting in *Calabria*, took a *Hart* with a Collar upon him, on which was written *Diomedes Dianæ*, which was suppos'd to be done before the Siege of *Troy*, which was a thousand Years before his Time.

The

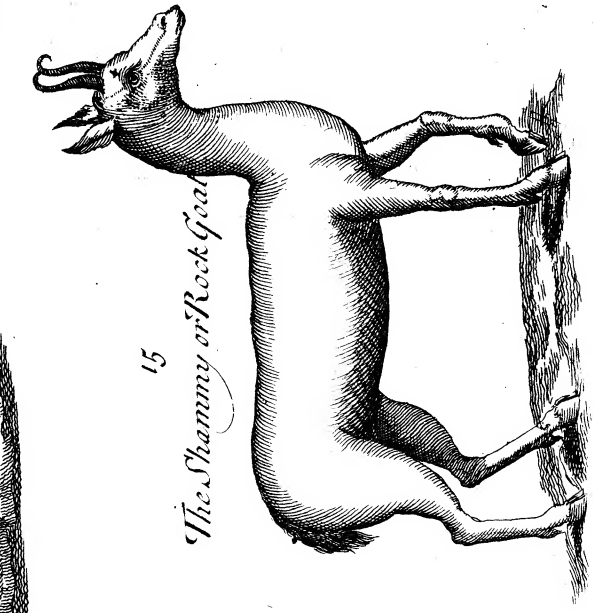


The Wild Goat

14

The Goat feeding on a Cistus

13



The Shanny or Rock Goat

15



The Shaheen.

16

The red and fallow *Deer* are generally found in all Countries of *Europe*, and several Parts of *Asia*, *Africa*, and *America*, in Parks, Woods, or Forests, feeding upon Grass, Hay, Herbs, and Leaves of Shrubs and Trees. The *Roebuck* is bred chiefly in *America*, *Syria*, *Arabia*, *Greece*, and several Parts of *Africa*, in *Lycia*, *Italy*, *Spain*, the *Alps*, and *Germany*. It is observable, that the *Lycian Roes* never go over the *Syrian Mountains*; yet their Delight is wholly among Hills and Rocks.

As to the medicinal Uses of the Parts of these Animals, they are in the main one and the same; and therefore in treating of them, we shall do it generally for all at once. The Horns are the principal Parts in Use, whereof there are many Remedies prepared; as the Raspings, the calcin'd Powder, the Jelly of Harts-horn, the Oil, Spirit and volatile Salt; all or most of which are great Cordials, and good against fainting and swooning Fits, Heart-burnings, Convulsions, Falling-sickness, hysterical Fits, &c. provoke Sweat, stop Fluxes, kill Worms, and comfort both the Heart and Brain. The Hoofs have the same Virtues with the Horns, but are much more powerful Cephalicks; the Spirit, or volatile Salt, or Oil, being excellent in Epilepsies, and Fits of the Mother. The Bone, or rather Cartilage, that is found in the Heart of an old Deer, is said to be cordial, and is brought into the Confection of *Hycinth*. It revives the Spirits, expels Melancholy, and helps the Palpitation of the Heart. This Bone is suppos'd to be the Effect of a *Polypus*.

The Bones of this Creature, distill'd in a Retort, yield a volatile Spirit, Salt and Oil, but neither so fine, or so much in Quantity as arises from the Horn. The Fat or Suet is equal to the best Emollient. It lenifies and softens Callosities, Contractions, schirrous and cancerous Substances. The Marrow being purified, and prepared for keeping, has the same Virtues, and may be used the same Way. The Powder or Filings of the Pizzle, given in Wine, is diuretick, and very good against Cholick and Dysentery: Some have affirm'd it provokes to Venery. The Skin or Hide of the Hart, Hind, Buck, or Doe, are of great Use, when dress'd, for Garments, Gloves, Stockings, Bags, Shoes, Boots, and

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other Things; and the Stones that are sometimes met with in the Stomach, or Gall-Bladder, are something like *Bezoar*, both in Figure and Virtue, but not altogether so powerful, and nothing near so much valued.

Cervus, or the *Deer*, is a large four-footed Animal, with Horns, *Leмеры*. that is very lively, sprightly, and agile, living a long Time, and bearing a great Branch of Horns, that serve him for his Defence, and drop off in the Spring-time, instead of which new ones put forth. The Female Hind or Doe, is call'd *Cerva* in *Latin*; the young one *Hinnulus*, or the Fawn. The whole abounds with abundance of volatile Salt and Oil. The Velvet Horns are so soft, during the first Month, that they may easily be beat off; and being made into a Jelly, are us'd to hasten the Birth. The Raspings of Harts-horn are proper for Ptsians, Jelly, &c. The Bone found in the Heart of a Stag, is sometimes half as long as the little Finger, broad as the Nail, flat and thin, usually triangular and white. Chuse the least rather than the biggest, because the Bone in an Ox's Heart is often imposed upon you for that. It is almost cartilaginous when taken out of the Animal, but hardens into a bony Substance afterwards. The Bone in the *Deer's* Heel is proper in the bloody Flux, being given in Powder to a Dram. The Marrow is yellowish, inclining to white, and may be us'd externally in *Rheumatisms Sciatica's*, &c. The Suet is likewise profitable for the same Ends, being emollient, strengthening to the Nerves, and resoluteive.

13. Of the Goat.

THE *Goat* is an Animal universally known in *France*, *Italy*, *Pomet*, *Cyprus*, *Candia*, and other Parts. The chief Commodity we sell which comes from these *Goats*, is a kind of Fat or Grease which is found sticking to the Beards of these Animals, especially such of them as feed upon nothing but the Leaves of a certain Shrub, very common in the hot Countries, which the *Botanists* call *Cistus Ledum*, or that Kind of it which produces the *Labdanum*. The Leaves are long and narrow, rough, very

F
gluey,

gluey, of a dark Green that continues all the Year.

The Inhabitants of the Country gather this Greafe with wooden Instruments, like Combs, and then make it up, being commonly full of Hair and other Filth, into a Mass, or Cakes of different Size and Weight, which is what is call'd *Labdanum*, or *Laudanum*, that is natural or in the Beard; but since the Islanders understood that there was a sweet pleasant Smell in this greasy Matter, and that when it was well purified, it would be considerably valued, they have taken care to melt it, and strain it through Cloths, as well to take out the Drofs, as to give it a more fragrant Smell. Having thus refin'd it, they wrap it up in fine thin Bladders, as we have it brought us, and to which we give the Name of *Liquid Labdanum*, or *Black Balsam*. This Fat, thus prepared, is much us'd in *England*: As for what is us'd in *France* it is scarce worth speaking of; the Perfumers being the only People that deal in it, either because of its Dearness, or because it is but little known. The worst of the liquid *Labdanum* is melted into Rolls, which they twist as they do Wax-Candles; and this they call *Twisted Labdanum*.

Chuse the *bearded Labdanum*, the most fragrant and cleaneft you can get. The liquid Kind ought to be of a solid Consistence, of a fine Jet Black, sweet and pleasant to the Smell, inclining to that of *Ambergrease*, which has given Occasion to some Merchants to sell liquid *Labdanum* for black *Ambergrease*. As to the twisted Sort, it ought to be rejected, as being full of nothing but Dirt and Sand. Besides these different Sorts of *Labdanum*, we have prepared Goat's Blood, which is us'd in Medicine; and that it may be endow'd with the excellent Qualities, which the Antients attributed to it, the Beast must be fed for some Time with aromatical Herbs, and such as are proper to break the Stone, and must not be above four or five Years old. Having cut its Throat, you are to reserve only the middle or second Blood, rejecting what comes out first and last. This you are to put into an earthen Vessel cover'd with a clean Cloth, to hinder Dust or Dirt from falling into it, and then expose it to the Sun, or set it in the Shade to dry; and when it is well dried, it ought to be put into a Glass

Phial to keep it for Use. They usually prepare the Blood of a Goat in the Month of *July*, because then the Herbs on which they feed are suppos'd to have their full Virtues. *Van Helmont* affirms, that if you hang the Goat by the Horns, and bending the hind Feet to the Sides of his Head; in this Posture cause his Testicles to be cut out, and dry the Blood that runs from the Wound, it will become as hard as Glass, and difficult to be beat into Powder, and quite different from that taken from the Throat. He moreover asserts, that one Dram of this taken will infallibly ease and cure the Pleurisy without Blood-letting.

We bring from *Auvergni* near *Lyons*, and *Nevers*, a great deal of *Goats Suet*; it being not only of some small Use in Physick, especially that of the He-Goat, but is also us'd to many different Purposes. It ought to be dry, of a clear white within and without; and take care it be not mix'd with Mutton Suet, which is not easy to distinguish; therefore do not deal with Merchants you cannot trust. As to the Skin, it is of vast Use, as to carry Wine, Oil, Turpentine, and other Liquors in. The *Eastern* People use the Skins of these Creatures for little Boats to cross a River with, and to carry their Goods upon the *Euphrates*, and other Rivers in the *East-Indies*.

Besides these Uses, the People of the *Levant* dress these Goat-Skins, and dye 'em of a red Colour, by the help of *Stic-Lac*, and other Druggs, and then it becomes what we call *Turkey-Leather*, and have such considerable Trade in, because of the great Use made of it in *France* upon several Occasions. The true *Turkey-Leather* should be of a beautiful Scarlet Colour, and a fine Grain. We make this Kind of Leather at *Marfeilles* and *Paris*; but it is not of so good a Colour, and will not last so long. As to the black Leather, the best comes from *Barbary*, in that it is of a finer Black, and better Grain. They make this also at *Rouen*, of what they call green or raw Skins; but it is neither so good nor so beautiful, as those made in *Barbary*.

14. Of the Wild Goat.

THE wild Goat is an Animal little known in *France*, and very common in *Switzerland*; upon which Account

Pomet.

count I thought it would not be amiss to relate what Father *Belon* of *Mans* has writ of it. "Wolves will not live in the Isle of *Crete*; for which Reason they leave all their Cattle in the open Pastures without Fear, and especially their Sheep and Lambs. "When the Inhabitants of the Country take the Kids of the wild *Goats*, of which there are great Plenty, they bring them up with the domestick *Goats*, and so they become the Property of those who tame them; but the wild ones are theirs who can take or kill them. They do not exceed the common Goat in Bulk, but they have no less Flesh upon them than a large Deer, and they are covered with the same sort of Hair, short and thick, not like the *Goats*. We have some of them also on our Mountains, and especially on Precipices that are difficult of Access; and one would wonder to see such a little Animal carry such a Weight of Horns on his Head. There are two Sorts of these *Goats*, as I have made appear from the different Horns brought from *Cyprus* and *Crete*, which I presented to *M. Le Bailly*, of *Lyons*. There are some Peasants on the Tops of the highest Mountains of *Crete*, that are such Archers, especially about the Mountains of *Sphacia* and *Madera*, that can wound them with their Arrows five and twenty Paces distant: And in order to come at them, they take the She-Goats which they have tam'd, and brought up from young ones, and tie them in some Passage of the Mountains where the He-Goats use to go, and lie in wait on the contrary Side to the Wind, for fear the wild Goat, who is so exquisite of Smell, as to scent you a hundred Paces, should discover them. The Male finding the She-Goat on the Way, stops, and then the Peasant draws his Bow; and if by chance he wounds him but slightly, or that the Arrow sticks in his Body, he knows how to cure himself; for he runs to the *Dittany*, which is an Herb that grows upon the Rocks in *Cyete*, and brouses upon it, by which Means he heals himself." The *Switzers* hunt these Animals both for eating and for their Blood, which they prepare as aforesaid, and use for dissolving the Stone, for as much as it has greater Virtue than

the Blood of the common Goat; especially when they feed on Saxifrage, or other Herbs of like Qualities.

Capra vel Capra, Hircus vel Hirca, the He or She Goat are both Lemery. the tame and the wild, one or other of which are Inhabitants of most Parts of the World; besides which are the *Rock Goat*, the *Oryx*, or the *African wild Goat*. But I shall confine myself here to the wild and tame Goat, that feed upon barren Mountains, and waste Places, and eat almost all Sorts of green Things whatsoever; so that they live and grow fat upon what any other living Creature would be starv'd with. Their Increase is prodigious; for they sometimes bring forth four, and sometimes five at a Time; and the Ewe Kinds will have young ones before they are a Year old. The Profit of keeping *Goats*, which is only proper for barren and hilly Countries, besides the Advantage of keeping the Family, arises from their Hides and Tallow; their Hides being the same Skins which in *Turkey* they make *Turkey Leather* of; and in *Spain*, *Spanish Leather*, and *Cordivant*, so call'd from *Corduba*. These Skins are so valuable, that in some Countries they go in Tale for Money, as the Cocoa Nuts do in others.

Of what Use the Leather is, daily Observation proves to us. Of the best tann'd Leather, which is the *Turkey* and *Spanish*, are made Covers for Chairs, also Shoes and Boots for the Gentry and better Sort of People; of *Cordivant* and Kid Skins are made vast Numbers of Gloves of all Sorts; of the Vellum may be made Covers for Books, Drum-Heads, Deeds, Maps, Books, and other Writings. This is the best Sort of Leather for universal Use, both for Strength, Substance and Goodness, next to Neats Leather. The Horns and Hoofs of these Creatures abound with a great deal of volatile Salt, Oil, and Spirit, which are equally useful with the Preparation from *Harts-horn*. The Powder of the dried Testicles is boasted by some to be no ways inferior to *Castor*; and being given to a Dram, cures Fits of the Mother to a Miracle. A volatile Oil drawn from the Brain of the Goat, and well rectified, is compared with *Goddard's Drops*, that made such a Noise in the Reign of King *Charles* the Second, and may very likely an-

swer as well, since that Medicine was no more than an exalted volatile Oil, as this is, and so may be rank'd in the same Class.

15. Of the Shamoy, or Rock Goat.

Pomet. UPON our Mountains, and especially on the *Pyrenees*, we meet with a kind of wild Goat, call'd, the *Shamoy*, or *Rock Goat*. There is a great Trade carried on with these Skins, by which they convey Oil, Wine, and other Liquids, out of the mountainous Countries, and of which they make several other Uses; for these *Shamoy* Skins, being dress'd, are converted into Gloves, Stockings, Drawers, Breeches, Waste-coats, Petticoats, Caps, &c. because they may be wash'd as Linen is, and be dyed into what curious Colour you please, as Orange, Lemon, Buff, Black, Green, Red, Blue, or the like.

This *Shamoy* is a very wild Animal, that is not to be met withal, but on the very Heights of the Rocks and Mountains; for which Reason the *Latins* call him *Rupicapra*, or the *Rock Goat*, and he mostly feeds upon the Herb we call *Leopard's Bane*. Sometimes we find in the Bladder of these Animals a Stone of different Colours and Sizes, which is call'd *German Bezoar*, because the *Germans* esteem this not inferior in Virtue to the *Oriental Bezoar*.

The *Shamoy* is of the Size of the common Goat: His Horns are small, black, bent forwards, and very sharp; the Tail not above three Inches long. They have large Eyes, and never step but on the Tips of their Toes. They are coated like a Faun, and have a Streak running all along the Back.

Rupicapra, or the *Rock Goat*, is *Lemery.* a wild Goat, no bigger than the common Kind, which frequents the Rocks and high Hills; as the *Alps*, *Pyrenees*, &c. The Horns of this Animal are oddly turn'd, for they rise upright first, and then wind forward like a Hook. They feed upon the Plants that grow on the Sands and Tops of the Rocks; the Chief of which is the *Doronicum Romanum*. The Male is call'd, in *Latin*, *Dama*, being a very shy and timorous Creature. Both the He and She afford abundance of volatile Salt and Oil. The

Liver is proper to stop Fluxes of the Belly; their Blood allays Vertigoes. The Fat is excellent for Ulcers of the Lungs and Phthicks, being taken in Milk. The Gall dries up, and waistes away Films and Cataracts in the Eyes.

16. Of the Shagreen.

CHagrin in the *French*, or what is call'd *Shagreen* in *English*, is the *Pomet.* Skin of an Animal very common in *Turkey* and *Poland*, which the *Turks* and *Poles* make use of to carry their Baggage, as in other Parts they do Mules, Horses, &c. When this Animal is dead, they take the hinder Part of his Skin, and hang it in the Air, after having strewed it, when raw, with Mustard-Seed. They leave them thus expos'd to the Weather several Days, then take them in, and tan them, and when they are dress'd, export them. This Skin is very hard when dry, and soft when steeped in Water. It is pretended, and I have been assured, that that which makes this Skin so hard, is because this Animal sits down and rests upon his Buttocks. They bring two Sorts of *Shagreen* from *Turkey*; to wit, the grey, or ash-coloured, which is the best, and the white or salted *Shagreen*.

Chuse your *Shagreen Skins* of right *Turkey*, or *Constantinople*, as being much better than those of *Algier* and *Tripoli*. There come some likewise from *Poland*, which you ought not to meddle with, because they are too dry, and will not take in the Alum when they come to be dy'd. Likewise chuse the largest, fairest, and evenest Skins, with a little round Grain well form'd, with as few Places altogether smooth as possible; those of a large and uneven Grain being less saleable, tho' no less fit for Use. The Use of this *Shagreen* is very universal for all Sorts of Pocket Utensils, Watch-Cases, travelling Furniture, and the like. They may dye these Skins of what Colour they please; but the most common are black, green, and red. The most beautiful and dearest is the red Colour, because of the Vermillion and Carmine with which it is dyed. You may know the true *Shagreen* from the *Spanish* Leather made into *Shagreen*, because the last is neither so rough



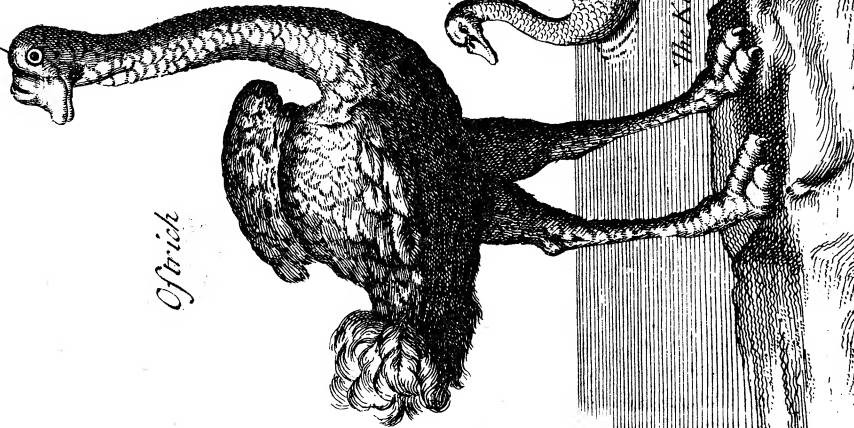
The Swallow.

20

The Frigate.



17



Ostrich

18

The Eagle.



The Swan

The Crocodile

19



The Vulture

22

Cantharides



The Kings Fish



rough nor so hard; but will wear smooth, which the True will not.

Besides the several Parts of Quadrupeds already describ'd, we sell *Bears* Grease and Tallow, which are brought from the Mountains of *Switzerland*, *Savoy*, and *Canada*: The Grease, if it be good, ought to be fresh, or new melted, greyish, gluey, and of a strong ill Smell, of a middle Consistence, that is to say, betwixt hard and soft; and meddle not with that which is white and hard, being mix'd with Suet. This Fat, or Grease, is a sovereign Remedy for curing cold rheumatick Humours. It is also much valued for easing Pains of the Gout, by rubbing the afflicted Part, and to make the Hair grow; it being esteem'd admirable against Baldness, especially when incorporated with Bees in Powder and Nut-Oil. As for the Bears Tallow, there is but very little of it brought into *France*, it being little used, and that only by those who will not come up to the Price of the Grease.

We sell likewise the Grease of the *Badger*, as very sovereign in nephritick Cafes, and Sciatica Pains. So we have also Pencils made of the Badger's Hair for the Painter's Use. This Creature is about as big as a Fox, but shorter and thicker; the Skin is hard, rough, and has rugged harsh Hair upon it, of an intermingled grised Colour, sometimes whiter, sometimes blacker; the Back almost black, the Belly almost white, the Teeth very sharp, the Tail short and hairy, of different Colours, long-snouted, has short Legs before, yet shorter behind, little Ears, small Eyes, sharp Claws, and is a Beast commonly very fat, and of a strong stinking Smell; the whole Length of him, from the Snout to the Tip of the Tail, is not above two Foot and a half.

The Liver and Bowels of the *Wolf* dry'd, are recommended for the Cure of all Diseases arising from the Liver and Bowels, particularly the Cholick. We also sell the Grease and dried Lungs of the *Fox*. The last are esteem'd excellent against Coughs, Asthma's, Phthisicks, Wheefings, Hoarseness, Shortness of Breathing, and all other Diseases of the Lungs. The Grease is admirable for the Ear-Ach, and to rub the Limbs of such Persons as are subject to Convulsions, Palfies, Tremblings, and Weakness in any Part.

There are the Cods of a little Creature brought us, call'd, in the *American Islands*, a *Musk Rat*, because of its Resemblance to our common Rats, except that the *West-Indian* are much larger. They sell these Cods for *Musk Cods*, to People that do not understand them; but it is an easy Matter to find it out, since these are no longer or thicker than a Child's little Finger. The *Musk Rats*, according to Father *du Tartre*, have the same Shape with ours, but are so much bigger, that one will out-weigh four of ours: The Hair upon the Belly is white, and that on the Back black; they smell so strong of Musk, that they perfume all the Air about them as they go. The Inhabitants of *Martinico* eat them; but they are forc'd, after they have skin'd them, to leave them one Night in the Air, and then throw away the first Water they are boil'd in, to take off the too strong Scent of the Musk. These Rats are natural to the Island, and they had none of the common Kind, 'till of late that they were brought thither by the Ships that trade there.

17. Of the Ostrich.

THE *Ostrich* is a Bird that has short Wings, and is much valued for its Feathers; which serve as *Pomet.* Ornaments for Hats, Caps, Beds, and Canopies of State. The *Ostriches* are taken in *Africa*, and are very common in *Peru*, where they march in Flocks like Cattle: The Natives eat their Flesh, and their Eggs are good Meat, tho' hard of Digestion: This is the largest of all Birds, being seven Foot high, and sometimes more. His Head is small, depress'd, or flat-crown'd, and almost like a Goose's; the Bill is compress'd, and being compar'd to the Body, very small, of a triangular Figure, Horn Colour, and black Tip, great Eyes, with a Hazel-colour'd *Iris*; the Head and Neck, almost as far as the Breast, are bare of Feathers, as also the Thighs; the Head and Neck are cover'd with a certain Down, or thin set Hairs: The Sides under the Wings and Thighs are absolutely bare; the Wings are small, and altogether usefess for Flying, design'd only to assist the Bird in Running. The Feathers of the Back,

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in the Cock, are coal black; in the Hen only dusky, and so soft that they resemble a Kind of Wool; the Wing-Feathers beneath, are of the same Colour with those in the Back; but above, in their upper Part, they are purely white: The Tail is thick, bushy, and round, not as in other Birds, spread out in Breadth; the Feathers in the Cock being whitish, in the Hen duskyish. Its Neck and Legs are very long; it wants the back Toes, and has but two others; the one Toe is five Inches and a half, and the other eight Inches long, cover'd with great dis-jointed annular Scales. It lays very large Eggs, as big as a Ball of four or five Inches Diameter, and that has Meat enough in it to serve seven or eight People, contain'd in a hard strong Shell, which they cover in the Sands, and forsake, never taking any more Care of them, but leave them to be hatch'd by the Heat of the Sun.

They have dissected several *Ostriches* in the Academy of Sciences; the largest whereof was seven Foot and an half high from the Ground to the Top of his Head. The Eye is oval like a Man's, having large Eyebrows; and the upper Eye-lid is moveable, contrary to the Generality of Birds, with an Eye-lid within, as a great many Brutes have; the Bill is short and pointed; the Tongue is small and adhering, as that of Fishes; the Thighs large, fleshy, and without Feathers, cover'd with a white Skin, a little reddish: The Legs are cover'd with great Scales; the Feet cleft, having only two Toes, with large Claws. The *Ostrich* carries the Quill exactly in the Middle of the Feather, upon which Account the *Egyptians* represented Justice by it. When we come to examine the Inside of this Creature, we meet with five Diaphragms or Partitions, which divide the Trunk into five Parts; four of which are placed strait up and down; and a fifth is situated a-cross, or thwart the Ventricles, which was found full of Herbs, Hay, Barley, Beans, Bones, and Stones, whereof he had one of the Bigness of a Hen's Egg. They found in one seventy Pieces of Money; the most Part of which was wasted and gone, perhaps by their mutual Attrition one against the other, rather than by Corrosion. For it is observable, that the *Ostriches* swallow Iron for the same End that Birds do Pebbles

and Gravel, to help 'em to grind their Food, and not nourish 'em, or to digest it, as the Antients believed.

The Flesh is fat, and said to cause an Appetite, and restore in Consumptions. The Ventricle, or Skin of the Stomach, strengthens and assists Digestion. The Fat is hotter than Goose-Grease, and may be us'd with great Advantage to dissolve hard Swellings, relax contracted Nerves, and ease Pain. Besides the *African Ostrich*, already describ'd, there are three other Sorts, to wit, the *American*, the *Emeu*, or *Cassowary*, and the *Dode*.

The *American Ostrich* is somewhat less than the former. Their Legs are long, and they have three Toes on each Foot, one of which stands backwards. Its Head is like that of a Goose, the Neck twenty-four Inches long, which they carry bended like a Swan or Stork; the Bill is compress'd, or flat, but not very broad, two Inches and a half long; the Wings small, and not fit for flying, which they only assist themselves withal in Running, which they do with that Speed, that a Grey-hound can scarcely overtake them. The whole Body is cover'd with grey Feathers, which are longer and more beautiful on the Back. Its Tail is like that of the former, but stretch'd forth long-ways. It feeds on Fruit and Flesh, but will swallow any thing you offer it. The Flesh is reckon'd among the *Spaniards* as good Food.

The *Emeu*, or *Cassowary Ostrich*, has a horny Crown on the Top of its Head, near three Inches high, of a dusky yellow Colour, which is reported to fall off at moulting Time, and to grow again with the new Feathers. The Head and Neck are bare, or only cover'd with a hairy Down; the Skin being of a purplish blue Colour. In the fore Part of the Neck hang down two membranous Wattles, or Lobes of Flesh, two Inches long, of a Vermilion Red; as is also the lower Part of the Back-side of the Neck: Its Bill is of a moderate Thickness, and strait, and four or five Inches in Length; the Neck is about thirteen Inches long; the Length of its Body, from Breast to Rump, three Foot, the Breadth two Foot over; the Thighs, with the Legs to the Feet, are seventeen Inches long; the Legs are thick and strong, and almost five Inches about, cover'd as it were with broad Scales. It has thick hard

hard Feet, divided into three thick Toes, all standing forwards, and wanting a back Toe, having very great Claws, almost two Inches long. It has some Rudiments of Wings, consisting only of five naked Shafts of Feathers, somewhat like *Porcupines Quills*, which commonly lie hid under the Feathers, covering the Sides; but it has no Tail. The Feathers covering the whole Body are all double; two coming out of the same Pipe or Stem, the upper somewhat the thicker, or grosser, the lower the finer and more delicate. It is said to want a Tongue, because the Tongue cleaves to the Mouth as in Fishes. It feeds upon Fruits, Flesh, Bread, Hen's-Eggs, Oranges, and almost any Thing that is offer'd it. It's Eggs are great and fair; one being measur'd length-ways, was fifteen Inches, and cross-ways twelve Inches, or more; of a greenish ash Colour, thick set with small Protuberances of a deep Green.

The *Dode*, call'd *Gallus Gallinaceus*, is said to be of a middle Size, between an *Ostrich* and a *Turkey*, agreeing much with the *African Ostrich*, if you consider it's Rump, Wings, and Feathers; but in regard of the Shortness of its Legs, it looks like a Pigmy among them. It has a great Head, cover'd with a Membrane, resembling a Hood, great black Eyes, prominent fat Neck, a Bill extraordinary long and strong, not flat and broad, but thick and of a bluish White, sharp pointed and crooked. Its Body is fat and round, cover'd with soft grey Feathers, much like an *Ostrich's*; on each Side, instead of hard Wings, Feathers, or Quills, it has small soft-feather'd Wings, of a yellowish ash Colour; and for a Tail, it has five small curl'd Feathers of the same Colour. It has yellow Legs, being about four Inches in Compass, and something more than four Inches in Length, cover'd with thick Scales. It has three fore Toes, and one back Toe, near an Inch and an half long, and its Claw above an Inch in Length. It is a slow-paced stupid Bird, and easily taken. The Flesh especially of the Breast, is fat, esculent, and has so much of it, that three or four of them will sometimes be enough for a hundred Men; but it is commonly salted, and stored up for Sea Provisions. It swallows Stones, and such like hard Substances, which shews it to be of the *Ostrich* Kind.

18. Of the Eagle.

THE *Eagle* is a large Bird of Prey, and the fiercest and strongest of that Kind, being scarce distinguishable from the *Hawk*, but only in Bigness, or from the *Vulture*, but by its long, black, crooked Bill; besides which its Legs are yellow, cover'd with Scales. This Bird is very well known in almost all the Parts of *Europe*, as well as other Parts of the World, of which there are several Sorts; as the golden *Eagle*, the black *Eagle*, the white tail'd *Eagle*, the *Brasilian Eagle*, the *Sea Eagle*, and the *Vulterine*.

The Flesh is hard, fibrous, and not fit for Meat or Physick. The Brain is said to cure the Epilepsy, the Testicles to procure Lust, and the Gall is the strongest of all Galls, and helps all the Diseases of the Eyes whatsoever; as Clouds, Mists, Films, Pearls, Blood-shot, Ulcers, &c. The Fume of the Dung is said to bring forth the *Fætus*, and outwardly applied, ripens Tumours and Apostems. The *Eagle* is a very salacious Bird, yet lives to a very great Age. But of all the Parts of this Bird, there is nothing sold in the Shops, but a kind of Stone that is found at the Entrance of the Holes where the *Eagles* build their Nests to preserve their Young from Lightnings, and other Injuries of the Weather. This Stone is brought us by the Pilgrims of St. *James's* in *Galicia*. The *Eagle* Stones most esteem'd, are those which are flat, blackish, and that rattle well; that is to say, which make a Noise when shak'd at your Ear, which can proceed from nothing else but some little Stone contain'd within it. Great Virtues are assign'd to this Stone, especially to procure easy and safe Labour, and to prevent Miscarriages. Some write, that the *Eagle* hunts for this Stone to the very *Indies*, in order to hatch, or bring forth their young ones.

19. Of the Vulture.

THE *Vulture* is a Bird of Prey that is much like an *Eagle*, and has so quick a Scent, that it will smell a dead

dead Carcass many Miles. Many are of Opinion that he differs not in Kind from the Eagle, but only in some other Characteristics, as that the Head and Neck of the *Vulture* are for the most part bare of Feathers, and are only cover'd with a short white Down; that a little under their Throats they have about a Hand's Breadth cover'd rather with Hairs, like those of a Calf, than Feathers; that the Crow hangs down like a Bag before the Stomach or Breast; that the Bill being strait for two Inches, does then grow crooked; that among all rapacious Birds, none fly together in Flocks but the *Vultures*; and lastly, that the Insides of the Wings are cover'd with a soft Fleece of Down, which is proper only to the *Vulture*.

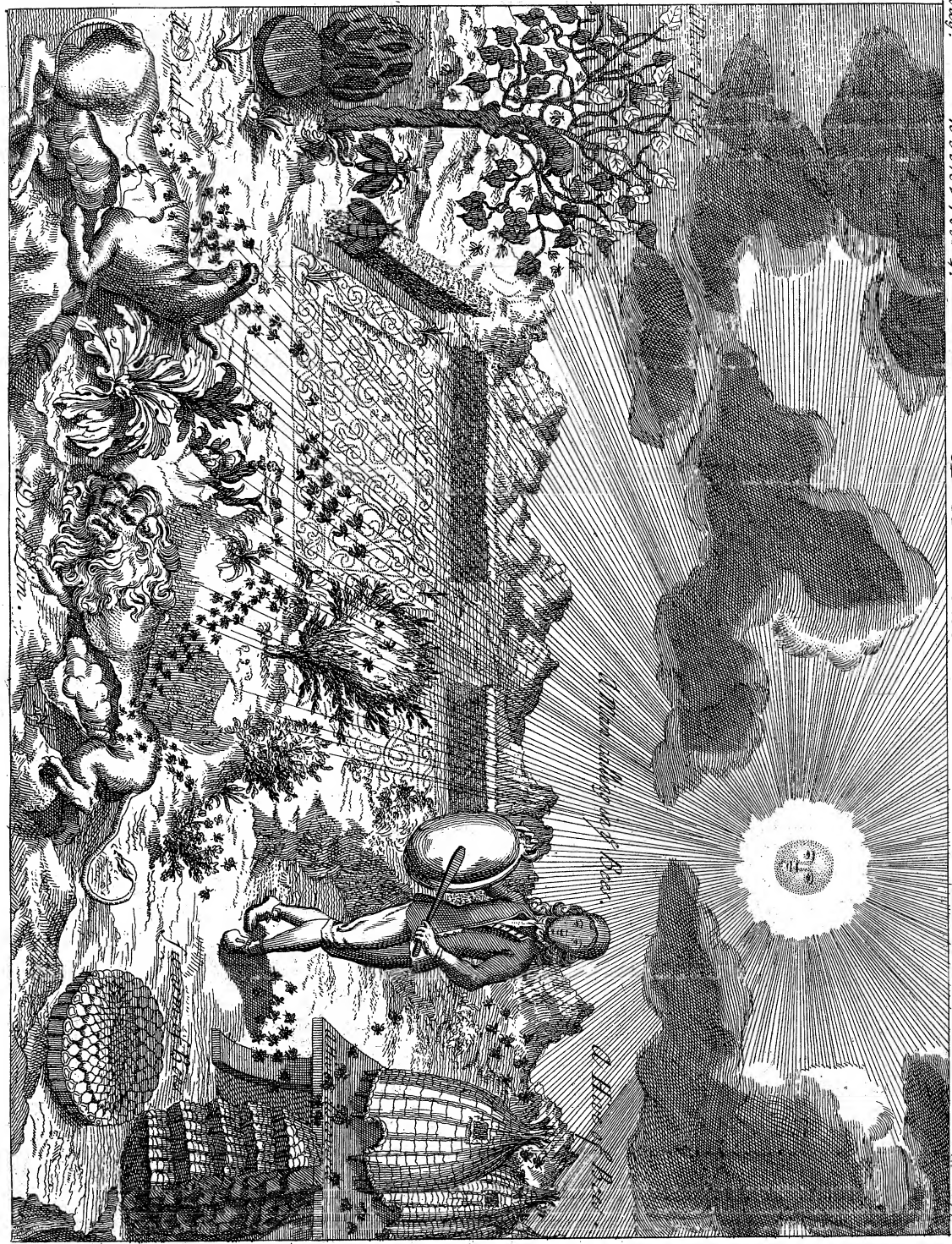
There are several Kinds of *Vultures* describ'd by Authors, as the Ash-colour'd, the Black, the Chestnut, the Hare *Vulture*, the Golden, the White, the *Brazilian*, and the Vulturine Eagle. The two first differ in nothing but their Colour. The Chestnut-colour'd is less than an Eagle, having the whole Plumage of its Body of the Chestnut Colour; the Feathers of the Crown are very short, if compar'd to Eagles, which is the Reason some have thought them bald. The *Hare Vulture* is so call'd from its preying upon Hares. This is inferior in Magnitude, and has not a Breast so refulgent as the golden *Vulture*, which has many Things in common with the golden *Eagle*, but is every Way, or in all its Parts greater. The *Brazilian Eagle* is a rapacious Bird, of the Bigness of a Kite, having a long Tail, and Wings longer than it. The whole Plumage of the Body is black, with a little Tawny here and there mix'd. It is headed almost like a Turkey, having a wrinkled Skin. Its Bill is long, hook'd at the End, and sharp; in the middle whereof is one large Hole for the Nostrils, transversely situate; Eyes almost of a Ruby Colour, with a round black Pupil. Its Flesh stinks like Carrion, for it feeds chiefly upon dead Carcasses; is ill-look'd, always lean, and never satisfied.

The *Vulturine Eagle*, tho' call'd so by the Naturalists, has nothing of the Eagle in him; for its Shape is unusual; the Bill is strait almost towards the Middle, and towards the Point bent into a remarkable Hook, after the Manner of *Vultures*, white towards the

Head, the rest of it black, the lower Chap wholly white. The *Iris* of the Eye is not so fiery as in Eagles, but whitish, and the *Pupilla* black; the whole Head whitish or grey; the Neck, half way from the Head, almost bald, set with a few white Feathers, and some small ones, like rough curl'd Hairs, higher than the rest of the Plumage, as if they were fine long Bristles; on the Back as it were a kind of Hood, reaching to the Middle thereof, and ending in a sharp Peak, resembling a Triangle. The Colour of the whole Plumage of a dark Chestnut, inclining to black. The Fat is the only Thing belonging to the *Vulture* Kind that is sold in the Shops, and us'd to anoint withal in Palfies and other nervous Cases.

20. Of the Frigat.

THE *Frigat* is a Bird which the *Indians* call so, because of the *Pomet*. Swiftness of its Flight. The Body of this Bird is no bigger than a Pullet's, but its Stomach is very fleshy. All the Feathers of the Males are as black as Ravens. The Neck is pretty long, the Head small, with two great black Eyes, and the Sight more piercing than the Eagle's. The Bill is likewise pretty thick, and altogether black, about six or seven Inches long, and straight to the End, where the upper Beak is crook'd like a Hook: The Claws are very short, being divided into two, as the *Vulture*'s, but are entirely black. The Wings are so prodigiously great, that it is seven or eight Foot from the Extremity of one Wing to the other, and that not without Reason, since his Wings are sometimes employ'd to carry him above three hundred Leagues from Land. It is with a great deal of Trouble that this Bird can raise himself upon the Branches, but when he has once taken his Flight, he keeps his Wings extended almost without any Motion or Fatigue. If sometimes the Weight of the Rain, or the Impetuosity of the Winds force him, he mounts above the Clouds, and soars beyond Sight in the middle Region of the Air; and when he is at the highest, he does not forget where about he is, but remembers the Place where the *Dorado*, or Gold-Fish, gives chase to the Flying-Fish, and



and then he throws himself down like Lightning; not so as to strike upon the Water, for then it would be difficult for him to rise again; but when he comes within twelve or fourteen Paces, he makes a large Turn, and lowering himself as it were insensibly, 'till he comes to skim the Waters where the Chace is given; in passing he takes the little Fish in its Flight along the Water, either with his Bill or his Talons, and sometimes both together.

The Male carries a great red Comb, like that of the Cock, not upon his Head, but under the Throat; and this Comb does not appear but in the old ones. The Females have none, but they have Feathers that are whiter, especially under the Belly. As the *Hérons* in *Europe* have Hern-shaws, which are certain remote Corners of Woods, to which they retire, as Places of Refuge, where they meet, roost, preserve themselves, and multiply; so these Birds, for a long Time, made a little Island, near *Guaduloupa*, their Habitation; in like Manner as the Rooks have a Rookery, where all of that Species thereabout come to roost at Nights, and builds their Nests in the proper Season. This little Island was called the Isle of *Frigats*, and bears the Name to this Day, tho' the Birds have left the Place; for in the Years 1643 and 1644, several People chas'd them so severely, that they were forced to abandon the Isle.

The Reverend Father *du Tertre*, apostolical Missionary in the *Antilles*, mov'd by the large Commendations given to the Oil drawn from these Creatures, by Means of two or three People, took more than one hundred of them in less than two Hours Time. They surpriz'd the large ones upon the Branches, or in their Nests; and as they rise with a great deal of Trouble to take Wing, it was an easy Matter to beat them down with long Sticks. There was not one of those, says this Author, that flew away, but what was sick at the going off; so that they vomited two or three Fish a-piece, as big as Herrings, half wasted: He believes they discharg'd themselves in order to fly away with the more Ease. The Oil or Fat of these Creatures is a sovereign Remedy for *Sciatica* Pains, and for all others, proceeding from a cold Cause. It is held in

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great Esteem throughout all the *Indies*, as a precious Medicine.

21. Of the Nests of certain Birds.

THE Nests which the People of *Siam* have brought into *France* *Pomet*. for many Years, are nothing but the Excrement of certain Birds call'd *King's Fishers*, which the *French* call *Alcyon*, and the *Latins*, *Alcedo* and *Avis Pofideonis*, which are very common in *France*, especially in *Normandy*. These Birds frequent the Sea Coast, Rivers, and watry Places; they are of the Size of a Swallow, or of a Quail; their Feathers and their Bills are of various Colours, as green, red, and blue; and they have a great many several Names; as the *Alcyon-Martin*, the *Martin-Fisher*, the *Martlet*, the Bird of St. *Martin*, &c. These Animals usually build their Nests among Reeds, or upon Rocks. The *Indian King-Fishers*, especially those about the Kingdom of *Camba*, when they are going to breed, throw out of their Bills a white Froth, with which they build a Nest, the Bigness and Shape of a round Dish, where they lay their Eggs, and hatch their young Ones: These Nests are of a white Colour, tending to yellow, and of a hard dry Consistence; the Taste being insipid, and almost like that of *Vermicelli*.

The *Chinefe* are such Lovers of these Birds Nests, that it is almost incredible what Quantities are sent to *Pequin*, the Capital of *China*. They are usually valu'd at fifty *Tabers* the hundred, which is about six hundred Livres, or fifty Pounds of our Money. They assign mighty Virtues to it, as that it nourishes extremely, being boil'd in Water with a Fowl and Ginger; they reckon it very good for curing Pains at the Stomach, and for restoring those that are in a languishing Condition. These Nests were formerly little known; and it was believed that they were made of the Froth of the Sea; but since the People of *Siam* have brought them us, they are become very common. There are besides, other Parts belonging to Birds, which we sell, and drive a considerable Trade in; as Quills, Pencils, and Down from the Swans, Geese, and other Fowl, which are brought us from *Gascoigny*, *Normandy*, &c. as also

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the Swallow Stones, which are like little Stones taken out of Cray-Fish, and are us'd to take out any Filth or Dirt that falls into the Eyes.

22. Of Cantharides.

Pomet. **T**HE *Cantharides* are Flies which the Peasants about *Paris* bring us, and which they find in great Plenty upon *Ash-Trees*, *Rose-Bushes*, and on the Blades of Corn. The Wings of these Flies are of a fine shining Green to look upon, because of their blue Colour mix'd with a gold yellow; but the whole is venomous, and of a foetid Smell. They have a large Sort in *Italy*, but they are of no Use. Chuse such as are new, dry, and whole, without being crumbled to Powder.

The Use of *Cantharides*, at this Day, is chiefly external; but there are some Countries where they are frequently given inwardly, by such as understand how to prevent their dangerous Effects otherwise. They are of very great Service to the Apothecary, not only for the blistering Plaister, that is always ready compounded by them, but to use fresh upon all Occasions where they are required. They use to kill the *Cantharides* with the hot Fumes of the sharpest Vinegar, enclosing them in an earthen Vessel, having its Mouth cover'd with a fine thin Cloth; afterwards they dry them, and putting them up in wooden Boxes, they keep them for the Space of two or three Years. These *Cantharides*, tho' rarely prescrib'd inwardly, are very efficacious in the Hands of a wise Physician, who knows how to correct them, and make them specific in a *Gonorrhœa*, Suppression of Urine, Ulcers of the Bladder, Stone, Gravel, &c. They are most frequently administer'd in a Tincture mix'd with Spirit of Wine, Camphire, &c. but to promote the Expulsion of Urine, nothing can be more safe than the anointing the *Perinæum*, or lower Part of the Belly, and the Region of the Navel, with the Oil, wherein *Cantharides* have been boiled,

Some at this Time use all the Parts of the *Cantharides* promiscuously; but the Head, Wings, and Legs, are to be cast away: If a blistering Plaister made of them be ap-

plied to a tender delicate Body, or upon most fine skin'd Women, it will cause a Strangury, or Scalding, and Heat of Urine, which is easily remedied by drinking of Milk, Barley-Water, or Emulsions of Almonds, or the cold Seeds. The volatile Salt of the *Cantharides*, is one of the most powerful Diureticks that is to be met with in the World; so that some Authors affirm it is able to break or dissolve the Stone. It is so pungent and biting, that it is apt to raise little Blisters upon the Tongue, when tasted; so that it is not to be taken alone, but in some smooth oily Substance, or other proper Vehicle: Dose from one Grain to three, being more gentle, and less hazardous than the *Cantharides* themselves.

23. Of Bees.

THE *Bees*, or *Honey-Flies*, are little Insects, the Nature and *Pomet.* Conduct of which is no less wonderful, than their Labour is necessary and useful since they furnish us with Honey and Wax; both which are very considerable Commodities. But as I never kept *Bees* myself, I have been oblig'd to have Recourse to a Friend, who communicated to me what, by many Years Experience, he had observ'd concerning them, that I might compare it with what had been said by others upon that Subject.

Some Naturalists will have it, that the Origin of *Bees* comes from the dead Lion and the Ox; and that instead of Worms that usually breed in the Bodies of other Animals, the *Bees* generate in the Bodies of the Lion and the Ox. This Extraction appears to me to be very wide of Truth, agreeable to a particular Experiment made by one, of what *Virgil* says in his fourth *Bucolick*, which he found altogether false. The Fact is related in a little Tract suppos'd to be writ by a Country Parson, who says thus:

“ *Virgil* appeared to me to be an Author
 “ of Solidity enough to ground a probable
 “ Opinion upon, and whose Credit was sufficient to induce me to make a Trial,
 “ which I unluckily did, and thought I had
 “ poisoned the whole Village; for I caus'd to
 “ be strangled a young Bull, *Bina cornua*
 “ *ferens*, giving him a thousand Strokes with
 “ a Cudgel,

" a Cudgel, as he was dying, which was
 " more than I could warrant from the Poet ;
 " for his Burial, I took thebruis'd Members,
 " with the two Horns, and put them into a
 " great wooden Tub, with four little Win-
 " dows open to the four Quarters of the Wind,
 " in order, as *Virgil* says, to produce Thou-
 " sands of *Bees*. The King is said to be bred
 " from the Brain, the working *Bees* from
 " the Stomach, and the Drones from the
 " Guts: the King makes War upon his neigh-
 " bouring State, both by Sea and Land; he
 " marshals his Army in *Battalia*; he rewards
 " his Captains and Generals; he punishes the
 " Cowards with Death, and makes the
 " Rogues and Deferters run the Gantlet ;
 " besides a Thousand old Womens Tales,
 " which several People relate, and believe
 " to this Day. But instead of the Swarms
 " of *Bees*, which I expected from the Body
 " of this Animal, there were Thousands
 " of Maggots produc'd, with an insufferable
 " Stench, that I thought would have in-
 " fected all the Neighbourhood: And the
 " Stink was so great, that all the Country
 " fanfy'd they were threatned with the
 " Plague." You may see from hence how
 wide Opinions are. And as I am not a capa-
 ble Judge, I shall content myself to make
 some Observations, founded upon Expe-
 rience, as you will find in the following Re-
 lations; and those who desire to be instruc-
 ted further, must consult the best Authors,
 who have writ upon this Subject.

*Observations upon Bees, according to an Ac-
count delivered me by a particular Person.*

The Production of *Bees*, at first, is, that
 they breed from a Kind of little white Bud
 or Sperm, that is posited at the Bottom of
 their small Holes or Sockets, that make up
 the Honey-Comb, which the *Bees* make in
 their Hives, and which they begin at the End
 of the Hive. This Sperm, assisted by the
 natural Heat of the *Bees*, encreases and forms a
 Kind of white Maggot, which at the be-
 ginning of its Formation, has no Resem-
 blance of the *Bee*, but in a Month's Time
 it becomes like one, of the same Colour with
 a Maggot, and continuing so a little while,
 it grows black, and comes out of the Soc-
 ket. The *Bees* generate from *February* to

the End of *October*, if the Hive be in good
 Condition; and they swarm in *May* and
June; but the *May* Swarms are more valu'd,
 because they are stronger than those that are
 later; because the Season is more favoura-
 ble, and the Heat more temperate; whereas
 the Swarms of *June* cannot be so successful,
 by reason they are usually attack'd with too
 much Heat and Dryness at first; so that they
 can neither supply themselves sufficiently
 with Provisions for their present Occasions,
 nor lay up Stores for Winter.

How the Bees work their Honey.

This I have observed, with particular Care
 and extraordinary Application, having spent
 a great deal of Time, watching the Hives
 every Hour of the Day, to satisfy my Cu-
 riosity in seeing the *Bees* work, having
 provided them Glas Hives for the Purpose.
 Towards the End of Winter, as oft as it is
 gentle Weather, as it happens sometimes
 that the Air begins to free itself of the great
 Coldness in the Month of *February*, the *Bees*
 venture out of their Hives, range the Fields,
 and bring home Wax of different Colours;
 as white, yellow, lemon, red, which sticks
 like little Lentils, on the hinder Parts of their
 Thighs; and which, when entered into the
 Hives, they industriously quit themselves of,
 and form their Holes or Lodgments, which
 they labour to compose of six Sides, that are
 made thinner and finer than Talck, and al-
 most as transparent. It is observable, that
 the same Hollows, or Sockets, are those
 wherein they deposit their Sperm, whence
 are generated the other *Bees*, and which are
 fill'd with Honey, as they become empty by
 the Production of the young *Bees*, which they
 enclose: They collect their Honey-Comb,
 or Wax, from all Sorts of Flowers, but the
 Rose, the Orange, the Pease Bloom, and the
 Daisy Flowers.

*Of the Manner how the Bees gather their Ho-
ney, and the most proper Times to take it.*

The best Season of the Year for the *Bees*
 to gather their Honey, is towards the latter
 End of *April* and *May*, for then they go out
 by break of Day, when the Air is gentle and
 serene, and gather the Dew, which is more

plentiful and common at that Time than any other Part of the Year : They return also as quick as they can into their Hives, to discharge, into the Holes assign'd them, the Honey-Dew they have gather'd from the Simples of the Field, and which they have suck'd into their Bodies, and throw it up again, as Pigeons do their Food wherewith they feed their Young : And when they have fill'd a Hole or Socket with this Honey, they close and seal it up with a small Piece of white Wax, to prevent it from flowing out again.

Towards the End of *June* and *July*, that the Dews are not so plentiful as during the Months of *April* and *May*, it happens still there are some dewy Mornings in which the *Bees* are not less industrious than at other Times, to make their Harvest : and likewise it falls out sometimes that the Fruits of the Earth, as the Corn and the like, are damaged by certain Rains, Blites, &c. which are favourable for other Sorts of Flies, but, on the contrary, are pernicious to the *Bees*.

It is observable, that when they swarm, and that the young ones which compose the Swarm are come out of the Hive, they make as it were a Cloud of Flies in the Air, that looks black, and is form'd, as they march out, into Squadrons and Battalions, like an Army engag'd. They follow close their Leader, or the Principal amongst them, who is much longer than the others, and whose Wings are much shorter, and which is of a reddish Colour. When they lose their Leader, they become Vagabonds, and this is a certain Loss to the Proprietor. When the Swarm are got out, they usually assemble together, and lodge upon some shady Branch, rather than in any other Place ; and being thus closely knit, it is then proper to leave them, for fear they should desert ; for should they stay long 'till the Sun shines upon them, they will then separate and fly away ; and when they are hiv'd it is proper to set 'em in the Shade from the Heat of the Sun, which might melt their new Wax, and incite them abroad again.

It is also to be observ'd, that the *Bees* Wax, for three Years together, is very generative, and plentifully productive in breeding of the *Bees* ; and that the Age of the Honey-Comb, is very easy to be known by its Colour ; for the first Year it is whitish, the se-

cond it is yellow, and the third brown ; but when older it turns black, is barren, and without Production, and then the *Bees* cease to make Honey, and breed any more Swarms.

I have Hives made of two Pieces, in form of a Barrel, or Sugar Loaf cut in the Middle ; so that I need not destroy the *Bees* ; and I take these Hives from Year to Year, in lifting up one Year one Part, and the following Year another, according as they are found full, and instead of those that are full of Honey I put empty ones. And one very remarkable Thing is this, that *Bees* delight much near Water, and watry Places, using a great deal of it in assisting them to make Honey. I have been informed of this by several of my Friends, and particularly by an Officer of the King's, who having *Bees* in a Garden at *Argentéuil*, where there was a Fish-Pond, the *Bees* used to go, and come constantly to take up Water to carry to their Hives ; upon which I asked him, what he thought of it ? And he told me that it was a Thing he had always observed since he kept *Bees*.

Care must be taken not to have any Space or open Holes in the Top or Bottom of the Hive ; for in *July* and *August* the Butterflies breed, enter their Hives, and engender large, short, hard Maggots, which lay the first Steps for Spiders Webs, which joining the Combs together, produce a Heat, so that in two or three Days the *Bees* will be gone, and quite forsake it, after having pillaged it : These Maggots, tho' but few at first, will multiply so, that in less than five or six Days they will not leave one Ounce of the Honey-Comb behind, but instead of it leave their Eggs ; which together with the Spiders Webs that are form'd, fill up the Whole of the Hive.

It is further observable, that amongst the *Bees* there are Drones which will not go into the Fields at all ; or if they do, which is not but from Noon 'till about four a-Clock, they bring nothing Home with them, but on the contrary eat the Honey made by others ; and the industrious *Bees* kill the Drones which are much larger and blacker than the others, and have no Stings ; but when you press their Tails there appear two little Horns like transparent Skins, which are yellow at the End. In *Poland* and *Muscovy* the *Bees*

Bees make their Hives in the Trunks of old Trees, and afford Plenty of Honey without any Assistance, which is contrary to the Nature of ours. Upon this, *Munster* and *Guyon* relate a surprizing Thing: A Peasant falling into one of these Trees where the *Bees* made Honey, in a large Forest in *Muscovy*, as he was searching for the Honey-Comb, and not being able to get out because the Hollow of the Tree was too deep and wide, a Bear providentially coming to this Place to seek for Honey, the Peasant immediately catches the Bear by the Paw, and was drawn out from the certain Danger he was in of perishing in the Tree.

Apis, or the *Bee*, is a Sort of Fly *Lemery*. that makes Honey and Wax, and is suppos'd to take its Name from being a Fly without Feet, which is not so in Fact, for it has Feet, but carries them close to its Belly, being difficult to separate. It has four Wings; the Tongue is long, which it carries usually out of the Mouth; it has small Teeth, and the Sting cleaves to the Belly. The Antients pretended, that the *Bee* was generated from the Lion or the Bull; but the vain Trials several have made are sufficient to confute such a Notion, as being no other than the Fancy of the Poet. Indeed we read in the Holy Scripture, that *Samson* found in the Carcass of a Lion that had been kill'd some Days before, a Swarm of *Bees* and Honey; but they were never generated from the Flesh of the Lion.

The Origin of them is certainly the same as that of other Flies, but only their Production is slower; tho' from the white Maggot they become a perfect *Bee* in a Month's Time. The large *Bee*, which they call the King, because of the others that attend and follow him, is a Male *Bee* that is capable of supplying a great many Females, after the same Manner as one Bull supplies all the Cows of a Village. This *Bee* is much larger than the rest, but he has shorter Wings. His Colour is reddish, instead of being brown, as all the others are. The *Bee* sucks the Virtue of the Flowers, and receives it into her Pouch or Throat, from whence she disgorges it into the Hive, in order to work it up to Honey; she carries also the Wax sticking to her Thighs. The whole kind yields a great deal of volatile Salt and Oil. They are proper,

being dry'd, to make the Hair grow. Being reduced to Powder, and mix'd with Oil of Lizards, they make a kind of Liniment wherewith they rub the Head. The essential Salt of them is so volatile, that it is difficult to keep it in a dry Form. It is a most subtle and penetrating Thing, and one of the most powerful Diureticks and Diaphoreticks.

24. Of Honey.

WE have three Kinds of Honey in *France* brought from several Parts, viz. *white Honey*, which is made without Fire, which some call *Virgin Honey*, as well because it flows of itself, without pressing, as because it is made from the first Year's Honey-Comb. The second sort is made of all kinds of Honey-Combs put together, after being well cleansed, in a Bag, by means of a Press, from whence there flows a white Honey, but very different from the former; not only because it is not so white, but because the Taste is not so agreeable. The third is the *yellow Honey*, which is made over the Fire in a Kettle, with a little Water, and then put into Bags, and squeez'd. The *yellow Honey* is more or less fine, according to the Degree of Heat it receives; for if it be too much heated, instead of being a fine Yellow, it will be brown, and of an ill Smell. They pretend likewise that the Honey is less beautiful and good, according to the Quantity of Water which is put into it to heat it.

The finest and most esteemed Honey, is that of *Languedoc*, which is white; especially that of *Corbiere*, a little Borough about three Leagues beyond *Narbonne*, which is the Place from whence comes the whitest and purest Honey, commonly called *Narbonne Honey*, tho' falsely so; for at *Narbonne* they do not know what you mean by *Narbonne Honey*, but only that of *Corbiere*: Yet the Name has been given to it, because *Narbonne* is a great City, and much better known than *Corbiere*, which it but a small Place. This true Honey, to have its proper Qualities, ought to be new, thick, candied, and entirely like Sugar Royal, of a sweet piquant Taste, and a little aromattick. Next after this is that of other Parts of *Languedoc* and *Provence*, but very

very much different and inferior to that of *Corbiere*; not only because it is never so white, but because it is not so pleasant to the Taste or Smell, being artificially disguis'd with Rosemary, to give it the Taste and Scent of the true pure *Honey* of *Narbonne*. The third and last Sort is the white *Honey* about *Paris*, and of the Country for twenty or thirty Leagues round, and which gives it the Name of *Country-Honey*; and that is met withal sometimes so good, that except the Taste and Smell, it is scarce inferior to that of *Corbiere*; which may be readily granted, because the Taste and Scent of *Honey* proceeds from the Plenty and Goodness of the Flowers with which the *Bees* are fed. And as *Languedoc* and *Provence* are warm Countries, and consequently full of aromatical Herbs and Flowers, as Thyme, Rosemary, *Stœchas*, &c. therefore the *Honey* is better, and of a more pleasant Smell, and more bought up, especially to make pectoral Piftans of, which is its chief Use; the Country *Honey* being principally employ'd in the great Compositions, and to eat in *Lent*.

As to the yellow *Honey*, the best that comes to *Paris*, and the most set by, is that of *Champagne*, which to be good, shou'd be fresh or new, of a good Body, of a golden colour'd Yellow, the most candied, and least full of Wax that may be; the Fault otherwise proceeds from the ill making of it; but the true *Champagne* is of much the best Sale, and of more Virtue than all the other *Honeys* brought from several other Parts, as *Tourain*, *Picardy*, and especially *Normandy*, which is ill-scented, reddish, and of a very bad Sale, tho' yet it is more purgative than that of other Parts. And this *Honey* is very easily known, both by the Colour and Smell; and likewise because it usually comes in Stone Pots, such as Butter comes in from *Normandy*. This *Honey* is very proper for the Apothecaries to make *Honey* of Roses, Violets, or the like. There are several other Ends this *Honey* serves for; as to distil into a Water, Spirit, or Oil, which are reckon'd proper to make the Hair grow, and to take out Marks, Spots, or Freckles in the Face. Some likewise assign to the Spirit of *Honey*, well rectified, the Power of dissolving Gold or Lead.

Lemery. *Mel*, or *Honey*, is a compound-
ed Body of divers Parts of Flowers,

which the *Bee* extracts, and receives into her Stomach to carry to the *Hive*, where she disgorges herself, and fills her Cell which she has made in the Honey-Comb before for that Purpose. There are two Sorts of *Honey* in general; one white, and the other yellow: The white is made of the first Year's Stock, without Fire or Pressing, which is call'd *Virgin-Honey*; and the Second is press'd from the Wax, with Force, and by the Addition of Heat. The white *Honey* is finer, and more pleasant for the Palate, and consequently better for internal Uses. The yellow has a little more Acrimony than the white, and therefore is more laxative, and externally a good Deterfive. Raw *Honey* is apt to gripe and swell the Belly, but being clarified, it opens, cleanses, nourishes, and restores in Consumptions, is pectoral, diuretick, and one of the best Ophthalmicks in the World.

The several Preparations made of *Honey*, and commonly sold, are, first, clarified *Honey*; next the Spirit, Oil, and Water, the Tincture and Vinegar, with Mead, Methieglin, and Hydromel. Clarified *Honey* is made with the Whites of Eggs; the Water, by putting *Honey* into a large Glass, or earthen Body, and distilling in Sand with a gentle Heat, until acid Drops begin to come; then cease the Fire, and keep the Water for Use. To make the Spirit and Oil, take what remains in the Retort aforegoing, and put it into an earthen one, or glass one coated; but let it be so large, that two thirds of it may be empty: Place your Retort in a reverberatory Furnace, with a large Receiver, luting the Juncture; begin the Distillation with a small Fire, for about three Hours, to warm the Retort; then increase it by little and little, so will the Spirits come forth, with a little black Oil, and fill the Receiver with Clouds; continue the Fire till all is come over, then separate the Spirit from the black stinking Oil by Filtration; the Spirit will be in a pretty Quantity, the Oil little and inconsiderable. The Spirit of *Honey* is an excellent Aperitive, cools the violent Heat of Fevers, quenches Thirst, and strengthens the Stomach, and may be put into Juleps, to give them a pleasing Acidity. It may be rectified by distilling it in a glass Cucurbit in Sand. What ascends first is Flegm; that which rises last is
the

the strongest of all, and is us'd to cleanse old Ulcers, as the Oil is to scale rotten Bones.

Tincture of *Honey* is made of pure *Virgin Honey*, mix'd with wash'd Sand or Bone-Ashes, whereon is thrown the best rectify'd Spirit of *Honey*; then let them stand in Digestion in a Cucurbit, having a flat Bottom, till the Spirit is ting'd of a golden Colour, which decant, pouring new Spirits upon the Fæces, so long till it will be no longer ting'd; mix the ting'd Spirits together, and abstract in *Balneo Mariæ*, till only a third Part remains, which is the Tincture, and one of the noblest Medicines for inveterate Coughs, Phthificks, and Catarrhs, from a Quarter of a Spoonful to a whole one. *Mead* is compos'd of one Part of *Honey* to eight Parts of Water, well boil'd, and work'd up with Yest Blood-warm, or clarified with the Whites of Eggs, Shells and all: Some add Aromaticks; as Cloves, Nutmegs, Cinnamon, Lemon-Peel, and Ginger; others Alteratives, as Thyme, Marjoram, Mint, Balm, Rosemary, Cowslip, &c. some Diureticks, as Sweet-Briar, Eryngo, Tamarisk, &c. and so every Person makes it to his Fancy, whether for medicinal Uses, or other Purposes. *Metheglin* is made of one Part *Honey*, and four Parts Water; to which may be added, Balm, Sage, Mint, Rosemary, Thyme, Bay-Leaves, Angelica, Savoury, *Roman* Wormwood, Geranium Mofchatum, Origanum, Nutmegs, Mace, Cloves, Cinnamon, Ginger, or the like, in the boiling of the Liquor; and in tunning of it up, some add black Currants, others Raisins of the Sun. To make *Hydromel*, take of the best *Honey* eight Pounds; Raisins four Pounds; Tamarinds half a Pound; fifteen Quarts of Water; boil all so long till an Egg will swim on the Top; let the Fæces settle; then decant the clear Liquor into a Cask, adding to every five Pounds four Ounces of Spirit of Wine rectified; let it stand six Months, and then drink of it as you please. All the Preparations of *Honey* are pectoral and diuretick.

25. Of Bees-Wax.

Pomet. BESIDES the different Sorts of Honeys, and the Uses made of 'em, we drive a great Trade in yellow and

white *Wax*. The first Sort is made from the Pressing of the Honey-Comb over a Fire, with a sufficient Quantity of Water; and when all is dissolv'd, they strain it through a Cloth; this done, they melt it, and scum off the Dross and Froth, and afterwards cast it into Cakes. Some Persons, to refine the Wax, use *Roman* Vitriol, or some others; but for my own Part, the best Secret I know of, is to purify it well by melting.

That which we call *Wax*, is, in its natural State, the Honey-Comb, which contains the Honey in the Hive. *Poland*, *Barbary*, *Bretagne*, and several Parts of *France*, furnish us with a great deal of yellow *Wax*; but that of *Dantzick*, *Bretagne*, and *Champagne* is reckon'd the best. Chuse such as is of a high yellow Colour, a good Smell, easy to break, and that does not stick to the Teeth; and take care that it be the same on the Inside as the Outside; and when in large Cakes, as that from *Dantzick*, that there be no Water, Stones, or Earth in the Middle, or that it be not mix'd with Refin, white Frankincense or Pitch, colour'd with Turmeric or *Roucou*.

The Use of yellow Wax is considerable for several Sorts of Works; as Tapers, Candles, and other-Wax-works. It is of great Use in Medicine; for it serves to give a Body to Ointments and Plaisters; and likewise to make Sealing-Wax for great and less Deeds. Some will have it, that yellow Wax has no Virtue in Physick. By the Retort there is made with Wax, Earth, and Oak-Ashes, a white thick Oil, like Butter, which is call'd Butter of Wax, which ought to be white, and have the Smell of Wax. Of this Butter, together with Bole, Chalk, or the like, in Powder, by means of a glass Retort on a Sand-Fire, they draw a clear white Oil, like Water, that is of an agreeable and pleasant Smell. The Butter and Oil of Wax are much valued for the Cure of Chilblains, especially those that are apt to chop, and other Maladies of the like Nature. That which remains in the Bags, after the Wax is strain'd out, is nothing else but the dead Bees and other Filth. We meet with, besides this, in the Hives, a kind of red Wax, call'd *Virgin-Wax*, or *Propolis*, which is that the Bees use to stop up the Chinks or Holes of the Hives, to hinder the cold Air from entering,

entring. This Wax is sweet-scented, and smells almost like *Storax*, and will chew and mold like *Mastick*. It cleanses and digests hard Tumours, eases Pains, and cures Wounds and Ulcers.

Of White-Wax.

The *White-Wax* is made out of the yellow; the same being by a certain Engine made into small Flakes, and then bleach'd in the Sun, by which it will become very white. It is then cast into round Cakes, some thicker, some thinner. That is the best which smells well, and chews hard, not being mix'd with Sheeps Suet, and is withal of a clear Colour, without any Cast of Yellowness. The best, and most proper to turn white, is the yellow Wax of *Bretagne*, which when it is well done, as that usually is of *Chateau Gontier*, eight Leagues from *Angiers*, which passes for the best Sort in *France*, will be pure, white, clear, transparent, in thick Cakes, that, when broken betwixt the Teeth, does not stick, neither has any ill Taste or Scent.

It is with this fine Wax we make the finest Works; as Tapers, Wax-Candles, Flambeaux, Figures, and other Curiosities in Wax. And we reckon, after the *Chateau Gontier Wax*, the second Sort is that of *Angiers*; the third that of *Mans*; the fourth that of *Holland*, which is generally brought in great Cakes of four or five hundred Weight; and the first Sort is that we call the *Dutch Wax Royal*; the fifth is that of *Amboise*; the sixth of *Chaumont* near *Troyes*; in short, the seventh and the worst is that of *Roüen*, because of the great Addition of Suet they put in, which is better or worse according to the Quantity of Suet that is mix'd with it.

Of the soft Red and Green Wax.

The soft *Red Wax* is made of *White Wax* melted with Turpentine that is wash'd, and then colour'd with Vermilion or Orkanet. This Wax ought to be of a good Consistence, a fine red, well made. The chief Use of this, as well as the Green, is for the Lawyers to seal Writs and Deeds with. The *Green Wax* is made the same Way, only Verdigrise is us'd instead of Vermilion.

Of the black Indian Wax.

In several Parts of the *Indies*, as well East as West, they have little Bees, which hive, or make their Nests in the Hollows of certain Trees; the Figure of which you have before. These Bees deposit their Honey in little Vessels of black Wax, which are of the Size and Shape of Pigeon's Eggs: The Honey is very pleasant, and of an Amber Colour. The *Indians* use this Wax to make Tapers of, and to gather from the Tree the Balsam call'd *Tolu*. Some Authors say, that there is an Animal like a Cat, that is black, which the *Indians* call *Hierat*, or the Honey-Beast, which climbs the Trees, and eats all the Honey; and that which is surprizing, is, that this Animal draws out the Honey-Comb with his Paw, and does no Damage to the Bees; and the Bees do not hurt him, because they have no Stings like ours. This Wax was formerly much us'd in *Spain*, and a little in *France*; but at present we know not what it is, being one of the scarcest Druggs we have. All the Kinds of Wax are naturally compos'd of Oil, volatile Salt, and Flegm, without Earth, being emollient, resolutive, and proper for Ointments, Cerecloths, and Plaisters.

26. Of Ambergrise.

Ambergrise is the dearest and most valuable Commodity we have *Pomet*. in *France*, and a Thing the least understood, its Nature and Origin being most contested; for if I should relate what Authors have said upon this Subject, it would make a Volume of itself. But to reproach no Body, and not to repeat what so many Authors have said, I shall affirm, that the *Ambergrise* we have brought us from several Parts, and chiefly *Lisbon*, is nothing else but a Mass of Honey-Combs that fall from the Rocks into the Sea, torn off by the Waves of the Sea, the Violence of the Winds, or otherwise. These Honey-Combs being in the Sea, whether by a Propriety of the Sea-Water, or by the Virtue of the Sun-Beams, are render'd liquid, and floating upon the Water, as is to be met withal sometimes.

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Many Persons will be surpriz'd at what I advance, that *Ambergrise*, whose Nature hath been hitherto so little known, comes from nothing but Bees-Wax, which I could not have affirm'd, if a Friend of mine had not assur'd me, he had seen a Piece that was one half *Ambergrise*, and another Wax; and to confirm what I say, Mr. *de Monconys*, Lieutenant-General of *Lyons*, at Page 71, of his Voyages, affirms that he was inform'd in *England*, that *Ambergrise* was nothing but Honey-Combs the Bees make upon the large Rocks, which are on the Sea-side in the *Indies*, which heated by the Sun, loosen and fall into the Sea, and by its Agitation are brought to Perfection; and that having broken a large Piece of *Ambergrise*, which was not yet perfectly concocted, he found in the Middle of its Substance, the *Honey-Comb* and the *Honey*, both together: And for further Confirmation, when the *Ambergrise* is dissolv'd in Spirit of Wine tartariz'd, there remains at last a Substance entirely like Honey. And to make it appear that *Ambergrise* is nothing else but the Product of the Honey-Comb, observe the great Quantities that are sometimes found of it: Not in Pieces of three hundred Weight, as some have writ, but thirty or forty Pounds are sufficient.

Mr. *Tavernier*, amongst other Things on this Subject, says, that in the Year 1646, or 1647, a *Zealander*, that was one of the best Families for the *Dutch East-India* Company, in the Isle of *St. Maurice*, which is on the East of *Madagascar*, found on the Shore a Piece of *Ambergrise* forty two Pounds Weight, which he sent to the Company; but, as such Persons have ever some Enemies, and the Piece appearing as if something had been taken from it on one Side, the Commander was accus'd of having taken half, of which yet he justified himself at *Batavia*.

In the Choice of *Ambergrise*, which some have call'd by the Name of *Oriental Amber*, let it be in fine Pieces, of a greyish Colour on the Outside, mark'd with little black Spots within, of a sweet pleasant Smell; and meddle not with that which is soft, fat, musty within and without, and which is full of Dirt and Filth, that is got when the *Ambergrise* was liquid, or before it gains its So-

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lidity. The best Trial of it is a Dissolution in Spirit of Wine; for that which is purest, and leaves the least *Fæces* is the best. The Fictitious is known by the Smell as well as Colour; the Materials of which it is made, appearing either too black or too white, and will dissolve easily in Water, being compos'd of Musk, Civet, Aloës Wood, Storax, *Labdanum*, Goat's Blood dry'd, &c.

Ambergrise, besides its Use for the Perfumers, by reason of its excellent Scent, is a very good Medicine to warm the Stomach, and prevent the Cause of the Gout from attacking the vital Parts; it refreshes the Animal Spirits by its volatile Sulphur, strengthens the debilitated Parts, and restores in Consumptions. As *Ambergrise* is a very dear Commodity, those who buy Quantities of it, must take great Care that there be no Mixtures in it, or that it be not counterfeit'd. The Thinness of the Substance of this Drugg, is the Reason that it is never expos'd to the Violence of the Fire, but only dissolv'd in Spirit of Wine, or Spirit of Roses, or some such like *Menstruum* to prepare it, exalt its Smell, and separate it from its earthy Parts: And this is called by the Name of *Tincture*, or *Essence* of *Ambergrise*.

Of Essence of Ambergrise.

Essence of *Ambergrise*, us'd by the Confectioners, Perfumers, Distillers, and others, may be made after these several Ways: To make Mr. *Charas's* Essence, take choice *Ambergrise*, two Drams; Sugar-Candy, two Drams; Spirit of Wine, four Ounces; ardent Spirit of Roses, half an Ounce; put 'em into a Glass Matras, with a blind Head, luted in the Juncures, set in the Heat of the Sun, Horse-Dung, or Sand, dissolve and make a Tincture; decant the clear, and keep it for Use in a Glass close stop't: The Dose internally may be given to three Drops in Cinnamon-Water, or any restorative Liquor. Another Essence is made thus: Take *Ambergrise*, and white Sugar-Candy, in Powder, of each two Drams; Musk one Dram; Oil of Cinnamon, Citrons, Oranges, Roses, Lavender, of each two or three Drops; mix and beat it up into a Paste, and dissolve it as you have Occasion over a gentle Heat, in Spirit of Wine, in a Bolt Head; or you

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may

may make it with *Ambergriſe* alone, in Spirit of Wine tartariſ'd, digeſting in a Sand Heat, or Horſe-Dung, for ſome Time.

The Way to make any odoriferous Thing yield its Scent, is by opening the Body of it firſt; which done, the Smell exerts and diffuſes itſelf immediately, in ſuch Vehicles as have Power either to diſſolve the ſeparated Particles, or extract their *Sulphur* or Tincture. *Ambergriſe* is open'd by grinding it firſt with Sugar-Candy, then with Oil of *Ben*: It is alſo open'd by grinding it with the Yolk of an Egg, and ſeveral other Ways. *Ambergriſe*, in its natural State, ſcarcely affords any Scent at all; but if it be opened, and excited by Solution, with a convenient Proportion of Odours and volatile Sulphur, ſuch as that of *Civet*, it preſently yields a ſweet and pleaſant Flavour. For Example: Take ten Grains of *Ambergriſe*, and three of *Civet*; beat them together in a Mortar, and the *Ambergriſe* will preſently melt; upon which, for encreaſing the Acid, put two or three Drops of Juice of Lemons to it, ſo will you have a Perfume of an admirable Sweetneſs.

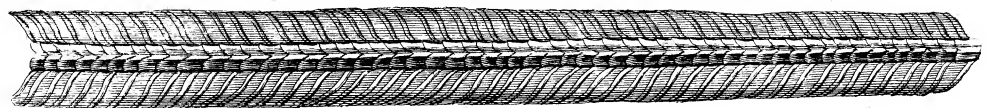
Ambra-grifea, ſeu Ambra Cineritia, or Ambergriſe, is a valuable

Commodity that is very dry, and almoſt as hard as a Stone; light, opaque, greyiſh, and ſcented: It is found in Pieces of different Bigneſs, floating upon the Water in ſeveral Parts of the Ocean, as towards the Coaſts of *Muſcovy* and *Ruſſia*, and particularly in the maritime Parts of the *Indian* Seas. There was a Piece of a prodigious Size, that was ſaid in the Year 1694, to be carry'd into *Ireland*, that weigh'd 182 Pounds. The *Naturaliſts* have differ'd much in their Opinions concerning the Production of *Ambergriſe*, 'till of late it ſeems to be univerſally agreed, that its made from the Honey-Combs that fall into the Sea from the Rocks, where the Bees had form'd their Neſts; and this is confirm'd by Experience, becauſe ſeveral Perſons have ſeen Pieces that have been one half *Ambergriſe*, and the other nothing but the plain Honey-Comb: And others again have met with large Pieces of *Ambergriſe*, where, in breaking of it, they have found in the Middle the Honey-Comb and the Honey too. Chufe ſuch as is clean, well dry'd, light, and spotted within with

little black Spots, of a ſweet pleaſant Smell; but avoid the moiſt, ſoft, and foul *Ambergriſe*, as being good for nothing: It is call'd *Ambra Cineritia*, as being of an aſh Colour. It ſtrengthens the Brain, the Heart, and the Stomach; procures Alacrity, and makes the Spirits gay, provokes Luſt, and is a good Antidote againſt Poiſon or Infection in Men; but raiſes the Vapours in Women, therefore let them avoid it. We meet ſometimes, amongſt the Druggiſts, with a white *Ambergriſe*, which differs from the other not only in Colour, for it is nothing ſo ſtrong, nor half ſo good. There alſo is a black *Ambergriſe*, but it is good for nothing in Phyſick, and but of very little Uſe for the Perfumers.

27. Of the Viper.

THE *Viper* is a Kind of Serpent that is very common in ſeveral *Pomet*. Parts of *France*, but chiefly in *Poitou*, from whence almoſt all the *Vipers* come that we ſell at *Paris*. As theſe Animals were terrible or frightful to all the World heretofore, ſo they are very familiar to us at preſent; inaſmuch that there are very few People of Quality in Places where they are to be had, but what make Uſe of them as good Diet, and a ſpecific Remedy againſt ſeveral Sorts of Diſeaſes, as may be ſeen in Mr. *Charas's* Treatiſe of them, wherein he has produc'd all that can be ſaid on that Subject, to which the Reader may have Recourſe at his Pleaſure; upon which Account I ſhall content myſelf in directing him to chuſe the largeſt, liveliſt *Vipers*, and ſuch as are newly taken; and to take Care that they are put into temperate Places, becauſe extraordinary Cold or Heat is contrary to them: They ought likewiſe to be careful when they receive any freſh *Vipers*, to take them out of the Boxes they are brought in, and to take from them the dead ones, if there is any, as ſometimes it happens; and to put them into a Tub with Bran or Moſs; not that it ſerves them to feed upon, as ſome fancy, becauſe theſe Creatures never eat after they are taken, but only live upon the Air; and notwithstanding this, they will continue alive fix Months. It is likewiſe to be obſerv'd, that they are to be taken either by the End of the Tail, or elſe with a
Pair

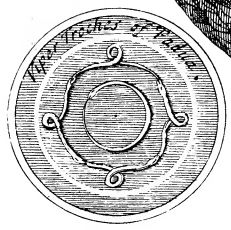


The Viper dry'd.

27



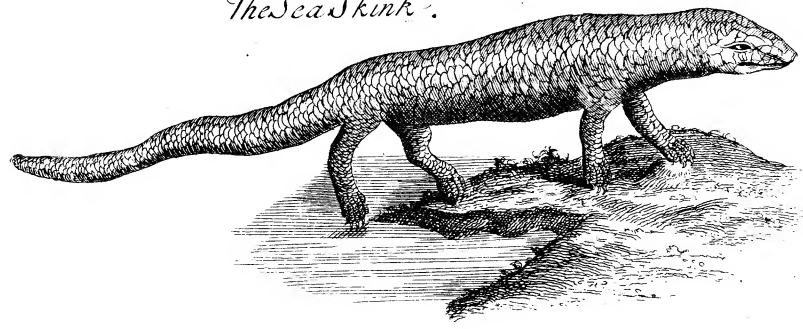
of Heart & liver of a Viper.



A Viper bringing forth Young ones.

29

The Sea Skink.



Pair of Tongs; because this Animal, when he finds himself squeez'd, bites whatever he meets with; and the Biting of the *Viper* being very dangerous and mortal, is the Reason why the Takers of them ought to be very cautious. The Keepers of them ought to be so likewise, lest by Mischance they should escape and get into any House, which would be very dangerous, especially where there are Children.

We have a great many dry'd *Vipers* brought from *Poitiers*, which if good ought to be heavy, large, long, well dry'd, and the freshest kill'd that can be got; for in a little Time after they are dead, the Worms will eat them in such a Manner, that nothing will be left but the Skeleton. You ought to be careful likewise, that every Bundle or Parcel of *Vipers*, which is usually two Dozen, have the Hearts and Livers along with them, these being the most noble Parts of the Animal, and weigh three Ounces and a half; and sometimes, but very rarely, four Ounces Weight; and take Care they be not such as have died of themselves, which you may easily discern, by their extraordinary Blackness. Some will say, that there are Snakes and Asps sold for *Vipers*; but this I can't affirm, having never known it to be done at *Poitiers*. There is, besides, a great deal of *Vipers* Powder sold; but those that buy it should take special Care, because there is nothing more liable to be adulterated. The dry'd *Vipers*, with their Hearts and Livers, reduced to Powder, and sifted thro' a fine Silk Sieve, is what some call *Bezoar Animal*, pretending that this Powder, thus made, has the same Virtues with the *Oriental Bezoar*, treated of before.

They bring us also from *Poitiers*, the volatile and fix'd Salt of *Vipers*, the Fat, and the black Oil that is made by the Retort, whose Virtues and Preparations you have thus describ'd by Mr. *Charas*. Take *Vipers*, all their Parts very well dry'd, cut 'em into small Pieces, with which fill a large Retort of Earth, or Glas well coated; fill it almost quite up to the Top, fix to it a very large Receiver, luting the Junctures well, place it on a naked Fire, in a close Reverberatory, or a Reverberatory Furnace, with its Dome; shut up the Register of the Dome, and the Door of the Fire Place, make a gentle Fire

in the Cinder Place, which keep on Foot for two Hours, only to heat the Retort and Furnace; then removing the Fire into its Place, keep it in the same Heat for two Hours longer; at the End whereof encrease the Fire one Degree, giving a little Air to the Register of the Dome, continuing it so for two Hours more; and encrease the Fire to the third Degree for the same Time; after which set the Register of the Dome quite open, encreasing the Fire to the highest Degree, which continue so long till nothing comes out of the Retort, and that all the Vapours in the Receiver be converted into Salt or Liquor; then cease the Fire, and the Vessels being cold, unlute the Receiver, and dissolve the Salt in the Liquor, or Spirit.

To rectify it, put all this distill'd Matter into a Glas Matras, with a long Neck; place it in a Sand Heat, cover it with its Head, and join to it a small Receiver, luting well the Joints, and give it a gentle Heat, so will the volatile Salt ascend, white and crystalline, to the Top of the Head, which take and put up into a double Glas Bottle, stopping it very close. Continue the Rectification, separating and keeping a-part the Spirit, which is the remaining Part of the volatile Salt, dissolv'd in some Flegm, and the Oil; and cause all the volatile Salt, and oily Parts, to ascend, casting away that which lies at the Bottom of the Matras, as a Thing of no Use.

This volatile Salt of *Vipers* is reckon'd an Antidote against Poisons, and a perfect Cure for the Biting of the *Viper*, or any other Kind of Serpent, or venomous Creature: It is also prevalent against the Measles, Small-Pox, Plague, or Pestilence. It resists Putrefaction in the highest Degree, becomes specific in intermitting Fevers, chiefly the *Quartan*; and there is scarce a Medicine known in the World more able to purify the Mass of Blood, and give it its natural Fluidity: whence it does such considerable Feats in chronick Cases; as Scurvies, *Erysipelas*, scalded Heads, and strumous Breakings-out; causing the foul impure Humours to perspire through the Pores of the Skin. It is also one of the most powerful Remedies in Nature for Gout, Rheumatism, and Venereal Relicks; for it opens, penetrates, attenuates,

and is *sodorifick*; so that it drives out any corrupted or malignant Humours, thro' the Habit of the Body; it dissolves coagulated Blood, removes Inflammations, prevents Apoptems, and cures Pleurifies. This Salt is very aperitive, and opens Obstructions both of the Head and other Parts; and relieves all Diseases of the Brain and Nerves; as Palsies, Convulsions, Vapours, Fits of the Mother, and the like; so that both for external and internal Uses, there is scarcely found a more universal Medicine.

All other Preparations of *Vipers*, as Powders, fix'd Salts, Tinctures, Decoctions, Broths, Jellies, Wines, Essences, Troches, Elixirs, Extracts, &c. compared with the volatile Salt, are nothing, for in that is to be found the Sum of all that is in the *Viper*: The Oil is so foetid, that it cannot be taken inwardly; outwardly it may be used to smell to, and to touch the Nostrils with in Vapours and Fits; but if it be made into an Elixir, with Spirit of Nitre, and Spirit of Wine tartarized, it is a most fragrant Medicine, cheers the Spirits, suppresses Vapours, and invigorates Nature to a Miracle.

Le Febure teaches us how to fix this volatile Salt, which is done by Acids, *viz.* with well rectified Spirit of Salt, dropping it upon it, dissolv'd in its own Flegm, 'till the Effervescency and Strife ceases, by which the volatile Salt is united to the Acid: Now though there be no great Need of this, yet it may be of some Use to watry Stomachs; and though the Taste and Shape of this Salt, thus fix'd, much resembles Bay Salt, it is quite another Thing in its Effects. This is evident by mixing it with double its Weight of Salt of Tartar, and subliming in proper Vessels; for then the volatile Salt will ascend with its first Force, Strength, and Virtue.

Vipera, or the *Viper*, is a Kind *Lemery.* of Serpent, which comes alive out of the Belly of its Parent, and not from an Egg, as the other Kinds do. It is about as long as one's Arm, and two Inches thick; sometimes bigger, and sometimes less, but never arrives at the Size of the large *Snake*, though in outward Appearance they are very like 'em. They are cover'd with a smooth Skin, a little scaly, on the Backside of several Colours as in Waves, soft and viscid underneath, and of very close Pores.

The Jaws are set on both Sides with little Teeth, like the Snakes; but besides these little Teeth, there is on each Side a Kind of a Tusk, or a long, sharp, cutting Tooth, that is sometimes forked. In the Jaw is a Bladder, full of a yellowish Liquid; the Tongue is long and cloven, which it darts out with great Violence; being provok'd, it looks like a Firebrand, which proceeds from the quick Motion or Agitation of the Spirits. This Tongue was suppos'd to be venomous, but it contains no manner of Harm in it: The Eyes are very small. The *Vipers* breed in wild stony Places in *Dauphiny* and *Poitou*: They live, being at Liberty, on Rats, Frogs, Worms, and several other Insects; but when taken and confin'd, they will live about a Year, without any other Subsistence but the Air they receive by the little Holes made in the Tubs or Chests wherein they are kept: The Reason why they live so long without eating, is, because the Pores of the Skin are so closely contracted, that they emit but very little Spirits or *Effluvia*.

They take the *Vipers* in Spring Time, or Autumn, because they are then fatter, and more active than in any other Season: The Peasants take 'em with little wooden Tongs made for the Purpose, and carry 'em in Bags to the Apothecaries. They are much more sprightly and gay when they are in the Field, than after they are taken, because they then draw themselves up into a narrower Compass, and contract their Pores. These differ from other Serpents, not only as to the two Teeth that are in their Jaws, but likewise by a different Connection of their *Vertebrae*, which hinders them, when they are taken by the Tail, from twisting and turning about the Arm or the Tongs, as the Snake does.

The *Viper* bites with his long Teeth, and shoots into the Wound a Spirit, or very volatile acid Liquor, which insinuates into the Vessels, coagulates, by little and little, the Blood, and interrupts the Circulation, from whence flows Death, if not prevented. This Effect has a great deal of Analogy with that which happens upon Syringing, thro' Curiosity, some acid Liquor into the Veins of a Dog, or other Creature; for in a short Time he falls into Convulsions and dies.

The Accidents which attend those who have had the Misfortune to be bit by a *Viper*, are first of all, that they grow pale, and then turn bluish, is more or less ting'd in the Veins and Arteries. In the second Place they become restless, melancholy, and sleepy; the Pulse intermitting, because the Course of the Spirits being intercepted by the *Coagulum* that is made in the Vessels, the Blood cannot circulate but with Difficulty. In the third Place they are chilly or cold, have Inclinations to vomit, and convulsive Motions; because the saline and acid Particles which are introduc'd into the Blood, and which are pungent, prick, or irritate the internal Coats of the Veins and Arteries. In the last Place, they die, because the Blood growing sharper, and coagulating still more and more, the Passage of the Spirits is entirely stopp'd, and there can be no Circulation, without which they cannot live.

The Remedies against the Biting of *Vipers* are external and internal. The external are, the speedy binding of the Part wounded, if possible, making the Ligature tight, in order to hinder the Poison from spreading further; but if the Part that is bit cannot be bound, you ought instantly to apply upon it the Head of the *Viper* that did the Mischiefe, after being bruis'd, or else that of another *Viper*; otherwise to heat a Knife, or some Piece of flat Iron, red-hot, and hold it near the Wound as hot as the Patient is able to bear it; or to burn upon the Wound a little Gun-Powder; or else scarify, and apply Treacle with Garlick and Sal Armoniack bruis'd together.

These external Remedies open the Pores of the Wound, and make the envenom'd Spirits flow; but it ought to be observ'd, that these Sorts of Medicines should be us'd upon the Spot where the Biting is made; for if there be Time given to the Poison to enter into the Vessels of the Body, before Application, all will be useles, because the Poison returns no more to the Wound. But tho' external Remedies ought not to be neglected upon this Occasion, they are what brings but little Relief, in Comparison of those Things that may be given inwardly; for the Venom of the *Viper* being very subtil, it passes instantly into the Blood, and therefore the Patient must take such Medicines as have

Power to break the Points of the Acids, dissolve the Blood, and other coagulated Humours, excite or promote the Circulation, push forward by Perspiration and Urine whatever Poison of the *Viper* may remain.

The volatile Salts of Animals are sufficiently efficacious for these Intentions, because they are alkaline, very volatile, rarifying, sudorifick, and aperitive. That of *Vipers* is preferable to all others, because it is the most subtil; but instead of that, we may use the volatile Salt of *Harts-horn*, that of Urine, or human Skull. *Venice-Treacle* is, notwithstanding, very proper, if old, to relieve this Malady, because it is compos'd of Ingredients chiefly attenuating and rarifying; but when it is new we cannot use it with Success, because the *Opium* which has not yet been rarified by Fermentation, will rather fix the Poison, and thicken the Humours, than rarify and discharge them.

The largest *Vipers*, and such as are well fed, ought to be chose, such as are gather'd in Spring-time or Autumn, when they are in the best Condition. The Trunk of the *Viper*, separated from the Skin and the Entrails, is administer'd against Poisons, to purify the Blood in the Small-Pox, intermitting and malignant Fevers, boil'd in Broths, or taken in Powder, from eight Grains to two Scruples, or a Dram. The Fat of the *Viper* is sudorifick, resolute, and anodyne, taken internally or externally; the Dose from one Drop to six. The Liver and Heart of the *Viper* being dried and powder'd, are call'd *Bezoar-Animal*, and are reckon'd the most powerful Part of the *Viper*. The Gall is sudorifick; the Dose being one or two Drops. It is likewise good for Catarrhs of the Eyes, to deterge and resolve. The Word *Vipera* comes from *Vi*, Force, and *parere*, to engender or bring forth; because the Antients believed that the Female *Vipers*, in the Pleasure of Coition, eat off the Head of the Male; and that the young ones, to revenge the Death of the Father, ripp'd open the Belly of the Mother; but the Word *Vipera* seems rather to be deriv'd from *viva*, alive, and *parere* to bring forth, which is as much as to say, the kind of Serpent that is brought forth alive, because all the other Kinds are produced from Eggs.

28. Of Treacle, commonly call'd Venice Treacle.

Pomet. **TREACLE** is a Composition of certain choice Druggs, prepar'd, powder'd, and reduc'd into an Opiat or liquid Eleſtuary, with Honey. The *Treacle* takes its Name from the *Viper*, which the *Greeks* call *Therion*, or *Thyrion*; and it was compounded by *Andromachus* the Father, a Native of *Candia*, and firſt Phyſician to *Nero*. The *Venetians*, of late Years, have got the Reputation of being thought the only People who had the true Way of preparing the *Treacle*; and at preſent the Apothecaries of *Montpellier* make ſuch vaſt Quantities of it, that one may ſee Multitudes of theſe *Treacle* Barrels, which has reduc'd it to ſo low a Price, that one Pound of good Honey will ſell for more than the ſame Weight of this pretended *Treacle*. And if I was permitted to publiſh the Frauds that are committed in preparing this Antidote, I am ſatisfy'd the Magiſtrates would preſently put a Stop to the Abufe, both as to that which is ſold about at Markets and Fairs, as well as to what is ſold at *Paris* for fifteen or eighteen Pence a Pound. And notwithstanding it is ſold at ſuch a low Price, thoſe who deal in it get conſiderably, becauſe what they ſell is nothing but the worſt Honey, in which is incorporated a Parcel of rotten worm-eaten Roots and Druggs, that are no better than the Sweepings of Shops; and to promote or recommend the Sale of this, they cover the Pots with a printed Paper, wherein are two *Vipers* that compoſe a Circle, crown'd with a *Fleur-de-Lis*, which contains this Title, *Fine Venice Treacle*, tho' it is made at *Orleans* or *Paris*.

As to that of *Montpellier*, I have ſeen it often made there, which is prepar'd with all the Exaſtneſs that can be; but what is ſent to the Fairs for common Sale, they mix with large Quantities of boil'd Honey, being oblig'd to ſell it at about eighteen Pence a Pound; that which is true ſtanding them in above forty Pence a Pound. The *Treacle* Makers are call'd by the honeſt Apothecaries, to ridicule them, Muſtard-Makers. As to the *Venice Treacle*, I can ſay nothing to it, not knowing directly how they make it; but as to what is made at *Paris*, by Meſ-

ſieurs *Charas*, *Geoffry*, *Joſſon*, *Bolduc*, and *Rouviere*, I have ſeen it prepar'd with all the Care imaginable. And I can affirm, for a certain Truth, that there was a large Quantity thereof made in *March* 1688. without ſubſtituting any thing, and with the fineſt and beſt Druggs that were ever ſeen, being alſo deſign'd for a Maſter-Piece, or Trial of Skill; but as we are not immortal, and that thoſe who ſell this may be capable of knowing the true Composition, and of making it themſelves aright, in order to prevent Abuſes, I ſhall here give you the true Receipt; which I would not have done, if Mr. *Charas*, who has writ a particular Treatiſe of *Treacle*, had mention'd the Names of the Druggs in *French*: This Book is entitl'd, *The Natural Hiſtory of Animals, Plants, and Minerals, that make up the Composition of Andromachus's Treacle*.

Andromachus's Treacle.

Take Troches of Squills, ſix Ounces; Troches of *Vipers* and *Hedycroy*, Long Pepper, Opium prepared, of each three Ounces; red Roſes, Florentine Orrice, Juice of Liquorice, wild Navew Seed, *Balfam of Judæa*, fine Cinnamon, Agarick, of each one Ounce and an half; powder'd Myrrh, *Arabian Coſtus*, Saffron, *Caffia Lignea*, *Indian Spikenard*, Flowers of Camels Hay, *Olibanum* in Tears, white and black Pepper, *Dittany of Crete*, Tops of white Horehound, fine Rhubarb, *Arabian Stæchas*, *Macedonian Parſly* Seed, Mountain Calamint, Turpentine of *Chio*, Cinquefoil-Root, Ginger, of each ſix Drams; Poley Mountain, Ground Pine, *Storax* in the Tear, Spicknel, true *Amomum*, Valerian, Celtick Spikenard, ſeal'd Earth, Germander, *Indian Leaf*, natural *Chalcitis*, Gentian Root, Aniſeed, Juice of *Hypociftis*, Fruit of the Balfam-Tree, Gum-Arabick, Fennil-Seed, common *Cardamum*, *Mariſhian Hartwort*, Treacle-Muſtard, Flowers of St. *John's Wort*, the true *Acacia*, Gum Sagapen in Tears, of each four Drams; *Caftar*, ſmall Birthwort, Candy Carrots, *Jews Pitch*, Flowers of the leſſer Centaury, *Opopanax*, and *Galbanum*, of each two Drams; choice Honey three times the Weight of all; *Spaniſh Wine* as much as to give the due Conſiſtence.

Troches

Troches of Squills. Take Pulp of Squills, twelve Ounces; Flower of the bitter Vetch, eight Ounces. Troches of Vipers are made of the Fleſh boil'd in Water with Dill and Salt, and cleans'd from the Bone, of each eight Ounces; Crumbs of Bread dry'd and sifted, two Ounces and an half. According to Mr. Charas they are made up of Dittany Root instead of Bread Crumbs. For Troches of *Hedycroy*, take Herb-Maittick, the leſs Marjoram, *Afarabacca*, Roſe-Wood, of each two Drams; Camel's-Hay, *Calamus Aromaticus*, the great Valerian, Wood of the Baſam-Tree, true Baſam, Cinnamon, *Arabian Coſtus*, of each three Drams; Myrrh, Saffron, *Indian Leaf*, Spikenard, *Cassia lignea*, of each fix Drams; true *Amomum*, one Ounce and an half; Maſtick in Tears, a Dram; *Spanish Wine* enough to form into a Maſs. The Way of making all theſe Troches is to be met with in moſt Diſpenſatories, eſpecially thoſe of *Paris*, *Bauderon*, *Charas*, and others.

The Grand Treacle reform'd by Monsieur d'Aquin, the King's Physician.

Take dry'd Vipers, with the Hearts and Livers, twenty-four Ounces; Troches of Squills, Extract of Opium, of each twelve Ounces; Roots of *Contragerya*, *Virginia Snake Root*, *Angelica*, the great Valerian Spiguel, Gentian, Birthwort, *Coſtus*, *Indian* and Celtick Spikenard, Cinnamon, Oil of Nutmegs by Expreſſion, Saffron, Dittany of *Crete*, *Indian Leaf*, Water Germander, Mountain Calamint, Poley Mountain, Ground Pine, Flowers of St. *John's Wort*, and the leſſer Centaury, *Arabian Stœchas*, *Amomum*, ſmall Cardamums, *Macedonian Parsley-Seed*, Biſhop's-Weed, *Marsilian Hart-wort*, and Myrrh, of each eight Ounces; Refin of *Storax*, *Opopanax*, Gum Sagapen and *Caſtor*, of each four Ounces; a mellaginous Extract of Juniper-Berries, ſeventy-two Pounds; *Malmſey Wine*, one Quart.

This Preſcription of Treacle has been better received than that of *Andromachus*, of later Years, by Reaſon of the vaſt Number of Ingredients, and the little Virtue that moſt of 'em have, which was the Reaſon why Mr. *d'Aquin* expung'd what was ſuperfluous, and added other Things more neceſſary; the

Description of which Additions he gave to Mr. *Charas* to infer in his Royal Galenical *Pharmacopœia*. As to the Virtues of Treacle, I ſhall not inſiſt on that Topick, becauſe there are ſeveral Authors who have treated of them; beſides the ſeveral printed Papers diſpers'd with it, that come from *Venice* or *Montpellier*, that explain the Uſe of it. In ſeveral *Diſpenſatories* we meet with a third Sort of Treacle, call'd the *Diateſſaron*, becauſe it is compounded of four Druggs, which are the Gentian, round Birthwort, Bay-Berries, and Myrrh, all reduc'd into Powder, and made up with Honey, and Extract of Juniper, into an Electuary. This Treacle, tho' of a ſmall Price, is not wanting in good Qualities, being very uſeful for all Sorts of Cattle. Some People call it the *Poor's Treacle*, or *German Treacle*.

Along with this Medicine, we have brought from *Montpellier* a Treacle-Water, call'd ſo becauſe Treacle is the Baſis of it, and by Reaſon its Virtues, in ſome Meaſure, are like it. The *Montpellier Treacle-Water* of *Bauderon* make thus; Take fine Treacle, three Ounces; Roots of Tormentil, *Angelica*, Vipers Graſs, Dittany of *Crete*, and Saſſafras, of each two Ounces; Bole, one Ounce; Juniper-Berries, Citron-Seeds, *Carduus Benedictus*, Sorrel, and Purflane-Seed, of each half an Ounce; Betony, Marygold, Balm, Water Germander, Borrage, and Bugloſs, of each one Handful; fine Cinnamon and Mace, of each two Drams; Vinegar of Roſes, made of White-Wine, two Pounds; Juice of Citron and Verjuice, of each fix Ounces: Chuſe and prepare all your Druggs according to *Bauderon's* Diſpenſatory; and from thence, by a Glaſs Alembick, you may draw a clear Water, of a ſtrong Smell of Treacle, having the ſame Virtues with it: But the ſmall Power there is in Vinegar, Juice of Citrons and Verjuice, to diſſolve and raiſe the Virtue of the Aromaticks in Diſtillation, made the *Sieur de Pelérin* lay aſide this Preſcription, and follow that which Mr. *Charas* has given us in his Diſpenſatory, Page 1030, which will appear much more reaſonable.

Mr. Charas's Treacle-Water.

Take Roots of *Gentian*, *Angelica*, *Mastewort*, *Valerian*, and *Contragerya*, of each
two

Two Ounces; Citron and Orange-Peel, not candied, but dry, fine Cinnamon, Cloves, and Juniper Berries, of each one Ounce; Water Germander, and St. *John's* Wort Flowers, of each one Handful: Spirit of Wine, Walnut and Carduus Water, of each one Quart; fine Treacle, four Ounces; draw from thence a very odoriferous Water, more efficacious, and better to keep than the former. It is very proper to resist all Poisons, and prevent Infections. The Dose is from one Dram to four, in a convenient Liquor. Likewise it is given sometimes alone, in a small Quantity. Mr. *Charas* says, that there is a Treacle-Water made, by dissolving of Treacle in equal Parts of Spirit of Wine, and Vinegar distill'd; so they make Treacle-Vinegar sometimes only by dissolving it in strong Vinegar, which is us'd against the Infection of the Air, and to wash the Hands, Temples, and Nostrils with.

Besides Treacle-Water, at first, when the *Roman Orvietan* was known in *France*, we had it from *Rome*, and some other Parts of *Italy*, as *Orviette*, from whence it takes its Name; but since that the *Sieur Contugi* came to *Paris*, and under Pretence of the King's Permission, took upon him the whole Management of this Medicine, the Druggists have left off to trade in it, either thro' Fear, or because the Profit to be got by it was not considerable enough. But since they understood that when the King gave his Authority to the *Sieur Contugi*, to sell and trade in *Orvietan* at *Paris*, he did not intend to exclude the Druggists or Apothecaries at *Paris* from making it, as has been declar'd by an *Arrest*, lest he should deprive *France* of a Remedy so valuable and necessary for the Publick. But since the *Sieur Contugi* and his Wife are both dead, I have thought fit to give the World a true Description of it, as well as I have done of other Receipts which I have acquir'd in different Parts where I have been; but being robb'd of a great many of my Papers and Memoirs, I was hinder'd in my Attempt, and plung'd into a vast Expence, which I was oblig'd to in the Impression of this Book, besides the great Charges I had been at for sixteen or seventeen Years, in gaining a particular Knowledge of the scarcest Druggs, and making all sorts of Trials I could upon this Subject,

agreeable to my Profession, and the Design of this Work.

Orvietan.

Take Roots of Vipers Grass, *Carline* Thistle, Master-wort, Angelica, Bitumen, Birthwort, Contrayerva, white Dittany, Galin-gal, Gentian, small *Arabian* Costus, true Acorus, *Macedonian* Parsley-Seed, Leaves of Sage, Rosemary, Goats Rue, Carduus Benedictus, Dittany of *Crete*, Bay and Juniper Berries, of each one Ounce; Cinnamon and Cloves, of each half an Ounce; dry'd Vipers with their Hearts and Livers; old Treacle four Ounces; white despumated Honey eight Pounds to the whole Druggs, to make it into a Body. By consulting of *Bates's Pharmacopœia*, you may see how far this Recipe differs from that which he says Sir *Robert Talbor* communicated to him, and which we may suppose he brought from *France*.

29. Of the Sea-Skink.

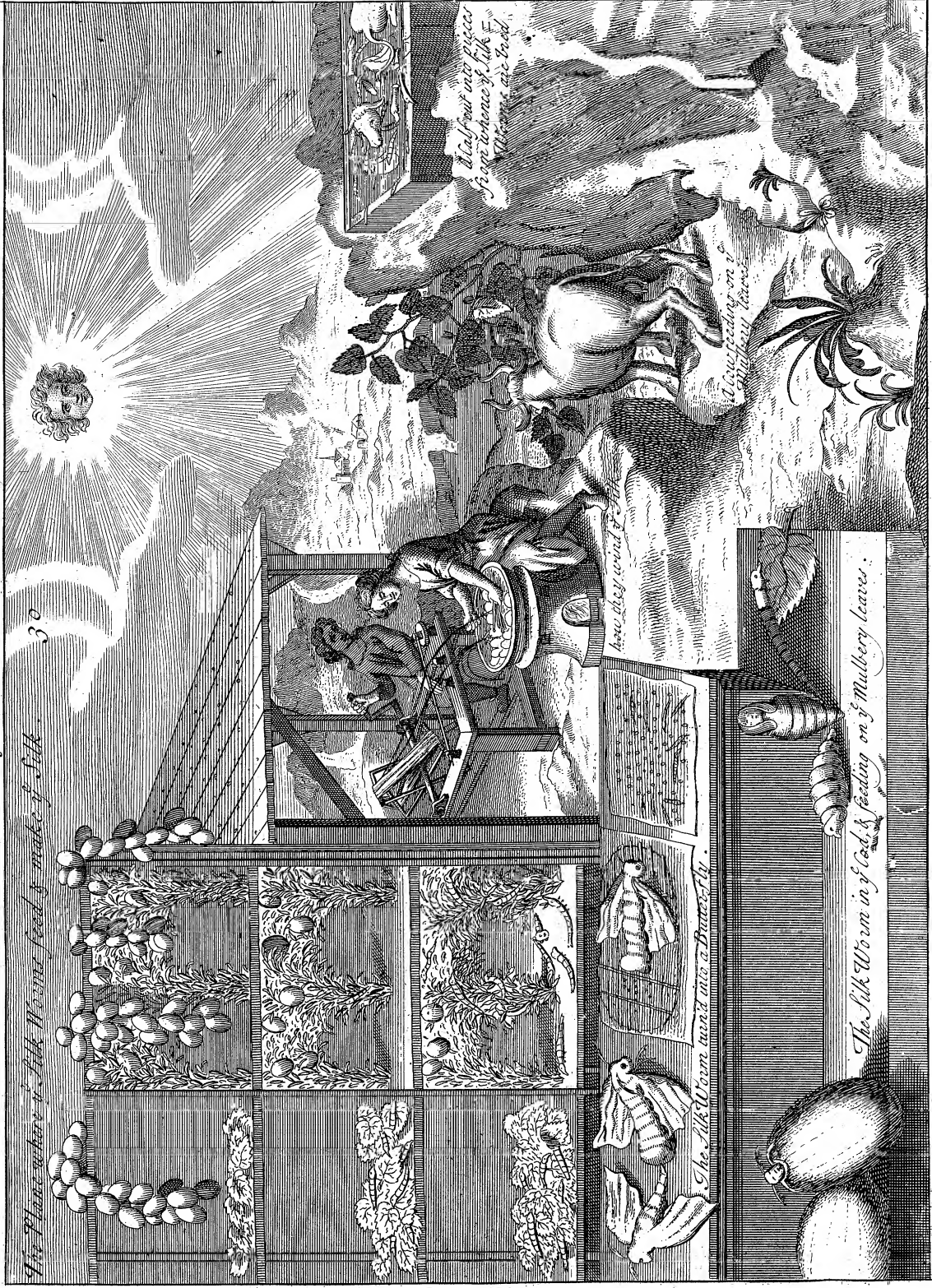
THE *Sea-Skink* is an amphibious Animal, pretty much like a *Pomet*. small Lizard. This Creature is about half a Foot long, and an Inch Diameter, having a sharp Nose, being cover'd with Scales. It has two little piercing Eyes, with the Mouth divided to the Place where the Ears should be seated, had this Creature any. It has a great many little white and red Teeth, and goes upon four Feet, little more than an Inch high, which are very like those of an Ape. It is cover'd with little round Scales, different from those of the Head, that are long and large. They are greyish, inclining to brown upon the Back, and of a Silver grey under the Belly. The Body of this Animal grows still smaller to the End of the Tail, like the Viper's.

There is a great many of these little *Skinks* to be found in the *Nile* in *Egypt*, from whence they are brought us by the Way of *Marfeilles*, only the Entrails are taken out, and the small End of the Tail is cut off. Chuse such as are the biggest, longest, heaviest, most dry and entire, and least worm-eaten, to which they are very subject. They

are

The Place where the Silk Worms feed & make of Silk.

30



are reckon'd proper to restore Warmth in old Age, and Decays of Nature, to encrease the *Semen Virile*, and are one of the Ingredients of *Mithridate*.

The Reverend Father *Du Tertre* says, that he saw not only in *Guadoloupa*, but likewise in other Isles, the true *Skinks*, altogether like those that are brought from *Ægypt*. It is a sort of *Lizard* which by the Inhabitants of *Guadoloupa* is call'd *Maboïta*, and in some other Isles the *Land Pike*, but I know not for what Reason. I believe rather it may be called so, because this Animal is almost always at Land, and when they cut off his Feet, he is just like a Stake that they drive into the Ground, and not a *Pike*, as the *Sieur Rochefort* would have it; who, to make it agree with the Name he has given this Animal, writes with all the Assurance and Falsity imaginable, that it has the perfect Head, Skin, and Shape of our *Pike*. These *Skinks* are more fleshy than the other *Lizards*, the Tail thicker, and the Legs and Feet so short, that they creep upon the Ground. Their Skins are cover'd with an infinite Number of little Scales, like those of Snakes, but of a yellow Colour, silver'd, and shining, as if rubb'd with Oil. Their Flesh is good against Poison, and the Wounds of envenom'd Arrows.

Of Mithridate.

Take choice Myrrh, Saffron, white Agarick, Ginger, fine Cinnamon, *Indian Spikenard*, Frankincense, and *Thlapsi*, or Treacle-mustard-Seed, of each ten Drams; *Marsilian* Hartwort, Balsam of *Judæa*, Camels Hay, *Arabian Stæchas*, *Costus*, *Galbanum*, Turpentine, Long-Pepper, *Castor*, Juice of *Hypocistis*, *Storax* in Tears, *Opopanax*, and *Indian* Leaves, of each one Ounce: *Cassia Lignea*, Poley Mountain, White-Pepper, Water Germander, Candy Carrots, Fruit of the Balsam-Tree, Troches of *Cephi* and *Bdellium*, of each seven Drams; Celtick Spikenard, Gum Arabick, *Macedonian* Parsley, *Opium*, the lesser *Cardamum*, Fennel, Gentian, red Roses, and Dittany of *Crete*, of each five Drams; Aniseed, the true *Acorus*, small Valerian, and Gum *Serapin*, of each three Drams; Spignel, *Acacia*, and the Sea-Skink, St. *John's*-Wort Seed, of each two Drams and

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an half; *Spanish Wine* a sufficient Quantity; fine Honey, nine Pounds, eight Ounces, and two Drams.

Of Troches of Cippi.

Take fat Raifins, Turpentine, choice Myrrh, Camels Hay, fine Cinnamon, *Calamus Aromaticus*, *Bdellium*, Spikenard, *Cassia Lignea*, *Cyperus*, Juniper-Berries, Rose-Wood, Saffron, fine Honey, *Spanish Wine*. The Way of compounding Mithridate differs nothing from that of Treacle; and as to these Troches, the Dispensatories of *Bauderon* and *Charas* shew us the Manner of preparing them.

Scincus Marinus, or the *Skink*, is a little amphibious Animal, resembling a small *Lizard*, or rather a little *Crocodile*, as long as one's Hand, sometimes thicker than an Inch, cover'd with little Scales of a Silver Colour, especially under the Belly, having brown Streaks cross the Back; the Head is oblong, and thicker over the Jaws than the Neck; the Eyes very little; the Nose sharper than that of the *Lizard's*, cover'd with Scales as the rest of the Body is; the Mouth is cut in very deep, set with a great many little white Teeth. Some Authors call it *Crocodilus Minor*, or the little *Crocodile*. It is bred in the *Nile*, and several other Parts of *Ægypt*, and feeds upon aromatic Flowers. It never grows bigger than as we have it brought to us. They open the Belly and take out the Entrails, then fill it with Poley Hair, or some other dry'd aromatic Herbs, in order to preserve it. This Creature affords a great deal of volatile Salt and Oil. Some People prefer the Kidneys before the rest of the Body; but there is no Difference in the Virtue of any of them.

26. Of Silk-Worms.

THE *Silkworms* are little Insects, whose Origin is altogether surprising, as well as the various Shapes and Changes they undergo. Several Authors have writ of them; and amongst the rest Mr. *Isnard*, in a little Treatise of his, at the 254th Page, accounts for their Original, thus: "At the Time when the Mulberry-
I " Leaves

“ Leaves are ready to gather, which should
 “ be five Days after their Budding, in the Be-
 “ ginning of the Spring, they take a Cow,
 “ which is almost at Calving, and feed her
 “ wholly with Mulberry-Leaves, without
 “ giving her any Thing else to eat, of Herbs,
 “ Hay, or the like, till she has calv'd; and
 “ this they continue for eight Days longer;
 “ after which they let the Cow and Calf
 “ both feed upon this some Days together,
 “ without any other Mixture, as before:
 “ They kill the Calf after it has been fill'd
 “ or satiated with the Mulberry-Leaves and
 “ the Cow's Milk; then chop it to Pieces
 “ to the very Feet, and without throwing
 “ any thing away, put all together, the
 “ Flesh, Blood, Bones, Skin, and Guts,
 “ into a wooden Trough, and set it a-top
 “ of the House in a Granary, or Garret, 'till
 “ it is corrupted; and from this will proceed
 “ little Worms, which they lay together
 “ on a Heap, with Mulberry-Leaves, to
 “ raise 'em afterwards, just as they do those
 “ which are produc'd from the Eggs; and
 “ these Silkworms are abundantly more
 “ fruitful than those from the Eggs; so that
 “ those who deal considerably in them, ne-
 “ ver fail every ten or twelve Years to raise
 “ them this Way.”

There are so many Particulars relating to the Management and Breeding of these little Creatures, that it would be troublesome to dwell upon this Subject; besides, it has no Relation to my present Purpose; and since Mr. *Isnard* has writ an entire Book upon it, I shall refer those to it who would know further. These little Animals supply us with a Commodity so valuable, that formerly those only of the best Quality were clothed with it. There are several Colours of Silk; as white, yellow, and the like: These different Silks are found upon little *Clues*, of the Size and Shape of a Pigeon's Egg; and by the means of warm Water, and certain *Windles*, they wind it into Skains, and then dye it of what Colour they please.

I shall not detain you with a Description of all the different Silks that we have brought us from several Parts, contenting myself only to say, that what is us'd in Physick is the Natural; that is to say the *Ball*, or what is wound up naturally, and without passing thro' hot Water, to which the Antients gave

the Name of *Raw-Silk*, or rough as it comes from the *Silk-worm*. This Silk, after it is reduced to Powder, which is not very easy to do, is brought into several Compositions, as Confections of *Alkermes*, *Hyacinth*, &c. They use likewise Silk dyed scarlet, to give to Women in Child-bed, instead of *Alkermes*. Several Authors say, that Silk has the Virtue of making the Heart pleasant, and the Spirits brisk, and to cleanse the Blood. Those who use the Balls of Silk ought to take care, before they reduce it into Powder, to cut it asunder, and take away the Worm that is within, sometimes fresh, and sometimes rotten, with the first Skin that wraps it about, as not fitting to be taken inwardly; and those who would have the best, use nothing except the Raw-Silk, because the rest is nothing but Dross, or refuse Stuff. It may be reduc'd to Powder, by cutting it very fine, so that it will pass thro' a Sieve; for to beat it, 'twill be a tedious Work; besides it will lose half. As to the Confections of *Alkermes* and *Hyacinth*, the scarlet Silk ought to be prefer'd to all other, tho' almost all Authors recommend the Raw-Silk, which is that which is white, or of a Gold Colour, and which has not been dy'd.

There are several other Reptiles which we sell, as the Leeches which are found in Ponds and Ditches, and which the Surgeons apply to several Parts of the Body, and chiefly those where Cupping-Glasses cannot be easily fix'd. There are several Sorts of Leeches; the best of which are the least, that have small Heads, reddish Bellies, with Streaks upon the Back, and of a Gold Colour. They are to be met with in clear running Water. Throw away the venomous Sort, which have thick Heads, and are of a green Colour, that shine like Glow-worms, being streak'd with blue, and are found in muddy Waters; for instead of relieving the Patient, they will cause Inflammations, Apostems, Fevers, and malignant Ulcers, that are sometimes incurable. To keep these Leeches, put 'em into clean Water, that must be renew'd from Time to Time, to which some will add Sand and Earth.

We sell, besides these, the Powder, volatile Salt, and Oil of Toads, as well as the Stone that is found in the Head of the large and old ones, to which the Antients attribut-

ed great Virtues; and Mr. *Charas* treats of it very largely, in his Chymical Dispensatory, Page 794; to which those who desire to know further may have Recourse. There are some who rank the Toad-Stone among the precious Stones, not only because it is scarce to be met withal, but because it is endowed with so many excellent Virtues, being proper to resist all Sorts of Poison: The white is the most valued, tho' those which are of another Colour, are endow'd with no less Virtues: They impose upon the Buyer, instead of the Toad-Stone, a little round or longish Stone, that is found in several Parts of *Europe*.

We sell likewise volatile Salt, Oil, and Powder of *Millepedes*, or Hog-Lice, to which Mr. *Charas* assigns great Virtues, as well as to the volatile Salt of *Cantharides*, Earth-Worms, and Ants; as may be seen in his *Chymical Pharmacopœia*; as likewise the Oils of *Scorpions*, simple and compound, which we have ready made from *Provence* and *Languedoc*, and for which we have a better Sale than those made by the Apothecaries at *Paris*; and which, without Dispute, are much better, because the *Scorpions* are most frequent in those Provinces. The Oil of *Scorpions* simple, is only made of *Scorpions*, and Oil of bitter Almonds: The Compound is that of *Matthiolum*, which is made of the following Druggs, *viz.* of *Scorpions*, old Oil Olive, the Flowers, Leaves, and Seed of *St. John's Wort*, *Germander*, *Mountain Calamint*, *Carduus Benedictus*, *Water Germander*, lesser *Centaury*, *Vervain*, *Dittany of Crete*, *Zedoary*, white *Dittany*, *Gentian*, *Tormentil*, round *Birthwort*, *Storax*, *Benjamin*, *Juniper-Berries*, black *Cummin Seed*, fine *Cinnamon*, the odoriferous *Reed*, long *Cyperus*, white *Sanders*, *Rhubarb*, *Myrrh*, *Aloes*, *Indian Nard*, *Saffron*, *Treacle*, *Mithridate*, and white *Wine*; mix all together, and make an Oil. The Doses you will find in *Matthiolum's* sixth Book of Poisons; or in *Bauderon*, or *Charas's* Dispensatory, whereto those who desire to make it may have Recourse. This Oil is one of the most difficult Compositions in Pharmacy, because of the different Mixtures, and the Difficulty of getting the *Scorpions* alive from *Provence* or *Languedoc*, which is the Reason why that which is made at *Paris*, is sold

dearer than that which we have from *Montpellier*, and other Parts.

Bombyx, *sive Vermis lanificius*, the *Silk-worm*, is a Kind of *Caterpillar*, or a Worm as long and thick as one's little Finger, divided from one Part to another in a Sort of Rings; having under them usually fourteen Feet, six in the fore Part, which are very small, and eight on the hinder Part, which begin after the third Ring: The two last are much larger than the rest; the Shape of 'em are ugly to look upon; their Substance very moist and viscid. They are cloth'd with a very thin tender Skin, easy to break and waft away, of a brown or whitish Colour, with some Spots. It is produced in the Spring, from a little round Egg, that is like a Poppy-Seed; is fed with *Mulberry-Leaves* fresh gather'd; for if they are decay'd, they kill the *Silk-worms*. When they are grown to their full Size they eat no longer, but spue out of their Mouths a kind of thick, gluey, or viscid Slaver or Foam, which they stretch, extend, and work to a *Silk Web*, and then wind into a *Clue*, that is sometimes white, and sometimes yellowish, wherein it is wrapp'd, and lies several Days still working 'till it dies; but if you do not throw this *Clue* into *Water* to draw off the *Silk*, it will quit this thick Clothing, pierce thro' the *Clue*, and arise a fine, white, gaudy, active *Butterfly*; and if you leave after this Manner a Number of them, you will have a diverting Sight, to see the Male and Female *Butterflies* carressing, and making Love; from whence, afterwards, you have Eggs when the Animal is dead.

The *Silkworms* yield Abundance of *Flegm* and *Oil*, but little volatile Salt. They are reckon'd very good to cure a *Vertigo*, if after they are dry'd and powder'd you apply the Powder upon the Head, being first shav'd. The *Silk* upon the *Clue*, before it is cast into the *Water*, is call'd *Sericum crudum*, or *Raw-Silk*. It ought to be cut asunder to uncover the *Worm* within it. This yields a little *Flegm*, a good deal of *Oil*, but very little volatile Salt and *Earth*. It is thought proper to recruit the *Spirits*, and purify the *Blood*, being taken in Powder. Some People hold, that if you feed a *Calf* with *Mulberry Leaves*, then kill and cut it to Pieces, and expose it to the *Air*, upon a *Houfe*, it will

produce Silkworms ; but this Thought wants Confirmation. In the Parts where they trade in Silk, as *Savoy*, *Languedoc*, and *Provence*, they put their Silk-worms in Chambers, where they are dispos'd in Repositories or Niches, where they make their *Clues* ; good Quantities of which they preserve on Purpose to have Eggs, and they throw the rest into warm Water, wherein the Worms die.

ed ; wherefore we ought to prefer the *French Oils* to those of *Holland*, which are easily known, because the *Dutch* are red and stinking, and yet are clear, and have little of the *Hogoe*. The great Quantities we have of Whale Oil, comes from the northern Sea, especially *Greenland*, from whence the *Hollanders* are supplied.

31. Of the Whale.

Of Sperma Ceti.

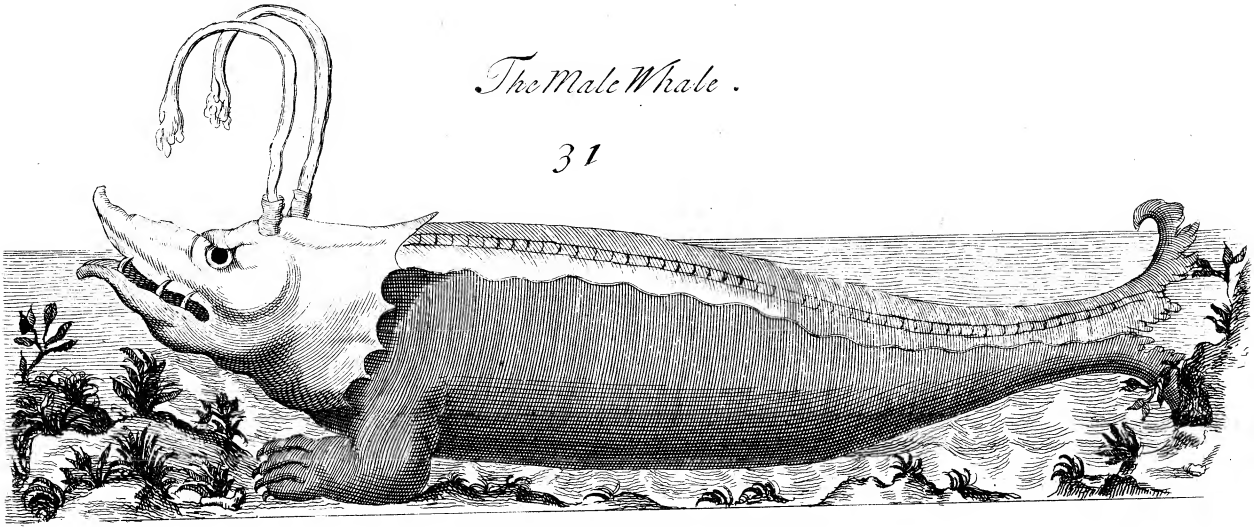
Pomet. THE *Whale* is the largest of all Fish, and is to be found in the Northern and North-West Seas. The *Skeleton* of one was shewn at *Paris* in 1658, whose Skull was between sixteen and seventeen Foot long, weighing four thousand six hundred Pounds ; the Jaws ten Foot wide, and fourteen Foot long, weighing each eleven hundred Pounds. The Fins, which look like Hands, weighing each six hundred Pounds. The Joints of the Back, from the Head to the End of the Tail, forty five Foot long ; the first Joints weighing fifty Pounds, and the others less, according as they came nearer the End. I shall not trouble myself to give an Account of all that relates to that Animal, or the Manner of taking him, because several Authors have treated of it ; but I shall only say, that there are two Sorts of Whales ; the one is call'd *Cachalot*, which differs from that which is call'd the *Whale*, in that the Mouth of the *Cachalot* is furnish'd with little flat Teeth without a Beard or Whiskers, which is contrary to that which bears the Name of the *Whale*, which has nothing but Whiskers. 'Tis from the Fat or Lard of these Animals, that they draw *Whale Oil*, which is a very great Commodity, especially in Times of Peace, by reason of the great Use they have for it in *France*, as well for Burning, as several other Uses, wherein it is very necessary. We have two Sorts of *Whale Oil* comes to *Paris*, the best of which is that which we call Oil of the great Bay, which is by the *French* made of the Fat immediately after it is taken from the *Whale* ; whence it comes that the *French Oils* do not smell so ill as those made in *Holland*, because the *Dutch* do not make their Oils from the Fat so soon as it is drawn from the *Whale*, but bring it into *Holland* to be melt-

The *Sperma Ceti*, according both to the Antients and Moderns, and which, tho' improperly, is call'd so at this Day, is the Brain of a Sort of Whale call'd *Byaris*, and by the People of *St. John de Luz*, *Cachalot*. This Animal is nam'd, by some, the male Whale, and in *Latin*, *Orca* ; it is about twenty five Foot long, and twelve Foot high ; each of the Teeth weighing one Pound, which are very useful for several Sorts of Works : These Creatures are very common at *Cape Finistre*, on the Coast of *Galicia*, and in *Norway*. In the Year 1688, there was one taken by a *Spanish Ship*, that carried it to *St. Sebastians*, from the Head of which was taken twenty four Barrels of Brain, and from the Body ninety six Barrels of Fat : They ought then to be undeceived who believe that *Sperma Ceti* is any Thing else but the Brain of the *Cachalot* ; and I can affirm this with Certainty, not having only seen this prepar'd, but having prepar'd it myself.

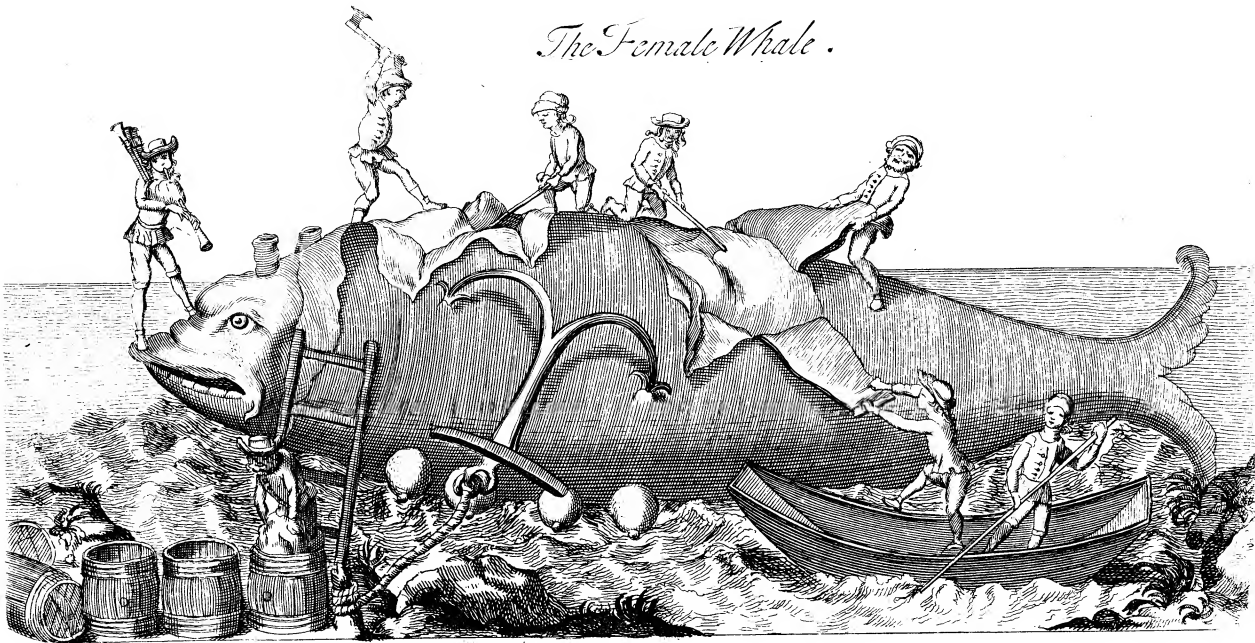
This *Sperma Ceti* is usually prepared at *Bayonne*, and *St. John De Luz* ; and this Work is so rare in *France*, that there are not above two Persons at the latter Place, who know how to prepare it. Those who perform this, take the Brain as aforesaid, and melt it over a gentle Fire ; then they cast it into Moulds like those wherein they refine Sugar ; and after it is cool'd and drained from the Oil, they take and melt it again, and proceed after the same Manner, 'till such Time as it be well purified and very white ; then with a Knife, made for the Purpose, they cut it into Scales or Flakes, just so as it appears when brought to us. As this Commodity is of some Consequence, by Reason of its Price, I must tell you, you ought to chuse such as is in fine white Flakes or Scales, that are clear and transparent, of a fishy Smell ; and take Care that it be not augment-

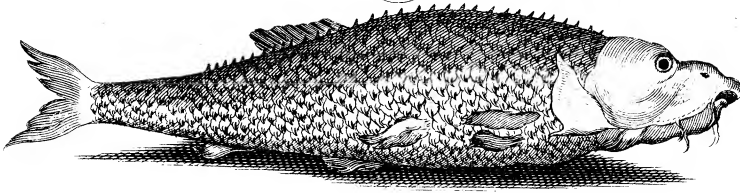
The Male Whale.

31

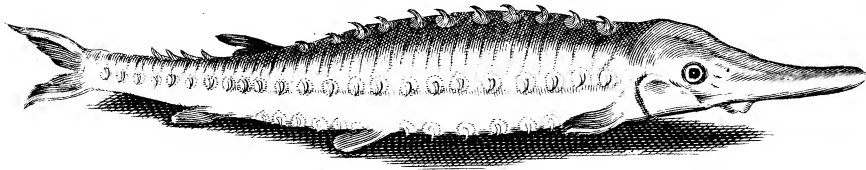


The Female Whale.



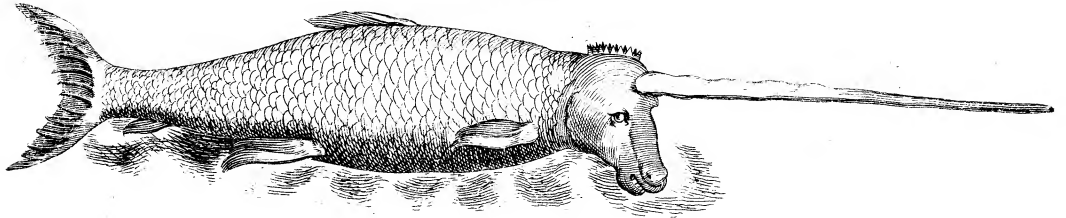


The Silurus.

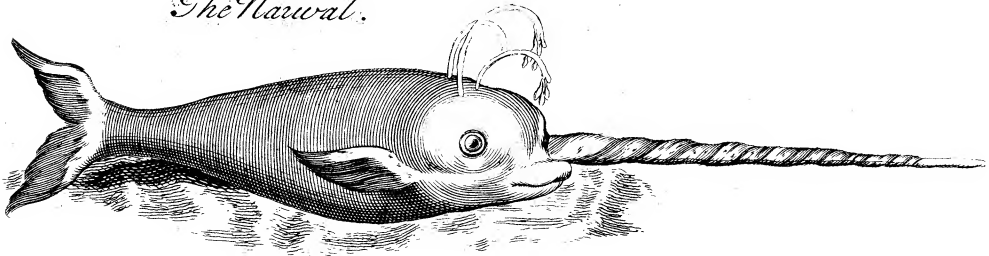


33

The Sea Unicorn.



The Narwal.



ed with white Wax, as it happens but too often, which is easy to distinguish, as well from the Smell of the Wax, as because it is very thin, and of a more unpolished white. They ought likewise carefully to observe, that what is made of the Brain of the Whale, is very apt to turn yellow, as well as that which comes from the Fat; for we have no Commodity which is so sensible of the Air as this, which is the Reason why it ought to be carefully kept in Glasses, or in Barrels, close stopp'd from the Entrance of any Air, lest this Drugg turn yellow. Its Use is for Ladies of Quality, as well for making of Paint, as for Pastes to wash the Hands withal. Women in Child-bed sometimes take of it, to a Spoonful, to remove After-pains, and assist their Cleanings; and it is an excellent Remedy in Bruises, Inflammations, Pleurifies, or the like, taken with Syrup of Violets, Oil of sweet Almonds, &c.

Balæna, sive Ceta, sive Cetus, or *Lemery.* the *Whale*, is a vast Fish bred in the Northern Seas, whereof there are many Kinds. From the Flesh of this they make the *Whale*, or *Train Oil*; and from the Brain of a Sort of Male Whale, which they call the *Orca*, *Byaris*, or *Cachalot*, is made what we call *Sperma Ceti*. The great Fish is common along the Coast of *Galiccia*, in *Spain*. When the Brain is separated from the Head, they melt it by a gentle Fire, which they cast into Moulds to cool; then they separate the Oil from the Water, and so repeat the Work till the Matter is clear and white; after which they divide it into Scales or Flakes for Sale. This was called *Sperma Ceti*, because the Antients believed that it was the Seed of the Whale that floated on the Sea. Several Moderns have rejected this Opinion, but would establish another which is as foreign from the Truth as the former. They say that the *Sperma Ceti* is a *Sea Bitumen*, or a kind of Sea Froth, that is driven by the Waves to and fro. It is astonishing that the Origin of this has been a Secret so long; for it is not above two and twenty Years, since it was known that this was drawn from the Head of the Whale. The *Sperma Ceti* is resolute and mollifying. They use it in Pomatums to soften and smooth the Skin; in Ointments or Liniments, to dissolve the Hardness of the Breasts; In In-

jections of the Womb, to soften the same; and it is sometimes given inwardly, to correct the Acrimony of Humours in the Breast or Belly. The Dose from half a Scruple to two Scruples.

32. Of the Fish-Glue, or Isinglafs.

THAT which we call *Fish-Glue*, *Pomet.* or *Isinglafs*, the *Latins*, *Gluten* *Alkanac*, the *Greeks*, *Ichthyocolla*, and the *Arabs*, *Alcana*, is the mucilaginous Part of a Fish, whose Back is full of little white Scales that are prickly, and rang'd in Order; commonly found in the *Muscovy* Seas; which is the Reason that almost all the *Isinglafs* we have from *Holland*, is brought thither from *Archangel*, which is the Place where is kept a famous yearly Market. Several who have writ of this Fish whereof they make the *Isinglafs*, and among others, *Rondelet*, have said that it was without Bone, which is the Reason why it is called the Fish without Bones. They have pretended also, that it has no Prickles, which is very wide of the Truth, because the Back of it is so well furnished with them, that there is not any Fish, how strong soever, will dare to bite it; and the Scales, though they are small, are very sharp, as represented in the Cut, which answers to the Original which I have in my Hands. The Antients pretend likewise, that it was of the cetacious Kind, that is to say, that it resembled in Nature and Bulk, the Whale and Dolphin, because the Head is very thick, heavy, and large, the Mouth very long and open, and that there grows to the Upper-Jaw a certain long Excrecence, hanging down like a Beard. As to the Flesh, it is sweet and gluey, and consequently of little Relish, if it be not salted some Time before it is eat.

As to the Manner of making the *Isinglafs*, the Skin, Tail, Fins, Stomach, and Guts of the Fish are taken and boil'd in Water, till all of them be dissolv'd that will dissolve; then the gluey Liquor is strain'd, and set to cool. Being cold, the Fat is carefully taken off, and the Liquor itself is boil'd to a just Consistency, which is cut into Pieces, and made into a Twist, bent in Form of a Crescent, such as are commonly sold, then hung

hung upon a String, and carefully dried. That which is clearest and whitest is best; and which being boil'd in Water and Milk, will almost all dissolve. It is chiefly made in *Muscovy*; and that which is call'd the Patriarch Sort, which is four square, very thin and white, almost transparent, is the choicest; the next is the *Czar's* Sort, which is the large Horse-Shoe, or twisted Kind, that is in thin Rags, and clear; a meaner Sort is that which is yellow and brown within; and that in square Books or Cakes, is the worst of all.

The Use of *Isinglass* is very common in *France*, but not in *Physick*; for I believe, besides what is us'd in making the *Diachylon* Plaster, that all the Apothecaries in *Paris* scarce use a Pound in the Year: But it serves the Wine-Merchants and Vintners, who use it to fine their Wines, for which formerly they were blam'd, tho' without Reason. For it is a very great Error that has been receiv'd, that *Isinglass* was a poisonous Drugg, when nothing is so certain as that it has no ill Quality whatsoever; but the Fish from whence it is made is one of the principal Foods of *Muscovy*, the Jelly being very wholesome; for the Flesh of the Back of this Fish tastes like Veal, and is very nourishing; the Belly eats like Pork, being very sweet and good. *Isinglass* is of a healing and strengthening Property; us'd in Broth and Jellies, it strengthens the Back, stops a Dyentery and continued Purgings. It is good in *Gonorrhœas*, and the *Fluor albus*. Being of an alcalious Nature, it absorbs Acids, and eases the most inveterate Pains of the Stomach. The necessary Uses to which this is put, are in several Sorts of Silk Works, to give a Lustre to Ribbons and other Silks, and to whiten Gauzes. It is a principal Ingredient to counterfeit Oriental Pearl. We have from *England*, *Holland*, and other Parts, a sort of *Isinglass* folded in little Books, that is of small Use in *France*, because it is very hard to dissolve, and that it will never turn white. Some Persons have assured me, that it was made of the Remainder of that which is made in little Wreaths; and others will have it, that it comes from the mucilaginous Parts of a Fish some Authors call *Silurus*, or *Sturio*, the *Sturgeon*, which is a very scarce Fish in *France*. It is sometimes to

be met with in our Rivers; but because of its Use, and its Rarity, and its being excellent Meat, those who find 'em sell 'em for three or four hundred Livres.

Ichthyocolla, *Isinglass*, or *Fish-Glue*, is a Paste or Glue made of *Lemery*. the Skin, Fins, Tail, Entrails, Nerves, and other mucilaginous Parts of a great Sea-Fish, call'd a *Huso*, or *Exoassis*, from being without Bones, that is twenty four Foot long, and weighs four hundred Weight. It is usually met with in the Seas about *Muscovy*, in *Hungary* and other Parts of the *Danube*. They make the *Isinglass* by cutting all the Parts of the Fish in Pieces, which they steep in hot Water, and then let it boil over a gentle Fire, till it is dissolv'd, and reduced into a Jelly. They spread this upon Instruments made for the Purpose, that it may dry, and be made into a Kind of Parchment. When it is almost dry, they usually roll it up into Wreaths of different Shapes and Sizes. The *Dutch* furnish us with almost all we use, [which is employed chiefly as *Pomet* has laid down.]

33. Of the Narwal, or Sea Unicorn.

THE *Narwal*, so called by the *Islanders*, and by some others, *Pomet*. *Rhoar*, by us the *Sea Unicorn*, is a large Fish, which some reckon to be a Sort of Whale, that is found plentifully in the Northern Seas, especially along the Coast of *Iceland* in *Greenland*. This Sea-Monster carries at the End of his Nose a white weighty Horn, that is smooth, and of a spiral Figure, such as is to be seen at St. *Denis's* in *France*, and some other Places. It is of different Sizes and Weight, as may be seen in the Cabinets of the Curious; as that of Mr. *Morin*, Physician to the late Mademoiselle de *Guisse*, which I have seen and handled, and is represented in the Figure. Mr. *Charas* told me, he had seen one longer and thicker than that in the Treasury of St. *Denis*. They are the Pieces of this Horn, that we sell at *Paris*, as they do elsewhere, for the true Unicorn's Horn, to which some People assign large Virtues, which I shall neither authorize nor contradict, having never had sufficient Experience of it.

There

There is another Fish besides, that they give the Name of the *Sea Unicorn* to, which is met withal in different Parts of the World. Mr. *Dumantel* says he saw a prodigious one, in an Isle near *St. Domingo*, in the Year 1644. This *Unicorn*, says he, pursued a little Fish with that Violence, that he threw himself out of the Depth of Water necessary to swim in, and ran himself upon a great Bed of Sand, where half of his Body being uncovered, he could not recover himself to get into the Deep again, and by that means the Inhabitants of the Island took him. This Fish was about eighteen Foot long, being of the Thickness of an Hoghead. He had six great Fins, that at the Ends were like Oars; two of them were placed instead of Ears, and the other four along the Belly, at equal Distance, being of a Vermillion Colour; and all the Body was covered with large Scales, as big as a Crown Piece, which were of a Blue, that appeared to be spangled with Silver. Near the Neck the Scales were more compact and close, and made a Sort of Collar; the Scales under the Belly being yellow: The Tail was forked, the Head a little thicker than that of a Horse, and almost of the same Shape; it was cover'd with a hard brown Skin. And as the *Unicorn* has a Horn on the Forehead, this *Sea Unicorn* has one perfectly fine, nine Foot and an half long, that stands directly on the Forehead. It is exactly straight, and grows taper from the Front of the Head, or Basis of the Horn, to the Tip, where it is so sharp, that with Force it will drive through the hardest Body. The thick End was about sixteen Inches Circumference; and from hence to about two thirds of this wonderful Horn, it was fashion'd like the Screw of a Press, or rather wav'd in Form of a twisted Column, saying that the Furrows were still less'n'd until they became altogether smooth about four Foot two Inches from its Original. The Bottom was covered with an ash-coloured Skin, that had on it a little short Hair as soft as Velvet, of a Fillemot Colour, but underneath was as white as *Ivory*. As to the other Part that appeared altogether bare, it was naturally smooth, and of a shining black, mark'd with some fine white and yellow Streaks, and so hard, that a good File could scarcely touch it. It has no Ears erected, but two great Gills, as other Fish;

the Eyes being of the Size of an Hen's Egg. The Apple of the Eye was of a Sky-blue, enamell'd with Yellow, and surrounded with a Vermillion Circle, that was succeeded by another very clear one, that shin'd like Crystal. The Mouth, like that of the Horse, was cleft and set with several Teeth; those before being flat and sharp; and the others in the Jaws behind, large, and raised with little Bunches. There was a Tongue of a proportionable Length and Thickness, which was covered with a rough red Skin.

This prodigious Fish had, besides, upon its Head, a kind of Crown rais'd above the rest of the Skin two Inches or thereabouts, made in an oval Form; and ending in a Point. Above three hundred People of the Isle eat plentifully of the Flesh of it, and found it very delicate. It was larded with a white Fat; and being boil'd, it parts into Flakes like Cod Fish, but has a much more savory Taste.

We ought to undeceive those who believe that what we now call the *Unicorn's Horn*, the *Latins*, *Unicornis*, and the *Greeks*, *Monoceros*, was the Horn of a Land Animal, whereof mention is made in the *Old Testament*, since it is nothing else but the Horn of the *Narwal*, which, as to the Choice of it, ought to be the whitest, largest, and heaviest. Some Time ago these Horns were so rare, that Mr. *Racq*, a Physician at *Florence*, said that a *German* Merchant sold one of 'em to a Pope for 4500 Livres, which is very much different from what they are at present, since we can buy the very finest at a much easier rate.

Narwal, *Rhoar*, or the *Sea Unicorn*, is a very large Fish, that carries upon his Front a Horn of five or six Foot long, that is heavy, white, smooth, and twisted, being of a spiral Figure, and hollow within, very like *Ivory*. He carries this for his Defence, and with it will attack the biggest Whales. This Horn affords a great deal of volatile Salt and Oil; is cordial, sudorifick, and proper to resist Infections, and cure Epilepsies. The Dose is from half a Scruple to two Scruples. They wear it also in Amulets hung about the Neck, to preserve them from infectious Air. Those who keep these for Curiosities, have the Horn entire, and chuse the longest and most weighty.

34. Of the Sea-Horse.

Pomet. THE Rivers *Nile*, *Niger*, and other Parts of *Africa*, breed us an Animal that has some Resemblance to an Ox, which I thought proper to give you the History of, upon Account of the Teeth which we sell. This Animal has nothing of the Likeness of a Horse; but as to his Size rather looks like an Ox, and his Legs are like the Bear's. He is thirteen Foot long, four Foot and a half broad; the Belly is rather flat than round; the Legs are three Foot about, and each Foot is a Foot broad, as the Head is two Foot and a half in Breadth, three Foot long, nine Foot about, and looks very thick in respect of the rest of the Body; the Mouth is a Foot wide, the Nose fleshy, and turns up; the Eyes are small; the Ears little and short, not above three Inches long; the Hoofs are cleft into four Parts, and the Tail is like that of a Hog; the Nostrils are winding, and about two Inches and an half deep, the Muzzle having some Resemblance with that of the Lion or Cat, and is hairy, tho' there is none upon the rest of the Body. It has six Teeth in the Under-Jaw; and the two which are at the End are half a Foot long, and two Inches and an half broad, and half a Foot thick; on each Side one may see seven Grinders that are short, but thick; it has as many in the Upper-Jaw, which it moves as the Crocodile: Its Teeth are as hard as a Flint Stone. The Antients believed that this Animal vomited Fire, when he grinded his Teeth one against the other.

The *Æthiopians*, and other People of *Africa*, eat the Flesh of them, though they are an amphibious Creature, living both on the Land and in the Water. Father *Vandenbroek* says he saw four Sea Horses feeding in the Country of *Lavango*, during his Journey to *Angola*, which were like huge Buffalo's; their Skins were very shining; their Heads like a Mare's; their Ears short, and their Nostrils large; they having two Tusks in their Mouths like the Boar's. Of all the Parts of this Animal, there is nothing us'd in *France* but the Teeth, by reason of their Whiteness and Hardness: Tho' *Mathiolus*

says, that the Ashes of the *Hippopotamus*, or Sea-Horse, incorporated with liquid Pitch, or other fat Body, will make the Hair grow. The Tooth worn, or a Ring made thereof, helps the Hemorrhoids, and easeth the Tooth-ach. A Ring made of the Pizzle, and worn, is said to cure the Cramp. The Testicles have the Virtue of *Castor*.

Hippopotamus, or the *Sea-Horse*, is a four-footed Animal, as big as an *Lemery* Ox. The Head is very thick, resembling more that of a Calf than a Horse; the Mouth is a Foot long, and the Jaws set with strong hard Teeth, that will strike Fire like a Flint with Steel, and are very proper to make artificial Teeth with. These Creatures delight to live in the large Rivers within Land, that they may enjoy both Land and Water, feeding upon Fish, Flesh, Plants, Pulse; and even Men, Women, and Children, if they can meet with them. The Skin is so thick, that it is able to defend from all manner of external Violence, no Bullet or Spear being able to pierce it; the Ashes whereof take away Spots from the Skin. The Fat applied to the Pulse or Stomach, relieves against Fits of the Ague, and is emollient and nervous,

35. Of the Sea-Cow.

VACCA marina, *Manati*, or the *Sea-Cow*, according to the *Pomet*. Relation of *Father du Tertre*, is a Fish altogether unknown in *Europe*. It is sometimes from fifteen to sixteen Foot long, and seven or eight Foot about; it has the Muzzle of an Ox, and the Eyes of a Dog. The Sight is very weak, and it has no Ears, but in their Stead two little Holes, whereinto one could scarcely put a Finger; by these Holes it hears so exquisitely, that the Weakness of the Sight is sufficiently supply'd by the Quickness of the Hearing. Under the Belly, next the Head, are two little Feet in form of Hands, having each four short Fingers and Nails, and therefore it was by the *Spaniards* call'd *Manati*, which is to say, the Fish with Hands. From the Navel it grows less and less, till it forms the Tail, which is in the Shape of a Baker's Peel. It is a Foot and an half broad, five or six Inches thick, clothed

cloth'd with the same Skin as the Body, and entirely made up of Fat and Nerves. This Fish has no Scales like other Fish, but is cover'd with a Skin thicker than that of an Ox; the Hide is of a very brown Slate Colour, like that of the *Sea-Wolf*. The Flesh tastes like Veal, but it is a great deal finer, and cover'd, in several Parts, with three or four Fingers thick of Fat, of which they make *Lard*, as they do of Hog's. This is excellent, and several People melt it and cast it into Cakes, which they eat with Bread instead of Butter.

The Flesh of this Animal being salted, loses much of its Taste, and becomes as dry as Wood; I believe that must be attributed to the Salt of the Country, which is very corrosive. They find in the Head of this Animal four Stones, two large ones, and two small ones, to which they assign the Property of dissolving the Stone in the Bladder, and bringing away of Gravel from the Kidneys; but I cannot approve this Practice, since this Medicine is too emetick, and acts upon the Stomach with too much Violence. The Food of this Fish is a small Herb that grows in the Sea, which it feeds upon just as the Ox does on those of the Field; and after having glutted itself with eating, it hunts out for the fresh Water up the Rivers, where it drinks plentifully twice a Day. After having eat and drank its Fill, it lies a sleeping, with the Snout or Muzzle half out of Water, whereby she is discovered at a good Distance by the Fishermen, who presently set about to take her after the following Manner:

Three or four Men, or sometimes more, take a little *Canoe*, which is a small Boat, all of a Piece, hollowed out of a Tree, in Shape of a Shallop: The Rower is upon the Stern of the *Canoe*, where he so manages the Flat of his Oar, moving it to and again in the Water, as not only to direct the *Canoe*, but to move it forwards so swift, as if carried by a Sail before the Wind. The Spear-man, which is he that strikes the Beast, stands upright on a little Plank, at the Head of the *Canoe*, holding the Spear in his Hand, that is, a Sort of Pike; at the End of which is fix'd a Cramping-Iron, or Javelin. The third sits in the Middle of the Boat, to manage the Line or

Cable, that is tied to the Cramping-Iron, to draw when the Beast is struck; they all keep perfect Silence, because this Creature hears so exquisitely, that a Word, or the least Noise of the Water dashing against the Boat, is enough to awake her and put her to Flight, and disappoint the Fishermen of their Hopes. It is diverting to see how the Spear-man trembles, as it were, for fear the Prize should escape, and fancyes the Rower, or Steersman, does not employ half his Strength, tho' he does whatever he can with his Hands, and keeps his Eye fix'd on the Spear, by the End of which the Spear-man points out the Tract he must keep, to come at the Place where the Fish lies fast a-sleep. When the *Canoe* is within three or four Paces of it, the Spear-man gives a Stroke with all his Strength, and darts the Cramp-Iron at least half a Foot into the Flesh; the Shaft falls upon the Water, whilst the Iron Head remains sticking in the Breast, which is now half taken. When this Animal perceives herself so violently struck, she musters up all her Strength, and makes use of it to escape; she bounds like a Horse broke loose, cuts the Waves, as an Eagle does the Air, and makes the Sea foam, covering it with white all the Way through which she passes, believing the while she is escaping from her Enemy, whom notwithstanding, she carries along with her; infomuch that one would take the Spear-man for *Nep-tune* drawn in Triumph by a Sea Monster. In short, after having thus, for some Time, drawn her Destruction after her, and lost a great Share of Blood, her Strength fails her; and being as it were brought to a Bay, she is forc'd to stop short to take a little Rest; tho' she no sooner lies by, but the Spearman, to bring himself nearer, draws the Line, and makes a second Stroke with more Violence than the former, at which she is able to make but slender Efforts, and in a little Time is reduced to an Extremity, and then the Fishermen easily enough drag her a-shore the first little Island they come at, where they put her into the *Canoe*, if big enough to hold her. The Flesh of this Animal makes a considerable Part of the Food of the Inhabitants of those Countries: They carry several Ship-Loads of it every Year from the *Terra firma*, and the neighbouring Isles, and as well at *Guadaloupa*, *St. Christopbers*,

phers, *Martinico*, as other adjacent Islands, they sell a Pound of it for a Pound and a half of Tobacco.

The Stone taken from this Animal has many medicinal Uses assign'd to it, and was a Thing unknown to the Antients. It is a whitish Stone, or rather a Bone taken out of the Head of the *Manatea* Fish, that is white and hard; sometimes like a Tooth, and somewhat resembling the whitest Ivory, but much harder. It is a fix'd *Alkali*, absorbs Acids, eases the Pain of the Stomach, cures Heart-burnings and the Cholick; is good against Stone and Gravel, and to expel Urine. The Powder is made by Levigation, and is given from a Scruple to a Dram. The Calx is made by calcining it either alone, or with Sulphur and Nitre. Dose from half a Dram to a Dram, in any appropriate Liquor.

Marati, vel Vacca Marina, the *Lemery*. *Sea-Cow*, is a large Fish of *America*, of fifteen or sixteen Foot long, almost round, being five or six Foot Diameter, of a frightful Figure. The Head is like a Calf's, but the Snout is more meagre, and the Chin thicker; the Eyes are small, and require a great Light, for the Sight is very weak; the Ears are made up of nothing but two little Holes, tho' the Hearing is very fine. The Skin is us'd to make Shoes of; the Fat or Lard, besides that the Inhabitants eat it for Butter, is a good Emollient, and discussing Unguent. The Stones taken out of the Head, which are of two different Sizes, are reckon'd emetick; tho' they are given inwardly in Power, to twelve Grains and upwards, for nephritick Pains, and Stone in the Kidneys and Bladder.

36. *Of the three Kinds of Tortoises, viz. The Frank or True Tortoise, the Kaouïanne, or Great-headed Tortoise, and the Caret, or Least Tortoise.*

Pomet. **T**HE Figure which I have given of the *Tortoise* is so exact, according to the Reverend Father *du Tertre*, that it would be losing of Time to give any Description of its Shape; and I shall think it sufficient to describe what is peculiar to those of the Isles, and what distinguishes them from the *European* Sort. We may say in general of the three Sorts of *Tortoises*, that

they are dull, heavy, stupid Animals, and without Brains; for in all the Head, which is as big as a Calf's, there is not found any above the Bigness of a small Bean: Their Sight is extraordinary, their Bulk so large, that the Shell they carry on their Backs is sometimes five Foot long, and four broad: Their Flesh, particularly that of the *Frank Tortoise*, is so like that of an Ox, that a Piece of *Tortoise* compared with a Piece of Beef, cannot be distinguish'd but by the Colour of the Fat, which is of a yellowish green. There are of these *Tortoises*, which taken from the Bone yield half a Barrel of Provisions, without taking in the Head, the Neck, the Feet, the Tail, the Tripe, and the Eggs, which is sufficient to feed thirty Men. Besides which, they make from the superfluous Fat, fifteen or twenty Pots of Oil, as yellow as Gold, excellent for Fritures, and all Sorts of Sauces, especially when new; for when old it is fit for nothing but Lamps. The Flesh of the *Tortoise* is so full of vital Spirits, that being cut in Pieces over Night, it will stir again the next Day.

I believ'd a long Time that the *Tortoises* of these Parts had three Hearts; for from the Heart above, which is as large as a Man's, proceeds a large arterial Trunk, to which are join'd two other, as it were, Hearts, on each Side one, about the Size of an Hen's Egg, and of the same Shape and Substance with the former; tho' I have since chang'd my Opinion, and believe firmly that they are nothing but the Ears of the Heart; yet be that as it will, 'tis certain that when rightly display'd upon a Table, it makes the Resemblance of a *Fleur-de-Lis*, which may be reckon'd a good Omen of the future Success of the *French Colonies* in *America*, since the Providence of God, which does nothing in vain, has planted, as it were, the *Fleur-de-Lis* in the Heart of this Animal, as the Hieroglyphick of this Country.

Of the Kaouïanne, the Loggerhead, or Great-headed Tortoise.

This differs from the true *Tortoise*, in that the Head is much larger, in Proportion to the Body, than that of other *Tortoises*; and tho' it is much the largest of the three Sorts, it is notwithstanding the least esteem'd, because

caufe the Flefh is black, of a Sea-Smell, and an ill Tafte. Thofe who fifh for the *Kaymans* mix it with the true *Tortoise* to get a Price for it, but it communicates its ill Tafte to it. The Oil made from it is acrid, and fpoils the Sauces with which it is mix'd, and is only us'd when the other can't be had: However, it is not ufelefs, becaufe it ferves to burn in Lamps.

Of the Caret, or fmall Tortoise.

The *Caret* is the leaft of all the three Kinds of *Tortoifes*. The Fifh is not fo good as that of the *Frank Tortoise*, but is a great deal better than that of the *Kaouianne*; the Oil drawn from it is excellent for Weaknefs of the Nerves, *Sciatica* Pains, and all cold Defluxions. I know Perfons who have found it very ufeful for Difcafes of the Kidneys, caus'd by over-ftaining, &c. but efppecially that which makes it valuable, is the Shell upon its Back, that is worth ten Shillings a Pound. All the Spoil or Covering of the *Caret* confifts of thirteen Leaves or Plates, eight of which are flat, the other five hollow or bending; of the flat there are four large ones, which are a Foot long, and feven Inches broad. The fine *Caret Tortoise* ought to be thick, clear, tranfparent, of the Colour of Antimony, and marbled brown and white. There are of them that bear fix Pound of Leaves upon their Backs; they make Combs and other fine Works of 'em, that are very beautiful and valuable. The Way of raifing the Leaves from the large Shell, which is properly the *Tortoise's* Houfe, is by making, when all the Flefh is taken out, a Fire underneath; and as foon as the Heat affects the Leaves, they are eafily rais'd with the Point of a Knife. The Oil drawn from the *Tortoise* is hot, and esteem'd by the Natives and People of *France*, who ufe it againft cold Defluxions, Cramps, and Numbnefs of the Joints and Nerves.

Testudo, the *Shell-Fifh*, or *Tor-Lemery. toife*, is an aquatick four-footed Animal, that is very ugly in all its Limbs, but cover'd with a fine large Shell, fmoth, hard, bony, oval, and marbled, or ftain'd with feveral Colours. This Creature may be reckon'd amphibious, living upon Land and in the Water. There are different

Sizes of 'em, but thofe in *America* are often met with of five Foot long, and four Foot broad; their Flefh is good Food, and has the Tafte of Beef, and yields a yellow Oil, very proper for the Lamp. The *Europeans* ufe the *Tortoise* Flefh in their Kitchens as good Meat. They abound with a great deal of volatile Salt and Oil, are proper for Difcafes of the Breaft, and Confumptions in the hettick Fever; and are very reftorative being eaten in Subftance, or elfe the Broth of the Flefh. The Blood dry'd, is esteem'd in epileptick Fits; the Dofe being from twelve Grains to a Dram.

The Way of Fifhing for the Tortoise.

There are three Ways of *Tortoise* Fifhing, *viz.* in coupling, with the *Pomet*. Spear, and when they come a-fhore. The *Tortoifes* begin to couple in *March*, and continue to *May*. I fhall not take Notice of all the Circumftances that relate to this Action; it will fuffice to fay, that 'tis done on the Water, fo that they are eafily difcover'd; and they are no fooner perceiv'd, than two or three People throw themfelves preffently into a *Canoe*, make towards them, and come at them with Eafe. They flip a Noofe a-round their Neck, or one of their Feet; or, having no Line, they lay hold of them with their Hand, by the Neck, where 'tis uncover'd by the Shell; and fometimes they take both of 'em together, but moft commonly the Female efcares, and the Males at that Time are very lean and hard Meat, but the Females very good.

The Spear for the *Tortoise* is much of the fame Sort as that for the *Sea-Cow*, only inftead of the barbed Iron, a Piece of fquare Iron of about half a Finger's Length, and very fharp, is faften'd to the Top of the Spear, to which is tied a Line; the Spear being thrown at the Back of the *Tortoise*, the Iron Head is ftruck half way into the Shell, which being of a hard bony Subftance, it fticks as firm as if fix'd in a folid Oak. The *Tortoise* perceiving himfelf ftruck, makes the fame Struggle to get loofe as the *Sea-Cow*, and the Spear-man ufes the fame Diligence to take him. Some fay that the Force abates proportionably to the Blood that is loft; but they are ignorant that the *Tortoise* does not lofe a

a Drop of Blood at the Place where it is wounded, 'till the Iron is taken out.

The Time of taking the *Tortoise* upon Land is from the first Moon in *April* to that of *August*; for when the *Tortoise* perceives the Inconvenience of its Bulk by its own Weight and great Quantity of Eggs, which are sometimes above two thousand, being forc'd by a natural Necessity, she quits the Sea, during Night, and comes to find out upon the Shore a proper Place to lay her Burthen in, or at least some Part of it; and having found out one convenient for this Purpose, which is always a Heap, or Nest of Sand, she contents herself that Night, in only taking a View of the Place, and retires gently into the Sea again, leaving the Business to be done the Night following, or very speedily; all the Day she feeds upon the Plants growing on the Rocks in the Sea, without being far distant from the Place where she is to lay her Burthen.

The Sun being upon the Declension, they may be seen drawing nearer to Land, and watching here and there, as if they mistrusted an Ambuscade: And as their Sight is very piercing, if they perceive any Body on the Shore, they will seek out for another Place wherein they have more Confidence; but if they see no Body, they come a-shore when 'tis dark. After having observ'd all Sides with great Diligence, they begin to work and dig in the Sand with their fore Feet, making a round Hole of a Foot broad, and a Foot and a half deep; which being made, they lay therein two or three hundred Eggs, as big and round as a Tennis-Ball. The Egg-Shells are soft as wetted Parchment; the White will not boil at all, tho' the Yellow hardens easily. The *Tortoise* remains above an Hour in laying her Eggs; and during that Time a Coach might drive over her Body, and she not stir from the Place. Having discharg'd her Burthen without Interruption, she covers the Hole so dexterously, and throws the Sand about every where, that it is extremely difficult to find the Eggs: That being done, she leaves 'em, and returns to the Sea. The Eggs are thus hatch'd in the Sand in about forty Days Time; at the End of which the little *Tortoises* being as big as young Quails, make strait to the Sea, without being shewn the Way. Those that are taken

by the Way, they fry whole, and so they are delicious Meat.

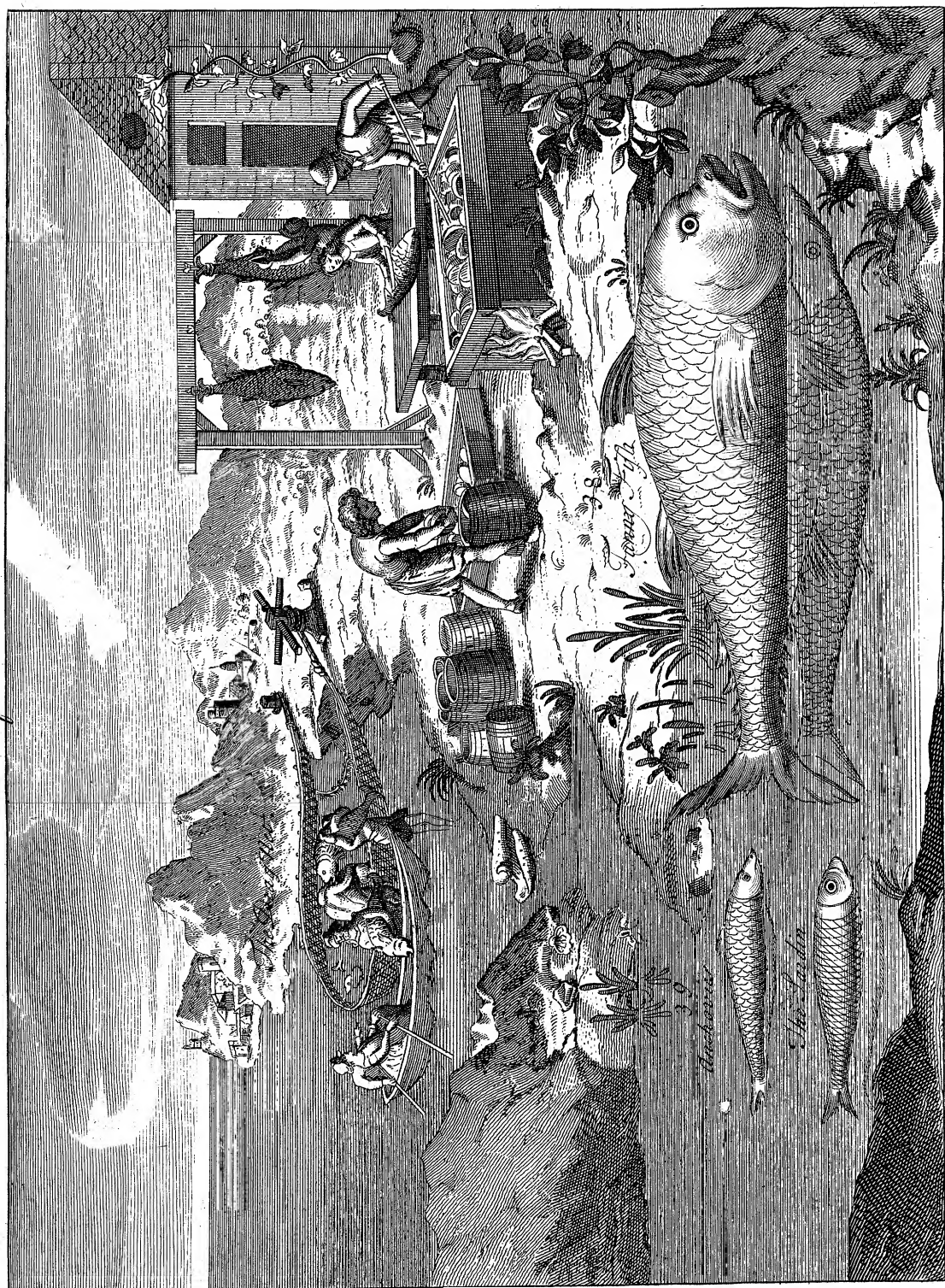
37. Of the Sea-Dog.

THE *Sea-Dog* is a pretty large Fish, that is found in several Parts, but especially in *Spain*, and at *Bayonne*. Of all the Parts of this Fish, we sell none but the Skin, because of the great Service it is of to the Workers in Wood, as Turners, &c. being very proper to polish withal. The true *Dog-Skins*, to be fine, ought to be large and broad, of a rough Grain, not too thick or too thin, but supply'd with Ears and Fins.

We bring besides, from the *Lower Normandy*, the Skin of a Fish that is very like the *Sea-Dog*, and which they call *Doucette*, or *Roufette*, the *Spotted Fish*, which some Workmen use instead of the Dog-Skin, tho' there is a good deal of Difference, because the Dog-Skin is very rough, and the *Roufette* very little so; and besides, the Dog-Skin is always brown, and the *Roufettes* are of different Colours, and constantly spotted on the Back with small Stars; besides, they are much less, which is the Reason why these Skins are very little us'd at *Paris*, and scarce any where else but in *Auvergne*. Those two Kinds of Skins are, over and above those mention'd, serviceable to other Tradesmen, as Sheathers and Case-Makers. We sell likewise another Fish-Skin, which has no other Use in *France*, *England*, and other Parts, than to make Knife-Handles of.

Mustelus, *Galeus*, or *Lævis*, is a Kind of *Sea-Dog*, which the *Italians* call *Pesce Columbo*, or a Fish that weighs above twenty Pounds; it is cover'd with a Skin that has no Scales, that is soft to the Touch, and of a whitish Colour, without Teeth, but the Jaws are rough, and it feeds upon Fish. The Fat is resolute and emollient.

There is another kind of Dog-Fish, which is call'd *Galeus Asterius*, sive *Mustelus Stellaris*, or the *Star Dog-Fish*, that is like the former, only for the Spots upon it that are in the Form of Stars. The Virtues and Uses of it are the same with the other. This Fish is call'd *Mustelus*, as if you should say, *Mus stellatus*



latus, because this Fish, in its Colour, somewhat resembles that of a Mouse or Rat, and every one of the Species are spangled with Stars.

38. Of the Tunny-Fish.

Pomet. THE Tunny, which the *Latins* call *Thunnus*, is a pretty large, heavy, big-belly'd Fish, which is plentiful in the *Mediterranean*, especially in *Provence*, and at *Nice*, from whence comes what we sell. There are likewise a great many of them upon the Coast of *Spain*. The Time of fishing for the Tunny is in *September* and *October*; and there are so many things peculiar therein, that it is by the Fishers shewn to Strangers. These two Months are the Time when the Tunny runs from the grand Ocean into the *Mediterranean*, towards the *Levant*, as the *Anchovies*. I shall lay aside what relates in particular to this Fish, to inform you, that when the Month of *September* comes, they cast their Nets made of small Cane, which they call the *Madrague*, which is divided as it were into several Partitions, or different Parts, of which the first is larger than the others; so that the *Tunnies* entering the larger first, do not return till the Net is full, which it is in a small Time, where the Fishery is good, as well from the Plenty as the Largeness of the Fish. The Net being taken out of the Sea, the Fish die, not being able to live out of the Water; then they hang them up in the Air, open them, take out their Entrails, and take off the Head; and having cut them in Pieces, broil them on large Gridirons, and fry them in Oil Olive; and after having season'd them with Salt, Pepper, and Cloves, and some Bay Leaves, they put them into little Barrels, thus dress'd, and ready to eat with fresh Oil Olive, and a little Vinegar, or to transport into several Parts, where this is call'd, by reason of the Preparation, *Sea Tunny*.

We have two sorts brought to *Paris*, which have no other Difference but that some have the Back-Bonetaken out, and for that Reason are call'd *Bon'd Tunny*, and are usually put up in little white Wood Barrels, broad at the Bottom, and narrow at Top; and that which is unbound is in little round Barrels. Chuse both

sorts new, firm, well done in good Oil, and the Flesh white like Veal. Its Use is very common in *Europe* and several other Parts of the World; as well because it is ready to eat, as because it is of an excellent Taste, like unto Veal. They commonly catch with the Tunny another Fish, which the *Provincials* call *Imperadro*, or *Emperor*, and *Dolphins* are also there to be seen, which are always two and two together, since they are accusom'd to fly into the Air at this Rate, which getting out of the Nets, suffer not themselves to be taken; where it is wonderful to see how they leap both together in one Moment, and fall again into the Sea at once, as if they were tied together.

Thunnus, vel Thynnus, or the Tunny, is a large, heavy, big-bellied *Lemery*. Fish, which is found plentifully in the *Mediterranean* Sea, in *Provence*, *Italy*, and *Spain*. It is cover'd with large, smooth, straight Scales, eats Acorns, and other sort of maritime Food. The Flesh is firm, very good to eat, being of a Veal Taste, but is salted to prepare and keep it for Transportation, when it is call'd *Tunny*. It is very nourishing, and of good Juice, and yields a great deal of volatile Salt. It is reckon'd proper to resist Poison, against the Bite of a Viper, &c. being eat, and applied outwardly. This Fish is call'd *Thunnus* from the *Greek* Word *θύεν* to be carried with Impetuosity, because this Fish moves so swiftly.

39. Of Anchovies.

BESIDES the Tunny, we sell *Anchovies*, that come from the same *Pomet*. Parts as the Tunny; and as we have considerable Trade with them, we chuse the least and newest, being white without, and red within, that are firm, and have round Backs, because they pretend that the large and flat ones are the *Sardins*. When the Barrels are made up, the Pickle ought to be well tasted, and Care taken that the Air do not affect them.

Anchovies are taken in several Parts, as in the River of *Genoa*, in *Catalonia*, at *Nice*, *Antibes*, *St. Tropez*, and other Places in *Provence*. They are taken most commonly in the Night, and always in *May*, *June*, and *July*,

July, which are the three Months in the Year that they come from the grand Ocean into the *Mediterranean* to go to the *Levant*. When they fish for the *Anchovies*, and would take a Quantity, they light a Fire upon an Iron Grate at the Poop of the Ship, to the End that the little Fish following the Light, may be the easier taken; but that which is very remarkable in this Fishing, is, that the *Anchovies* that are taken by means of the Fire, are not so good, or so firm, nor will they keep so well as those which are taken without it. The Fishery being done, they tear from the Head the Gills, or other superfluous Garbage; and this is the Difference betwixt them and the *Sardins*, where they are left in; and not as Mr. *Furetiere* says, because of the Gall, which he in his Book takes notice of to be in their Heads. As to the manner of ordering of them, they do nothing but range them in little Barrels of different Weight and Sizes, not weighing above five or six and twenty Pounds, in which they put a due Quantity of Salt with the *Anchovies*. We sometimes, but very rarely, have dried *Sardins*, prepared the same Way as red *Herrings*; but the little Consumption there is of them gives no Encouragement to the Dealers to make any Demands for them. Being at *Royan*, a little Town of *Xaintogne*, where there are a great many *Sardins*, several Fishermen assur'd me, that these Fish never swam but in Shoals, and that under the Conduct of a King, or Captain, like the Bees.

Apua, sive *Aphyra*, or the *Ancho-Lemery*. *vy*, is a little Sea Fish, as thick and long as one's Finger, having a thick Head. The Eyes are broad and black; the Body of a silver white, and reddish within, and the Back round. They do not swim but in Companies, and cling fast one to the other. These Fisheries are made in several Parts; and when the Fish are taken, they gut them, and take out of the Head what is apt to putrify, then salt them up in Barrels. The little *Anchovies* are valued more than the large ones. They contain in them a great deal of Salt and Oil. They are aperitive, and proper to raise the Appetite; but they serve more for Food than Physick. The *Sardin* is a kind of *Apua*, that is something larger and flatter than the *Anchovy*, but not so well tasted. The *Melette*, or *Sprat*,

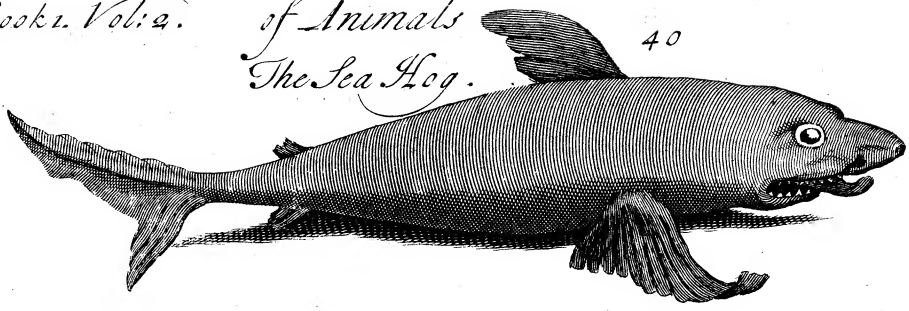
is a little Fish they eat in *Languedoc*, and partakes something of the Nature of the *Apua*, which is a Name given in general to these three little Fishes, and in particular to the *Anchovy*.

40. Of the Sea-Hog.

THE *Sea-Hog* is a large Fish very well known, the Use of which *Pomet*. is very considerable, because it is excellent Food; which is the Reason why some have rank'd this among the royal Fish. Of all the Parts of this, we sell none but the Fat or Oil aromatized, or plain, which is nothing but the Fat melted, and by the Addition of some Aromaticks, altered from its stinking Smell, and made pleasant. They assign to the Fat and Oil of the *Sea-Hog*, the Property of curing cold Humours. Some Apothecaries, by the Retort, draw from this Fish several Preparations, to which they attribute different Virtues.

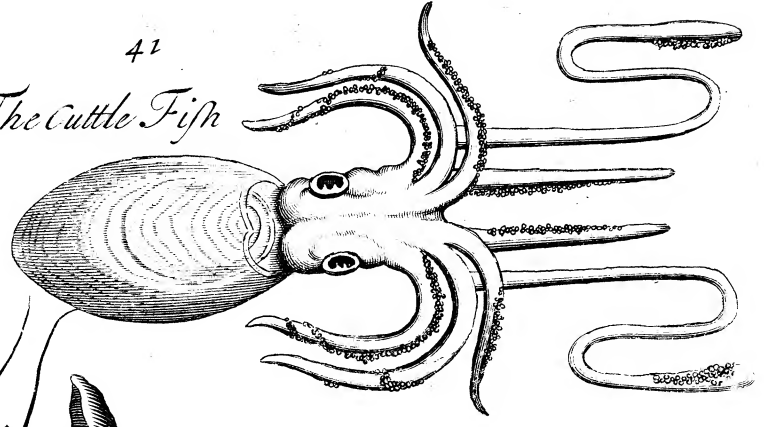
Delphinus, sive *Porcus marinus*, or the *Sea-Hog*, is a large nimble *Lemery*. Sea Fish, that is almost always leaping out of the Water, and swims with a vast Swiftneſs. They commonly call it *Simon*, quasi *simum rostrum habens*, as having a flat Nose or Snout. The Tongue is short, broad, fleshy, and in Motion; the Teeth little and sharp, rang'd like the Teeth of a Comb; the Eyes are large, but so covered with a Skin, that it appears only like the Apple of the Eye, yet the Sight is very fine; the Voice is like that of a Person crying; the Back is hollow'd, and bent outwardly. It swims by means of two Wings, or strong able Fins, which are set on at the Place of the Shoulders. It comes to its Growth in ten Years, and will live to thirty. *Pliny* relates several Stories, true or false, on this Subject. He will leap on board a Ship, usually attended with a Companion. These two Fish will make their Leaps so regularly, that they seem to be joined together. There are many of them taken in fishing for the *Tunny*. They are very good to eat, and yield abundance of Oil and volatile Salt. The Stomach dried and powdered, is proper for Diseases of the Spleen, and the Liver for intermitting Fevers. The *Sea-Hogs* are made almost

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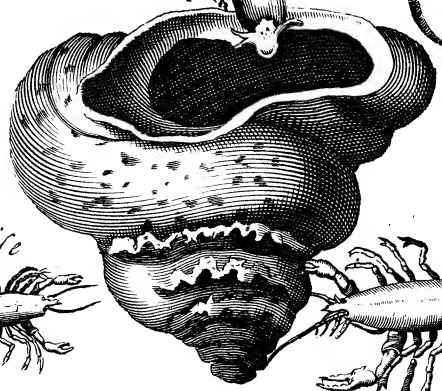
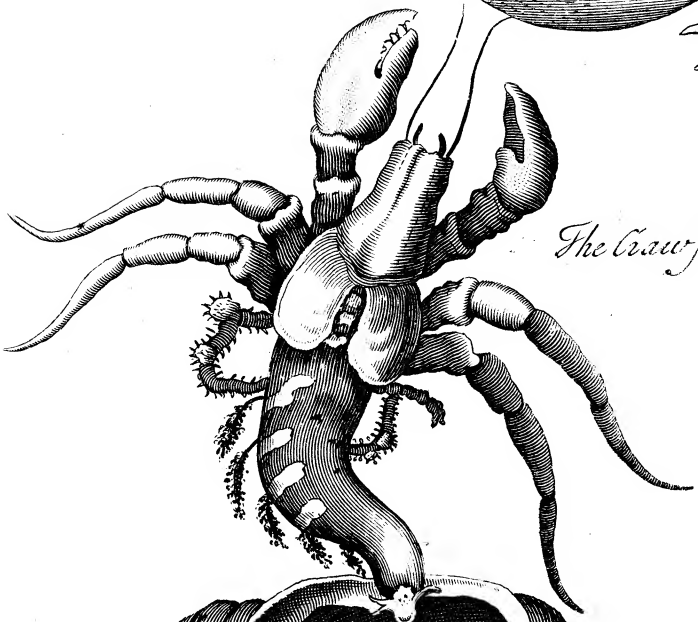


41

The Cuttle Fish



The Crawfish



42

The Crevise



43

Homarus



almost like the Dolphins, but they are not so little. The Fat of both is us'd to the same Purposes.

41. Of the Bone of the Cuttle-Fish.

Pomet. THAT which we now sell, and call the Bone of the *Cuttle-Fish*, and the *Latins*, *Os Sepiæ*, is the Back-Bone of a Fish very common in the Ocean, and also in the *Mediterranean*. They are very ugly Fish, and of a very surprizing Nature. They eat them in several Towns in *France*; as *Lyons*, *Bourdeaux*, *Rochel*, *Nantz*, &c. The Bone of this Fish is of different Sizes, though the largest never exceeds above half a Foot. The Bones are white, and hard on one Side, and soft on the other; for which Reason the *Goldsmiths* use them for casting. Some use the *Cuttle-Bone* to clean the Teeth with; but the main Use is for the *Goldsmiths*, and for those who cast *Venetian Lac*.

This Bone consists of a hard brown Shell on the Outside, with a thick, white, spongy, dry Pulp or Substance underneath it, which being rubb'd between your Fingers, will become a pure white, fine, subtil Powder, that being drunk in Water, helps the Asthma, and is good against Diseases of the Breast and Kidneys, expelling the Stone and Gravel, and curing a *Gonorrhæa*, taken for a considerable Time together. Outwardly apply'd, it helps Spots, Clouds, Films, Pearls, and other Impediments of Sight, and likewise dries up Rheums, and other watry Humours.

Sepia, the *Cuttle-Fish*, is a de-
Lemery. form'd Sea Fish, resembling much a *Polypus*. The Covering of the Back is a Sort of Shell, Scale, or Bone, as thick as one's Hand, an Inch thick in the Middle, but thinner on the Sides, light, hard without, and spongy within, very white, and something of a saltish Taste. They call it *Os Sepiæ*, or *Cuttle-Bone*. The *Goldsmiths* use it for Moulds to cast Forks and Spoons in. This Fish carries under its Throat a Bladder, or Receptacle, full of an Humour that is blacker than Ink, which it discharges into the Sea, when pursued, to intercept the Sight of the Fishermen. It has two kinds of Arms, or Trunks, fix'd to the Head, which serve it for swimming, and to take what it can catch.

Besides these, it has six Feet which have Teeth on the upper Part of 'em, and two much larger underneath. It lives on small Fish, is good Meat, and brought to the Table in several Parts of *France*. As to its medicinal Use, it is deterfive, aperitive, deficcative, proper to take away Freckles and Spots on the Face and Skin, to clean Teeth, provoke Urine, and bring away Stone and Gravel. Dose from half a Scruple to half a Dram. The Eggs or Spawn of the *Cuttle-Fish* provoke Urine and the Terms.

42. Of the Crevise, or Craw-Fish.

THE *Crevise*, says *Father du Tertre*, is a kind of small Crab, *Pomet.* of three or four Inches long, or more; one half of the Body of which is like a *Sea Locust*, or *Grasshopper*, but cloth'd with a Shell that is a little harder. Four Feet are like those of a Crab, two are Biters, one of which is not much bigger than one of the four Feet, and the other much broader than one's Thumb, that shrinks up strangely, and shuts the Mouth of the Shell wherein it lodges. All the rest of the Body is a sort of Pudding, in a pretty rough thick Skin, as thick as one's Finger, and half the Length, or more. At the End is a little Tail, made up of three small Nails or Shells, like the Tail of a *Sea-Grasshopper*. All that Part is full of a Substance, like that in the Shell of a Crab, but red; and being expos'd to the Fire, or set in the Sun, melts, and runs into Oil, which is a true Balsam for fresh Wounds, which I have made Trials of on several Persons with good Success.

They descend once every Year to the Sea Coast; but whether it is to wash, and to cast their Eggs, as the Crabs do, I know not: But this I know, that they go to change their Shells, which every one endeavours to find out according to his Size; and finding what may fit 'em, they run themselves backwards therein, and so clothe themselves a-new; and being arm'd like Soldiers with these foreign Shells, they march to the Mountains, and take up their Quarters among the Rocks and hollow Trees, living upon rotten Leaves and Fruit, where encreasing in Bulk, and the Shell becoming too straight for them, by

by reason of their Growth, they are obliged to go down to the Sea-Coast to change their Houses. The Curious, who have made Observations of what happens during the Exchange, have ingenuously own'd to me, they took a great deal of Satisfaction in the Sight; for they stop at every Shell they meet with, consider it diligently, and having met with one they believe for their Turn, they immediately quit the old one, and run themselves so swiftly backwards into the other, that one would think they were either afraid of the Injury of the cold Air, or ashamed to be seen naked.

Aristotle, who said that these Animals never fight, but for their Victuals, or when they couple, might have added, that they will fight for their Lodging; for if two of them meet at the same time stripp'd, to enter into one and the same Shell, they will bite each other, and battle it, till such time as the Weaker yields, and quits the Shell to the Conqueror, who having cloth'd himself with it, takes three or four Turns upon the Shore, and if he finds it does not fit him, he quits it again, and has immediate Recourse to his old one, and then seeks out for another; and thus they will change five or six times, till they meet with one for their Purpose. They carry in their Shells about half a Spoonful of clear Water, which is a sovereign Remedy against the Pustles and Blisters that the Drop of a certain Tree in the Mountains raises upon the Skin.

Cancellus is a sort of very small *Lemery*. *Craw-fish*, call'd the *Hermit*, or *Bernard the Hermit*, because it retires from the others, and enters into the first Shell it meets with. The Figure of his Body is longish, but in Size of the Bulk of a Spider, only that it is a little larger. It carries upon its Head two little, slender, reddish Horns; the Eyes are rais'd, the Mouth is set with fine Hairs, that may be called a Beard. The two upper Legs are bent up again, and serve instead of Hands to reach to the Mouth, where it has Teeth. They are found near the Rocks, and are good Meat, several eating them after they are wash'd and boil'd. They afford a great deal of volatile Salt, and are proper for Stone and Gravel, being aperitive.

In several of the *American Isles* they meet

with a kind of *Cancellus*, or *Craw-fish*, that is much bigger than that I have been speaking of, and that is three or four Inches long, and call'd the *Soldier*, because he is clothed and arm'd with a foreign Shell. Those who would know further, may be satisfied from the Reverend Father *du Tertre*, who has writ concerning this Animal, [*as Pomet has already taken Notice of.*] The Inhabitants of the Isles where this Fish is taken, make an Oil of them, by hanging them in the Sun, so that the Substance that melts from them make an Oil of a Consistence as thick as Butter, and of a very foetid Smell; the Virtues of which are wonderful in rheumatick Pains, to which the Inhabitants of the Country are very subject. They sell this Oil very dear, because it is very scarce in *France*.

43. Of the Sea and River Crab.

THERE are two Sorts of *Sea Crabs*, says Father *du Tertre*, *Pomet*. which are commonly call'd *Homars*, which differ not, but as to the Size of their Claws, some of which are as long and as broad as one's Hand, and much stronger than those of the *Crabs*, and grow to a vast Size, so that some are three Foot long. Their Flesh is white and more relishing than the *Crabs*, but it is harder, and more undigested. It is eat with Lemon, or Vinegar and Pepper. They find them in the Night with Lights on the Sands, or stony Places, from whence the Tide is retir'd.

There are no Parts of the great *Sea-Crab* used in Medicine, but the black Tips of the Claws, call'd *Cheli Cancrorum*, which are prepared either by Levigation or Calcination. The first is by beating them to a fine Powder, and grinding on a Marble with Rose-Water, or the like. The next Way is putting them in a Crucible, and burning them till they are white, and then reducing them into a fine Powder, as before. These Preparations are *Alcalies* in their own Nature, and such as Physicians call a fix'd *Alkali*. They cure Heart-Burnings, take away Sourness from the Stomach, absorb Acidities, and ease Pains in the Bowels, proceeding from sharp Humours. They are sometimes given with

with good Success in the Whites in Women and the *Gonorrhœa* in both Sexes. They are commended to cool, dry, cleanse, and disperse, and are good against Cholicks, falt Humours, &c.

As to the fresh Water, or River Crabs, we sell nothing but a little white Stone, made in Form of Eyes, from whence they take their Name, tho' very improperly, since they are nothing but little Stones which are found in the Head of the large River *Crab*. These Stones, which are called *Crabs Eyes*, or *Oculi Cancrorum*, are never found but in *May* and *June*, which are the Times that the *Craw-fish* leave their Shells. The *Craw-fish* or *Crevice Stones*, which we now sell at *Paris*, come from *Holland*: And, if we can believe a Physician of the *Poland* Envoy, who was a very honest able Man, and remain'd a long Time in *Holland*, he assur'd me, that what we sell now under the Denomination of *Crabs Eyes*, was nothing but a white Earth wash'd, and made into little Pastiles or Troches, and moulded with a little Instrument made for the Purpose, with Holes of proper Sizes to form it. To prove this, he assur'd me he saw two Persons at *Amsterdam*, who did nothing else but counterfeit these little Stones; so that now it is no longer doubted but the greatest Part of the *Crabs Eyes* made use of in the Shops is nothing else but an artificial Paste reduc'd to Powder; for *Crabs Eyes* are nothing but a little thin, hollow Shell; of which there are some of a large Bigness, as the *Chester Lobsters*, every one having two Stones in the fore Part of the Head, beyond their Eyes. In *Silesia* they have great Quantities of them, as also in *Poland*; and they are brought from *Dantzick*, *Hamburg*, *Denmark*, *Norway*, and *Sweedland*, and are found upon the Shore, almost every where of the *Baltick* Ocean.

There are several Preparations of them, but the levigated Powder is only us'd, and that chiefly to absorb Acids, open Obstructions, and cleanse the urinary Passages of Gravel; to provoke Urine, and bring away the Stone, and other tartarous Coagulations: They are sometimes calcined in a Crucible; and if they are rightly prepared, they ought to be yellow; for if they are of a black Colour, they are too much burnt, and good for nothing.

Vol. II.

44. Of the *Boutargo* and *Caviere*.

B*Outargo* or *Potargo*, is the Spawn of a Fish, which the People of *Pomet. Provence* call the Mullet, very frequent in the *Mediterranean*. The best is that which comes from *Tunis* in *Barbary*. It is likewise made at *Martegue*, eight Leagues from *Marsailles*. The reddest is most valued. They eat it on Fast-Days with Oil Olive and Lemon.

The *Caviere* or *Cavial*, which we have, comes from *Italy*, and is made in several Parts of the *Levant* from the Spawn of a Fish, which some have assur'd me was that of a *Sturgeon*, which I shall not assert to be so, not knowing it positively. I shall only say this, that they eat a great deal of it in *Italy*, and little in *France*, not being so well known, no more than the *Boutargo*, especially at *Paris*.

Mugil, *Cephalus*, or the Mullet, whereof *Boutargo* is made, is a Sea *Lemery.* and River Fish, which has a great Head, from whence it is called *Cephalus*, which signifies a Head; the Muzzle is thick and short, the Body oblong, covered with Scales. They find a Stone in its Head, which is called *Echinus*, or *Sphondilus*, because it is set with Prickles. This Fish is common in the *Mediterranean*; it swims with an extraordinary Swiftnes, and gives some Disturbance to the Fishermen. It is good Meat, and yields Abundance of Oil and Phlegm, with some little volatile and fix'd Salt. The Ventricle being dry'd and reduc'd to Powder, is proper to stop Vomiting, and strengthen the Stomach: This Stone found in the Head is very aperitive, and proper to dissolve the Stone in the Kidneys and Bladder. The Dose is from half a Scruple to two Scruples. The Spawn of the Fish serves to make *Boutarg* of, which is usually eat on Fast-Days.

45. Of the *Shark*, or *Sea-Dog*.

THIS Fish is call'd by the *Spaniards* *Pomet.* *Phyburon*, by the *Dutch*, *Haye*, and by the *French*, *Requiem*, because it devours

vours Men, and fo is the Occafion that *Dirges* are fung over 'em. It is one of the moft glutinous Animals in the World; nothing comes amifs to him; tho' it be a Log of Wood he'll fwallow it, provided it be but greafy, for he fwallows without chewing. He is furious and bold, and will throw himfelf upon the Shore, and remain on the Land, that he may have the Opportunity of catching the Paffengers. Sometimes he will bite at the very Oars with his fharp Teeth, for Rage and Madnefs that he cannot get at the Men which are in the Boat. There is found in his Head two or three Spoonfuls of Brain that is as white as Snow, which being dry'd, reduc'd to Powder, and taken in white Wine, is excellent for the Gravel. The Reverend Father *du Tertre* has made a long Difcourfe of this Animal, to which the Reader may have Recourfe. Some have given the Name of *Tiberon* to this Animal, and others that of the Fifh with two hundred Teeth; and he is fo furious, that with one Bite he will fnap off the Thigh of a Man.

Befides thefe Animals, and the Parts whereof I have treated, we fell, tho' very rarely, the Bone of the Head of the *Tiberon*; thofe of the Crocodile, Carp, Perch, &c. with the Jaws of the Pike; and, in fhort, the Druggifts are permitted to fell all Sorts of Salt-Fifh, either Wholefale or Retail.

Carcharias, Canis Marinus, or *Lemery*. the *Sea-Dog*, is an *American* Fifh, that grows to a large Size, fo as to be two Ton Weight. It is long and thick, cover'd with a rough Skin. The Head is very great, and like a Dog's; the Mouth long and broad, furnifh'd with Abundance of triangular Teeth, that are hard and fharp. The Eyes are large and round, the Body cartilaginous, the Tail about a Foot and a half long, forked; the Fins are great, it fwims in the deep Sea, but fometimes enters into the Mouths of the Rivers to purfue its Prey; it lives on Fifh and Flefh, but is very eager after that of Man's Flefh. *Johnfton* relates, that he found in one of thefe *Sea-Dogs* a whole armed Man. They are of feveral Sizes. Their Flefh is eat, but it is not good. The Skin is of great Ufe to feveral Artifts. The Head contains in it two or three Ounces of Brain, that is very white. The Teeth are

us'd to rub Children's Gums with, to make their Teeth cut.

46. Of Pearl.

THE *Pearls* are little round Bodies, that are found both in the *Pomet*. Eastern and Western Seas. There are feveral Sorts of 'em, which are more or lefs valued, according as they are large, round, and of a fine Water, and according to the Place from whence they are taken, as the following Account will fhew from Mr. *Tavernier*, who in his Travels has made a curious Enquiry after them. Thefe Pearls are found, fays he, both in the East and Western Oceans. And though I have never been in *America*, yet as well for the Reader's Satisfaction, as that nothing may be omitted, I fhall relate all the Parts where the Pearl Fifhings are, beginning with thofe of the East. Firft of all, there is a Pearl Fifhing about the Ifle of *Babren* in the Gulph of *Persia*. This belongs to the King of *Persia*, and therein is a good Fortrefs that entertains a Garrifon of three hundred Men. The Water which they drink in this Ifland, and that of the Coaft of *Persia*, is like falt Water, and of an ill Tafte, and what none but thofe of the Country are able to drink. As for Strangers, if they will have fresh Water, they muft pay for it; being only to be had a League or two off, by putting to Sea five or fix Perfons in a little Veffel, and drawing Water with a Bottle from the Bottom of the Sea, where for about two or three Foot at the Bottom the Water is fweet, and pleafant to drink. When they that dive to the Bottom of the Sea to draw up this Water have fill'd the Veffel, they give a Pull to a fmall Cord, which is tied to one of thofe in the Boat, which is the Signal to his Comrades to pull him up.

During the Time that the *Portuguefe* were poffefs'd of *Ormuz* and *Majcatè*, every Veffel that went out to fifh, was oblig'd to take from 'em a Passport, that coft five *Abaffis*, and they kept always feveral Brigantines to fink fuch as refus'd to take any. But fince that the *Arabs* have retaken *Majcatè*, and that the *Portuguefe* have no Forces upon the Gulph, every Man that fifhes, pays only to the King of *Persia* five *Abaffis*, whether he has Succefs

cess in his Fishery, or catches nothing at all. The Merchant also gives some small Matter to the King out of every thousand Oysters.

The second Fishery of Pearls is opposite to *Babren* on the Coast of *Arabia Fœlix*, near the City of *Catifa*, which belongs to a Prince of the *Arabs*, with all the Country thereabouts. All the Pearls taken in those Parts are mostly sold to the *Indies*; because the *Indians* are not so difficult to be pleas'd as we, but are easier impos'd upon. They likewise carry some to *Balsara*. Those that go into *Persia* and *Muscovy* are sold at *Bander-Congo*, two Days Journey from *Ormus*. In all the Places I have nam'd, and other Places of *Asia*, they admire the Pearl that is more upon the yellow Water, as well as the white, because they say the Pearl, with that Water, retains its Liveliness, and will not fade; but that the white will not last above thirty Years without losing its lively Colour; and not only the Heat of the Country, but the Sweat of the Person that wears them, will discolour them with a base yellow.

Before I leave the *Gulph of Ormus*, I must beg Leave to give an Account of that admirable Pearl, which the Prince of the *Arabs* had, who took *Mascate* from the *Portuguese*. He took then the Name of *Imeneet*, Prince of *Mascate*, but was call'd before that, *Aceph Ben Ali*, Prince of *Norevæ*. It is no other than a petty Province, but the best of all the *Arabia Fœlix*. There grows every thing that is necessary for human Life, but particularly the finest Fruits, and especially Grapes, whereof they may make excellent Wine. This Prince had the finest Pearl that was in the World; not for its Size, for it weigh'd not above twelve Carats, or its perfect Roundness; but because it was so clear and transparent, that you might almost see clearly through it. As the *Gulph* over-against *Ormus* was not above twelve Leagues over from the *Happy Arabia* to the Coast of *Persia*, and the *Arabs* were at Peace with the *Persians*, the Prince of *Mascate* came to pay a Visit to the *Kan* of *Ormus*, who treated him very magnificently, and invited to his Entertainment, the *English* and *Dutch*, and several other *Europeans*, of which Number I was one. When Dinner was over, the Prince took this Pearl from a little Purse that hung

about his Neck, and shew'd it to the *Kan* and all the Company. The *Kan* would have bought it for a Present to the King of *Persia*, and offer'd him two thousand Tomens, but it would not do. Since that, I pass'd the Sea with a *Banian* Merchant, which the Great *Mogul* had sent to that Prince to offer him forty thousand Crowns for that Pearl, which he would not take. This Story lets us see as to what relates to Jewels; those which are fine are not always brought into *Europe*, but rather carried out of *Europe* into *Asia*, because in all those Parts, they set a great Price upon precious Stones and Pearls that are of an extraordinary Beauty, except in *China* and *Japan*, where they do not mind them at all.

The next Place, in the Eastern Parts where there is a Fishery of Pearls is, in the Sea that beats upon a large Town, call'd *Manar*, in the Isle of *Ceylon*. These are the finest for their Water and their Roundness of all the other Fisheries, but there are rarely any found that exceed three or four Carats Weight. There are, moreover, upon the Coast of *Japan*, Pearls of a very fine Water, and very large, but uneven or rough; but they never fish for them, because, as I have been saying, the *Japoneze* do not value Jewels. Although the Pearls which are found at *Babren* and *Catifa* are a little upon the yellow, they will yield as good a Price as those of *Manar*, as I have observ'd; and throughout all the East, they allow they are come to their full Maturity, and will never change Colour.

I come now to the Western Fisheries, which are all in the great *Gulph* of *Mexico*, along the Coast of *New Spain*, and they are five in Number, lying in Order, from the East to the West, as follows. The first is along the Isle of *Cuba*, which is not above three Leagues about, and five, or thereabouts, distant from the *Terra firma*. It is in six Degrees and a half of Northern Latitude, and one hundred and sixty Leagues from *St. Domingo*, in the Isle call'd *Hispaniola*. This is a very barren Soil, and wants every Thing, especially Water, which the Inhabitants are oblig'd to fetch from the *Terra firma*. This Island is famous in the *West-Indies*, because it is the Place where there is the greatest Fishery of Pearls, tho'

the largest of them, exceed not five Carats Weight.

The second Fishery is in the Isle of *Margarit*, that is to say, the Isle of *Pearls*, a League from *Cuba*, which it very far surpasses in Bigness. It produces every Thing necessary for Life, only that it wants Water as well as *Cuba*, and they are forced to bring it from the River *Cumana*, near *New Cadiz*. This Fishery does not yield the most Plenty of all the Five that are in *America*, but is esteemed the Chief, because the Pearls which are found here excel the other in Goodness, as well for their Water as their Bigness. One of these last, which I have had in my Possession, being shap'd like a Pear, and of a fine Water, weigh'd fifty five Carats, and I sold it to *Cha Est Kan*, Uncle to the Great *Mogul*. Several Persons are surpriz'd, and wonder why we should carry Pearls out of *Europe* into the *East-Indies*, where they have so many: But they should take Notice that in their Fisheries of the East, they do not meet with such large ones as in the West; adding to this, that all the Kings and great Lords of *Asia*, will give a greater Price than those in *Europe*, not only for Pearls, but all sorts of Jewels, that have any Thing excellent in them, except Diamonds.

The third Fishery is at *Comogota*, pretty near the *Terra firma*. The fourth is at *Rio de la Hacha*, along the same Coast. The fifth and last is at *St. Martha's*, about sixty Leagues from *Rio de la Hacha*. All these three Fisheries, produce pretty large *Pearl*, but for the most Part they are ill shap'd, or irregular, and of a black or leaden Water. As for the *Scotch Pearl*, and those found in one of the Rivers of *Bavaria*, tho' there have been Necklaces of them valued at a thousand Crowns and upwards, yet they are not to be equalized with the oriental or occidental *Pearl*. Of later Years there has been a Fishery discovered in a certain Part of the Coast of *Japan*, and I have seen some of the *Pearl* which the *Dutch* have brought from thence, that have been of a fine Water, and large, but irregular.

Before I finish this Chapter, I will give you a Remark worth Consideration, in Relation to *Pearls*, and the Difference of their Waters; some being very white, some inclining to yellow, and others upon the black,

which are, as it were, of a leaden Colour. As to these last, they are met with no where but in *America*, and that comes from the Nature of the Soil, which is fuller of Mud than the Eastern Parts. In the Return of the *Cargo* which the *Sieur du Jardin*, the famous Jeweller, had in the *Spanish Galleons*, there were six *Pearls*, perfectly round, but as black as Jet, and which, one with another, weigh'd twelve Carats each. He gave me these, among other Things, to carry to the *East-Indies*, and see if I could dispose of them; but I brought them back again, and could meet with no Body that would look upon them. As to the *Pearls* which are inclin'd to yellow, that comes from hence, that the Fishermen selling the Oysters in Heaps, and the Merchant staying sometimes fourteen or fifteen Days before they open them to take out the *Pearl*, some of these Oysters, during this Time, do lose their Liquor, which wastes and stinks, and the Pearl becomes yellow from the Infections; which is so true, that all the Oysters that keep their Liquor, or Water in them, are always white; but they wait till the Oysters open of themselves; because if they should open them by Force, as we do ours here, they would go near to endanger and split the *Pearl*. The Oysters of the *Streights* of *Manar*, open naturally five or six Days sooner than those of the *Gulph* of *Persia*, because the Heat is much greater there, which is in the tenth Degree of Northern Latitude, than in the Isle of *Babren*, which is in the twenty seventh; and therefore among the *Pearls* that come from *Manar*, there are but few yellow ones. In short, all the Eastern Countries are much of our Minds, in Relation to Whiteness; for I have always made it my Observation, that they love the whitest *Pearl*, the whitest Diamonds, the whitest Bread, and the fairest Women.

Margaritæ, Uniones, vel Perleæ,
Pearls are little Stones almost round, *Lemery.*
 oval, or shap'd like Pears, compact, hard, smooth, white, shining, and of different Sizes, which are form'd in certain Oysters, whose Shells are of different Bigness: But there are some of them met withal that are three or four times as big as the *Rouen Oysters*. They fish for these *Pearl Oysters* in the Eastern and Western Ocean, as you
 may

may see at Length in Mr. *Tavernier's Travels*. [*From whence Pomet has given you a Relation.*] The Antients call'd these Pearls *Uniones*, because they believ'd there never was but one in an Oyster; but they were deceiv'd, for we sometimes find seven in a Shell. They are bred from a viscous, or saline, glutinous Humour, that is condens'd and putrefied in several Parts of the Fish. Instead of a particular Part assign'd for the Generation of *Pearl*, they breed indifferently in all the Parts of the Oyster, but are most commonly found in the largest and best shap'd Oysters rather than in others; tho' these Oysters are as good to eat as the common Sort. Sometimes we meet with Pearl in Muscles, and other Shell Fish, as well as in Oysters. All *Pearl* is esteem'd cordial, proper against Infection, to recruit and restore lost Spirits; but their chief Virtue is to destroy and kill the Acids, as other Alcalies do, and likewise to correct the Acrimony of the Stomach. *Pearl* is likewise good against a canine Appetite, a Flux of the Belly, the Hemorrhage, &c. The Dose from six or ten Grains to a Dram.

47. *The Manner of the Pearl breeding in the Oyster.*

Pomet. I Know, that on the Authority of several antient Authors, that were not well inform'd in the Nature of these Things, it is commonly believ'd that *Pearl* is bred from the Dew of Heaven, and that there is never above one in a Shell; but Experience has let us see the contrary: For as to the first, the Oyster never stirs from the Bottom of the Sea, where the Dew can never come; and as to the other, it is certain that there are found from six to seven *Pearls* in a single Oyster; for I have one in my Hands, where there are to ten *Pearls*, that were in the Course of Formation. It is true, they were not all of the same Size, for they breed in the Oyster just as Eggs in the Belly of the Hen; for as the largest Egg advances first to be excluded, the least stay behind, till they have acquir'd their Bigness; so the largest *Pearl* advances first, and the other lesser, not having attain'd to their Perfection, remain under the Oyster at the Bottom, till they are grown to the Size that

Nature has appointed for them; but we cannot say there is a Pearl in every Oyster, for there are several open'd in which there are none at all.

The Pearl-Fishing in the *East-Indies* is twice a Year; the first is in *March* and *April*, and the second in *August* and *September*; and the Sale of 'em is from *June* to *November*. The People are so poor, and live so miserably along the Coast on the *Persian Gulph*, that they must starve but for this Fishery; for they have neither Bread nor Rice, and eat nothing but Dates and Salt-Fish; and they must go twenty Leagues in the Country before they can meet with a Plant. The more Rain there falls in a Year, the better the Pearl-Fishing is. Many have imagined, that the deeper in Water the Oyster is found, the Pearl therein is the whiter, because the Water is not so hot, and the Sun finds greater Resistance to get to the Bottom; but that is only a groundless Fancy. They fish from four to twelve Fathom deep; and this Fishery is upon the Banks, where there are sometimes two hundred Barks, or little Vessels, at a Time, in most of which there is not above one Diver, or two at most.

These Boats go off every Day from the Coast before the Sun rise, with a Land-Breeze, which lasts till ten a-Clock in the Morning, and in the Afternoon they return with the Sea-Breeze, that constantly, about eleven or twelve at Noon, succeeds the other. The Banks upon which they fish, are five or six Leagues out at Sea, and when they come there, they fish thus for the Oysters: They tie a Cord under the Arms of those that dive, of which those that remain in the Boat take hold of the End. They tie to the great Toe a Stone of eighteen or twenty Pounds, of which also those that are in the Boat take hold of the End. They have besides a Net made like a Sack, whose Mouth is made round like a Circle, that it may keep open, and this Net is tied like the rest. Then the Diver goes down into the Sea, and as soon as he is at the Bottom, where he is quickly by the Weight of the Stone, he nimbly unties the Stone, which those in the Boat draw up again. As long as the Diver can hold his Breath, he puts the Oysters into the Net, and when he finds he can hold no longer, pulls the Cord that is tied under his Arms, which is

the

the Signal that he would come up, and those that are in the Boat draw him up as quick as possible. Those at *Manar* are more expert at fishing, and stay longer in the Water than the Fishermen of *Babren* and *Catifa*, for they put nothing in their Noses or Ears to keep out the Water, as they do in the Gulph of *Persia*.

After they have drawn up the Diver into the Boat, they take about half a Quarter of an Hour's Time to empty the Net of the Oysters. In the mean while the Diver recovers his Breath, and returns to the Bottom of the Sea, as before; which he does several Times for ten or twelve Hours together, and then returns to Land. To conclude this Discourse of Pearl, we ought to observe, that throughout *Europe* they sell by the *Carat*, which is four Grains, as well as that of the Diamond Weight; but in *Asia* they use several Weights. In *Persia* they weigh Pearls by the *Abas*, and an *Abas* is an Eighth less than our *Carat*. In the *Indies*, especially in the Great *Mogul's* Countries, and in the Kingdoms of *Golconda* and *Visapour*, they weigh by the *Ratis*, and that is also an Eighth less than the *Carat*.

Goa was formerly the Place where the great Trade of *Asia* lay for Diamonds, Rubies, Saphirs, Topazes, and other precious Stones. All the Mineralists and Merchants came here to sell whatever was fine from the Mines, &c. Here also was the great Commerce of Pearls from all Parts of *Asia*, as also of those from *America*. As for *Africa*, this Sort of Traffick is unknown to them, because the Women there are contented with Pieces of Chrystal, or some Grains of false Coral, Glas Beads, or yellow Amber, to make Necklaces and Bracelets of. As to the Pearl we usually sell, call'd *Seed Pearl*, which is for medicinal Uses, being proper to reduce into Powder by the Mortar or Muller, it ought to be white, clear, transparent, and true Oriental, rejecting all other Kinds, especially the *Scotch* or *Brussels Pearl*, it being nothing but an artificial or counterfeit Sort. The Use of Pearl is to put in Potions, or other Cordial Compositions. The Ladies of Quality use the fine ground Powder of it, to give a Lustre and Beauty to the Face. They make of it likewise, with Acids, &c. a Magistery and Salt, to which

they attribute large Virtues; besides other imaginary Preparations; as the *Arcanum* of Pearl, the Flowers, Spirits, Essences, Tinctures, and the like, to pick Fools Pockets; but the best and only useful Preparation of it, is the Powder well levigated.

48. Of Mother of Pearl.

WE bring to *Paris* great greenish Shells that are rough and un- *Pomet.* even on the Outside, and of a white, inclining a little to be greenish within, which they call, tho' improperly, by the Name of *Mother of Pearl*; not because the Pearl is bred in them, as a great many People believe, but because they are on the Inside of the Colour and Water of Oriental *Pearl*, as well as without, especially when they are prepar'd with *Aqua Fortis*. These Shells serve for several Sorts of fine Works: A great many People preserve and grind them into Powder, after which they form them into Troches, and sell them for prepared *Pearl*.

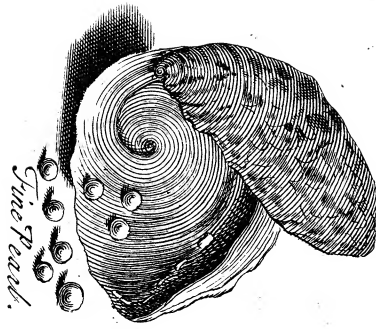
The *Mater Perlarum*, or *Nacre de Perles*, in *English*, *Mother of Pearl*, is a Kind of Oyster, of which there are several Sorts that are within of the Colour and Beauty of the oriental *Pearl*. I have preserved by me one of these Shells that weighs seventeen Ounces, and is as broad as both my Hands. Chuse the whitest, and of the best Lustre. They make of these Shells Snuff-Boxes, and a great many other fine polished Wokrs, that are neat, smooth, and very agreeable to the Eye. And likewise grind it to Powder on a Porphyry, and it is used by the Women amongst their Pomatums, for a *Fucus* to beautify the Face.

49. Of the Shell of the Sea Snail, call'd Concha Venerea.

WHAT we call the *Sea Snail Shell*, and the *Latins*, *Concha Venerea*, *Pomet.* is the little white Shell that is brought from several Parts of the *East* and *West Indies*, hung in Strings in the Nature of Beads, and big Bunches; so that in a Par

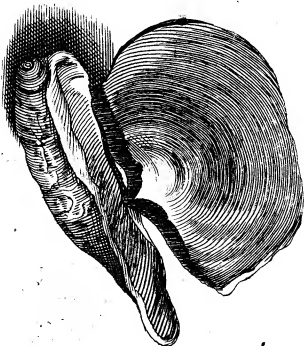
of Animals.

True Mother of Pearl.



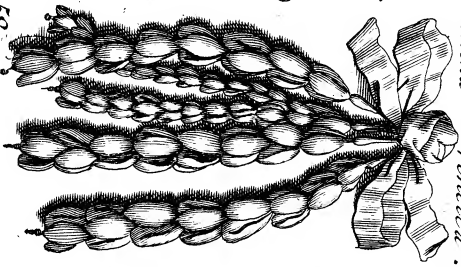
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False Mother of Pearl.



49

The Shell of the Sea Snail or Concha Venosa.

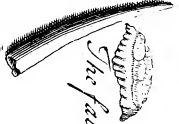


The true Smooth Shell.



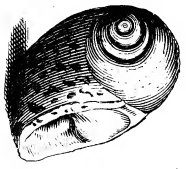
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The false Smooth Shell.



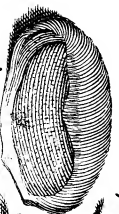
52

The Natica.



53

Sweet Hoop.



54

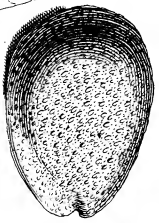
The Stone or Tringee Shell.



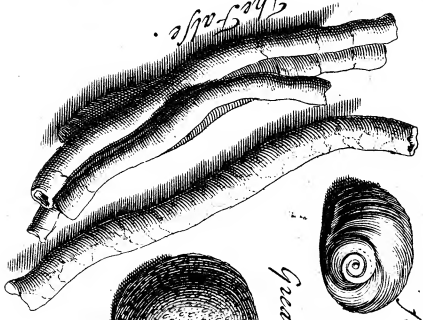
Small Sea Snail Shell.



Great Sea Snail Shell.



The Sassa.



51

The true Antallium.



a Parcel where there are several of these Bunches, there are more than a thousand of these little Shells. The *Siamois*, *Aroavargues*, and the People of *New Spain*, use these little Shells as we do Money here. They are us'd in Powder with us as Pearl, of which we chuse the least and the whitest. There are several Sorts of them described by *Johnston*, but we have only given the Figure of one, which we thought sufficient.

Concha Venerea, *Pourcelaine*, or *Lemery*. *Pucelage*, is a little *Sea Snail Shell*, something larger than a Pine Kernel, longish, white, and smooth, which is brought us from the *Indies*, strung several together like Beads. They serve the Natives there for Money. They make a better white than *Pearl*, and are us'd in Paint for the Face. Besides which, they are alkaline, and a good Sweetner of the Blood, but are not much us'd in Physick.

50. Of the Dog-like Tooth-shell.

Pomet. THE true *Dog-like Tooth-shell*, or *Dentalium*, not *Dentalis*, as commonly call'd, is a Pipe of about three Inches long, thick at one End, and small at the other, made like a Dog's Tooth. This Pipe is of a greenish shining White, adorn'd with straight Lines that go from one End to the other. It is hollow, light, of the Size of a Quill at the thick End, and smaller by Degrees, to the other End.

The true *Tooth-shell* is so rare, that it was never writ of by the Antients; but Mr. *Tournefort* gave me one, which I have caus'd to be delineated amongst the Pearl, which I am obliged to pass by in Silence, and speak to that which *Schroder* and several others have mention'd, that it is a small hollow Pipe of several Colours, which is very commonly found on the Sea Side, and sold in the Shops for the true *Dentalium*, and which the Apothecaries improperly use as such in several *Galenic* Compositions. Several likewise take the Bone in the Head of a Sea Fish for the true *Tooth-shell*, which some suppose to be a little Bone taken out of the Head of a Haddock or large Whiting. As to the Virtues of this, it is an Alkali, to be us'd as other testaceous Powders.

51. Of the Antalium, or Entaglia.

THE true *Antalium* is as little known as the former, since the *Pomet*. Apothecaries constantly, for the true *Antalium*, make use of a hollow Pipe, of different Colours and Sizes, not exceeding, still, that of a large Quill. These Pipes are found at the Bottom of the Sea, and upon Rocks, sometimes separated, and sometimes several of them together; they serve for several little Sea-Worms to creep into. And several Authors, especially *Rondelet*, an eminent Physician of *Montpellier*, calls these Pipes, *Tubuli Marini*. I shall not stop here to relate the long Discourse of *Renou* in his Book, but affirm, according to Mr. *Tournefort*, who is a Man of the greatest Perpicuity, as well in Plants as Shells, that *Europe* has bred these many Years, that the true *Antalium* is another sort of Pipe, which grows likewise at the Bottom of the Sea. This Pipe is about an Inch and a half long, and the Bigness of a large Quill at the thick End, and that of a little Quill at the other. It is hollow and thick at one End, and slender at the other. As to the Colour it is always white, but differently so, being found of a greenish white, and a more unpolish'd white, &c. As to the Choice of these two Pipes, there is no other Difference than to take the true; for the Virtue of the *Antalium* is nothing different from that of the *Dentalium*, they being both Alkalies and Driers.

52. Of the Umbilicus Marinus.

WHAT the *Latins* call *Umbilicus Marinus*, i. e. *Sea-Navel*, *Pomet*. is the Covering of a Cockle or Sea Snail, that is very common in the *Mediterranean*, which *Rondelet* calls *Cochlea Celeta*. This Lid is tied to one End of the Fish, which lodges in a Shell, and when the Animal retires into his House, he draws after him the Lid or Covering, which shuts the Mouth of the Shell so exactly, that the Sea-Water cannot enter. *Rondelet* informs us, with Reason, that the true *Umbilicus Marinus* is a Shell very different from this Covering, which he describes in

in the 38th and 39th Chapter of the same Book; but Custom has decided this Controversy in Favour of this Covering, which must be used when the *Umbilicus Marinus* is prescrib'd: It is of different Sizes. That which is most frequently seen is not much broader than a Farthing, and of about the Thickness of a Crown-Piece. It has its Denomination from the Similitude it bears to that Part of which it bears the Name. Some instead of this use the Shell of a Sea-Fish, call'd *Narita*, of which Mr. *Tournefort* gives the following Account.

The History of the *Narita* is very confus'd in both antient and modern Authors. That which *Rondelet* takes for the *Delian Narita*, is a Kind of Sea-Snail that is found in the *Mediterranean*, and which the Waves cast upon the Sands in the same Places with the *Solen*. These Snails are as big as the Land-Snails, and pretty like them in Shape; but they are much thicker, smother, and usually redder within: Outwardly they are met with of different Colours. *Rondelet* assures us, that the Sort he speaks of are mark'd or spotted with Black, but that this Kind is scarce. I have seen some all white, others that have been of a Rose-Colour, and several other Varieties. Together with the *Narita* some Apothecaries confound a small Plant, whose Leaves are round and thick, which the Antients call'd *Cotyledon*, or *Umbilicus Veneris*, Navelwort, because the Leaves pretty much resemble the Shape of the Navel. This Plant is pretty scarce at *Paris*, but very common in *Languedoc*.

53. Of Sweet-Hoof.

Pomet. THE *Unguis Odoratus*, or Sweet-Hoof, is likewise the Lid or Cover of a certain Shell-Fish call'd *Conchylium*; this is of different Sizes; but for its Shape it resembles the Claws of some Animals. It is thin, of a brown Colour, easy to burn, and of an unpleasent Smell, like that of Horn, which is quite contrary to its Name; and I cannot understand what Reason the Antients could have to call it *Unguis Odoratus*, as well because it has no Resemblance to Hoofs, if it has any to the Claws or Talons of any Animal, as because the

Scent is so far from being agreeable, that it is very stinking. *Dioscorides* calls this Covering *Unguis, sive Onyx*: This, says he, is like to that of the Purple-Fish. That which is found in the Lakes of the *East-Indies*, amongst the Spikenard, is of a very pleasent Smell, because the Fish to which it belongs feeds on this Plant. This Author prefers that which comes from the *Red-Sea* to that which is found on the Coast of *Babylon*, which is blackish, and much less. They burnt in his time one and the other for the Vapours, because, says he, that this Smell comes near to that of *Castor*; which confirms what I said, because the Smell of *Castor* and the other is very disagreeable: Wherefore it should no longer be call'd *Unguis Odoratus*, but only *Blatta Bizantia*, that is of *Constantinople*. As this is very scarce, they substitute in its Place the *Solen*, both Male and Female, whereof take this Description.

54. Of the Solen, or Finger-Shell.

THIS is a Shell of two Pieces, *Pomet.* that are join'd together at one End, from four to five Inches long, and from seven to eight Lines in Breadth, hollow like a Spout, arched above, thin, square at the Ends; and which, when join'd together, are like a small Trunk, or one of those Cases wherein they put a Knife and Spoon for the Table. *Rondelet* calls the Male *Solen*, that whose Shell is bluish, or of a Slate-Colour, and this is agreeable to *Apuleius's* Sentiment; and he calls the Female *Solen*, that which has the white or ruffet Shell, and which is generally less than the others. These two Species are very common in the *Mediterranean*, so that I have gather'd them upon the Sands in the Isles of *Hieres*, and on the Coast of *Martigues* in *Provence*, and in *Languedoc*, on the Coast of *Peraut* and *Cette*. They meet with, besides, a Kind of *Solen* on the Coast of *Normandy*, whose Shells are white, inclining to purple; but they are thicker than those of the *Mediterranean*, and about seven Inches long, and about an Inch broad.

Together with these Shells afore-mention'd, we sell the Inside of the Oyster-Shells, after they have been calcin'd to a Whiteness, and made

made into Troches. It is observable, that 'tis difficult to preserve or keep those Troches whole, because they fall into Powder like Lime. Oyster-Shells calcin'd make very good Lime, which is the Reason why the Dutch use nothing else. Some Authors, as *Etmuller*, a German Physician, says in a Treatise of his of Animals, that the Oyster-Shells burnt are very proper to cure pestilential Buboes, being applied upon them: He observes, likewise, that they serve instead of Pearl. Besides these Shells there are Abundance of others, which I have not mentioned for three Reasons: The first, because they are not used. Secondly, because I have little or no Knowledge of them. And, in the third Place, because Mr. *Tournefort*, who has the compleatest Knowledge of these Curiosities, designs in a little Time to give the Publick an exact Account of them, which he might do with a great deal of Ease, as well from his great Understanding, as the large Number he has by him, whereof I have seen above three thousand different Sorts; so that

from such a vast Variety, we cannot but admire the *Lufus Naturæ*, the Pastime, or Sporting of Nature.

Solen, Dactylus, vel Digitus, or the *Finger Shell*, because of its Resemblance to a Finger, is a small Shell, something larger than one's Finger, and an Inch thick, made up of two Pieces like the Muscle, but join'd together at the End, and hollow like a Pipe. This contains in it a little Fish of the same Shape, which when it would feed, puts the Head out at the End of the Shell that is not join'd together, and draws it in again like the Tortoise. This Fish is good Meat, when well wash'd from the Sand, whereof it is full. The Flesh is a little viscous, and it sometimes casts a Light like the *Phosphorus*. The Shell is alkaline, resolute, drying, opening, &c. being taken inwardly. The Dose is from half a Scruple to two Scruples. They use it externally in some Cerats and Ointments, in the Place of the *Dentalium*, which is scarce.

Lemery.

BOOK the Second of the Second Volume.

Of METALS.

P R E F A C E.

Of FOSSILS in General.

I Understand by the Word Fossil, every Thing that is found in the Bowels of the Earth; as Metals, half Metals, Minerals, Bitumens, Stones, and Earths. Now, as my Design is to begin with Metals, I shall explain myself, that by the Word Metal, I mean a Body that is hard, of a Substance alike in all its Parts, that may be melted by the Fire, is ductile, and may be extended by the Hammer, and is

different from Minerals, Bitumens, Earths, and Stones, as shall be shown hereafter. There is a great Dispute concerning the Number of Metals; some will have them to be nine, others eight, others seven, and others six, because they would have Quick-silver, Pewter, Glafs, and Founders Metal, to pass for Metals: But as this Opinion is not well grounded, because Glafs and Founders Metal are things made, I shall therefore agree with them who have concluded that the Number is seven, which answers to the seven Planets, and the seven Days of the Week; that is to say, Gold to the Sun, and to Sunday; Silver to the Moon, and to Monday; Iron to Mars, and Tuesday; Quicksilver to Mercury, and Wednesday; Tin to Jupiter, and Thursday; Copper to Venus, and Friday; and lastly, Lead to Saturn, and Saturday. Some Persons will have it that Mercury is but half a Metal; but as I think it not proper to discuss that Matter here, I shall refer the Reader to the Chapter of Mercury and Quicksilver, and begin here with Gold, which is the chief of all Metals.

1. Of Gold.

GOLD is a Metal yellow, soft, and malleable, the most noble, pure, precious, and weighty of all other Metals. Gold is brought from many Parts of the World, but it comes in largest Quantities from the Mines of *Caravana* in *Peru*, and of *Valdivia* in *Chili*, where it is so common, that 'tis used for the same Purposes as we do Pewter, Brass, or Iron; and tho' it is the richest Country for Gold of any that has come to our Knowledge, yet the Inhabitants are very poor, by reason of the Dearness of all Provisions. There are several other Places where Gold is found; but the greatest Quantity comes from *Peru*, because there it is most commonly found, and is refin'd with the least Trouble and Expence.

Africa, *Asia*, and *Europe* produce Gold of four different Sorts. The first is in Bits of different Sizes, which is so fine and soft, that you may make an Impression upon it with a Seal, as if it were upon Wax. This natural Gold is called *Virgin Gold*. The second is in Grains. The Third in Ore. The fourth in Sand. These three last Sorts are generally found after great Rains, in those Places through which the Torrents of Water have pass'd; and even in the Bottom of Rivers, especially such as have run thro' some Mines of Gold; as those of *Datzin* and *Diguwira* in *Afric*, where there are Negroes who make it their whole Employment to search for it in the Bottom of the Rivers. The greatest Part of the Gold we have in *France*, comes from *Peru*, whence it is brought in Wedges or Ingots to

Cadiz, by the Spanish Galleons. The Company in *France* bring from *Senega* a Gold which they call *En Aurillet*. This is in different Works wrought by the Savages, which they fetch from the Kingdom of *Galan*, which is near that of *Tombut*. The Dutch likewise bring Gold from *Sumatra*, and other Places of the *East-Indies*, together with their Peppers, and other Commodities of those Countries. There is yet another Sort of Gold, which is that of the *Alchymists*, of which I shall say nothing, because I have no Knowledge of it, leaving it to those who have time enough to amuse themselves, and seek the Ruin of their Families, in an Operation that does not seem to have much Possibility in it: But this may be said of them, that as Gold is the best of all Metals, so they call it by the Name of the *King of Metals*; and that by the Means of their Chymistry, they extract from it many Things that are useful for human Life. The first Preparation that is made of Gold is the refining of it, which is done after four Manners; to wit, by Antimony, which is the best; the second by the *Cupel*; the third by *Aqua Regia*; the fourth by the *Cement*. They call Gold by the *Cupel*, that which is refin'd by Lead, and Ashes deprived of their Salts, or Bones burnt, which is that the Gold-beaters use to make *Leaf Gold* of. That which is refin'd by *Aqua regia*, is call'd Gold by *Departure*, or Precipitation. Lastly, That which is call'd Gold by *Cement*, is that which is refin'd by the means of a Paste compos'd of Brick, common Salt, *Sal Ammoniack*, *Sal Gem*, and Urine. There is a fifth Refinement of Gold

by Mercury; but as these Matters are too long to be here decided, I shall refer the Reader to the several Books of Chymistry which treat thereof.

Regulus of Gold.

The *Regulus of Gold* is Gold refin'd by Antimony, and afterwards thrown into a Brass Mortar, warm'd and greas'd in the same manner as that into which is thrown the *Regulus of Antimony*. This Operation is seldom us'd because of the Charge, and is seldom done but by such as have the Curiosity of having Gold that is extremely fine.

Leaf Gold.

We call *Leaf Gold* that which is refined by the Cupel, and then by the help of a certain Kind of Skins, or Beasts Bladders, (which the *French Workmen* call *Baudruche*) is by Hammering reduced to Leaves extremely light and thin.

It is a surprizing thing to think that a *Gold-Beater* can reduce an Ounce of Gold into 1600 Leaves, each of which shall contain seven and thirty Lines square. And Monsieur *Furetiere* says, that they can reduce Gold into one hundred and fifty nine thousand ninety two Times its superficial Size; and the *Wire-Drawers* into six hundred and fifty one thousand six hundred and ninety Times. There are five Sorts of *Leaf Gold* amongst the *Gold-Beaters of Paris*: The finest and most durable is that which is sold to the Sword-Cutlers, wherewith they work their finely gilt and flowered Blades. The second is that which they sell to Smiths and Armourers to gild their Iron and Weapons. The third is that which is used in Gilding of Books. The fourth is used by Gilders of Wood, and Painters. The fifth is that us'd in Physick, which the Apothecaries put into several of their Powders and Confections, as well for the Virtue of it, as for Ornament.

They grind these Leaves of Gold, or the Clippings of them, which they call *Bracteolæ*, with Virgin Honey, and then put them into Muscle-Shells; and this they call Gold in Powder, or in the Shell. This Gold, so prepared, is used for Painting in Miniature.

Aurum Fulminans, or Crocus of Gold.

The *Aurum Fulminans*, or *Crocus Auri*, is Gold in File-dust dissolv'd in *Aqua Regia*, and precipitated into a brown Powder by Oil of Tartar *per Deliquium* poured upon the Dissolution. This Powder dried has much more Force, and takes Fire sooner than Gun-Powder. This Preparation of Gold is a Sudorifick very proper in the Small Pox, being given from two Grains to six. It is likewise good to stop Vomiting, and suppress the too vigorous Operation of mercurial Medicines.

Amalgamation of Gold, or Gold Powder.

The Powder, or ground Gold, is made by calcining Gold with Mercury and *Sal Ammoniack*; and this Calcination is called *Gold in Powder*, or amalgamated, and is us'd by the Gilders, because it spreads easily. There are some who omit *Sal Ammoniack* in their reducing Gold to Powder, and only make use of Mercury. There are several other Preparations of Gold; as Tinctures, Extracts, and the pretended *Aurum Potabile*. But since those are not receiv'd by all the World, I shall only say that which all agree in, that the greatest Property of Gold is to give all Sorts of Conveniences to him that is Master of it.

Gold, in *Latin*, *Aurum*, *Sol*, *Rex Metallorum*, is the most solid, Lemery. weighty, compact, and precious of all Metals. It is generated in many Mines in different Parts of the World; but the greatest Quantity is brought in Bars or Ingots from *Peru* to *Cadiz* by the Galleons of *Spain*. There is Gold likewise found in *Asia*, *Africa*, and *Europe*, sometimes in a Mass, which is called *Virgin-Gold*, sometimes in Grains, sometimes in Ore, sometimes in Dust or Spangles.

The first is called *Virgin-Gold*, because it comes pure out of the Mine, without any further need of Preparation, and is so soft as to receive the Impression of a Seal, and is found in greater and lesser Pieces.

The second is in Grains, but not so fine as the first.

The third is a Gold mix'd with other Metals, and the *Marcasite* or mineral Stone,

which are form'd together as a Stone, call'd *Gold Ore*. The fourth is a Gold in Dust, or Spangles mix'd with Sand.

The three last Sorts of Gold are generally found at the Bottom of Rivers after great Rains and Torrents of Water, and the Negroes either dive for it, or wash it out of the Sands.

Gold is refin'd several Ways; by the Cupel, by Departure, by Cementation, and by Antimony.

The refining of Gold by the Cupel and Departure, is done after the same Manner as that of Silver, of which hereafter.

Gold is refined by Cementation in the following Manner: They make a hard Paste with *Sal Gem*, and *Sal Ammoniack*, Chalk and Urine. This Paste is laid with Gold, *stratum super stratum*, in a Crucible, which is plac'd in a Furnace, and a large Fire being made about it, the Matter is left to calcine for ten or twelve Hours, that so the Salts may penetrate the Foulness of the Gold, and throw it off in *Scoria*; and so the Crucible being taken off from the Fire, the Gold will be found separated from the *Scoria*.

Gold is refin'd by Antimony after this manner following: They weigh the Quantity of Gold they would refine, and make it red-hot in a Crucible, by a strong Fire, and then throw in four Times the like Quantity of Antimony in Powder; soon after which the Gold will melt, for Antimony is full of a saline Sulphur, which not only very much augments the Heat, but piercing into the Metal, divides the Parts very speedily: Then the impure or gross Matters that were in the Gold are swallowed up by the Antimony, to which they readily join themselves, and so separate into *Scoria*, of which the more volatile Parts are dissipated into Smoke. They leave this Matter in the midst of a great Fire, till it sends forth Sparkles, and then they pour it into an Iron Mortar warm'd and greas'd, beating it about till the *Regulus* fall to the Bottom. When all is cold they empty the Mortar, and with a Hammer separate the *Regulus* from the *Scoria*. They weigh this *Regulus*, and put it into a Crucible over a strong Fire to be melted a second Time; then by little and little they throw in three times as much Salt Petre to purify the Gold from any of the Antimony that may happen

to remain. They continue a very violent Fire about the Crucible till the Fumes are gone off, and the Gold remains in Fusion clear and neat: Then they turn it into a Mortar as before; and when it is cold they separate the *Scoria* that are found underneath it; then they wash it, and wipe it with a Cloth. This *Regulus* of Gold is as fine as it possibly can be; and this Way of refining is preferable to all others, when they would cleanse Gold exactly from other Metals.

The Cupel will cleanse Gold very well from *Marcafites*, and even from such Metals as are called imperfect, but not from Silver. This Metal is so bound up and joined with Gold, that Recourse must be had to the Departure before 'tis possible to separate them.

The Departure separates Gold from Silver; but when the Gold is precipitated, it generally carries with it some Portion of Silver.

The Cementation often leaves the Gold undischarg'd of some Particles of other Metals, and the Salts entering into the Gold, dissolve a little of it. But Antimony is a Devourer which spares no other Metal but Gold; yea it will oftentimes gnaw off some light Portion of it, and by that Means create some Displeasure to the Refiner.

The Degrees of the Fineness of Gold are call'd Carats: A Carat of Gold is of the Weight of a Scruple, or twenty four Grains, and by consequence twenty four Carats make an Ounce.

Gold that is entirely fine is called Gold of twenty four Carats; because if you put an Ounce of such Gold to the Proof, it will not be diminished: But if an Ounce of Gold waste a Scruple in the Proof, it is Gold of twenty three Carats; if it waste two Scruples, it is Gold of twenty two Carats, and so of the rest. But many Refiners believe that there is no Gold of twenty four Carats; for let them refine it never so well, there will still remain some light Portion of Silver. Gold easily mixes and unites with Quicksilver, and this is what is called *Amalgama* of Gold. To make it, they put Gold cut into very minute Pieces into a Crucible, leaving it to be red-hot; to this they put eight times as much Quicksilver, stirring it with a small Iron Rod, and when they find it incorporated, they cast it into an earthen Vessel

fel full of Water, where it cools and remains soft as Dough. They wash it several Times to take away the Blackness, and they separate the superfluous Mercury, that is not well united to it, by putting it into a Cloth, and pressing it gently with the Fingers. They throw a great deal of Quicksilver upon Gold, that it may charge itself with it as much as possible; for the more Mercury enters into the Amalgama, the softer it will be, and the more pliable; but Gold can receive no more than a certain Quantity, because when its Pores are full, the rest is uselefs.

The Amalgama of Gold is us'd by the Guilders, because it is most easily spread over the Work prepar'd for it.

Gold, when refin'd, will be extended by the Hammer more than any other Metal. The Gold-Beaters reduce it into very thin Leaves, which they put into little Books. These Leaves of Gold are us'd for Gilding. They are us'd likewise in compounding of Medicines, and are preferable to all other Preparations of this Metal; not only because they are easily mix'd, but because they appear like Spangles, which beautify and set off the Composition.

As Gold is the most weighty, the most compact, firm, and beautiful of all Metals, so it has likewise been esteem'd the most perfect; and a numerous Sect of Philosophers, call'd Alchymists, have thought that the Production of Gold was the principal Design of Nature in all Mines; and that it had been obstructed from its due Course by some Accident, when it produc'd other Metals. But this Opinion is not approv'd by all; for one may very reasonably believe that Iron, Lead, Copper, and other Metals, that are call'd imperfect, have the Perfection which they ought to have, according to their own Nature, as well as Gold. This Sentiment of the Alchymists has led them into another Chain of Reasonings, which are not more just than the former: They believe that they can perfect the imperfect Metals, by supplying the Failure of Nature, and consequently that they can make Gold. It is this Operation which they call the Great Work, or the Search of the Philosophical Stone. To arrive at which, some of them make a Mixture of these Metals with some Matters proper to refine 'em, and calcine them a long Time in

a strong Fire, to arrive at their Perfection, as if Nature had wanted Heat to produce them.

Others put Metals into a Digestion upon the Fire, in saline and piercing Liquors, so to draw out the Mercury, which they say is a Matter dispos'd to be reduced into Gold.

Others seek for a Seed of Gold in Gold itself, and believe they shall find it there, as they do the Seed of a Vegetable in a Vegetable, and that of an Animal in an Animal. To accomplish this, they endeavour to open Gold by Dissolvents; and they put it to digest by the Fire of a Lamp, or the Heat of the Sun, or that of Smoke or Fume, or some other Degree of Heat always equal, which approaches nearest to that which Nature makes use of.

Others look for the Seed of Gold in the Minerals, as in Antimony, where they pretend there is a Sulphur and a Mercury like to that of Gold. Others hope to find it in Vegetables, as in Honey, Manna, *Rosa Solis*, and Rosemary; and others in Animals, as in the Spittle, the Blood, the Brain, the Heart, and the Excrements.

Others imagine they can catch the Seed of Gold, by fixing the Rays of the Sun after a certain Manner; for they, as several Astrologers, look upon it as a Thing uncontestable, that the Sun is Gold melted in the Center of the World, and that it is cupell'd by the Fire of the Stars that surround it; and that the Rays which it casts, and that shine on all Sides of it, are the Sparkles which rise from it after the same Manner that they do in refining Gold by the Cupel.

I should enlarge too much, if I would here repeat all the Fancies of the Alchymists, and the Manners of Working, which they have invented to arrive at the Perfection of their Designs. They have spar'd neither Time, Pains, Watching, Care, nor Money; and a great many of them having spent the better Part of their Life in this Labour, have so exhausted their Spirits, their Healths, and their Pockets, that they have fallen into a deep Melancholy, next to Madness, into incurable Diseases, and a most miserable Poverty.

But the ill Success of these Alchymists has not hinder'd other Persons from entering the same

same Lifts; the Hopes with which they flatter themselves, that they shall find the Means of making Gold does so far prepossess their Minds, that they become incapable of thinking seriously of any other Thing than what may contribute to the grand Work. They think no Body reasons so well as the Alchymists. They treat all People that don't come up to their Sentiments as Infidels, and they assume to themselves, exclusive of all others, the Name of the true Philosophers, or the Philosophers by way of Excellence. If they speak, 'tis by Monosyllables; if they explain themselves, it is in such obscure Terms, and heighten'd Expression, that very often they don't understand themselves. If they write, it is that it may not be comprehended. If they work, 'tis with Mystery, giving sublime Names to all the Ingredients they make use of. Gold is by them call'd the Sun; Silver, the Moon; Tin, Jupiter; Lead Saturn; Sal Armoniack, the solar Salt, or the Mercurial Salt of the Philosophers; Nitre is *Cerberus*, or the infernal Salt; the Spirit of Nitre, the Blood of the *Salamander*; Antimony, the Wolf, or the Root of Metals, or *Proteus*; and so of the rest. Their Preparations are all philosophical; and even the Bricks of which they build their Furnaces participate of that Quality. Besides, these Gentlemen look upon themselves to be far above all other Persons. They think they are the Depositories of the richest Secrets of Nature. They explain every Thing to their own Advantage; and according to their own Prejudices they call themselves the Holy Nation, and the elect People. King *Solomon*, according to their Opinion, was of the Sect of Alchymists, because Gold was so common in his Days. The Spirit of God which swam upon the Water, and is spoken of in *Genesis*, was the universal Spirit of which Gold is made. I could relate a great many more of their Opinions as extravagant as these, but I am afraid of growing tedious to the Reader.

That which the Chymists aspire to by their great Labour is, as I said before, to find out the Seed of Gold. Several of them pretend that they have attain'd to it, and are in full Possession of it, and it is this which they call the Powder of Projection. They attribute to it the Virtue of turning

any Metal whatsoever into Gold; but we see no Experiments of this pretended Fact: Those that have been made upon several Occasions, have been only Tricks or Slight of Hand, (some of which I have describ'd in another Place,) by which they throw Dust in Peoples Eyes, and engage them to blow the Bellows, and bear Part of the Charges with them.

It is easy to apprehend that the Seed of Metals is not to be found in them, because their Production does not arrive by Vegetation, as in Plants, but proceeds from a Congelation that is made by Waters, loaded with Salts of different Natures, and sulphurous Earth, as they have acknowledg'd, who have wrought in them.

The Alchymists say that their Seed of Gold is a Mercury which they have drawn from Metals; but besides that it is still a Question, whether they can draw a *Mercury* from Metals, it is not probable, that if they can draw it, it should be the Seed of Gold.

They affirm likewise, that the Seed of Gold is in every thing, and that it abounds in the Spirit of the Universe, and that Dew, Manna, and Honey, having the Impressions of the Spirit, the Seed of Gold may therefore be drawn out of them. We agree with them, that the Universal Spirit serves to the Production of Gold, as it serves to that of other Mixtures; but it is by an Acid that it contains, and not by a Seed, at least the Name of Seed is not given to this Acid; and then there is no more Reason to think that the Universal Spirit abounds in the Seed of Gold, any more than in the Seed of the grossest Mineral, the most useless Plant, or the most despicable of Animals.

Although all the antient Authors have esteem'd and prescrib'd Gold as the greatest Cordial, when taken inwardly, yet we do not find this Virtue to be in it; for Experience shews us, that it passes by Stool in the same Weight and the same Condition in which it was taken, because it is too hard to be penetrated and digested by the weak Acids of the Body: But it is proper, and very convenient for them who have taken too much Mercury, for it amalgamates with it in the Body, and fixes it in such a Manner, that it hinders it from acting as it did before. This

Mixture

Mixture is afterwards thrown out by the Stool or Urine. It is likewise good for Collick Pains of the Glaziers and Plummers, which are caus'd by the Vapours of their Lead.

Mercury clings so easily to Gold, that if a Person salivated with Mercury has any Pieces of Gold in his Pocket, they will commonly grow white in a little Time without touching them. But this Mercury is expell'd by putting the Gold in the Fire, and afterwards rubbing it with a little Oil of Tartar.

The *Aurum Potabile* of the Chymists is nothing but a Chimæra: They pretend that they can resolve Gold into its first Principles, and separate the Salt and Sulphur of it, so that they cannot be reviv'd into Gold any more than the Oil and Salt that are drawn from a Vegetable, can be put into the same Plant again. They call these pretended Salts and Sulphurs of Gold, potable Gold, because they can be dissolved in all Sorts of Liquors, and be taken as a Potion: They attribute to it the Virtue of being a Preservative against all Sorts of Illness, that it cures all Diseases, prolongs Life, and, in a Word, is the universal Medicine.

The noble Qualities of the *Aurum Potabile* are grounded upon many other *Chimæras*. The Alchymists and Astrologers affirm, that there is a great Correspondence, and a peculiar Intercourse between the Sun and Gold, by the Influences which they communicate one to the other; and that Gold is therefore consequently imprest with the Influences of the Sun: That the Sun is the Heart of this great World, and having that Quality, it ought, by the Means of Gold its Substitute, to display its Virtues over the Heart of the little World, which is that of Man. That the Quality of the Sun is to warm, revive, rejoice, and cleanse the Body from all ill Humours, and to render Life happy, long, and free from Distempers: That all their Principles being certain, there is no Room to doubt that Gold has these excellent Virtues; but that as this is a Body very hard and solid, its Qualities are so enclosed and concentrated, that they cannot be well perceiv'd without reducing them to their first Principles, which are the Sulphur and the Salt that they call *Aurum Potabile*.

It is not difficult to confute all these Arguments; they are so weak, and have so little Foundation, that they fall of themselves. *First*, The Alchymists take it for granted, without proving it, that Gold can be resolv'd into its first Principles, so that Salt and Sulphur may be drawn out of it; for this Metal is so solid, and so conjoin'd in its insensible Parts, that they could never find a Means to dissolve it radically, nor to separate any of its Principles, notwithstanding all their Pains and Application. They extend, they divide, they attenuate, they rarify it, into insensible Parts, by Means of their Dissolvents, but hitherto they have done nothing but disguise it; for it still remains entire Gold, and is ready to be reduced to its primitive State by Fusion. The other Preparations of Gold, which some Persons would put upon us for the Salt and Sulphur of this Metal, are found, when strictly examin'd, to be nothing else but Gold extremely rarify'd, dissolved and disguis'd by some ammoniacal Salt; but this Gold is revived again by freeing it from this Salt, and making it pass through the Fire.

And though in Process of Time they should come to be able to dissolve Gold radically, so as to extract the Salt and Sulphur, yet it would still remain a Question, what would be the Virtue of these Principles? Which could only be known by the Experiments that should be made with them; but there is Room to believe, that the Effects would be different from what they would persuade us. The intercourse of Gold with the Sun, and the peculiar Influences that they would have it receive from thence are Fancies, which carry no Probability with them: We see the Sun displays its Warmth and Rays upon all Bodies, without any Appearance of its making a Distinction.

Although there is no *Aurum Potabile* in the World, and that it is uncertain what Effect it would have could we find it, yet the very Name of *Potabile Gold* imposes upon a great many People, and gives an Opportunity to Mountebanks to cheat 'em with Impunity; for they draw Tinctures from some Ingredients, whose Colours come near to that of Gold, and sell it at a very great Rate, under the Title of *Aurum Potabile*. This Sort of Cheat is what generally succeeds

ceeds best; for Patients are prepossess'd in Favour of such Medicines as carry great Names, and have a specious Appearance: Men are likewise apt to cry up that which is dear. So the Name and the Price gains an Estimation. It likewise often happens, that these Tinctures, which go by the Name of *Aurum Potabile*, produce some good Effect, because they can take care to draw it off from such spirituous Menstruums, as comfort the Heart, and expel ill Humours by Perspiration; then it is cried up for a Miracle, and the Effect is attributed to the Gold, which has no Share in it, as having never enter'd into the Liquor.

Others, who are less Cheats than those I have spoke of, dissolve Gold in some spirituous Liquors after the common Manner; and as the Dissolution of Gold is always yellow, they make it pass for the true *Aurum Potabile*, altho' it is only Gold divided, and may be reduced to the same State that it was in before.

Besides, I cannot see that the Perfection of Gold must necessarily give it the Preference in Physick to other Metals; on the contrary, this Perfection, in an exact Contexture of the Parts, and a very great Solidity, is the Cause why this Metal is so much the less dispos'd to be digested and distributed into the Vessels of the Body, Iron, Mercury, and the other Metals, which are call'd imperfect, are much more tractable; for we put them into a Way of penetrating through the whole Body, and producing considerable Effects: What is Perfection with the Workman, is often an Imperfection with the Physician; and we make better Use of the mixt Bodies, whose Principles are naturally rarified and dissolvable, than of those which through too much Firmness are render'd as it were incorruptible.

2. Of Marcasites.

Pomet. UNDER the Name of *Marcasite*, according to Monsieur *Morin*, Doctor of Physick of *Montpellier*, is to be understood a metallick Mineral, which is loaded with Sulphur and Earth. This swallows up the metallick Matter which gets loose, and the Sulphur carries up with it

those Parts which being more subtil, mercurial, and less fix'd, are evaporated, so that there remains nothing but a Body, which is vitrified and useless, that they call *Letier*, or *Lytharge*.

Altho' from this imperfect Mineral, no Metal can be drawn by Fusion, whatever else be mixed with it to promote the Separation, yet it is much search'd into by all true Chymists, and prefer'd to that from which Metals may be extracted, which some improperly call *Marcasite*; and it is with just Reason, for the Principles not being yet well united, it is the less difficult to separate them, and consequently to determine and multiply them by their Operations.

It is for this Reason, that they who work in Mines throw them by, and separate them from the Ore, which is so much the better, by how much the less Earth and Sulphur there is in it.

It is easy to conceive, by what I have said, that each Metal has its proper *Marcasite*; which is, as it were, its Seed or Bud; and the more it ferments, and the nearer it approaches to a metallick Perfection, the farther it goes from the Nature of a *Marcasite*.

It must nevertheless be considered, that we sell commonly but three Sorts of *Marcasites*, which are those of Gold, of Silver, and of Copper. That of Gold is usually a little round Ball, very weighty, and difficult to break. That of Silver is almost of the same Make, but is not of so clear a Colour. That of Copper is either round or long, and oftentimes irregular, and of the Largeness of a Tennis Ball. This *Marcasite* is very hard, but if you leave it in a moist Place, the Moisture will penetrate it, and turn it all to Vitriol, and so it comes to nothing. When you break in Pieces these *Marcasites* of Copper, they are of a yellow Gold Colour, and radiated like a Sort of Sun. These are the Descriptions of the common *Marcasites*; but for those of Iron, Tin, and Lead, I cannot, to this Day, learn positively what they are. There are some who affirm positively that the Load-Stone is the *Marcasite* of Iron; the Bismuth, or natural Tin-Glass, that of Tin; and the mineral Zink, or Spelter, that of Lead. And there are others who say that Tin and Lead are the same Thing, and differ

for only in Colour, grounding themselves upon this, that the Antients call'd Tin White Lead, and Lead Black Lead, so that there cannot belong to them two Sorts of *Marcasites*; and my Sentiments must concur with theirs; seeing it has not been possible for me to find the natural Glass of Tin, as I shall shew hereafter.

It is remarkable, that tho' I say that we sell but three sorts of *Marcasites*, yet there are very few large Druggists Shops where there are not found several other Sorts, as the square, the flat, the grey, the black, the yellow, and the like. And this happens, because they give the Name of *Marcasite* to every thing they don't know, and take to be a Mineral; and the Buyer not knowing what it is any more than he that sells it, it happens that they who work it are deceived, and lose their Labour.

I have by me a white *Marcasite* full of Veins of Gold, which was brought from the *Isles*, and was affirmed to me to be the true Gold Ore.

The *Marcasite*, *Magnesia*, *Bif-Lemery*, *muth*, *Zinck*, *Spelter*, or *Tin-glass*, is a metallick Mineral, of which there are several kinds; for all Stones which contain more or less of a Metal are called by this Name. But three Sorts are more principally intended by the Word *Marcasite*; that of Gold, that of Silver, and that of Copper.

The two first are in little Balls, of the Bigness of a Nut, almost round, weighty, brownish without, but of different Colours within; for one has the Colour of Gold, the other of Silver, but both bright and shining.

The *Marcasite* of Copper is as large as a little Apple, round or oblong, brown without, yellow and crystalline within, bright, sparkling, and easy to be broken.

The *Marcasites* are taken out of the Mines. They contain a great deal of Sulphur and vitriolick Salt, especially that of Copper.

They are resolute, and are applied outwardly. The pure white Magistery of Tin-glass, made with pure Spirit of Nitre, being mix'd with Pomatum, is an excellent Cosmetick to whiten the Hands and Face, and is likewise good for Tetter, Ringworms, &c.

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3. Of Silver.

Silver, which the *Spaniards* of *Peru* call *Plata*, is the best and most perfect Metal next to Gold. It is white, hard, extensible, and very agreeable to the Sight. The most famous Mines for Silver are those of *Rio de la Plata*, that is, the *River of Silver*, and of *Potocchi* in *Peru*, which were discovered in the Year 1545. The Enclosure which bounds the Extent of them, is called *Potosi*, which is a Mountain situated in a flat Champain, rising in the Form of a Sugar-Loaf, above a League in Circuit below, and a Quarter of a League on the Top. The Silver coming out of the Mine is refin'd with Mercury or Quicksilver; and there have been some Years in which they have taken out of these Mines three hundred thousand Weight of Silver, pure and neat; and for the refining it, have made use of six or seven hundred thousand Weight of Quicksilver; for the more they refine it with Quicksilver, the better it is. There are several other Silver Mines in the *Indies*, in *Europe*, and even in *France*.

As Silver is of itself a very pure Metal, and especially when it has been well refin'd, the Chymists perform several Operations upon it; the first of which is its Purification.

Purification of Silver by the Cupel.

Silver purified by the Cupel, is Silver which is put into melted Lead, and by means of the Fire, and a secret Quality of the Lead, it works upon the Silver as the white of an Egg does upon Sugar when it is well refined. They granulate it after the Manner that we see it, which if it be proof, ought to be well refin'd, white, and very shining. This sort of Silver is made use of in several of the following Chymical Operations.

Of the Crystals of Silver, or the Vitriol of Luna.

They extract the Crystals of Silver from cupel'd Silver dissolved in Spirit of Nitre, and when the Moisture is almost evaporated, they

they take away the Crystals, which being applied to the Flesh, make an *Escar*, as the *Lapis Infernalis*.

Of the Lapis Infernalis, or the Silver Caustick.

The *Infernal Stone* is so call'd, because of its burning Quality, and its black Colour. It is made of cupell'd Silver dissolv'd in Spirit of Nitre, afterwards perfected by the Fire, and pour'd into a Mould, warm'd and greas'd on the Inside, where growing cold, it coagulates, and becomes a Stone of the same Shape that the Mould has given it.

This Stone ought to be made choice of in little Pieces of a Finger's Length, dry and solid, of a brown Colour, approaching to that of Iron, which will neither burn the Fingers nor Paper, unless they are moistned, and does not melt, when expos'd to the Air, without Difficulty, but will immediately burn any Place that is moistned as soon as it is laid upon it; which are the true Marks of the *Infernal Stone*, when rightly prepared with the cupell'd Silver. You ought to reject that which is green, and turns the Paper it is wrapt in of that Colour, that grows wet, and is easily dissolv'd in the Air, because it is made with Copper. Some use the common Plate Silver, or the Burnings of old Silver Lace, but the Stone they make is not so good as the other. This Stone is much us'd by Surgeons to burn and consume dead and superfluous Flesh; but special Care must be taken not to touch the sound Flesh, because the Stone will not fail to burn it, and cause an Extremity of Pain, especially if the Place be wet.

The *Lapis Infernalis* has the Property of staining Marble, and entering into it; so that upon sawing the Marble, the same Figure shall appear within that was on the Outside, and will never wear out. You work with it as if it were a Crayon, and the Colour it makes is black.

Of the Tincture of Silver.

The *Tincture of Silver* is a Dissolution of Silver in the Spirit of Nitre, which they precipitate by means of a Solution of Salt;

then they put this Silver *Calx* into Spirit of Wine acuated with volatile Salt of Tartar, and volatile Salt of Urine, and thence draw a beautiful, celestial, blue Tincture, very much recommended against the Epilepsy, the Palsy, Apoplexy, and the other Diseases of the Brain. The Dose is from six to fifteen or sixteen Drops.

Silver, in *Latin Argentum*, or *Luna*, is a Metal very compact, *Lemery*. weighty, hard, white, smooth, and shining, very extensible by the Hammer; and resisting the Cupel. It is taken from several Mines in *Europe*, but the greatest Quantity comes from *America*, and especially from *Le Rio de la Plata*, in *Peru*, where it is often found intermix'd with small white crystalline Stones, and with Gold, Copper, or Lead. Being taken out of the Mine, it is refin'd with Quicksilver, and then transported. They who would render it as fine as possible, refine it by the Cupel, and by Departure, in the following Manner:

They make the Cupel red-hot in the Fire, and they put four or five Times as much Lead as Silver to cupel it; they let the Lead melt, and extend itself, so that one Part of it, in a little Time, enters into, and fills the Pores of the Cupel; they cast the Silver into the midst of the Cupel, where it is not long before it melts; they blow the Fire till 'tis so strong, that the Flame encompasses the whole Matter; then all the Impurities unite with the Lead, because that Metal being sulphureous, it cleaves to and embraces the gross Bodies better than the Silver. The Fire drives the impure Mixture to the Circumference, in the same manner as Scum or *Scoria*, and the Silver remains fine and clean in the Middle. They know that the Refinement is perfected, when no more Fume arises; then they pour the Silver into a Mould, to let it cool, and this they call Silver of the Cupel. The *Scoria* of Silver mix'd with Lead make the Litharge, of which I shall treat hereafter. These *Scoria* consist of the Parts of some other Metals, or the Marcasites, which were mix'd with the Silver when it was taken out of the Mine.

It is to be noted, that Silver being thrown into melted Lead, runs sooner into a Fusion, than if it were put alone to melt in a Crucible,

cible, because the sulphureous Parts of Lead contribute to the speedy Fusion of Metals.

This Purification of Silver clears it from all other Metals but Gold, which likewise resists the Cupel, so that one cannot be altogether assured that this Silver of the Cupel is entirely Silver; therefore if one would separate it from any little Quantity of Gold that may be in it, Recourse must be had to another Operation, call'd the *Departure*, and this is the Manner of the Proceeding.

They melt together in a Crucible by a strong Fire, three Parts of Silver, and one Part of Gold: They throw this Mixture, when melted, by little and little into cold Water, where it coagulates into Grains; they throw away the Water, and dry these Grains, and then put them to dissolve in two or three Times as much *Aqua Fortis*; the Silver is dissolv'd, and the Gold is precipitated to the Bottom of the Vessels, because it cannot be penetrated by this Dissolvent.

It is to be remark'd, that in this Operation they mix Gold with the Silver, that if the Silver should contain any small Quantity of Gold, it might be drawn and precipitated along with that which was added. This precipitated Gold is called *Gold by Departure*, and they can easily turn it into an Ingot, by melting it in a Crucible over the Fire, with a little Borax, and pouring it into a Mould.

This Dissolution of the Silver is thrown into an earthen Vessel, in which there is a great deal of Water, and a Plate of Copper, where it is left for five or six Hours, or till all the Silver is precipitated, and sticks to the Copper Plate, and then they gather it together and dry it; and it is this they call the Precipitate of Silver, and sometimes the Calx, or Chalk of Silver. The Water in which this Precipitation was made, becomes blue, because of some Portion of Copper dissolv'd in it, and is called the *Second Water*; it is us'd to deterge, and to eat proud Flesh, being applied outwardly.

Silver also may be precipitated, by mixing Salt Water in the Dissolution; for the Sea Salt will produce the same Effect as the Parts of the Copper, that is to say, by pushing rudely against the Points of the *Aqua fortis*, which hold up the Particles of the Silver, it will break 'em, and make 'em let go their Hold, so that the Silver having no-

thing to support it, will, by its own Weight, fall to the Bottom.

The Silver so precipitated is cast into an Ingot, by melting it in a Crucible, with a little Salt-Petre, and afterwards pouring it into a Mould. This Silver is the finest of all, and of twelve Penny-Weight, if it has so much; but there is always some little Alloy of Copper to be found in Silver, let it be never so well refin'd.

That which is call'd a *Carat* in Gold, is a Penny-Weight in Silver; so an Ounce of very fine Silver is of twenty Penny-Weight, or twenty-four Scruples, which make twenty-four Times twenty Grains. This Ounce of Silver should not be diminished by the Proofs; but if it lose a Scruple by the Cupel, the Silver is but of nineteen Penny-Weight sixteen Grains; if it loses two Scruples, it is seventeen Penny-Weight twelve Grains; but they don't express themselves by twenty Penny-Weight in Silver, as they do by twenty-four Carats in Gold; for they double two Pence in Silver, and say Silver of twelve Penny-Weight, to express Silver of the utmost Purity; Silver of eleven Penny-Weight and an half, Silver of eleven Penny-Weight, to denote the Degrees of its Fineness, and so of the rest.

Plate Silver contains one Part Copper, to twenty-four Parts Silver; and Silver of the Cupel has but one Quarter Part Copper, to twenty-four Parts of Silver.

They beat the purest Silver, and reduce it into very fine and thin Leaves, which we make use of in Medicine. One may likewise use the Precipitate of Silver instead of these Leaves.

Silver is proper for those who have used too great a Quantity of Quicksilver, either by Frictions, or taken inwardly, for it binds or amalgamates itself with it in the Body, and depriving it of its Weight, takes away its Virtue. It may be taken from four Grains to a Scruple, and a larger Dose may be given without Fear of any Danger. It is pretended by several Authors to be an infallible Medicine for Diseases of the Head and Brain; but Experience shews us, that it is of no Use in such Cases.

The Astrologers and the Alchymists call it *Luna*, because they imagine this Metal to be of the same Matter as the Moon, and that

it receives continual Influences from her for its Nourishment.

4. Of Iron, or Mars.

Pomet. **I**RON, which the Chymists call *Mars*, because of the Influences they pretend it receives from that Planet, is a Metal the hardest, driest, and most difficult to melt of all others. It is compos'd of an Earth, a Salt, and a Sulphur, ill digested, and ill united, which makes it subject to be rusty. There are Mines of Iron in *Spain, Germany, Sweden, and England.* The best in *France* are those of *Champagne, Lorain, and Normandy.* There are some in *Burgundy, Berry,* and other Places. An Iron Mine is sometimes found within an Inch of the Surface, sometimes one, two, three, four, five, or six Foot deep. The Ore is found in different Manners, sometimes in Pieces, and sometimes in Sand. I shall not discourse here of finding out Mines by the magical Rod, which is of Hazel, because Monsieur the Abbot *de Vallemont* has lately written a very exact Treatise about it.

The Manner of taking Iron from the Ore, and making it into cast Iron, commonly call'd Sow-Metal.

After the Ore is taken from the Mine, they wash it in a running Water, to separate the Earth from it, and then carry it into large Furnaces, where covering it with Coals, Flint-Stones, and Potters Clay, or Earth, by the means of two large Pair of Bellows wrought by a Water-Mill, it melts like Lead; and after scumming from it a Dross, which when cold becomes like Glafs, they stay the Bellows, and with an Iron Bar open a Hole which is in the Bottom of the Furnace, and immediately comes out as it were a Stream of Fire, which runs into Holes made in the Nature of Moulds, of six, seven, to ten Foot long, and a Foot broad. The Iron thus thrown into these Moulds, is what the Smiths call Sow-Metal. 'Tis to be remark'd, that when they would make Cannon-Bullets, Mortars, Weights, Backs of Chimneys, or other Works, of this Sow-Metal, or rather cast Iron, they

take up the running Metal in great Iron Ladles, to put it into Moulds made in deep Sand, or else of the same Matter, that is to say, of cast Iron.

It is also to be observ'd, that the finer the Work is to be, the longer is the Metal to remain in Fusion; for the Matter continues but twelve Hours for the coarser Works, and fifteen or eighteen Hours for the other. The cast Iron of *France* cannot be touch'd by the File, as that of *Germany* and other Places, but must be polish'd with Mafons Dust, or Emery.

Of Iron in Bars, and other Kinds.

When they would reduce this Metal into true Iron, they take one of these Lumps of Sow-Metal, and carry it to a Sort of Forge, which has Turf of Earth in the Middle, where is a Hole, into which the Matter flows as it melts. They melt the Metal by the Means of Charcoal, and two great Pair of Bellows, which are mov'd by Water. As this Matter melts, the Refiner stirs it with an Iron Bar; and the more vigorously the Matter is stir'd, the more kindly will the Iron be, and the better qualified. After it is well stir'd, they carry the Matter which is harden'd, with large Tongs, to an Anvil, where, with a great Hammer, they beat it, to force the Grease out of it, or rather the Earth or other foreign Matter that might have remain'd in it; and then the Iron is made, and need not be refin'd again, but will endure the Filing. When they would reduce it to Bars, or any other Fashion, they take this Mass, which the Workmen call the *Piece*, and carry it to another Forge, and by the Help of Charcoal, and two Pair of Bellows wrought by two Men, they make it red hot, and then carry it to the Anvil, and with a wooden Hammer, with Iron at the End of it, they make it as long and as thin as the Hammerer pleases. There is one Thing remarkable, that is of no small Consequence, which is, that seeing the Hammerer can reduce but half this Piece into Bar, because he must hold it fast by the other Part, he therefore, to cool it the sooner, that he may go to work upon the other, throws it into Water; and this is the Cause that the *French* Iron is brittle: But this might be easily remedied, by letting it cool of
it

itself. It may be objected, that it is not always the quenching it in Water that makes it so churlish and brittle, but it proceeds oftentimes from the Mineral, or from its not being well stir'd. I don't disagree to this, but there is a Proverb which says, *Ill to Ill can never be good*; therefore what can easily be remedied, ought not to be made worse. And this is the Manner of making Iron into Bars.

Of Iron in the Gad, and of Iron Wire.

Iron in the Gad, or Rod of Iron, is made from Iron in the Bar, which has been heated in a Kind of Furnace, and by Steel Mills cut into the Shape and Figure we see it in. The *Iron Wire* is made of these Rods drawn through little Holes, after the Manner that they make Wax-Candles: They begin with the largest Hole, and finish by the little one, still diminishing the Size of it.

Of Iron Plates, and of Black and White Iron.

The *Iron Plates* are made of Bars heated and made thin with Hammering. There are two Sorts of Plates, the great and small. They make the *Black Iron* by beating the Plate with smaller Hammers: But besides this, in *Germany* they make a white Iron of which they make several Utensils. This is a soft Iron reduced into thin Plates, and afterwards covered with Tin, in which Operation it is said they use *Aqua fortis*. There is white Iron made at *Nevers*; but that of *Germany* is most esteemed, because it is more white and brighter, and will not rust as the other.

Of Steel.

Steel is an Iron that has been melted several Times, and quench'd in common Water, or in a Water compos'd of several Druggs, as shall be shewn hereafter.

The best *Steel* is that which comes from *Germany*, and is called *Steel of Carma*, from a Village in *Germany*, called *Kernent*, where the best *Steel* is made. This Sort is called *Steel of a double Mark*, and is used in making such Instruments as are extremely fine; as Lancets, Razors, Graving Tools, &c. The second sort is that they call *Rose Steel*, because when 'tis broken there appears some-

thing in it like a little *Rose*, of the Colour of the Eye of a Partridge; and besides, the Casks that they come in are marked with a *Rose*. This *Steel* is in little Bars from one Foot to two Foot long, and half an Inch thick. There are likewise several softer Sorts of *Steel* which are but the Refuse of the *Rose Steel*, which some call *Steel of the single Mark*. We have likewise *Steel* from *Hungary, Italy, and Piedmont*. There are likewise several Sorts made in *France*, as those of *Vienne*, of *Rive in Dauphin*, or *Clamecy in Auvergn*, of *St. Disier in Champagne*; and it is likewise made at *Nevers*, and at *la Charité*; and this they call *Common Steel*.

But of all the Sorts of *Steel* in *Europe*, there is none that comes near to that of *Kernent* for Goodness, because amongst the hundred and fifty Iron Mines that the *Germans* are possess'd of, there are no People but those of *Kernent*, that know the just Quantity of Arsenick, Tar, Orpiment, Sublimate, Antimony, white Coperas, and other Druggs, of which they compose their Water to dip it in: And this, in few Words, is the Reason why no good *Steel* is made but in *Germany*, and that many Persons ruin themselves by endeavouring to counterfeit it. But as to the tempering of common *Steel*, they make use of nothing but common Water.

There was formerly a *Steel* which came from *Damascus*, and was very good; and if we will believe Mr. *Furetiere*, the Temper of it was made by the Impressions of the Air, when a Horseman riding full Speed held it in his Hand and brandish'd it in the Air. He also says, that they temper it by whetting it upon a moist Goat's Skin.

Good *Steel* ought to be brittle, of a fine Grain, and as white as it can be made. The Chymists make several Operations with it, of which hereafter. As for the Filings of *Steel*, they are of some small Use in Physick, and the best and most natural is that of Needles; its Proof is by putting it upon a lighted Candle; that which burns by halves, and puts out the Candle, is mix'd with the Filings of Iron.

Of the Saffron of Mars, or the Crocus Martis.

The *Crocus Martis*, which is called aperitive, is a Preparation of Iron or *Steel*, which

is made after three Manners: *First*, by exposing Plates of Iron to the Dew. The *Second* is by sprinkling the Filings of Iron with Rain Water, or Water mix'd with Honey; and after some Time you shall have thence a Rust of a brown Colour. These Preparations of *Iron* or *Mars* are very long, but very good for the Diseases hereafter mention'd. But as these two Sorts, as I have said, require much Trouble, and have but a bad Colour, they chuse rather a *third* Way, which is to take a Piece of Steel, and take a white or flame Heat of it in a Smith's Forge, and then applying to it a Roll of Sulphur, melt it down, and so melted, put it into a Crucible together with Sulphur, and reduce it into Powder of a beautiful red Colour: Others use the Filings of Iron instead of Steel.

The aperitive *Saffron* of *Mars* is commonly called *Crocus Martis aperitivus*, or *aperiens*, and is an excellent Remedy for the Dropsy, and to cure the Green-Sickness. The Dose is from ten Grains to forty in some Opiat, Conserve, or Lozenge, or, as Mr. *Le-mery* says, with some Purgatives.

Of the astringent Saffron of Mars.

The astringent *Saffron* of *Mars*, otherwise *Crocus Martis Astringens*, is one of the former Preparations of *Mars* wash'd several Times with Vinegar, and afterwards put into a Crucible, and by a forcible Calcination for five or six Hours, is reduced to a reddish Powder, but not so beautiful as that above.

The Use of this *Crocus* is to stop Blood when voided, either above or below. It is taken in a like Dose as the former, in Medicines proper for the Malady. The Ancients have given both of these the Name of *Crocus* or *Saffron*, from their reddish Colours.

Of the Salt or Vitriol of Mars.

There are two Sorts of *Salt* of *Mars*, or *Iron*, but the best is that which is made by putting the Oil of *Vitriol* and Spirit of *Wine* in an Iron Pan, and when it has staid there three Weeks or a Month, you will find at the Bottom a greyish Salt, which you must dry, and then preserve it carefully. The other *Salt* of *Mars* is made by putting the

Filings of Steel into distill'd Vinegar, proceeding in the same Manner as you would make Salt of *Saturn*, as shall be shewn hereafter. The first *Salt* of *Mars* is an excellent Remedy against Obstructions. The Dose is from four to twelve Grains in any Liquor proper for the Distemper. As for the Choice of it, the whitest and driest is the best.

Of the Oil of Mars.

They call improperly the *Oil* of *Mars*, or *Iron*, a Salt of Iron resolv'd into Liquor in a Cellar. Some People use this Oil as the Salt, with this Difference, that they do it in a larger Dose.

Of the Crystals of Mars.

They extract the *Crystals* of *Mars* by putting the Filings of Steel in Water, and putting upon it a good Spirit of *Vitriol*, and by putting it in a Cellar; they draw thence *Crystals* of a greenish Colour; which being dried, may be made Use of to the same Purposes as the Salt or the Oil, but they must be given in lesser Quantities, because of their great Acrimony. Some Persons pretend, that by a Retort they can draw a Spirit of *Vitriol* from these *Crystals*: But as this Spirit must be very weak, I would not advise any Body to trouble themselves about it.

Of the Tincture, or Syrup of Mars with Tartar.

They draw from the Rust or Filings of *Iron*, by the Help of *Tartar* and boiling Water, a blackish Tincture; which after having been evaporated and reduced to the Consistence of a *Syrup*, is what they call *Tincture*, or *Syrup* of *Mars*; others cause almost all the Moisture to evaporate, and so make that which we call the thick *Tincture*, or the Extract of *Mars*.

They attribute to these Tinctures the Property of being very good Aperitives; their Doses are different, for the thicker the Tinctures are, the less of them must be taken; so the ordinary Dose may be from a Dram to half an Ounce.

Of the Tincture, or astringent Syrup of Mars.

They likewise draw from the Rust of Iron, with the Lees of Wine, or the Juice of Quinces, or any other astringent Juices, a *Tincture*, *Syrup*, or *Extract*, to which they attribute a binding Quality. The Dose is likewise according to their Thickness, but the common one is from ten Grains to half a Dram in some astringent Liquors.

Of Mars Diaphoretick.

The *Mars Diaphoretick* is made of the Rust of Iron mix'd with an equal Quantity of Sal Armoniack, and by a subliming Vessel, they draw thence Flowers which they dissolve in Water, and then precipitate them by pouring upon the Dissolution the Oil of *Tartar per deliquium*. They dry this Powder, which being dried is what they call *Mars Diaphoretick*, altho' the diaphoretick Virtue, which it may have got from the Sal Armoniack is not very great, because it is almost all carried away by the Water.

Iron, in Latin called *Ferrum* or *Lemery*. *Mars*, because the Astrologers pretend that this Metal receives Influences from the Planet of that Name, is a Metal very hard, dry, and the most difficult to melt of all others. It is naturally compos'd of a vitriolick Salt, of Sulphur and Earth, very ill digested, and bound together, which makes it rust so easily. There are several Mines of it in *Europe*, and especially in *France*, in *Champagne*, *Lorrain*, *Normandy*, *Burgundy*, and *Berry*. They take it up sometimes in a *Marcasite*, that is of the Bigness of Pig Nuts, and of the same Colour, streak'd with shining Metallicks, sometimes in Sand. They wash this *Marcasite* to get the Dirt from it, then they put it into great Furnaces made on Purpose; they cover it with Charcoal, Flints, and Potters Clay, and by means of a very violent Fire, blown by huge Bellows, they put it into a Fusion; they scum thence a Matter that is as it were vitrified, resembling Enamel; then they let it run into Moulds, for great Wedges, about ten Foot long, and a Foot thick. This is called by the *French Gueuse*, commonly Sow-Metal. The Rust of Iron is Iron penetrated and rarified

by the Moisture of the Air, which the *Latins* call *Ferrugo*; it is aperitive for the Urine, and astringent for the Belly, proper for all Illness caus'd by Obstructions, and to stop Looseness.

Iron made red-hot in the Fire, and several Times quench'd in Water, renders the Water astringent and proper for Diseases of the Belly. The Waters of a Smith's Forge retaining some saline and vitriolick Particles of the Iron, are astringent for the Belly, and aperitive for the Urine.

Steel is Iron rendered more hard, more compact, more fine and polish'd, by calcination and dipping it in Water. To do this, they lay Iron, and the Hoofs of Animals, *Stratum super Stratum*, in a Furnace made on Purpose, near the Mines; they put Fire to it, and when the Metal is softned and almost melted, they dip it in cold Water, that so the Pores which were opened by the Force of the Fire, may immediately be shut up; and they oftentimes repeat the Calcination and the Dipping.

The Hoofs of Animals burnt in the Fire, produce two Effects: The first is, that they dissipate the most volatile, the most saline, and the most rarified Particles of the Metal. The second is, That a Portion of the volatile Salt which these Hoofs do naturally contain, is introduced into the Pores of the Metal. Now this Salt being rendered an Alkali by the Calcination, it absorbs and destroys the Points of the vitriolick Salt, and the Acid which remained in the Iron; so that the Motion of this Salt being relax'd, the Metal does no longer rarify itself so much, which may contribute to give a good Quality to the Steel; but the principal one that it gains comes from the Water it is dipt in, which is made on Purpose. They make Steel in many Places of *France*, *Italy*, *Piedmont* and *Hungary*; but the best is made in *Germany*, at a Town called *Kernent*. Steel ought to be brittle, of a fine Grain, and white. They that would be at large instructed, as to the different Sorts of Steel, may read what Mr. *Pomet* has written in his Book of Druggs.

The Filings of Steel are proper to remove Obstructions, for the Jaundice, and for the Diseases of the Spleen. The Dose is from a Scruple to a Dram.

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The Water, in which red-hot Steel has been quenched, called chalybeate Water, is an Astringent, and is good against a Looseness.

It is remarkable, that in Iron there should be two such very differing and opposite Qualities, as of Drying and Moistning, Opening and Obstructing, Astringing and Relaxing. These Qualities are thought to reside in the mixt Part of the Body; the relaxing Quality in the saline and more volatile Part; the Astringent in the Earthy, and that which is more fix'd.

The Salt of Iron is made in the following Manner. Take Oil of Vitriol, or of Sulphur *per Campanum*, two Pounds; Water two Gallons; mix them well in a well-glaz'd earthen Jar, by dropping the Oil into the Water, and stirring it well with a wooden Rod; put into this Mixture, of Filings of Iron two Pounds or more, stirring it for half an Hour, then let it settle; decant off the clear Water, filter and put it into a Frying-Pan, which over a Charcoal Fire evaporate to Driness, and so there will remain a pure white Salt at the Bottom. This Salt cures and opens the worst Obstructions in the Womb or Bowels; it sometimes purges, and may be given to half a Scruple in a Glass of Wine alone, or sweetned with Syrup of Violets.

After the Filings of Iron are turn'd into Rust, and a Tincture extracted from thence, the *Fæces* are a Kind of *Crocus* made without Fire, which are drying and binding, good against Fluxes, Bloody Flux, Gonorrhæas, Whites in Women, &c. They dry up Ulcers and Wounds, stop all Fluxes of Blood, the Flux of the Terms and Hemorrhoids; they strengthen the Liver, dry up Water in Dropsies, and running Ulcers in the Legs. It is given from a Scruple to half a Dram, in a proper Vehicle, every Night going to Bed.

The Coperas, or Vitriol of Iron, is made in great Quantities by a cementary Calcination, then perfected by Dissolution, Evaporation, and Crystallization.

Not only the Salt of Iron, but the Tinctures, are said to open Obstructions of the Reins, cure Ulcers in the Reins and Bladder, help the Cholick, Weakness of Stomach, or Want of Appetite; it gives ease in the Gout, and other Pains of the Joints,

both by inward taking, and outward Application.

The Rust of Vitriol of Iron mix'd with Vinegar and applied, is good against Tetters, Ringworms, Scabs, and running Sores, or Breakings-out, though of many Years Continuance, especially if a little Roch Alum be mix'd with it, taking away the St. *Anthony's* Fire, or any other lesser Heats and Inflammations.

5. Of Quicksilver.

THAT which we call *Quicksilver*, crude and running Mercury, Hydrargyrie, liquid Silver, or the Water of Silver, the *Proteus* of Nature, the fugitive Salt, or the mineral Spirit, is, according to Mr. *Charas*, a metallick, or mineral Liquor, of a volatile Nature, found in the Mines, and composed, as is believed, of a white sulphureous Earth, and of its own proper internal Mercury, which the Philosophers think to be one of their Principles, in like Manner as their Salt and their Sulphur. Some Authors, and Mr. *Charas* amongst the rest, say, that Mercury is not placed in the Rank of Metals, but that they have given it the Name of a half Metal, because that being neither hard nor malleable as the true Metals are, yet it easily unites itself to any other Metal, especially to Gold, to which it often serves as an Intermediate to join it to other Metals. Its Colour of Silver, and the Disposition it has to Motion, is the Reason why they call it *Quicksilver*; from the same Colour, and its Fluidity, it is named *Hydrargyrum*, that is to say, watry Silver, or the Water of Silver. They call it *Mercury* from the Analogy which it bears to the Planet of the same Name, or because of the Variety of the Shapes it can take, suitable to what the Heathens represented of that Deity. 'Tis likewise for the same Reason and Diversity of Colours that may be given it, that 'tis named *Proteus*, and from its Fluidity and Volatility, it is called the *Fugitive Salt*.

Quicksilver is found in the Mines after different Manners, sometimes enclosed in its own Mineral, and sometimes as fluid and of as changeable a Figure as we see it; and because it is found natural, some have given it the

the Name of *Virgin Mercury*; they find it sometimes amongst Earth and Stones, and very often embodied in a natural Cinnabar, as we shall see hereafter. They who take Quickfilver from its Mine, or to speak more properly, from the Places it lies in, make use of great Iron Retorts to separate it from its Mineral, or the other hard Bodies with which it is join'd, and by the Means of Fire and fresh Water, into which it falls, they render it fluid, so as we commonly have it. The Ore of the Mercury is so like the Antimony of *Poitou*, that if it were not for the Rays or Streaks which are somewhat whiter, there is no Body that could find the Difference; and when it is found running or liquid in the Ground, the Slaves who take it up have nothing to do but make it run through *Chamois* Leather to cleanse it from its Impurities. There are but two Places in *Europe* from whence they take Quickfilver, which are *Hungary* and *Spain*; that of *Hungary* is carried to *Vienna* in *Austria*, and from thence to *Holland*, from whence we have it. That of *Spain* is transported to *Peru* to serve to purify their Gold and Silver, as I have observed before. The *Spanish* Quickfilver was common enough in *France*; but because this Quickfilver being put upon Silver a little heated, had the Property of gilding the Superficies, and of giving the Silver a very fine Vermilion Colour, this rich Quality, according to some Alchymists, which in Reality is nothing, and the Difficulty there is of having it at present, because the King of *Spain* has expressly prohibited the Transportation of it into other Countries, has made it so scarce as it is at present, as well as the natural Cinnabar. Some modern Authors have said, that there is Quickfilver found in the *Indies*, *Polland*, *Germany*, and even in *France*; which perhaps may be true: But notwithstanding all the Pains I have taken, I could never discover the Truth of the Matter. This is true indeed, that a Mine of Cinnabar was lately found in *Normandy*, between *St. Lo* and *Charenton*, near a Place call'd *Le Fosse Rouge*; but the great Charges of it oblig'd them to stop it up again. Mr. *Lemery* says, that Quickfilver is usually found at the Top of Mountains covered with white Stones, which are as brittle as Chalk. The Plants which grow upon these Mountains seem greener and

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larger than elsewhere, but the Trees which are near the Quickfilver Mine, rarely produce Fruits or Flowers, and their Leaves come out later than in other Places.

One of the Signs that discover a Mine of Quickfilver, is when in the Month of *April* or *May* there come thick Mists or Vapours out of one particular Place, which cannot rise far in the Air because of their Weight: It is to such a Place that they go to look for this Metal, and especially if by chance it is situated opposite to the North Wind, for then they think the Mine will prove best. They likewise find a great deal of Water about these Mines, which it is necessary to draw off at the Foot of the Mountain, before you can come to work them.

They who would know more concerning Gold, Silver, and Mercury, may read *Acosta* of the *Indian Mercury*, who treats of it very largely. You should chuse such Quickfilver as is white, running, clean, of a lively and beautiful Water, and reject that, which being put into any Copper Vessels, such as Scales of a Balance, or others, appears like Lead; that is to say, when its Colour is brown, and it leaves Tails or Trains behind it, as if it were roapy, or sticks to the Hands when you handle it, and is form'd into little round Balls, which is of no small Consequence, because the greatest Part of the Quickfilver that is consum'd, is made Use of by Looking-glass-Makers, Goldsmiths, Burnishers, Gilders, and others; and if by Mischance or Roguery, in such a Parcel of Quickfilver as is used at one boiling, there should be one Pound of Lead, it would spoil their Works.

Besides these Qualities before-mentioned, which ought to be in Quickfilver, one may prove it by putting a little of it in a Silver Spoon, and letting it evaporate over the Fire; and if there remains a yellow Spot, it is a Mark that it is natural; or if it leaves a black one, it is a Sign that it is mix'd with Lead or Tin. Quickfilver is a Matter so very weighty, that Mr. *De Furetiere* says, that a solid Foot of Mercury weighs nine hundred forty seven Pound, and that a cubical Foot of the *Seine* Water weighs but seventy Pounds; that is to say, a Vessel which will hold thirty five Pints of the Water of the River *Seine*, according to the *Paris* Measure, will contain nine hundred forty seven Pounds

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of Quickfilver. As *Quickfilver* is so extremely weighty, so it is no less strong; since a fifty Pound Weight of Iron being put upon a Bouillon of Quickfilver, which, as it comes from *Holland*, generally weighs a hundred and threescore or fourscore Pounds, it shall no more sink in it than if it were an Ounce, which I could never have believed, unless I myself had seen it. As to the Properties of Quickfilver, they are so great, that they exceed Imagination; and some Persons pretend, that a Dram Weight of Quickfilver has the same Effect as any greater Quantity whatever; and that if they prescribe it in a large Dose, as they do sometimes, especially in the *Miserere* or Twisting of the Guts, it is only that it may pass the faster, and disentangle the Bowels. It is likewise a surprizing thing, that into whatsoever Shape you metamorphose Mercury, you may make it return to its first State of Nature, and that with a very small Diminution. *Borrichius*, a *Danish* Chymist, says, in his Book of Chymistry, that having operated upon some Mercury for a Twelvemonth together, and having reduced it into several Forms, it took its own Shape, at last, by the Means of a little Salt of Tartar. The great Consumption of Quickfilver, especially in *France*, is the Reason why the *Dutch* have rais'd it two *Stivers* of their Money in the Pound, which is three *Sous*, or 3 Pence of ours. And since they have, for a long Time, engros'd that Merchandize, it is not sold there under six and thirty *Sous* the Pound. I shall not here recount the several Virtues that are attributed to this Metal, because several Authors have treated of them, nor decide the Controversy, whether it be cold or hot; but I must say this, that it is so cold, externally, that it is impossible to hold one's Hand in a Quantity of Quickfilver for the Space of a Quarter of an Hour. It is wrong to think what some modern Authors have written, that the *Dutch* turn Mercury into Cinnabar, to transport it into other Places, and that for these three following Reasons: *First*, Because Quickfilver is easily transported in Sheep skins, put into Barrels, and fill'd up with Straw or Shavings. The *second* is, that if we were oblig'd to revive Cinnabar into Mercury, we could not afford it at the Price we do: And all the Mercury that is reduced in *Holland* into Cinnabar, is

us'd in *France* and other Places as Cinnabar, at least there are only some very curious People, who resolve to have their Mercury pure and neat, who give themselves the Trouble to revive it. In the *third* Place, when the *Dutch* have a Mind to make their Quickfilver portable, they fix it very easily, and put it into all sorts of Vessels, even into Paper, and send it to them who have the Secret to make it run again without any Charges.

Quickfilver, called in *Latin* *Hydrargyrus*, *Mercurius*, *Argentum Vivum*, and by the Chymists *Azock*, is a Metal, or half Metal fluid, running, of the Colour of Silver, very weighty, and yet volatile, penetrating, uniting, and amalgamating itself with Gold and Silver. It is found in several Mines in *Europe*, as in *Hungary*, and in *Spain*; and there is one Mine discovered about forty Years since in *Normandy*.

As Mercury is a very fluid Body, so it is more difficult to be found than other Metals, for it insinuates itself into Earths, and into the Clefts of Stones, so that you often lose the Sight of it when you think you are just going to take it up. People are forced to go very deep in the Ground to find it, and the Men cannot work very many Years at it before they have the Palsy; so that few are employ'd in it but Criminals condemned to Punishment.

The Quickfilver is not always taken out of the Mine neat and running, but it is generally mix'd with Earth, or reduc'd into a natural Cinnabar by some Portion of Sulphur that it had met withal. That which has but a little Earth with it may be separated by making it pass through Leather; but when it has a great deal of Earth, or other Impurities, it must be put into Iron Retorts placed upon a Furnace, to which they fit a Recipient full of Water, and blow the Fire under the Retort till it becomes fierce, and makes the Mercury distil into the Water. Iron Retorts are the most preferable upon this Occasion, because the Quickfilver endeavouring to get to this Metal, separates itself the more willingly from the Earth, and is the more dispos'd to be rarefy'd and push'd on by the Fire.

One is not always assured of the Purity of the Mercury that is sold by the Merchant,

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for it may be vitiated by some Mixture which was made in the Mine, and could not be separated by the Leather, or by the Addition of Lead, or some other Metal or Mineral; that the Sophisticators may have put into it, 'tis therefore necessary to purify it before you use it.

The Method of the Ancients to purify their Mercury; and as they said at the same Time to correct its cold Quality, which was so in the fourth Degree, was by mixing it in a Stone Mortar, with Salt and Sage in Powder, and to beat this Mixture for an Hour together with a wooden Pestle, and afterwards to strain it through a Skin; by this Means they render it clear and beautiful: But they had only taken off a superficial Impurity which was of no Consequence, which the Quicksilver by rolling about contracted in the Vessels of Leather or Earth it was kept or transported in: If there were any Metal or metallick Matter in the Quicksilver, it would pass with it through the Pores of the Skin, and that could make no Separation of it; and as for the pretended cold Quality of the Mercury, that could not be corrected by this Preparation, and the Metal continued in the same Condition as before.

The sure Means of having Quicksilver as pure as it is possible, is to separate it by Cinnabar after the following Manner:

Mix together two equal Parts of Powder of Cinnabar, and Filings of Iron, and fill about a half, or two thirds of a Retort with them, place it on a reverberating Furnace, and fit to it a Glass Recipient full of Water, without luting the Joints; encrease the Fire to the fourth Degree, you will find the Quicksilver distil and fall to the Bottom of the Recipient; keep it on the Fire till no more will rise, and you will have got thirteen Ounces of running Mercury, from one Pound of Cinnabar; wash it, and having dried it with Linen Cloths, strain it through a Leather. We may be secure that this Mercury is pure, because if any Portion of Metal or Mineral had been mix'd in the Mine with the Quicksilver, of which the Cinnabar was made, it would have remained at the Bottom of the Vessel, and would not have been able to rise with the Mercury and the Sulphur; and if after the Sublimation any strange Body had been mingled with the

Cinnabar, this Impurity, of what Nature soever, would be separated by the Revivification or Distillation that I have been speaking of. The Recipient must be filled with Water, that the Mercury which ascends in a Vapour from the Retort, may, by the Coldness thereof, be condens'd into a Liquor; but the joining of the Recipient with the Retort, must not be luted, because that in the Distillation there always arises a great Quantity of Sulphur from the Cinnabar, which would mix itself with the Mercury, if it could not find a Place to get out at, and would reduce it to a sort of grey Paste, so that it would be necessary to distil it a second Time.

The Iron, upon this Occasion, serves as an Alkali to separate the Acids of the Sulphur, which held the Mercury in the Cinnabar; and this Mercury being disengag'd from its Bonds, comes into a Condition of being rarefied and push'd on by the Fire. Quick Lime produces the same Effect as the Iron, but then there must be thrice the Quantity.

The Fluidity of the Mercury proceeds from this, that the insensible Particles, of which it is naturally compos'd, are all spherical or round; for their Figure rendering them incapable of hooking one into the other, they roll about continually. The same Reason explains why this Metal, though it be so heavy, should easily be volatilized by the Fire; for its round Parts being always disunited, and having no Tie of one to the other, are all severally light, and in a proper Condition to be push'd forward, and elevated by the Fire. That which makes the Solidity and Firmness of the Metal, is when its insensible Particles having divers Figures, are so hook'd, bound and exactly united one to the other, that the Fire has no Power to separate them, so as to let them be elevated.

Quicksilver is a Remedy for the *Miserere*, in which the Patient swallows a Pound or more, that by its Weight it may in its Passage extend the Fibres of the Bowels, which are twisted in this Distemper: It is voided by Stool, without any Alteration.

They use crude Mercury to kill the Worms, they boil it in Water, and then give the Patient the Docockton to drink, which

must have taken but a very small Impression let it have boil'd never so long; for the Metal is found to be of the same Weight, and the Decoction has no other Colour, Taste, or Smell than common boiling Water; and yet it does not fail of producing a good Effect. Care must be taken that the Vessel in which the Mercury is boil'd be of Earth or Glass, and not of Metal, because the Quicksilver would penetrate it. Mercury kills Lice and other Insects that infect the Body; it cures the Itch, Tetter, and venereal Distempers. It resolves and dissipates hard Tumours in the Glands and other Parts. It removes Obstructions, applied outwardly or inwardly. It is us'd in the Composition of several Unguents and Plaisters. It is one of the best Remedies in Physick, to dissipate and eradicate the grossest, most foul, malignant and inveterate Humours.

One of the most surprising Effects that Mercury produces, is to raise a Salivation, and so to carry off the very *Radix* or Root of the Distemper in all venereal Foulnesses. To explain this, it must be considered, that the venereal *Virus* consists in an Humour that is salt or acid, tartarous and gross; which fermenting by Degrees, corrupts the Blood and other Humours, and causes all the ill Accidents that follow it.

The Particles of Mercury which enter into the Body, either by Frictions of mercurial Ointments, or by the Mouth, being rarefied, are distributed as a Fume, and apply themselves particularly to the *Virus*, because this acid Matter is more capable of uniting with them than any other Substance. They penetrate the Venom, and are penetrated by its acid Salt, almost in the same Manner as it happens in the Mixture that is made when one would prepare the corrosive Sublimate. The Heat and the Circulation of Humours soon make this Mixture of Mercury and Acid, elevate and sublime itself to the Brain, as the Fire elevates the corrosive Sublimate in a Matras, upon which the Head, the Gums, the Palate and the Tongue, are ulcerated; the salivary Vessels are relax'd; and there are the same Pains as if the corrosive Sublimate was put upon some Part that was excoriated. These Accidents are accompanied by a copious and involuntary Salivation, which is maintain'd by the Acrimony of the Humours, that descend

from the Brain, and the Relaxation of all the salivary Vessels. This Flux continues 'till all the acrid, virulent, and mercurial Humours are evacuated.

Since there is nothing able to subdue these venereal Distempers so speedily, safely, and effectually as Mercury, it will be necessary to see the several Ways, by which it may be prepared as well for external as internal Uses.

An Ointment commonly called the Neapolitan Ointment, is prepar'd after the following Manner for external Uses.

Take of Quicksilver cleans'd and strain'd through Leather, three Ounces; kill it in a marble or wooden Mortar, with a sufficient Quantity of the Oil of Turpentine, adding of Hogs-Lard, six Ounces; beat the Mercury and the Lard well together, until the Quicksilver disappear, and make an Ointment to raise a Salivation after the following Manner:

First bleed the Patient once or twice, or oftner, if you see Occasion for it; then purge him according to the Strength and natural Constitution of his Body, making use of a Bath, half Bath, and Broths, alter'd with proper and suitable Herbs, so as to render the Humours more fluid, and fitting to rise upon a Salivation, taking Care that the Salivation be rais'd, carried on, and promoted leisurely and gradually; for in this Respect most of our old Surgeons have err'd, and not a few of our late Surgeons do still err, in raising a Salivation too hastily, and to such a Height, that the Mouth, Tongue, and Tonfils are frequently seiz'd with a Gangrene; wherefore a Salivation ought to be rais'd by degrees, and the Mouth often look'd into, so as that the Signs of an approaching Salivation may be duly and clearly discern'd: Wherefore placing the Patient before a good and clear Fire, being first cover'd with Clothes suitable to his Distemper, begin the Friction at first with half an Ounce of the *Neapolitan Ointment*, anointing him from the Soles of his Feet to the Calves of his Legs. Upon the second Night use about two Ounces more of the same Ointment, in anointing him from the Calves of his Legs to his Knees: And upon the third Day let him rest,

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especially if you perceive the Signs of an approaching Salivation, that is, an extraordinary Heat and Dryness of the Mouth, a Swelling of the Gums and Salival Glands, attended with a frequent Spitting. Upon the fourth Day, having searched the Mouth to try whether the Orifices of the Excretory Vessels be seiz'd with an Inflammation, or small Ulcers, another Friction is to be perform'd with two or three Ounces of the Ointment, anointing from the Knees to the Middle of the Thighs; and upon the fifth Day the Patient is to rest again, abstaining from the Use of the Ointment, especially if you observe the Ulcers to enlarge, and a laudable Salivation to come on; but this depends upon the Nature of the Distemper, and the Strength of the Patient; for some require but four Frictions, others more; and nothing is more to be feared and avoided than too high a Salivation: Wherefore, if a fourth Friction be required, it is to be performed with two or three Ounces of the Ointment, anointing from the Middle of the Thighs to the Loins, Hips, and privy Members; and if a Friction should happen to be required a fifth Time, you are to anoint the Hips and privy Members over again, extending to the Arms, and all the upper Parts of the Body, except the Head, Neck, and Breast.

If the Tonfils should happen to be seiz'd with a Gangrene, by Means of too high a Salivation, then having taken away some Quantity of Blood, you must instantly have Recourse to Purgation, than which there is nothing more effectual; and it is to be frequently repeated, if necessary, and the Clothes wherewith the Patient was covered, during the Time of Friction, must be taken off. Such a Salivation is approv'd of, whereby about two or three Pints of a viscous or glutinous Humour are discharg'd every Day, and which is fully accomplish'd in the Space of twenty or twenty-five Days, or a Month at farthest. After the Salivation is over, the Patient is to be expos'd to the Air, and refresh'd and recruited by the Help of a Bath, Broths, and Foods of a good Nourishment; or else he must make use of a Diet-Drink made of the sudorifick Woods and Roots for some Time after.

Some raise a Salivation by Emplastration,

making use of the Plaister of *Vigo*, otherwise call'd the Plaister of Frogs, with a four-fold Quantity of Mercury. Others raise it with the Fumes of Cinnabar; and this is call'd Fumigation, which is a very good Way, especially for such as are troubled with Warts, Chaps, and Swellings about the Fundament.

Salivation is also rais'd by the Help of crude Mercury taken in at the Mouth.

Take of crude Mercury an Ounce, well cleans'd and kill'd with *Venice Turpentine*; of the Conserve of red Roses, half an Ounce; of red Coral prepar'd, half an Ounce; of which take from half a Dram to one or two Drams, till such Time as a due Salivation rises.

The most common Preparations of Mercury for the venereal Distemper, are these which follow: Sweet Mercury, or the white Eagle; the mercurial *Panacea*, Turbith Mineral, Mercury precipitate, white, red, and green, &c. for Mercury, like *Proteus*, can be chang'd into several different Shapes, but by the Force of Fire it still returns again to its own Nature, which the Chymists call Reviving.

Sweet Mercury is thus prepar'd: Take of Sublimate Corrosive Mercury, and of crude Mercury, of each what Quantity you please; mix them well together, and put them in a Glafs Body, to the Height of one Finger, or two; then sublime them with a slow Fire gradually, and separating the Sublimate from its Dreggs, powder it over again, and sublime it three or four Times over, mixing it well; and this is call'd *Sweet Mercury*, or the *White Eagle*.

The *Panacea* of Mercury is made by subliming of Mercury ten or twelve Times over. This *Panacea* will sooner raise a Salivation than sweet Mercury, which is sometimes apt to purge downwards. They are both of them prescrib'd from ten Grains to half a Dram.

Take of Sweet Mercury twelve Grains, powder it, and make it up into a *Bolus*, with a sufficient Quantity of the Conserve of Roses, or the Mucilage of Gum Tragacanth, to be given at nine o' Clock at Night, giving the next Night fifteen Grains, and the third Night twenty, till the Salivation be duly rais'd.

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The *Panacea* of Mercury is to be us'd after the same Manner, by encreasing the Dose of it gradually, according to what Height you have a Mind to raise the Salivation.

A great many use to prescribe sweet Mercury one Day, and a purging Potion upon the other Day, endeavouring by that means to cure the venereal Distemper without Salivation, or else they mix sweet Mercury with Purgatives, and give it in Pills, Bolus's, or Opiates.

Take of sweet Mercury and *Diagrydium* a Dram; of Lozenges of *Coloquintida* a Scruple; powder them, and with a convenient Quantity of *Venice* Turpentine, make a Mass of Pills for five Doses.

White precipitate Mercury is thus prepared: Take of Mercury well cleans'd and strain'd four Ounces; dissolve it in a large Matrafs or Cucurbit, with three Ounces of Spirit of Nitre; adding to the Solution, of fair Water two Pounds; and pour again upon this last Solution, of salt Water two Pounds; and then the Mercury will, by little and little, precipitate or fall to the Bottom in the Form of a white Powder, which is to be sweetned by often washing, drying, and burning, or kindling Spirit of Wine upon it. The Dose of the Powder inwardly, is from four Grains to half a Scruple.

But outwardly it cures the Scab, and other cutaneous Distempers, being us'd after the following Manner: Take of white Precipitate one Dram; of the Ointment of Roses an Ounce; mix, and make an Ointment.

Yellow Precipitate, or Turbith Mineral, is thus prepar'd: Take of crude Mercury four Ounces; pour upon it of Spirit of Vitriol or Sulphur one Pound; put this Solution into a Retort, with a large Receiver, set it upon a slow Fire, and draw off all the Liquor, until it is dry, and so a white Mass will be obtain'd, which is to be powder'd and dissolv'd in hot boiling Water, and then the Mercury will gradually precipitate in the Form of a yellow Powder, which is to be sweeten'd by washing, and burning upon it Spirit of Wine. This Powder is to be given from three Grains to four or six. It purges vehemently, both upwards and downwards, but it safely and speedily cures the *French Pox*.

The Coralline Secret, or the Dragon devouring itself, call'd also *Lampandra*, is, without any other Addition, perform'd in the Space of two Months, by digesting Quick-silver in an earthen Pot with a long Neck, by the help of a Lamp; for the Mercury is by that Means chang'd into a bright red Powder, to be given from four Grains to six or eight, provided it be first sweeten'd by burning Spirit of Wine upon it, otherwise it often provokes Vomiting.

6. *Of the mineral or natural Cinnabar, and likewise of the artificial Cinnabar.*

THE mineral *Cinnabar* is a red Stone, heavy and shining, which *Pomet* is found in many Places of the World, but the best and most esteem'd comes from *Spain*. I have taken a great deal of Pains to find the true Name of the Place where *Cinnabar* is found, because a worthy Person has assur'd me, that he himself had seen and gather'd it, and that the best qualified was that of *Andalusia*, upon the Lands of the Fathers of St. *Ferom*, and that it was there as common as Free-stone is with us. But Mr. *Charas* has inform'd me, that the great Mines of *Cinnabar* lay in the Mountains of *Sierra Morena*, that the King of *Spain* maintain'd a great many Workmen there at his own Expence and Charges, to get it thence and send it to *Peru*. And as this Relation seems to me to be most probable, I take it for certain, that the large Quantity of *Cinnabar* that we had heretofore, and the small one we have had lately, came from the Mountains of *Sierra Morena*; and that the Cheapness of it, at that Time, sufficiently shews us that it was not difficult or expensive to take it out of the Mines, which may in some Measure favour the Sentiments of that Person who told me that it was found as commonly as Stones, and that it cost nothing but the gathering of them.

The natural *Cinnabar* is to be chosen of a high Colour, the most shining, and with as little Stone as possible; but since the true *Spanish Cinnabar* is become so scarce in *France*, there are so many Sorts of the other, that it is difficult to describe them all, tho' nothing is at present more common, than to

ask

ask for the right *Spanish Cinnabar*; however, they who sell it, make no Scruple of giving one for the other, and so put off that of *St. Lo*, tho' very different, because that of *Spain* is of a bright red Colour, and that of *St. Lo* of a dull one, and is less abounding in Mercury; and yet some Persons have maintain'd, that that of *St. Lo* would yield fourteen Ounces of Mercury out of the Pound, as well as that of *Spain*, which I cannot contradict, because I never tried it.

The mineral *Cinnabar* of *Spain*, though much demanded, has no other Property, that I know of, but that skilful Alchymists pretend to make Vermillion of it, and even Gold itself, by fixing it, and giving it a Tincture; for in Respect of the Weight, it comes very near the true Gold. Mr. *Lemery* says, the natural *Cinnabar* is a Mixture of Mercury and Sulphur, which are sublimed together by a subterraneous Heat, which is done by Nature almost after the same Manner as they do the artificial *Cinnabar*.

Mr. *Furetiere* has remark'd in his Book, that there is a mineral *Cinnabar*, which is a very red Stone, heavy, and not hard, resembling the *Hæmatitis*, which contains Quicksilver, which drops from it of itself, without the Help of Fire. He says it is found about *Carniola*, and that it is the same Thing as the *Minium* of the Antients, and is a Poison. He says also the Word *Cinnabar* comes from the Greek Word *Kinabra*, which signifies the Smell of Goats, which is an insupportable Smell; because when they dig a Kind of Fossil *Cinnabar* out of the Ground, according to *Matthiolus*, it casts so rank and strange a Smell, that they are forc'd to stop their Nose and Mouth, for fear of being suffocated by it. I should not have spoke of this latter *Cinnabar*, but that I look upon it to be a Falsity, and to dissuade them who would believe that there is a mineral *Cinnabar*, from which the Mercury flows naturally.

The artificial *Cinnabar* in the Stone, is a Mixture of Mercury and Sulphur sublimed and reduced to a Stone, in the Manner we see it.

The Use of *Cinnabar* is, as I have said, to draw thence a Mercury, for those who would have it clean and neat, as well to make the mercurial *Panacea*, as for other

Operations where Mercury revived from *Cinnabar* is necessary.

Cinnabar in Stone is also of some small Use to Painters, after it is ground, because it is of a more lively red than that which comes ready ground from *Holland*; but that which is troublesome in it, is, that it is very difficult to dry it. It is likewise of some Use in Physick, as well to make Fumigations, as other Remedies, both inwardly and outwardly; tho' *Cinnabar* is seldom us'd inwardly but for Horfes, to make a Composition, call'd the Pills of *Cinnabar*.

All the *Cinnabar*, both whole and ground, comes from *Holland*. And it is a surprizing Thing to find, that they who make it, do it in Cakes of three or four hundred Weight, which they do easily, by putting twenty-five Pounds of the Materials, that is to say, of Sulphur and Mercury together; and when they are sublimed, by putting twenty-five Pounds more, and continuing it after the same manner, till the Vessel is full; and this is the Reason why the *Cinnabar* we see is dispos'd in several Beds.

As for Vermillion, it is *Cinnabar* in Stone, ground with Urine or *Aqua Vitæ*, and after it is dried, transported to different Places.

There are two Sorts of Vermillion brought from *Holland*, the red and the pale, which happens according as they are more or less ground; for the more it is ground, it is the finer, the paler, and the more esteem'd, especially by them who use it in making Sealing-Wax.

That Vermillion is to be made choice of that is well ground, dry, least earthy, the most pure and clean that may be. It is certain that the *Dutch*, when they grind their Vermillion, mix it with some Lead Ore, or some other drying Druggs, because *Cinnabar* in the Stone, when ground, is difficult to dry, whereas it is otherwise in that which comes to us ready ground.

Vermillion is much us'd in *France* by them who make Sealing-Wax, Painters, and other Workmen. But Care must be taken not to use *Cinnabar* ground, and mix'd with any fat Substance to paint the Face; because, as Mr. *Lemery* has well remark'd, there is a great deal of Danger in it; and ill Accidents may attend it; and therefore the Vermillion of *Spain*, or *Spanish Wool*, may be us'd instead

of it with Safety, as being made of nothing but the Saffron of the *Levant*, or *Safranum*.

They draw from *Cinnabar*, or Vermillion, by the Help of Fire, and the Filings of Steel, or Quick-Lime put into a Retort, a Quickfilver that is very pure, and proper for all Uses where Quickfilver is requisite; but as it is very dear, because of the Expence, every Body, except they be very curious, make use of that of *Holland*. This Mercury ought to be extremely white and lively.

Cinnabar is a mineral Matter, *Lemery*. solid, hard, weighty, bright, crystalline, of a very red Colour, distinguish'd with Streaks, shining and sparkling like Silver, compos'd of a Sulphur, and Quickfilver, and a little Earth. That which is impure, and of a yellowish Colour, mix'd with a stony Matter, is to be rejected, as not being the true kind of *Cinnabar*, but rather a kind of *Auripigmentum*, or Orpiment.

There are two Sorts, one natural, call'd mineral *Cinnabar*, the other artificial, call'd simply *Cinnabar*. The natural is found form'd in Stones that are red, shining, and weighty, in the Quickfilver Mines of *Spain*, *Hungary*, *Germany*, *France*, and other Parts; That of *Spain* is accounted the best. That which is most weighty, clean, red, and shining, is to be prefer'd, because the higher its Colour, the more Quickfilver it contains. The natural *Cinnabar* has been sublimed by the subterraneous Fires, almost in the same manner as the artificial *Cinnabar*; but as in its Sublimation it is mix'd with the Earth it meets with, it is not so weighty, pure, nor beautiful as the artificial, and contains less Mercury.

The artificial *Cinnabar* is made with three Parts of crude Mercury, and one Part of Sulphur, mix'd and put into subliming Vessels over a gradual Fire. It ought to be made choice of in fair Stones, very weighty, bright, with long, clear, and fine Points, of a brownish red Colour. Each Pound of *Cinnabar* has fourteen Ounces of Mercury to two Ounces of Sulphur. Artificial *Cinnabar* being ground upon a Porphyry, is reduc'd to the finest Powder, of a most beautiful red Colour, made use of by Painters, and those who make Sealing-Wax.

These *Cinnabars* are made use of in Epi-

lepsies and Asthma's; to take inwardly from two Grains to half a Scruple.

Take of native *Cinnabar* six Grains; of the Conserve of Lime-tree Flowers one Ounce: Make a *Bolus* to be given in the Falling-Sickness.

It is to be observ'd, that native *Cinnabar*, though it has been us'd and tried by a great many, will not raise a Salivation; whereas the other Kind of *Cinnabar* will do it speedily and easily, which truly ought to be attributed to the large Quantity of Earth, with which natural *Cinnabar* abounds, that refrains it from subliming or rising high enough for that Purpose.

If native *Cinnabar* be required to be made use of in Distempers of the Brain, the *Cinnabar* of Antimony ought to be employ'd instead of it, rather than the fictitious or artificial *Cinnabar*; for this is more properly us'd in venereal Distempers, and chiefly by way of Fumigation.

Some chuse the *Cinnabar* of *Hungary*, as being the most solid and heavy, of a solar Nature, replenish'd with the best Sulphur and Mercury.

Native *Cinnabar* being ground into an impalpable Powder, is almost an universal Medicine, and may be given from ten to thirty or forty Grains, or a Dram, in any convenient Vehicle, for forty, fifty, or sixty Days together, taking it always at Bed-time. It may be taken two Days together, and sometimes three, and then the next Day to purge after it, and so to continue till thirty, or even fifty or more Doses are taken.

It is an excellent Antivenereal; and being taken inwardly, expels the Pox, and all its Foulness out of the whole Body, and all its Juices. It sweetens the Blood, takes away all manner of Pains and Aches in any Part; all manner of Swellings, Ulcers, and nocturnal Pains; kills Worms in Young and Old; is a Specifick for the Falling-Sickness, as said before, and is excellent for Vertigoes, Apoplexies, Palsies, Lethargies, and all Diseases of the Head and Brain.

The artificial *Cinnabar* is thus made: Take common Sulphur, in Powder, four Ounces; melt it in an Earthen Pan upon Coals; add to it a Pound of Quickfilver; stir them continually with an Iron *Spatula*, till they are united in a black Powder, and the

the Mercury ceases to appear; being cold, grind it in an Iron Mortar to a subtil Powder; put this Powder into a Glafs Retort well luted, and distil with a naked Fire; first with a gentle Heat, then with a stronger; then in a few Hours the Mercury and Sulphur will sublime into the Neck of the Retort, the whole appearing of a greyish Red, or a dark red Colour; beat it into a fine Powder, sublime it again, and you have a most pure red Vermillion. It has all the Virtues of the former: But Physicians have not given it inwardly so much as the former, though it be full as safe.

7. *Of the Corrosive Sublimate, and other Preparations of Mercury.*

Pomet. **T**HE *Corrosive Sublimate*, which we have from *Holland* and *Venice*, is made of the common Mercury, or Quicksilver revived from Cinnabar, of Spirit of Nitre, of Vitriol calcin'd to a Whiteness, and of Sea Salt decrepitated, and by the Means of a subliming Vessel, reduc'd to a Lump that is white and shining.

That *Sublimate*, whether from *Holland* or *Venice*, is to be chosen, which is whitest and most shining, but the least weighty and compact that is possible, but that is to be rejected that comes from *Smyrna*, which is weighty, and full of Sparkles, because it is pretended that it is made with Arsenick, which I can't affirm, because I am not certain of it; and the best Way to prove it that I know, is to throw upon it a Drop of Oil of Tartar *per Delequium*, or to rub it with a little Salt of Tartar; if it grows yellow, it is an infallible Mark that it is made of Mercury, and has the Qualities requisite to it; on the contrary, if it turns black, it is to be rejected.

Corrosive Sublimate is made use of by several Persons; as Surgeons, Goldsmiths, Farriers, and others. It is likewise us'd in Physick externally; but as it is one of the strongest Poisons we have, it ought not to be us'd without the greatest Precautions; and the Persons who retale it ought not to sell it but to such as have Occasion for it by their Profession, as the King's Ordinances require, by which it is expressly forbid to sell any Sorts of Poisons, but to the Master of a Family: And these same Retailers are or-

der'd to take a Note of him that buys it, declaring what he intends to do with it; and the Seller is to keep the same Drugg under his own Lock and Key, so that no Body but himself may have the Sale of it. I hope this Advice will not be taken amiss, because it is design'd for the publick Safety.

Of Sweet Sublimate, or Mercurius dulcis.

The sweet or dulcified Mercury, or Sublimate, call'd likewise *Aquila alba*, or the white Eagle, is corrosive Sublimate, and crude Mercury, reduc'd into a white Lump, with little shining Streaks, by the Means of Fire and Glafs Matraffes.

The sweet Sublimate, or dulcified Mercury, ought to be white, shining, adorn'd with little hard Shoots, which being put to the Tongue, is insipid, and reduc'd to Powder, is of a white Colour, a little upon the yellow. Great Care must be taken that it has been dulcified three Times at least; for unless it has its necessary Qualities, that is, that it be very insipid or without Taste, it may produce very ill Effects. They who bring it from *Holland*, should not so much look upon the beautiful Colour which the *Dutch* give it, as take heed that it has no Taste: For to my Knowledge there has come some from *Holland* which might have had very ill Effects, if Care had not been taken; because it had been sublimed, or dulcified but once.

The sweet Sublimate is a very excellent Remedy to cure the Secret Disease, and to kill Worms in Children. The ordinary Dose is from two Grains to thirty, taken in a *Bolus*, either of some Conserves, or purgative Medicines.

Of the Mercurial Panacea.

The *Mercurial Panacea* is a sweet Sublimate made of Mercury, reviv'd from Cinnabar, and dulcified or sublimated eight Times. I shall not be long upon this Point, because the Directors of the Hospital of the Invalids have caus'd a long Tract concerning it to be printed. I shall only say, that this Medicine is very much demanded and valued, as well for its Novelty, as because they pretend it is a general Medicine for the Cure of the above-mention'd Diseases, and they attribute so many Qualities to it, that they

have given it the Name of *Panacea*, which is as much as to say, the universal Medicine. They commonly make up this *Panacea* into little Pills, with the Mucilage of *Gum Tragacanth*, and when they are dry, they differ little in Colour or Size from the *Coriander Comfit*.

Of the White Precipitate.

The *White Precipitate* is a Quicksilver dissolved in the Spirit of Nitre, and precipitated by Salt into white Powder. This Powder, after having been well wash'd and dried, is what we call'd the true *White Precipitate* of Mercury, to distinguish it from other Sorts of *White Precipitate*, of which one is made of corrosive Sublimate, dissolved in a Water made of *Sal Armoniack*, and reduc'd into a white Powder, by casting the Oil of *Tartar per Deliquium* upon the Dissolution, and afterwards washing it and drying it as that above-mentioned. The third is made likewise of the corrosive Sublimate reduc'd to Powder and put into warm Water; and when the volatile Spirit of *Sal Armoniack* has been cast upon it, there will remain a white Powder, which after having been wash'd and dried, has the same Properties as the two others, which is to raise a Salivation, or to mix with Ointments or Pomatums to cure Tettors and cutaneous Distempers.

As these Precipitates, and generally all Preparations of Mercury, are violent Remedies, in which one may run some Hazard; so they ought not to be us'd but with great Precautions, and the Advice of understanding Persons. The *White Precipitate* of Mercury shews itself to be in a good Condition when it is white and weighty, and if it exhales, being put upon a burning Coal; on the contrary, if it remains upon the Fire, or runs into Lead, it is an infallible Sign that it is nothing but white Lead ground, or some other white Powder, as that of *Roan*, or the like.

The Precipitate made with Sublimate, should be extremely white, and much lighter than that which is made of crude Mercury; which may seem strange, because every thing made of Mercury is generally weighty, and this is the Reason why they that do not know it will not take it, although it is as beautiful and as good as that which is made of crude Mercury.

Of Red Precipitate.

The *Red Precipitate* is Mercury dissolved in Spirit of Nitre, and afterwards heated by the Fire, till it has got a shining red Colour, such as that which comes from *Holland*. As for those *Red Precipitates*, which are made by the Artists in *Paris* and other Parts of *France*, they have as many different Colours as there are People who make 'em, and there are few of them can come up to that of *Holland*. 'Tis this which makes the greatest Part of the *Red Precipitates* which are sold, to be sometimes red, and sometimes of an Orange or some other Colour, and never shining, unless it were that which comes from *Holland*; however, I will not say but it may be as good though it be not as saleable. There are likewise two other Sorts of *Red Precipitate*, one of a Rose Colour, which is made when, instead of putting the Dissolution of Mercury in the Spirit of Nitre upon the Fire, they pour upon it hot Urine, and there will soon be a Precipitate of a Rose Colour, which being wash'd is good for the Worms or the Itch, and may serve for the same Uses as the *Red-Precipitate* made by Fire. The third *Red Precipitate* is made of Sublimate dissolved in warm Water, upon which they pour the Oil of *Tartar per Deliquium*. Mr. *Lemery* says, that this Preparation of Sublimate is the true *Red Precipitate*, but that it does not act so violently as that of Mercury. These two last Precipitates are very seldom us'd, because the first is most in Vogue, which ought to be faithfully prepar'd that it may be good; and Care must be taken that it be not mix'd with Lead Ore, which may easily be known by rubbing it upon a Piece of Gold, for if it makes it white, it is a Sign that is good, and that it is made of Mercury; but if it makes it black, it is a Proof that it retains a Tincture of Lead, and that it is mix'd with it. You may likewise put it upon the Fire, and it is a good Sign if it exhales: However, I must say, that that which comes from *Holland* is most preferable, as well because it is more beautiful, and consequently more saleable, as because we can sell it cheaper, especially in Time of Peace, than any that can be made in *France*.

Of the Coralline Secret.

They call the *Coralline Secret* a red Precipitate of Mercury, upon which they have burnt a good Spirit of Wine, repeating it six Times; and this *Coralline Secret* is made use of internally, because the Spirit of Wine has sweetened it, and taken away whatever might be dangerous in it.

Of Yellow Precipitate.

The *Yellow Precipitate*, or *Turbith Mineral*, is Mercury revived from Cinnabar dissolved in the Oil of Vitriol, and afterwards with lukewarm Water precipitated to a yellow Powder, which being washed and dried, is us'd as a strong Purgative and Emetick.

They likewise make a *Yellow Precipitate*, by dissolving powder'd Sublimate in warm Water, and pouring Lime-Water upon it, and the yellow Powder, which will be found at the Bottom, after being washed and dried, may pass for *Yellow Precipitate*, or *Turbith Mineral*. Mr. Lemery says, this Dissolution or yellow Water, is called Phagedenick Water, or Water for Ulcers, because it is proper to cleanse and heal Ulcers. The Surgeons make frequent Use of it in the Hospitals; but the common Phagedenick Water is Lime-Water, into which they have put a little Sublimate.

Of Green Precipitate.

The *Green Precipitate* is Mercury and Copper, dissolv'd in Spirit of Nitre, and afterwards with distill'd Vinegar thrown down to a Powder of a green Colour, which is made use of to purge upwards and downwards; and, as some pretend, it is a specifick to cure venereal Distempers. They who prepare these Precipitates find a yellow Powder, that is very like the *Turbith Mineral*.

It is observable, that the more Copper is us'd in this Operation, the more Acridity it has, and greater will be its Effect. This Precipitation is very little made use of, and was very little known, before the Sieur *Matte de la Faveur*, the King's Distiller at *Montpellier*, gave us a Description of it.

Of the Oil of Mercury.

The *Oil*, or to speak more properly, the Liquor of *Mercury*, is Quicksilver dissolv'd in the Oil of Vitriol, and reduced into a white

Mass by the Means of Fire, which being put in a Cellar, will dissolve and be reduced to Water. One may make another Oil of Mercury that is sweeter, by dissolving Quicksilver in the Spirit of Wine; and this may be us'd with the greater Safety. You may likewise make it with sweet Sublimate, and *Sal Armoniack*; or instead of *Sal Armoniack*, you may use Salt of *Saturn*, or in the Room of Salt of *Saturn*, of Sugar-Candy; and so of several other Sorts enumerated by several Authors.

8. Of Tin.

TIN, which the Antients called *White Lead*, is a white Metal which is not so hard as Silver, and yet harder than Lead. Some have given Tin the Name of *Jupiter*, because they pretend it draws Influences from that false Divinity. They pretend likewise, that it is formed of two Matters, that is, Silver and Lead, because in the Tin Mines there is sometimes formed both Lead and Silver, and sometimes Diamonds, which are fix'd to the Rock from whence they take their Tin. These are naturally polished, squar'd and pointed, and are of different Sizes, some as big as a Nut, but they are not so hard, nor will they cut like true Diamonds. They say likewise, that it is compos'd of Earth and an impure Sulphur, a metallick Salt, and a Mercury a little finer and better digested than that of Lead, and that it is an Enemy to Gold and Silver; and when they are once mix'd it is difficult to part them.

The greatest Part of the Tin which we have in *France* comes to us from *England* in Pigs of different Weight, and especially from the County of *Cornwall*. The *Britannick* Islands abounded so much with that Metal, that the Ancients gave them the Name of *Tin Islands*.

There are three Sorts of *Tin* at *Paris*; the hammer'd Tin, the sounding Tin, and the common Tin. The hammer'd Tin, which is the most beautiful, and the best Sort, is the *English* Tin, as it comes from the Mine, and in working they incorporate it with Tin-Glass, Copper, and a little Zinck to purify it. Sounding Tin is *English* Tin mix'd with the more common Tin, and is also made with Tin-Glass and Copper, which is the Cause, as Mr. Lemery has very well observ'd, that these

Matters which are compos'd of stiff and brittle Parts, being united with the Tin, makes its Parts firm, and render the Metal more hard, solid, and compact, and so it becomes founding or ringing; for it is necessary that all founding Matter should be compos'd of stiff Parts so dispos'd, that being struck upon, they should be agitated and tremble, by hitting one against the other, which cannot be done by Tin alone, because it is soft and pliant. The common Tin is *English Tin* and Lead, with Brass that is incorporated with it.

To know the Degrees of Goodness in Tin, they take a white Chalk that is found near *Tonnerre* in *Burgundy*, and of this Chalk they make a Sort of Mould into which they pour the Tin when melted; and by Means of this Chalk the Artists know what Standard it is of, by the little Lines or Furrows found in it; or else they cast Tin Bullets in Moulds, and that which is found lightest is esteem'd the best. Some Authors say, that Tin or white Lead is found upon the Surface of the Earth, amongst the Sands, and in Torrents dried up; and that it is found in Grains, which being wash'd is cast into Moulds, in the Shape we see them. Besides the different Uses we make of Tin, the Chymists perform several Operations with it, as shall be shewn hereafter.

Besides the *English Tin*, there is some that comes from *Germany*, but it is not so good, because it is only the Refuse of that which serv'd to tin their white Iron. We have also some brought from *Lorrain*.

Of Tin in Leaves.

Tin in Leaves, call'd by the *French*, *Appreau*, is an hammer'd Tin, which the *Dutch* have painted on one Side with their Varnish, making it of what Colour they please; as yellow, red, black, sky-colour, &c. The Tin in Leaves ought to be uniform, well varnish'd, whole, and as evenly roll'd as it can possibly. The *Dutch* send it in Boxes which hold commonly a Gross, that is twelve Dozen.

Of Tin in Powder.

They reduce Tin into Powder two Ways, either with beaten Charcoal, or with Chalk,

as shall be afterwards shewn in the Chapter of Lead. They who work upon Tin, instead of grinding it to Powder, burn it, that is, calcine it, and reduce it to a grey Powder, which is that which we and the Pewterers sell under the Name of *Putty of Tin*, and use it to burnish their Hammers with, and others to polish their Steel Mirrors. They who would make this *Putty* extremely white, calcine it 'till it becomes of a most beautiful white Colour. This Tin calcin'd to such a Whiteness, is what the Chymists call the *Ceruse* or *Calx of Tin*, and others the *Spanish White*, or the *Jovial Bezoar*.

Some Authors affirm, that Tin may be reduced into a *Calx* or *Ceruse* by the Help of Urine, and that the Urine acts upon Tin, as Vinegar upon Lead. Besides the Uses that the Chymists have for this calcin'd Tin, it is much us'd by the Potters, who make of it their beautiful Varnish, or white Enamel that is upon their earthen Ware: But it is observable, that this Ceruse of Tin, before it can be us'd by the Potters, must be expos'd to the Weather for a Twelvemonth, that so the Air may make a second Calcination; but Care must be taken that this white Tin have no Impurities amongst it, because they would make so many Spots upon the Works.

Of Salt of Tin.

The Salt of Tin, is Tin calcin'd, upon which they have pour'd distill'd Vinegar; and by Means of Fire, and a cool Place, they draw thence a white Salt in little Crystals, which they use for Tettors mixt with some *Pomatum*. It ought to be dry, white, light, and in little Shoots.

Of Flowers of Tin, or of Jupiter.

They draw from Tin and *Sal Armoniack*, by the Help of a subliming Vessel, white Flowers of Tin. Instead of *Sal Armoniack*, others use Salt-Petre refin'd. They can make of the Flowers of Tin, by Means of the volatile Spirit of *Sal Armoniack*, or Oil of *Tartar per Delequium*, a Magistery of Tin, which being dulcified, wash'd in Water, and dried, is of a very fine White; so that being mix'd with *Pomatum*, it is us'd for Paint.

The

The Flowers of Tin are often put to the same Uses as the Magiftery.

Of the Diaphoretick of Tin.

The *Diaphoretick Tin*, which Mr. Lemery calls the *Jovial Diaphoretick*, or the *Antibectick* of *Poterius*, is made of fine *English Tin*, and the *Regulus* of Antimony, with Iron melted together; and afterwards, with Salt-Petre and divers Lotions, they draw thence a Powder which is used for Diseases of the Liver, the Small-Pox, and malignant Fevers, as the same Author tells us.

Of natural Tin-glass.

Whatever Pains I have taken to discover if there were any true natural *Tin-glass*, it was impossible for me to find it; and all those with whom I have convers'd, either by Word of Mouth, or Letter, they have all agreed there was no other *Tin-glass* than that we sell, which is an artificial one, as I shall shew presently. However, I shall not be positive that it cannot be found, but that it has not come to my Knowledge, and therefore I cannot contradict them who have written, that *Tin-glass* was a sulphureous *Marcasite* which is found in the Tin-Mines, or that it is a mineral Body, or half Metal, compos'd of the first Matter of Tin, which is yet imperfect; and that it is found in the Tin-Mines, and has a Substance that is very hard, weighty, brittle, and of a gross Grain, smooth, white and shining. They say likewise, that it is call'd *Tin-glass*, because when it is beat to Powder, there appear in it several little Substances, smooth as Glass. They call it also *Marcasite*, by way of Excellence, because it surpasses all others in Whiteness and Beauty. They say it contains an arsenical Salt, which is dangerous to be taken inwardly.

Of the ordinary Tin-glass.

The *Tin-glass*, which some call *Bismuth*, is a Mixture of Tin, Tartar, and Salt-Petre, from whence, by the Means of Fire, and a Crucible, they draw a *Tin-glass* very white and pure, and much whiter than the *Tin-glass*

that is brought from *England*. And this Difference, as I have been told, proceeds from this, that the *English* mix a little Copper with it, to give it the reddish Cast which it has.

Tin-glass may not improperly be call'd the *Regulus* of Tin, since it is so in Effect. And it is a Thing so probable, nay, so sure, that the *Tin-glass* we sell is artificial, that the very Figure demonstrates it; for it is easy to see that it is a Metal melted and cast in a Mortar, warm'd and greas'd, as they do to other Sorts of *Regulus*. And it is so true, that *Tin-glass* is artificial, that I have made it myself, and am ready to shew it to those who won't believe me.

Tin-glass should be made Choice of, that is in fine Scales, white, and easy to break; and that is to be rejected which is in little Scales, and in a Word, comes near the Figure of *Regulus* of Antimony, as well as that which being broke in two, has some greater and some lesser Scales, and is of a dark Colour.

The Use of *Tin-glass* is for Pewterers, who at present make use of it instead of *Regulus* of Antimony; or else for the Chymists, who from thence draw Flowers, or a Magiftery, or white Precipitate.

To draw the Flowers of *Tin-glass* they calcine it, and with *Sal Armoniack*, and a subliming Vessel, draw thence the Flowers, which when dissolv'd in Water, and precipitated with the Spirit of *Sal Armoniack*, or Oil of Tartar, may be us'd as the Magiftery of *Bismuth* that I am going to speak of.

Of the Magiftery of common Bismuth.

The Magiftery of *Bismuth*, which some improperly call the *Spanish* or Pearl White, is *Tin-glass* dissolv'd in Spirit of Nitre, and precipitated into a white Powder, with a little common Salt, and afterwards well wash'd and dried. There are Peruke-Makers that use this *Magiftery*, tho' preposterously, for the making red Hair look of a light Colour: but this Trick will be easily discover'd, because the Colour will not remain long, especially if the Peruke comes into the Rain.

The Magiftery of *Bismuth* is sometimes us'd for the Face, by putting it into Pomatums, or diluted with Lilly or Bean-Flower Water.

Water. It is good for the Itch, because, according to Mr. *Lemery*, it destroys the Acids or Salts that nourish that Distemper. One must take care not to be over-stocked with this *Magistery*, because its Colour will from white become yellowish as it grows old, and so become unfit for Sale.

This *Magistery* should be bought of honest Persons, for there are a great many Cheats in it, and there is no Body can answer for it but he that made it, and therefore you must not stand upon the Price.

Bismuth is a metallick Matter, *Lemery*. but it is hard, brittle, shining within, dispos'd into smooth Shoots, bright and shining as little Pieces of Glasse. This Matter is drawn from the gross and impure Tin that is found in the Mines of *England*. The Workmen mix this Tin with equal Parts of Tartar and Salt-petre. This Mixture they throw by Degrees into Crucibles made red-hot in a large Fire. Afterwards, when the Matter is melted, they pour it into Iron Mortars that are greas'd, and there let it stand to cool. Then they separate the *Regulus* that is at the Bottom, from the *Scoria*, and wash it well. It is the *Tin-Glass* that one may properly call the *Regulus* of Tin. Some People say, that in the Tin of which they make *Bismuth*, there is always a little Mixture of Arsenick. We can make *Bismuth* in *France*, with ordinary Tin, Salt-petre, and Tartar, as I have said; but it will be brighter than that of *England*, because the Tin we use is purer than that they use in *England*.

This Operation is the same as that of *Regulus* of Antimony; there is the same Detonation and Purification of the gross Sulphur contain'd in the Metal, the looser Parts of the Sulphur are elevated with the volatile Parts of the Salt-petre, and the Oil of Tartar, by the Detonation; afterwards the fix'd Salts of the Salt-petre and the Tartar, which are become Alcalies, dissolve the other Part of the Sulphur, which renders the Tin hard and brittle, whereas before it was pliant and malleable; for this Sulphur made the Ductility, and the exact Ties between all the Parts of the Metal. It may likewise happen, that some small Portion of the Salts of Tartar and Salt-petre may penetrate this *Regulus* of Tin, and so continue to the making of it brittle.

Bismuth is brought to us in round or orbic-

ular Lumps, flat below, and round above, and of the same Figure with those of *Regulus* of Antimony, which was cast in a Mortar whilst it was in Fusion.

Tin-Glass is to be made choice of in fine large Pieces, shining, whose Shoots are large, white, and sparkling. The Pewterers mix it with their Tin, to render it more beautiful and founding.

It is resolute and drying, being beat to Powder, and made up either into an Ointment, or a Plaister.

Tin is a Metal soft, malleable, sulphureous, white, shining, a little harder than Lead, very easy to be melted. The Antients call'd it *Plumbum Album*, white Lead. It is taken out of the Mines of *England*, and other Places, and brought to us in Pigs. At *Paris* we have three Sorts of it.

The first is that Tin which is without Mixture, as it comes from the Mine, and this is the true Tin. The second is the common Tin, which is an Alloy of the natural Tin of Lead and Brass. The third is the founding Tin, or Pewter, which is a Mixture of Tin, Bismuth, and Copper, and a little Zinck. They sometimes put in some *Regulus* of Antimony, and its sulphureous vomitive Salt is not to be feared upon this Occasion, because it is absorb'd and mortify'd by the great Quantity of other Metals with which it is incorporated.

Natural Tin is not founding, because it is too soft and pliant; for to render any Matter founding, it is requisite that it be compos'd of firm stiff Parts, which being struck, may tremble and hit one against the other; which Quality is found in the Tin which is hardned and made solid by Bismuth, or by Antimony and Copper. This Tin, when fine and well compos'd, is very much like Silver.

Natural Tin is look'd upon as proper for Diseases of the Liver and the Womb, but I have found but little of this Virtue in my Experience of it.

Zinck, which has been mentioned above, is a sort of Marcasite, or a metallick Matter, resembling Bismuth, but less brittle, and in some Measure pliable to the Hammer. It grows in the Mines, and principally in those of *Goffelar* in *Saxony*. That is best which is hard, difficult to break, white, with Shoots that are large and shining. It is used to

cleanse

cleanse and whiten the Tin, as they make use of Lead to purify Gold and Silver. The Workmen mix in their Casting about six hundred Pounds of Tin, with one Pound of this Mineral.

Zinck is made use of in Solder: they likewise mix it with Copper to give it the Colour of Gold.

Zinck is resolute and drying, being applied outwardly.

9. Of Enamels.

Pomet. **E***namels* are Vitrifications made of Tin, Sand, and Pot-Ashes of *Alicant*, to which they give divers Colours, with different Metals, as shall be shewn hereafter.

The *Enamels* come from *Venice* and *Holland*, and are in little flat Cakes of different Sizes, and different Marks; some have the Name of *Jesus*, some have the Figure of a Sun, and the like, from the different Workmen that made 'em.

The first is the *White Enamel*, which is the Basis of all the others, and is made of Tin calcin'd, or Putty, of Sand and Pot-Ashes, which having underwent a great Fire, are reduc'd to a PASTE, and being cool'd, become hard as a Stone. It is this white Enamel which they use at present for varnishing their Earthen Ware, rather than Tin calcin'd and expos'd to the Air and Weather for a Year together, that Operation being too long. *White Enamel* is us'd by the Enamellers, Goldsmiths, and others: As for the Choice of it, there are none but they that use it, that can know the Beauty and Goodness of it; the Whiteness is more or less according to the Goodness of the Tin it is made of.

The second *Enamel* is of a Gridelin approaching to a Slate Colour, which is white Enamel colour'd with Azur.

The Third is of a Sky Colour, which is a white Enamel coloured with Copper, and Cyprus Vitriol.

The fourth is of a Flesh Colour, which is white Enamel coloured with Perigueur.

The fifth is the Yellow, which is the White colour'd with Rust of Iron.

The sixth is Green, which is White colour'd with Pin Dust, or other Filings of Brais.

The Seventh is the Blue, which the Enamellers call the *Faux-lapis*, the false Stone; which is the Sky-coloured Enamel, covered with *Lapis Lazuli*. These Enamels will take different Colours, that is, many Colours are made of one, by putting in more or less of the Metals, or Druggs, before-mention'd.

Enamel is called *Encaustrum*, from a *Greek* Word signifying *Lemery*. Burning, because Enamel is made by a great Fire: But the *Encaustrum*, or *Enamel* of the Antients, was quite another Thing from that which we now use, and is suppos'd to be wholly lost. It is a Work almost of the same Nature with making artificial Gems, and a Mixture of the same Colours, with this Difference, that in Gems the Mass is transparent, according to the Nature of the Gem, but in this it is opacous and solid, it being Tin, which gives it such a Body and Solidity. The Ancients made their chequer'd or Mosaick Work of it; and Goldsmiths now use it in Colouring and Enamelling of Gold.

As for Enamelling, these Things must be generally observ'd: That the Pots in which the Enamel is made, be glaz'd with white Glass, and able to endure the Fire: That the Mass and Colours for the Enamel, be well mix'd and incorporated: That the Enamel, when well mix'd, refin'd, and of a good Colour, be taken out of the Fire with a Pair of Goldsmith's Tongs: That Care be taken that no Dirt or Ashes fall in or mix with it.

The Way of making Enamel, is this: Powder, grind, and searse well the Colours, and mix them well first with one another, and then with the Matter for the Enamel, then set them in Pots in the Furnace; when they are all melted and incorporated, cast them into Water, and when dry'd, set them into the Furnace again to melt, which they will soon do, and then make Proof; and if the Colour be too high, add more of the Matter for Enamel; if too light, add more of the Colour till it is exact, then take it out of the Furnace.

The common Matter for all Enamels, is thus made: Take fine Lead, thirty Pounds; fine Tin, thirty three Pounds; calcine them together in a Furnace and searse them; boil this Calx a little in fair Water in an Earthen Vessel; take it off the Fire, and decant off the

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the Water, which will carry off with it the finer Part of the Calx; put fresh Water to the Remainder, and boil and decant it as before; repeat this as often as the Water carries off any Calx; re-calcine the gross remaining Calx, and then draw off again the more subtil Parts as before: Then evaporate these Waters which carried off the Calx at a gentle Fire, that the Calx may not be wasted, which will remain at the Bottom much finer than ordinary. Take of this fine Calx, Crystal Frit made of Tarso, which is a hard and most white Marble, ground and feared fine, of each six Pounds four Ounces; of pure white Salt of Tartar one Ounce; searfe and mix them well: Put this Mixture into a new Earthen Pot, giving it a Fire for ten Hours, then powder it and keep it in a clean dry Place; of this Mixture all Enamels whatsoever are made.

Altho' these Enamels are not made use of in Medicine, yet they have their Virtues according to the Qualities of the several Druggs they are compos'd of; but they must be very well ground upon a Marble, if you would have them produce any Effect.

The White, the Blue, and the Yellow Enamel, are purely Desiccatives, but the others are Deterfives and Desiccatives.

10. Of Copper.

Pomet. **C**opper is a Metal found in several Parts of *Europe*, but principally in *Sweden* and *Denmark*, from whence we have almost all that we sell. *Copper* is taken out of the Mine in Sand, and in a Stone, almost like that of Iron; and after it is wash'd and purified from the Earth mixt with it, it is cast into Moulds of different Figures: To render it true red *Copper*, they melt it a second Time, and when it is well refin'd, they cast it into Moulds of Sand, where it falls into Cakes or Plates that are not smooth, as we see them. When they would make this *Copper* malleable, they melt it a third Time, and afterwards form it into Cakes of three Inches thick, and about fifteen Inches Diameter. Of these Cakes, put whole or in Quarters into the Fire, they make Plates, and of these Plates they make Cauldrons, by the Means of Hammers that work by a Water-Mill, and

the Plates are form'd into the Vessels by one that turns these Plates, with his Legs cover'd with Sheeps Skins, whereby he reduces them into what Shapes he pleases, with very little Use of his Hands.

Copper is a Metal very hard and dry before it is melted; and when it has been often melted it becomes ductile, and almost as malleable as Gold or Silver. Some call *Copper*, *Venus*, because that Planet is suppos'd to shed its Influences upon this Metal. From *Copper* the Chymists draw several Things very proper for divers Uses, as shall be shewn hereafter.

Æs, sive Cuprum, sive Venus, that is, *Copper*, is a beautiful Metal, *Lemery* shining, of a reddish Colour, easy to rust, abounding in Vitriol. It is found in several Places of *Europe*, but principally in *Sweden* and *Denmark*; it is taken from the Mine in Lumps, which are superficially wash'd to cleanse it from the Earth that is mix'd with it, and afterwards melted with vehement Fires. 'Tis to be observ'd, this Metal is very difficult to be melted: They purify it from its *Scoria*, and cast it into Moulds. When the same *Copper* has been twice or thrice melted, it becomes more pure and ductile, and you have a red *Copper* more beautiful than the common.

Copper is a Metal of good Use in Physick, and is said to strengthen the generative Parts in Men and Women; but us'd Crude in the Stomach in Filings, or the like, it is little better than Poison, being hot to the last Degree, and of a caustick Nature, causing Pain in the Stomach and Belly, Vomiting, Fluxes, Ulcers, and Difficulty of Breathing, and if it be calcin'd, it is yet worse. The Cure, if any one be hurt with it, is by warm Water mix'd with Oil, Oil alone and Butter, Hogs Lard melted and drank; and if it be got into the Guts, by Clysters of the like Kind, Salt and Oil of Tartar and other Alcalies; Juice of Mints, and such other Remedies as are us'd against Arsenick.

Thin Plates of *Copper* infus'd all Night in Lime-Water only, or in Lime-Water mix'd with Volatile Salt, or Spirit of *Sal Armoniack*, make an admirable *Collyrium* for the Eyes to wash with against Mists, Clouds, Films, Pearls, Suffusions, &c.

Copper is made or generated of a purple Sulphur, a red Salt, and a Citrine Mercury.

11. Of Yellow Copper, or Brafs.

Yellow Copper, is old Copper melted and made yellow by means of the true *Calaminaris* Stone. The greatest Part of the yellow Copper, is made in *Germany* and *Flanders*. They beat this Copper, and reduce it to the Thinness of Paper; and this is what we call Tinsel. They beat this Tinsel over again, and make it extremely thin, and afterwards put it into little Books of Paper, and call it *German Gold*. They grind this *German Gold* to Powder, to make Brafs for the Painters, which has more or less Colour, according to the several Times that it has pass'd the Fire. They grind this Brafs over and over again, 'till it becomes an impalpable Powder, which they sell under the Name of *German Gold* in Powder. Others put this Powder Gold into Muscle Shells, and call it Shell Gold. That Shell Gold is most esteem'd that comes from *Ausburg* in *Germany*, and from thence has the Name of *Augusta*. As to the Choice of the *German Gold*, either in the Leaf, the Powder, or the Shell, that which is finest, and highest in Colour, is esteem'd the best. The *German Gold* is us'd by Painters, especially such as paint in Miniature. The Painters Brafs is likewise us'd by them to make their Figures of Plaister have a Brafs or Copper Colour, and for other Uses.

Besides the different Preparations that are made of this yellow Copper, the *Venetians*, as I am assur'd, make of it that which the *French* call Purpurine, which heretofore was made use of upon Coaches. By Means of this yellow Copper, and the Help of Fire, they make that Sort of Vitrification, which the Enamellers call *Avanturine*; and they pretend the Name was given it because this Operation was found without being thought of, and was made by some Dust of yellow Copper which fell into a Furnace where Glass was melting. *Avanturine* is all embellish'd with Streaks of Gold. There is an *Avanturine* that is found naturally in several Places of *France*.

Aurichalcum, Yellow Copper, or *Lemery*. *Leton*, is a Mixture of Copper and *Calaminaris* Stone melted together by a very vehement Fire in Furnaces made

on Purpose. The Discovery was made by the Alchymists, who endeavouring to turn Copper into Gold, found how to give it a yellow Colour. The greatest Part comes from *Flanders* and *Germany*. The *Calaminaris* Stone embarrasses and extends the acrid Salts of the Metal to that Degree, that Brafs does not make the same Impression on Liquors, as the red Copper. Besides, as the *Calaminaris* Stone costs but little, so the yellow Copper is cheaper than the natural.

That which we call Tinsel, is yellow Copper beat to a Leaf as thin as Paper, and is us'd by the Lace-Men.

German Gold is Tinsel beat very thin, and kept in little Paper Books for the Use of Painters.

The Painters Brafs is the *German Gold* ground to Powder, which is put into little Shells, and called Shell Gold. It is us'd to colour Figures made in Plaister, and by them who paint in Miniature.

The common Brafs, which the Workmen call Metal, is an Allay of Copper with *Leton*, or with Tin. They make divers Sorts, which only differ according to the Quantity of Tin which is mix'd with the Copper; the Mixture is from twelve Pounds to five and twenty Pounds, to the hundred Weight of Copper.

They use Brafs for Clocks, Mortars, and several other Works. The best is that which gives the clearest Sound when you strike it.

12. Of Pompholyx.

THE *Pompholyx*, called *White Calamine*, *Nil*, *Nihil*, *Nibili Pomet*, *Album*, or Flowers of Brafs, and improperly, Ashes of Brafs, is that which sticks to the Cover of the Crucible, and the Pincers of the Founders when they melt yellow Copper; and it is certain that nothing but yellow Copper gives the true *Calamine*, and not the cast Copper, nor the Metal, nor the brittle Brafs, as the greatest Part of the Authors have written.

Although this *Pompholyx* be easy to be come at, yet there are not many Druggs more unknown, which proceeds from the Negligence or Ignorance of the Apothecaries, because they take Tutty and the *Pompholyx*

Pbolyx to be the same Thing, and therefore they use the Tutty instead of it.

The best Calamine comes from *Holland*, not that it is in Reality better in Substance than any other, but better collected and preserv'd. That *Pompholyx* ought to be chosen which is very white, light, friable, clean; it matters not whether *French* or *Dutch*, so it be very white.

They who cast Bells may gather a little of it; but because it is not very good, it is not worth while to look after it.

The Founder that I have seen, who made Calamine, said, he never sold any but to some particular Persons who came for a Dram Weight to take in Fevers, and assur'd me that it was a certain Remedy, and cured all Sorts of Fevers, which is a Thing I have never tried; but I should advise any Person not to use it but with great Precautions, because it is a very violent Remedy.

The *Pompholyx*, call'd in *Latin*, *Lemery*. *Nil*, *Nibili album*, *Capnites*, *Bulla Cadmica*, *Calamites*, is a Flower of Brass, white and light, which is found sticking to the Cover of the Crucible in which they melt Copper with the *Lapis Calaminaris* to make yellow Copper or Leton. It is likewise sticking upon the Founders Tongs: But either through Negligence in collecting this Drugg, or because the Workmen let it fall in the Fire when they uncover the Crucibles, we rarely find it amongst the Drug-gifts, and are therefore oblig'd to substitute Tutty in the Room of it.

The *Pompholyx* should be light, very white and crumbling. It is deterfive, desiccative, proper for Wounds. It is not much us'd, but externally for Ointments. Some give from half a Scruple to two Scruples in intermitting Fevers. It excites Vomiting very violently.

13. Of the *Æs Ustum*.

Pomet. THE *Æs Ustum*, or burnt Copper, is made of red Copper cut into little Plates, and put into a Crucible with Sulphur, and a little common Salt, *Stratum super Stratum*, and put into a great Charcoal Fire; and when the Sulphur is burnt away, and the Copper taken out of it

is of an Iron Colour without, and of a reddish one within, being shining and very brittle.

The *Æs Ustum*, if it be in a good Condition, should be moderately thick, and of the Colour before-mention'd; and being rubb'd one upon another should make a Red like that of Cinnabar, which the *Æs Ustum* or burnt Copper cannot do, unless some Salt be put to it, which is the Secret of the *Hollanders*, whereby they make it better than they do in *France*.

The *Æs Ustum* is of some small Use in Physick, because it is deterfive; but they who make Use of it, make it red-hot in the Fire nine Times, and quench it as often in Linseed Oil, and reducing it to Powder, use it for eating off dead Flesh; and they call this Powder of the *Æs Ustum* so prepar'd, *Crocus*, or Saffron of Copper.

14. Of Verdigrise.

THE natural *Verdigrise* is a greenish Marcasite like the Dross of Iron, and is found in Copper Mines, and is of no Use that I know of.

The *Verdet*, or *Verdigrise*, or Rust of Copper, is made of Plates of red Copper, and the Skins of Grapes after pressing soak'd in good Wine, and put together in a large earthen Pot, *Stratum super Stratum*, that is to say, they put an Handful of those Skins at the bottom of the Pot, and then a Layer of Copper Plates, and so on 'till the Pot be full; then they put it in a Cellar, and after some Days Time they take out these Copper Plates, which are cover'd with Rust, by the *Latins* call'd *Ærugo*; and this Rust being scrap'd off, the Plates are put in again after the same Manner as before; and this must be repeated 'till the Copper is consum'd, or render'd so thin, that it may be mix'd with the *Verdigrise*, as it often happens. The most Part of the Authors who have treated of *Verdigrise*, tell us, that it is made with Vinegar, which is not true, for the best Wine is not too good for it; and this is so true, that there is scarce any but *Languedoc* Wine that will make good *Verdigrise*. It is in and about *Montpellier* that the greatest Part of the *Verdigrise* us'd in *France* and other Countries is made, and it is a Commodity very difficult to make, and

and to hit right, altho' it seems as if nothing were more easy; for if never so little happens to be amiss, it grows greasy and black, and good for nothing, and will never come to a true Consistency. Had not the Receipt been stolen from me, I would have told you how they do it at *Montpellier*, which I hope to recover and present the Reader with, in the second Edition.

There are some Authors, who say, that one may make *Verdigrise* by putting Plates of Copper in a Crucible, with Salt, Sulphur, and Tartar, which being calcin'd and cool'd, the Plates are converted into a very good *Verdigrise*; but these Operations, supposing them to be true, are at present of no Use, because all the *Verdigrise* we sell, is made in the fore-mentioned Manner.

We have two Sorts of *Verdigrise* from *Montpellier*, the one in Powder, the other in Cake: If it is good, it must be dry, of a beautiful deep Green, and with the fewest white Spots that is possible. *Verdigrise* is a Merchandize that loses most of any Grocery Ware; and this makes them who deal in it, mix it with several Druggs, that there is no Necessity of naming, and render it so moist that the Merchant loses much by the Waste of it, besides the Skin which covers it, for which they pay as much as if it were *Verdigrise*: Therefore they who use it should consider its Goodness, and not stand upon the Price; for I can affirm, that there is no Cake of *Verdigrise*, such as they send from *Montpellier*, that weighs twenty five Pounds, but after it is dry has lost a third Part; so that the *Verdigrise* that cost twenty Pence when soft, will be worth near eight and twenty Pence when hardned.

Verdigrise is a Drugg the most demanded of any we have, and the Quantity of it that is us'd is almost incredible, not only in Physick, but by Dyers, Skinners, Hatters, Farriers and Painters; but it is remarkable, that *Verdigrise* alone, ground with Oil, cannot be used; so that it is absolutely necessary for Painting, to add white Lead to it, for otherwise, instead of being green, it would be black. As for the Properties of *Verdigrise*, one of them is eating off dead Flesh. The Apothecaries use it in some Ointments and Plaisters, as the *Ægyptiac*, the *Apostolorum*, the Divine Plaister, and others. They who

colour Paper green, make use of *Verdigrise* and white Tartar to give it that Colour.

The Apothecaries and others, who have Occasion for *Verdigrise* in the afore-mention'd Compositions, and others, instead of the Powder, may dissolve it in Vinegar, and strain through a fine Sieve, and so avoid, in reducing it to Powder, the Effects of the ill Quality of the flying Dust of *Verdigrise*.

Verdigrise, in Latin *Ærugo*, or *Viride Æris*, is a Rust of Copper *Lemery*. penetrated and rarefied by the acid tartarous Salt of Wine. To make it, they stratify Plates of Copper with the Grape Skins when the Must is taken from them, and leave them in that Maceration 'till they are in Part converted into a blueish green Dust, which they separate with Knives, and continue the Operation as before, 'till the whole be turned into *Verdigrise*. This is commonly the Work of the Women in *Languedoc*, *Provence*, and *Italy*, where the Refuse of the Grapes have the greater Force to penetrate the Copper, and work upon it with its Salt.

It deterges powerfully, it consumes proud Flesh, it attenuates and resolves, and is us'd only in external Medicines; it is sharp and digesting, and cicatrizes Ulcers, being mix'd with Oil and Wax, and applied. It likewise cleanses them from their Filth and Putrefaction, although they were the most stubborn, and had resisted all other Remedies.

It is of good Use in the Gout, being dissolved in fair Water, and used warm to the Part.

It cures Diseases of the Eyes, and effectually takes off Pearls and Films. But before you use it for the Eyes, or for Wounds or Ulcers, you must purify it after this Manner: Powder it, and put upon it Spirit of Vinegar six or seven Times its Weight, digest till the Vinegar is tinged very green, which decant, and cast away the Fæces; then evaporate the Vinegar in a Brass Vessel, and so you will have a glorious *Verdigrise* at Bottom, of which one Ounce is worth ten Ounces of the former.

Take of this fine *Verdigrise*, a Dram; Spirit of *Sal Armoniack*, half an Ounce; Alcohol of Wine camphorated, two Ounces; mix them for a *Collyrium* to wash the Eyes. Take the white of an Egg beaten well with Spring Water, four Ounces, and add to it

Saccharum Saturni, ten Grains; white Vitriol, fix Grains; and so many Drops of the *Collyrium* as may make it of an Azure Colour, with this wash the Eyes two, three, or four Times a-Day.

This fine prepar'd *Verdigrise* being made into an Ointment with Honey, Juices of Wound Herbs, Vinegar, and absterfive Sulphur of Vitriol, is applicable to weeping Wounds, Ulcers in the Joints, &c.

15. Of Verdigrise Crystalliz'd.

Pomet. THE crystalliz'd *Verdigrise*, or Crystals of *Verdigrise*; or as it is call'd by Merchants and Painters, calcin'd or distill'd *Verdigrise*, is *Verdigrise* dissolv'd in distill'd Vinegar, and afterwards filtred, evaporated, and crystalliz'd in a Cellar. These Crystals are of some small Use in Physick, to consume dead Flesh. They are likewise us'd by Painters to make a green Colour, especially in Miniature.

All the Crystals of *Verdigrise* that we sell in *Paris*, come from *Holland* or *Lyons*, and are not unlike Sugar-Candy, except in Colour, especially to that which is on Sticks, and if good, these Crystals must be beautiful, clean, and transparent, very dry, and as free from Sticks as possible. Here it may be observ'd, that the *Verdet* which the Apothecaries make, is reduc'd to Crystals by the Means of a Cellar, whereas that which comes to us is made after the Manner of Sugar-Candy, as I have been inform'd.

I cannot tell what has induc'd the Merchants to call these Crystals distill'd or calcin'd *Verdigrise*, seeing it is neither distill'd nor calcin'd, but made after the fore-mention'd Manner.

They likewise make Crystals of *Verdigrise* by dissolving Copper granulated in the Spirit of Nitre, and afterwards evaporating to a Scum or Pellicle, and setting it in a Cellar to crystallize.

If you would reduce these Crystals to a Liquor after having dried them, you must carry them back to the Cellar to resolve them into Water; and this Liquor is call'd by the Apothecaries or Chymists, the Liquor of Copper or *Venus*, and the Crystals the Vitriol of *Venus* or Copper.

16. Of the Mountain, or Sea Verdigrise.

THE Mountain or *Hungarian Verdigrise*, is a Sort of greenish *Pomet*. Powder in Grains, like Sand, which is found in the Mountains of *Kernaufen* in *Hungary*, and comes from *Presbourg* to *Poland*. It is found likewise in the Mountains of *Moravia*; and some will have it, that what the Ancients call Flowers of Brass, was made by throwing Water, or rather Wine, upon Rose Copper, whilst red, that is to say, as it comes out of the Furnace; and that this Flower, or Mountain *Verdigrise*, is gather'd and found sticking to other Plates of cold Copper, which they place over them, in small Grains like Sand, and that this is made by Vapours which arise when they throw Water or Wine upon the hot Copper; and that it is that which makes what we call Rose Copper to be so unsmooth, and to be full of little Figures. Others have assur'd me, that this same green was Plates of Copper dissolv'd in Wine, which was made almost after the same Manner as *Verdigrise*; but as I know no more of it, I shall only say, that such is to be made choice of as is dry, of a high Colour, well granulated, that is to say, like Sand, which is the Mark of natural Mountain *Verdigrise*, and makes the Difference between that and the Artificial, which some make by pulverizing *Verdigrise*, and putting a little white Lead amongst it.

The *Verdigrise* of the Mountain is of no other Use but in Painting, principally for making a Grass Green; and therefore it is that most of the green Painting we see in Gardens is done therewith.

As it is a dear Commodity, and comes from several Parts, so there are different Sorts of it, and different Prices; therefore they who use it should regard the Qualities of it rather than the Cheapness.

17. Of Mix'd and Bell-Metal.

BELL-Metal, according to Monsieur *Furetiere*, is an Allay of Metals, the Principal of which is Copper melted with some Part of Tin, or of Brass; some for Cheapness

ness put in Lead, because one cannot melt Copper in a reverberating Furnace, but that it shall remain full of Holes like a Sponge. There is likewise another Compound of Copper, which is call'd *mix'd Metal*, which in Effect is nothing else but *Bell-Metal*; and they give it this Name from the greater or lesser Quantity of Tin that is mix'd in it, which is from twelve to five and twenty in the hundred. The Dregs, or *Scoria*, of mix'd Metal is call'd *Diphryges*, and is us'd in Physick. The Flower thereof is made by throwing fair Water upon melted Bras; when it runs, they place Iron Plates over the Fume of it, and that which congeals, settles into little Grains like Millet-Seed, which are bright, and of a reddish Colour, and this is call'd *Flowers of Bras*. The Scales of Bras is what falls from the Bras when they hammer it and work it.

Diphryges is of a mix'd Faculty, meanly astringent, sharp, and of excellent Use against spreading Ulcers. It cleanses, dries, and consumes Excrescences, and being made into a *Collyrium*, is good for dropping Eyes, and such like Diseases of the same. The best is that which has the Taste of Bras, or the Rust of it, being astringent, and very much drying the Tongue.

As for the mix'd, or Bell-Metal itself, we use it for making Figures, Bells, Mortars, and other Utenfils. The best Metal is that which is whitest, and sounds like Silver. I should not have been so long upon this Head, if it had not been for the sake of Tutty, which is describ'd under the following Head.

18. Of Tutty.

TUTTY, or the *Spodium* of the *Greeks*, is a metallick Species in Scales or Drops of different Size and Thickness, solid within, and rough without, with a Sort of Excrescences, like Pins Heads; for which Reason the Antients call'd it *Spodium*, or *Tutty* in the Cluster. The *Tutty* which we sell in *France* comes from *Germany* and other Places, where they make mix'd, or Bell-Metal. It is wrong to think, what most Authors both new and old have asserted, that *Tutty* is got from the yellow Copper or Bras, and that it is made at the same Time as the *Pompholyx*;

for this is not true, seeing the *Tutty* is found sticking to Rolls of Earth, which are hung up, and plac'd on purpose on the Top of the Furnaces where the Founders cast their mix'd and Bell-Metal, to retain the Fume or Vapour, like the Smoke in Chimneys; and by the means of these Rolls the Vapour is retain'd and reduc'd into a Shell of the same Figure as these Rollers, which we have seen: And the Thing is so certain, that if one will but look amongst the *Tutty*, you will find sticking to it the Earth; and therefore it is not made by sticking to the Bottom or Sides of the Furnace. And that which makes this more than a Supposition, is, because all the *Tutty* we have is always in Form of a Gutter, and half round.

Tutty ought to be in bright Scales, thick, granulated, of a fine Mouse Colour without, and a pale Yellow within, hard to break, and as little mix'd with Foulness as possibly can be. *Tutty* has no other Use, that I know of, but in Medicine, and that not till 'tis well beaten. Others burn it, and after wash it, and make it up into Troches, which they use for Diseases of the Eyes, mixing it with fresh Butter, or diluting it with Rose or Plantain Water. *Tutty*, well prepared, and incorporated with fresh Butter, is an excellent and sure Remedy for the Piles. That is most esteem'd which comes from *Orleanse*, either because it is better prepar'd, or because it has all along carried the Vogue with it.

Tutty is brought from *Sweden*, *Cyprus*, *Greece*, *Turkey*, and *Ægypt*; *Lemery*. but the *Cyprian* is the best. It was heretofore brought from *Alexandria*, and therefore Authors, in their Descriptions, call it *Tutty of Alexandria*. The Difference between the *Pompholyx* and the *Tutty*, or the grey *Spodium*, is this; the *Pompholyx* is more white and light, like volatile Meal; the latter is nearer the Colour of Bras, heavier, thicker, and fattish, which with Vinegar yields a Smell like Bras. *Tutty*, by some, is accounted the better Medicine, and more powerful for the Uses intended. *Cadmia*, calcin'd by a violent Fire, and brought to Ashes, is sold for *Tutty*; but this is a Cheat: And sometimes, for want of it, burnt Ivory is sold in the Shops for it.

It is deterfive, deficcative, proper for Difcafes of the Eyes, for drying and cicatrifying of Wounds, and for the Piles. It is only us'd externally, after being ground to a very fine Powder.

19. Of Chalcitis.

Pomet. **C**halcitis, or Colcothar, is a natural Vitriol made red by subterraneous Fires in the Entrails of the Earth, which is the Reason why Chalcite is a Stone of a reddish Colour. I shall not endeavour to write what the Antients have said touching the different Changes that happen to the Chalcitis, nor to explain what is Misy, what Melanteria, and what Sory, for I cannot tell what these three last are, or where they may be found. *Matthiolus* upon *Dioscorides*, pag. 729. says, that Misy is hard and like Gold, and glisters like a Star, and is found in *Cyprus*. The Melanteria is found of two Sorts; one is found growing like Salt at the Entrance of Copper Mines; the other is found congeal'd at the Top of the Mines. He says, that the best Melanteria is that which is smooth, clean, firm, and of the Colour of Sulphur, and that turns black as soon as a Drop of Water is put upon it. As for Sory, he says it is black, full of Holes, and astringent to the Taste, of a very ill Smell, and that a great deal is found in *Agypt*, *Libya*, *Spain*, and *Cyprus*. *Pliny*, on the other Hand, says, that Chalcitis, Misy, Melanteria, and Sory, are the same Thing; that the one changes to the other in Process of Time, that is to say, Chalcitis becomes Misy, Misy turns to Melanteria, and Melanteria to Sory; which I could never find, tho' I have had a Lump of it above eighteen Years, in which I could never see any Alteration, as to its Nature or Colour, tho' I have been careful to observe it. It is true, there is a Chalcitis that has different Colours in the same Piece, but as I have found no Alteration in it by keeping all the Time I had it, I am apt to believe it was so naturally.

Chalcitis is to be chosen in pretty large Pieces, of a brownish Red, of the Taste of Vitriol, which being put into a little Water, dissolve easily, and being broke, are of a Copper Colour, but something more shining.

The Chalcitis, or natural Colcothar, is brought from different Places, as from *Sweden* and *Germany*. It is a Drug very little us'd in Medicine, because very rare; and if it were not an Ingredient in *Venice-Treacle*, there would be scarce any Demand for it. The Dearness and Scarcity of this Stone has given Occasion to many Counterfeits, and to seek for *Succedaneums*, as the Colcothar, or Vitriol made red, the white Vitriol calcin'd, the *Lapis Calaminaris*, because of its Colour, and several other Things; so that Persons who want the true Chalcitis, must apply to honest People, and not stick at a Price.

Chalcite is a Vitriol naturally calcin'd by the subterranean Fires, *Lemery*. and render'd into Pieces of Stone, pretty big, red, and sometimes streak'd with in with yellow Veins something sparkling. It is found in Copper Mines, and within side participates of that Metal. It is melted by Fire. It is brought sometimes from *Germany* and *Sweden*, but is generally very scarce in *France*.

That is most preferable, that is in pretty large Pieces, of a brownish red without, which being broke, is of a Copper Colour, something shining, of the Taste of Vitriol, and easily dissolv'd in Water.

The Chalcitis is hot, dry, deterfive, and very astringent. It stops Bleeding at the Nose. It is us'd internally and externally; and in the Composition of *Venice-Treacle*; but not being easily got, they commonly substitute an artificial Colcothar, which is a green Vitriol calcin'd to a Redness, in the Room of it. It is of thiner Parts than Sory, but thicker than Misy. In a *Collyrium* it cleanses, dries, and heals the Eyes. The same *Collyrium*, if weaken'd with Rose-Water, prevails against *St. Anthony's Fire*, and all Sorts of creeping Sores, whether of Skin or Flesh. With Juice of Leeks it is said to stop a Flux of Blood at the Nostrils, as also in Wounds, and of the hemorrhoidal Veins. It is good against Vices in the Gums, and eating Ulcers of the Tonfils, the Powder of it being laid upon the Part affected. Burnt, and mix'd with Honey, it helps callous and rough Eyebrows, Fistulas, Leprosy, and other cutaneous Diseases.

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They who distinguish *Misy* from *Chalcitis*, say, it is a natural mineral Excrement almost like Gold, which glisters when it is broken. It is commonly bred upon the *Chalcitis*, and is only the Recrement of that Mineral, being bred thereon, as Verdigrise is upon Brafs. It is very astringent, burning, and of much thinner Parts than *Chalcitis*, but is of the same Virtue with it, as being bred from it, but in a different Degree. That which comes from *Ægypt* is accounted the best, and is more corrosive than *Chalcitis* or *Sory*; being calcin'd and burnt, or wash'd, it is good against malignant Ulcers or Fistulas. With Lime Water, in which a little *Sal Armoniack* is dissolv'd, a *Collyrium* may be made by infusing the Powder. That Water is likewise good to wash malignant Sores, and running Ulcers.

The *Melanteria* of *Dioscorides*, according to *Matthioli*, is a mineral vitriolick Matter, of which there are two Kinds. One is found like a Salt upon the Entrance of Copper Mines, from whence they gather it. The second is found at the Top of the same Mine, in a firm, smooth, clean Stone, of the Colour of Sulphur. *Dioscorides* prefers this latter Sort to the first, and chiefly when it grows black upon being melted with a little Water. He says the *Melanteria* is found in *Cilicia*, and several other Countries: He attributes a caustick Virtue to it. This Drugg is unknown to us; and many believe, with *Pliny*, that it is nothing else but the *Chalcitis*, which has taken several Shapes and Colours in the Mine. However it is, we substitute the natural *Chalcitis* in the stead of it.

Sory is a stony Mineral, vitriolick, gross, impure, porous, or naturally pierc'd with many Holes, fattish, black, of an ill Smell, and a stiptick Taste. It is found in the Mines of *Cyprus*, *Spain*, *Libya*, and *Ægypt*; and as *Matthioli* says, it is found in the Dukedom of *Brunswick*. Many have thought it to have been a *Chalcitis* grown old, and that has lain long in the Mine; but there is more Probability that it was a Mixture of Vitriol and Bitumen calcin'd by subterranean Fires. There has been none of it found for many Ages, at least it has been neglected, and we substitute the *Chalcitis*, or natural red Vitriol in the Room of it. It was drying, burning, and astringent, not much differing from *Misy*,

but of thicker and grosser Parts, and therefore less piercing.

20. Of the Roman Vitriol.

Roman Vitriol, as well as all other Vitriols, or Sorts of Copperas, is *Pomet*. a Crystallization drawn by the Help of Water from a Sort of Marcasite, found in Copper Mines, to which the Antients have given the Name of *Pyrites*, or *Fire-stone*. This Stone is found under our Clay-Pits at *Passy*, within a League of *Paris*, upon which several Operations have been perform'd; and as I have been assur'd, it was with this that a certain Abbot made his universal Medicine. The *Pyrites*, from whence they extract the *Roman Vitriol*, is found in several Parts of *Italy*. To reduce this Marcasite to Vitriol, they expose it for some Time to the Weather, that so the Air may penetrate into it, and that it may calcine and turn into a Chalk of a greenish Colour. When the *Pyrites* is fit for working, they throw it into Water, and afterwards, by the Help of Fire and wooden Tubs, reduce it to Crystals, such as we receive from *Italy*. In a Word, all the Vitriols, or Copperas's, are made as they make Allum in *England*, or Salt-Petre with us. All the Difference that there is between the several Copperas's proceeds from the different Places where the Mineral is found; and as it participates more or less of the Copper or the Iron, they which have most of the Copper are those of *Cyprus* or *Germany*: They which have most Iron are the *Roman Vitriol*, and that from *Pisa* and *England*. When the first are rubb'd upon the Edge of a Knife wet with Spittle, they make it look red; on the contrary, the *Roman Vitriol*, and the Copperas of *Pisa* and *England*, don't change the Colour upon the Edge of the Knife: And this has given some People, who shall be nameless, an Opportunity of counterfeiting *Roman Vitriol* by *English* Copperas, which they do by washing that Copperas never so little, and exposing it to the Air for some Days, till from a green it turns to a greyish Colour; which is easy to be found out, because the true *Roman Vitriol* is in thick long Pieces, or a Grass Green, very difficult to melt, and being broke, is transpa-

transparent as Glafs; from whence, the *Latin* Word for Glafs being *Vitrum*, some pretend that it takes its Name: Others will have it, that the Name of *Vitriol* is mysterious, and that every Letter stands for a Word; so that it is as much as to say, *Visitando Interiora Terræ, Reëtificando Invenies Occultum Lapidem, Veram Medicinam*.

The true *Roman Vitriol* is much sought for at present, both because of its Scarcity, as well as because 'tis proper for the making a white Powder, which they call the *Sympathetick Powder*, which is only *Roman Vitriol* expos'd to the Air and the great Heat during the Dog-days for a considerable Time; and when it becomes extremely white by the Calcination which the Sun has given it, is made use of for Wounds and Stoppage of Blood. Some mix Gum *Tragacanth* with it. They bring us likewise from *Italy* another *Vitriol*, which comes near the Colour of the *Roman*, only it is greener, and in lesser Pieces, and is what we call *Vitriol*, or *Copperas of Pifa*, and is made use of by the Dyers.

The third *Vitriol*, which is of a martial Nature, and as it is more common, is also cheaper than the *English Copperas*, is much us'd by Dyers, Hatters, and others, who have occasion for a black Colour; and they pretend that that which makes the Copperas dye black, is because it participates of the Iron; othey will have it, because they who make it throw old Iron into the Liquor.

The necessary Qualities in right *English Copperas* is, that it be dry, of a clear transparent Green, with as few small and whitish Pieces as possible.

Of the Cyprian or Hungarian Vitriol.

Notwithstanding all the Pains I have taken to discover what the *Vitriol of Cyprus*, which we sell, might be, I have not been able to learn it. The Antients, and some Moderns, have pretended, that this *Vitriol* is a Crystallization made of a blue Water which is found in subterraneous Places in *Cyprus*, from whence it has its Name. And a Person of Worth and Honesty has affirm'd to me, that the *Vitriol of Cyprus* was made of Rose Copper dissolv'd in the Spirit of *Vitriol*, and afterwards crystalliz'd. Another has told me,

that it was made of *German Copperas*; but not knowing which Part to take amongst these three, I shall only say, that two Sorts of *Vitriol* are brought from *Cyprus*, one in large Pieces, which we call the *Company's Vitriol*, because the Merchants trading to the *Indies* bring it to us; the other cut into Bits on Purpose, with Points like Diamonds, to make it look more beautiful, and promote the Sale.

The *Vitriol of Cyprus* or *Hungary* is to be chose of a fine sky-colour'd Blue, especially when broken; for being a Commodity easily penetrated by the Air, it will come to be of a whitish grey on the Outside, which does not at all diminish its Goodness, but renders it not so saleable to the Eye; and a Sign that it is the Superficies only that is damag'd, is this, that by putting it to the Tongue, upon the Approach of the least Moisture, it will come to its Colour. Some Persons have assured me, that so piercing a Spirit is drawn from the *Vitriol of Cyprus*, that it would break any Glafs Vessel of whatsoever Thickness, and yet tho' so piercing, being mix'd with an equal Quantity of Water, was a sovereign Remedy for consolidating all green Wounds, and stopping of Blood; which is probable enough, because we have no Druggs more astringent, or that stop Blood better than the *Vitriol of Cyprus*. This *Vitriol* is much us'd by several Artists. Some Persons carry it about them for Blotches in their Face.

This, as well as the *Roman*, is us'd for the sympathetick Powder.

Of German Copperas.

The *German Copperas* is a *Vitriol* of a bluish Green, clear and transparent, which is made and crystalliz'd at *Goffelar* in *Saxony*, whence it is that the *German Copperas* is call'd *Goffelar*, or *Saxon Vitriol*. The largest Pieces, clearest, and most transparent, are to be chosen, and the driest that can be.

The *German Copperas* is of much use in Medicine, as being that from whence the Chymists draw most of their Preparations, as shall be shewn hereafter. It is likewise us'd by the Dyers. This *Copperas* may be us'd for stopping Blood in Case of Necessity, instead of the *Vitriol of Cyprus*, but it has not so much Efficacy.

Of White Copperas.

The white Vitriol which we fetch from *Germany*, is the Copperas of *Goffelar*, before mentioned, calcin'd to that Whiteness, and afterwards put into Water and filtred, and reduc'd to Salt; and when it begins to coagulate, the *Germans* make Lumps of forty or fifty Pound Weight, of the Shape we see them in. It is therefore an Abuse put upon us by a modern Author, who would make us believe that the white Copperas is that which is found near Fountains, and is the most purified from any metallick Substance. This Copperas ought to be pretty hard, white, and of the nearest Resemblance to fine white Sugar that can be. Care must be taken to keep it from the Air, for when that gets to it, it becomes yellow and unsaleable.

This Copperas is of some Use in Physick, because some People put it into Rose or Plantain Water, with Orrice and Succotrine Aloes, to cure the Eyes. Painters use it when calcin'd to put in their Colours that they may dry; but Farriers have the most Occasion for it.

By Help of the Spirit of Vitriol they draw Brytals from this white Copperas, which are those we call *Gilla Vitrioli*, or emetick Vitriol, because being taken from twelve Grains to a Dram in Broth, or other Liquor, it gives an easy Vomit.

Of the Spirit and Oil of Vitriol.

They draw from the *German* or *English* Vitriol, calcin'd to a Whiteness, by Means of Fire and a Retort, a Phlegm, a Spirit, and an Oil; but because the Operation is long and troublesome, I should not advise any one to concern themselves with it: Besides, the Spirit and Oil of Vitriol which we Apothecaries and Chymists make, are not so good, nor can be afforded so cheap as those brought from *England* and *Holland*. This must be taken Notice of, that what we call Oil of Vitriol, is a Spirit well rectify'd from its Phlegm; tho' it must not be expected in this as in others, that the Oil should be fat and swim upon the Water, for the Oil of Vitriol is not such, but easily intermixes with watry Liquors.

That which is called Spirit of Vitriol is the

Liquor which comes immediately after the Phlegm, which if right ought to be as clear as Water, of a Taste something sharp, and being put upon white Paper, and held to the Fire, becomes black. They use this Spirit of Vitriol very common in Physick for Cooling, and upon other Occasions. The Spirit of Vitriol, well cleans'd of its Phlegm, is what we improperly call Oil of Vitriol, and ought to be of a dark Colour, of so piercing and caustick a Taste, that it is impossible to endure it upon the Tongue. They are in the wrong who think that acid Spirits need not be stop'd, because they pretend that they do'nt evaporate, which is true; but this Spirit being thoroughly divested of its Phlegm, if you leave it in a Bottle unstop'd, the Air gets into it, increases its Bulk and Weight, and at last becomes as insipid as Water.

The Oil of *Vitriol* is very corrosive, and therefore made use of to dissolve Metals: It is taken inwardly for the same Distempers as the Spirit, but must be us'd in lesser Quantities, because it has greater Strength in it. Spirit of Vitriol should be bought of such Persons as one can trust, because there are some who make Spirit of Vitriol, by mixing *Aqua fortis* with Water, which they are able to afford at a cheaper Rate; and this Spirit of Vitriol, made with *Aqua fortis*, is call'd the philosophick Spirit of Vitriol, of which you must be carefully beware.

As to the Water and Phlegm of Vitriol, which I mention'd before, it is of no Use because it is insipid, yet some People wash their Eyes with it.

Monfieur *Lemery* says, that you must use *English* Vitriol, or Copperas, for the fore-mentioned Operations, because it is not of such Acrimony as the *German*: However all they who work with Vitriol make use of the *German*; but I leave the Decision of this Point to them that have more Experience in it than I have. That which remains in the Retort, after Distillation, is a reddish Earth which the Chymists call the *Caput Mortuum* of Vitriol, artificial *Colcothar*, or rubified Vitriol. One may draw a Salt out of it by the Means of Water and Fire, which is what they call Salt of Vitriol, and is made use of as *Gilla Vitrioli*, only not to be taken in such large Doses. The Salt of Vitriol ought to be white, and faithfully prepar'd;

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for it is usual to sell the *Gilla Vitrioli*, or green Vitriol calcin'd to a Whiteness, for the Salt of Vitriol.

The *Colcothar* has some little Use in Medicine, for as much as some People employ it instead of *Chalcitis*, both because it is cheaper, and also has the same Qualities. Some Apothecaries put *Colcothar* into their *Diapalma*, as well to make it red, as to humour the Surgeons, who are pleas'd that the Publick don't know that it is nothing but *Diapalma*; and to disguise it the better, they call the Plaster by the Name of *Diachalciteos*.

They make with the *Colcothar*, Burnt Alum, Sugar-Candy, Urine and Rose-Water, a very astringent Water, and proper for stopping of Blood, as Monsieur *Lemery* has observ'd, to whom the Reader may have Recourse. There is another styptick Water of Monsieur *Faveur*, describ'd by Monsieur *Charas*.

It is to be observ'd, that the *Colcothar* is improperly call'd *Calcanthum*, because the Word *Calcanthum* signifies nothing else but Vitriol.

Vitriol is a mineral Salt drawn *Lemery*. as Salt-petre by Lotion, by Filtration, by Evaporation and Crystallization, from a sort of *Marcasite*, call'd *Pyrites* or Fire-Stone, of which I shall speak in its Time. It is found in the Mines in several Parts of *Europe*, as in *Italy* and *Germany*: There are some forts taken about *Paris*.

This Fossil or Mineral, consists of an acid Salt, Earth, Iron and Copper. The distinguishing Mark of Vitriol consists in the black Colour which it communicates to an Infusion of Galls. That 'tis an acid Salt appears plainly, not only by its being chymically analys'd, (for a great many cavil, that an acid Spirit may be produc'd by the Violence and Force of the Fire) but also from the bright red Colour that a Solution of Vitriol imparts to blue Paper. The Earth of Vitriol precipitates or falls to the Bottom of the Crucible, when the Solution of fix'd Nitre is pour'd upon a Solution of Vitriol. As to Iron and Copper, it is not to be doubted that they are contained in Vitriol; for by pouring the Spirit of Salt of Vitriol, upon the Filings of Iron, an excellent Vitriol of *Mars* or Iron is made, and by placing Plates of Iron or Copper in a Crucible, with some common

Brimstone interspers'd, a Vitriol is produc'd by the Help of Fire: Wherefore it is very probable that the Vitriol of *Mars* or Iron, and the Vitriol of *Venus* or Copper, are bred in the Bowels of the Earth, from the acid Juices or Liquors corroding the Copper.

White Vitriol, vulgarly call'd *Eye Copperas*, is a Mineral Vitriolick Salt found in the Earth, near unto Fountains, and the most of all depurated from a metallick Mixture; or it is made by dissolving the *Roman* or dark green Vitriol in Water, and then boiling it 'till all the Water is evaporated, and the Vitriol turned into large white Lumps like Sugar, which being expos'd to the Air, turn outwardly of a reddish or yellowish Colour. It is the least acrid of any of the Vitriols.

It is to be chosen in large white Lumps, pure and clean, resembling Loaf Sugar, of a sweet Taste, astringent, accompanied with an Acrimony. It contains abundance of Phlegm and acid Salt, a little Sulphur like common Sulphur, and some Earth.

The white natural Vitriol needs no Manner of Preparation, being of great Use and Force in a Looseness and Bloody Flux, and frequently used for that Purpose in Camps and Hospitals. The other white Vitriol is thus purified. Take white Vitriol, what Quantity you please, dissolve it in Phlegm of Vitriol, or in Rain Water; then filtrate, evaporate, and set it to crystallize. This is that which is called *Gilla Vitrioli*, and *Gilla Theophrasti*.

It heats, desiccates, astringes, or constipates, yet excites Vomiting. It powerfully extricates tough Phlegm out of the Ventricle, by its emetick Force, yet may be given to Children. It kills Worms, and strengthens the Stomach and Brain, and is good against Convulsions and Epilepsies; it cleanses and strengthens the Womb, and is us'd in Injections against a *Gonorrhœa*, and the Whites in Women, a Dram thereof being mix'd with a Pint of Spring Water, and so us'd with a Syringe: Inwardly, as a Vomit, it is an excellent Remedy against Fevers. Dote from twelve Grains to a Dram in Broth, or other Liquor. It cleanses the Stomach from all Impurities, eases the Head-ach, stops Fluxes, and is good against *Quotidian* and *Tertian* Agues.

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There are two Things observable, *First*, That in making this *Gilla Vitrioli*, all the Liquor may be evaporated away without any Crytallization, so the *Gilla* will remain at the Bottom in a white Powder. Next, that after taking this Vomit, the Sick sometimes voids by Stool a black Matter, like Ink, because it often happens that some Part of the *Gilla* descending into the Guts, meets with a styptick Matter, almost of the same Nature as Galls, which causes that Blackness.

The sympathetick Powder is white Vitriol open'd and prepar'd; it ought to be plac'd upon a Stone, so as to receive the Beams of the Sun reflexively, from a large Burning Glas, by which it will be sooner done than by any Furnace whatsoever, and the calcin'd Powder is to be kept in a Glas close stop't for Use. It is us'd in the magnetick Cure of Wounds. Dissolv'd in Water, and used outwardly, it dries, binds, and heats much, and has the Virtue of the *Gilla*.

The *Aqua Styptica Composita*, or the Compound Styptick Water, is made of this Vitriol. Take purified white Vitriol, Roch Alum, of each an Ounce; *Saccharum Saturni*, half an Ounce; Spring Water, two Quarts; mix and dissolve over a gentle Heat, digest close stop't ten Days; decant the Clear, filtrate and keep it for Use. This is an easy Preparation, and of few and simple Ingredients, but of no mean Use. It is a good Injection (Universals being first premis'd) against the Whites in Women, and the *Gonorrhœa* in Men, though of never so long standing, and possibly may do more in two, three, or four Days Time, being injected, than all other Medicines could do in as many Years: It stops Bleeding in any Part, heals Ulcers, and infallibly cures all Sorts of Tetters, Ringworms, Scabs, Scurf, Morphew, and inveterate *Herpes* in any Part of the Body, if daily wash'd therewith, two or three Times a-Day, for half an Hour at a Time, and as hot as can be endured; injected as a Clyster, it kills the Worms call'd *Ascarides*.

There are several Sorts of green Vitriol, as the *German* or *Hungarian* Vitriol, the *English* Vitriol, and the *Roman* Vitriol.

As for the Green or *Hungarian* Vitriol, the Native is found in Mines like Copper. The Factitious is made of the Marcasite, call'd *Pyrites*, or the Fire-Stone, with or without

Additions of Copper, and is brought to us from *Dantzick*, out of *Germany*, *Hungary*, &c. The best is the greenish, and of that, that which participates more of Copper than of Iron, which rubb'd on a Knife, colours it red; that which is subceruleous, pale, aqueous, and moistens the Hands, is not so good.

The Factitious is that which is made either of Water coming from vitriolick Springs, evaporated and crytalliz'd, or else made from vitriolick Marcasites, the *Pyrites*, or Fire-Stone, (with Additions of Copper) which is found in Grounds abounding with metallick Seeds, and inclin'd naturally to the Generation of Sulphur. It is known by burning, for it yields a sulphureous Fume, not unlike Brimstone. This powder'd and exposed to the Air, yields on its Superficies a little white and sharp Salt melting in the Mouth, at first sweetish, then ending in a vitriolick Harshness. From this Powder Vitriol is thus extracted; it is dissolv'd in Rain Water, by boiling in a slow Heat, then filtrated, evaporated, and crytalliz'd; so you have an excellent greenish Vitriol.

Out of any of these three Kinds of greenish Vitriols, all the great and fam'd Medicines are made. It goes sometimes by the Name of *Dantzick* Vitriol; it may be purified after the same Manner as the white, and the *Gilla* of it has all the Virtues as the other, but is much stronger, and ought to be given with Caution and Discretion, and only to strong Persons; and if given to the Sick, they ought to be provok'd to Vomit, lest by Reason of its Quality it should ulcerate the Tunicles of the Stomach and Bowels.

The sympathetick Powder is much better to be made with this than with white Vitriol, as being much more powerful to all the same Intentions of curing Wounds, and the like: And as to the Compound Styptick Water of white Vitriol, the same may be done with the *Hungarian*, only the Proportion of it must be something less. It is superior in Virtue, and may do Wonders, if in a wise Man's Hand; but for vulgar Use the former is better, because it may be trusted with Persons that are less skilful, and there will be no Danger of their doing Mischief with it.

The Styptick Water of Monsieur *Faveur* is made after this Manner: Take of Vi-

triol twenty five Pounds, dissolve it in fair Water, strain it through a coarse Cloth, boil it in a Copper Vessel for a Quarter of an Hour; remove it from the Fire, and put to it immediately half a Pound of Spirit of Vinegar to cause the earthy Parts to settle; let it stand twelve or fourteen Hours, that the *Terra* may precipitate, then decant the clear Liquor. This *Terra* or Precipitate wash well, dulcify and dry over hot Embers; of which take eight Ounces, put it into a Glass Retort, upon which pour Spirit of Vitriol, well rectify'd from its Phlegm, eight Ounces; distil with a gradual Fire, soft at first, and at length very violent, continuing it so 'till nothing more will come. Take the *Caput Mortuum*, reduce it to Powder, and with Alcohol, or tartariz'd Spirit of Wine, enough to cover it five Inches over, in a Matrafs well luted. Set it in a soft Heat to digest for twenty four Hours, 'till the Spirit of Wine becomes very red; filter it hot, and draw off the Spirit in a Glass Alembick, so you have at the Bottom a whitish Powder: Take of this Powder one Ounce; Rain Water four Ounces, digest in the Sun for some Days, then filter and keep it for Use: But the same Person, in making the same Water, did put double the above limited Quantity of Spirit of Vitriol, and then only drying the *Caput Mortuum* in a Crucible till it became yellowish, he to two Ounces of it put only three Ounces of Rain Water; digested them together for some Hours, then filtrated and kept the Liquor close stoppt for Use, as an extraordinary Remedy against all Hemorrhages, or violent Fluxes of Blood.

To conclude, the *German* or *Dantzick* Vitriol is in green Crystals, inclining to a blue, of an astringent acrid Taste; it participates of Copper, and is that which is used to make *Aqua fortis*.

The *English* Copperas is in Crystals of a dark green Colour, of a sweet astringent Taste, coming near to that of white Vitriol: It participates of Iron, and does not make it change its Colour. It is more than half of it Phlegm, a great deal of acrid Salt, Sulphur, and Earth. One may draw from this Vitriol a very good Spirit of Vitriol by Distillation, as I have shewn in my Book of Chymistry.

This Vitriol is made in *England*, upon the River of *Thames*, in vast Quantities, of the

Marcasite *Pyrites*, or Fire-Stone, with the Addition of old Iron. Of this Copperas, with Galls, or any other astringent Vegetables, you may make Ink, and the Black for Dyers; yet some think that the Vitriol of Copper is better, because that Experience teaches the Refiners that *Aqua fortis* made with Copperas, or Vitriol of Iron, will carry its Foulness through all their mediate Solutions, even to the Verditer itself, which it will make of a dirty green Colour, wherefore *Aqua fortis* is made of *Dantzick* Vitriol only.

Dark green, or *Roman* Vitriol, vulgarly call'd *Common Green Copperas*, is prepar'd about *Rome* in *Campania*, being extracted out of Clots or Lumps, of an ash-Colour inclining to black, like Potters Clay; which being expos'd to the Air, gradually heat and ferment, and being dissolv'd some Days after in fair Water, they yield this Sort of Vitriol, but from the fresh Clots no Vitriol can be obtained. This *Roman* Vitriol is also prepared in some Parts of the Kingdom of *Naples*; it is of a paler Green than the *German* Vitriol, but almost of the same styptick Taste.

The blue Vitriol, or celestial Stone, is call'd *Cyprian*, or *Hungarian* Vitriol, because it is brought to us from those Countries. It is in Crystals of a very fine Sky-coloured Blue. It is not certainly known after what Manner it is made; some think it is extracted by the Evaporation and Crystallization of the blue Water that is found in the Copper Mines: Others say 'tis an artificial Operation, performed by a Dissolution of Copper, in a weak Spirit of Vitriol, evaporated and crystalliz'd. However it be, it participates much of the Copper, which gives it the blue Colour. It is acrid and something Caustick; it comes in great and lesser Pieces; the little ones are pointed like Diamonds. It contains much acrid Salt, or a corrosive Acid of Sulphur, but less Phlegm and Earth than other Vitriols.

The artificial Vitriol of *Venus*, is made by taking little thin Pieces of Brass, about the Bigness of a Shilling. First put a Layer of Sulphur, then a Layer of Pieces, filling a Pot full, *Stratum super Stratum*, and calcine in a Furnace for two or three Hours; or calcine first the Copper by itself, and then beating the *Calx* to Powder, calcine it again,

again, having first mix'd with every Pound of *Calx* six Ounces of Sulphur, stirring it continually as it burns, that it may not stick to the Pan, and become black. Powder the *Calx* again, and calcine and repeat it three times, till the *Calx* becomes very red. Take of this red *Calx* in Powder one Pound; fair Water six Pounds; boil them together for about four Hours; let it cool and settle; decant the clear sapphirine Liquor, and filtrate it after it has stood about two Days. The remaining Copper calcine, as before, with Sulphur three Ounces; and with Water in like Manner draw the Tincture. This Process of calcining, boiling, settling, and filtrating is to be done six or seven Times, till with the Water you have extracted the whole sapphirine, azure, or blue Tincture out of the Copper. These blue filtrated Liquors put together, and in a large earthen Bell, in a Sand Heat, not violent, evaporate the Water till a Pellicle arise, which being then put into a cold and moist Place for a Night, will shoot into Crystals like great Gems. *Glauber* extracts the Tincture from calcin'd Copper, with Spirit of *Sal Armoniack*, by frequent Ignition and Extinction, and in an Hour's Space extracts a blue Colour; which being set to crystallize in a cold Place, shoots into most elegant blue Vitriol. *Beguinus* does it with Spirit of Vinegar; but then the Vitriol will be of an obscure green Colour.

The native blue Stone is good against Diseases of the Eyes, taking away Films, Clouds, Pearls, &c. Rheums, Redness, Inflammation, and Blood-shot; if you take the Stone and put it into a little Spring or Well Water for about two Minutes Time, and then take the Water with a Linen Rag to wash the Eyes, and drop two or three Drops into them at Bed-time, it cureth any running Sore, or Ulcer, or inveterate *Fistula*, Tetter, Ring-worms, Scurf, &c. but for these latter Diseases the Stone ought to lie in Water for a Quarter of an Hour. It also helps the Canker in the Mouth, by rubbing the Place with the Stone, and washing the Mouth with the Water.

The factitious blue Stone is given from two or three Grains, to twelve or fifteen, in proper Liquors, against Diseases of the Head, Stomach, and Parts of Generation. It is

often us'd in Injections in proper Vehicles, one Dram to one Pound of Liquor, for all Sores, Ulcers, Scabs, Itch, Tetter, or any other cutaneous Disease. Inwardly it kills the Worms. It may be given in a small Dose against Diseases of the Stomach and Brain. It strengthens the Brain against a growing Epilepsy. It is also a Specifick to cleanse the Womb; and it is held as a great Secret, to dissolve a little of it in Water against the burning and intemperate Heat of the spermatick Vessels, and so to use it for Injections: For as this Vitriol possesses a large Portion of the Sulphur of *Venus*, which is able to appease the Irritation of those Parts, so also it produces rare and eminent Effects, by virtue of its deterfive and refrigerative Salt.

The red Vitriol, call'd *Colcothar*, is a Vitriol that has been naturally calcin'd in the Mines by subterraneous Fire, or artificially by ordinary Fire. That which is found naturally in the Mine, is call'd *Chalcitis*, because 'tis taken from Copper Mines. It is a brownish red Stone, which is brought to us from *Sweden* and *Germany*. It is rare, and we have scarce enough of it to use in our *Venice Treacle*, of which it is one of the Ingredients.

That is best which is of a reddish brown, of the Taste of Vitriol, and easily dissolv'd in Water.

The *Colcothar*, calcin'd by the common Fire, is of a pleasant Red. The best is that which remains in the Retorts after the Distillation of the Spirit and Oil of Vitriol. Both one and the other *Colcothar* contain a great deal of metallick Earth.

Vitriol is chymically analyz'd after the following Manner: Fill a Glass Matrass, or Cucurbit, up to the middle with Vitriol powder'd; then clapping on the Head, fitting the Receiver, and luting the Joints, distil it with a Sand Heat, that the *Ros*, or Phlegm of the Vitriol, being of a strong sharp Taste, may be drawn off; then take off what remains in the Matrass, bruise or powder it, and throw into a Retort, encreasing the Fire gradually three or four Days, and you will obtain a Spirit and an Oil: And, lastly, from the *Caput Mortuum* of the Vitriol dissolv'd, an Earth and Salt is obtain'd.

The *Ros* or Phlegm of Vitriol is prescrib'd by the Chymists from one Dram to two, and

and is mightily commended by them for its Virtues, being diuretick, vulnerary, anodyne, and good to strengthen the Bowels.

The Spirit of Vitriol provokes Urine, excites an Appetite, and allays the burning Heat of Fevers, being given in a Cup full of cold Water, to a grateful Sharpness. This Spirit may be sweeten'd, digesting it with the rectified Spirit of Wine; and then it may be us'd in Diseases of the Gums, and cutaneous Distempers.

The Salt of Vitriol is endued with an emetick Faculty. It may be given from half a Dram to two Drams.

The *Colcothar*, or red Earth, out of which the Salt was extracted, is effectually us'd in a Looseness, Bloody Flux, Hemorrhages, and Wounds.

The spiritous Parts of Vitriol may be easily again recover'd, if you expose the *Caput Mortuum* for some Time to the open Air, keeping it from Rain; so that by Distillation you may obtain another Spirit: But this Spirit is a great deal sweeter and weaker than the common.

Paracelsus corrects the Spirit of Vitriol by pouring it upon the *Caput Mortuum*, and then distilling it nine Times over, every Time pouring on more fresh Spirit; and taking it out of the Alembick, he puts it into a Retort, and distils it over again with as much Spirit of Wine as is sufficient to make it into a Paste. This he highly commends in an Epilepsy, or Falling Sickness.

Of the medicinal Stone of Crollius.

The Stone of *Crollius* is made of *Pomet.* *English* Copperas, white Copperas, Alum, white Pot-ashes, or *Natrum* of *Ægypt*, of common Salt, Salt of Tartar, Salt of Wormwood, Salt of Mugwort, Salt of Succory, Salt of Plantain, Salt of Arimart, white Lead, Bole Armoniack, Myrrh, Frankincense, Vinegar of Roses; of all these in proper Doses, as they are set down in *Crollius*, *Pag.* 442. by the Means of Fire, is made a red Stone, endued with very excellent Properties, as the same Author remarks, which would be too long to be describ'd in this Place: But as this Stone is of great Consequence, both because it costs a great

deal of Money, and because few Persons have the true Knowledge of it, the greatest Part of the Apothecaries substitute in the Room of it the medicinal Stone describ'd by *Monfieur Charas*, and *Monfieur Lemery*, because they can afford it cheaper than they who sell the true Stone of *Crollius*; this latter being made of Druggs of a much lower Price, as shall be shewn hereafter.

Of another medicinal Stone.

Monfieur Charas, in the 1041st Page of his *Pharmacopœia*, de- *Pomet.* scribes a medicinal Stone compos'd of the Vitriol of *Cyprus*, Salt of Nitre, white Lead, Alum, Bole Armoniack, Sandiver, *Sal Armoniack*, and common Vinegar; so that one may see by these two Descriptions, that there is a great deal of Difference betwixt this Stone and that of *Crollius*: And that more of this is likely to be sold for its Cheapness than of the other.

Of the Lapis Mirabilis.

The *Lapis Mirabilis* is so called because of its great Properties; a- *Pomet.* bove all for the Cure of Webs, and other Diseases that happen to the Eyes of Horses.

This Stone is made by putting into an earthen Pot a Quantity of white Copperas, Alum, Bole Armoniack, Litharge, and common Water, as *Monfieur Solleysel* has remark'd in his Book, *pag.* 86. to which they that have Occasion may have recourse, as well to know the Dose, as those excellent Qualities by which it obtain'd such a Name.

21. *Of the Pyrites, or Fire-Stone.*

THE *Pyrites*, or *Fire-Stone*, is a Sort of *Marcasite* of Copper, of which they make their Copperas's or Vitriols. This *Marcasite* is weighty, of a Mouse Colour, full of little, yellow, shining Spots.

There is a great Quantity of this *Fire-Stone* in *France*, especially at *Passy* near *Paris*.

Pyrites

Pyrites is a Sort of Copper Marcasite, or hard Stone, heavy, which sends forth Sparks of Fire upon striking it with Iron of a grey Colour interspers'd with little, yellow, shining Streaks: It is found in the Copper Mines in *Italy*, from whence they draw the *Roman Vitriol*.

To get the Vitriol out of this Stone, it is necessary to expose it to the Air for several Months together, that so the Acid getting insensibly into the Pores, may rarefy its Parts, and render its Salt more dissolvable. By this Time it is converted in a Manner to a Chalk, from whence they extract the Vitriol, by washing it several Times with Water, and making Evaporations and Crystallizations as are necessary, and as they do in the making of Salt-Petre.

The *Pyrites* is deterfive, astringent, deficative, digestive, resolute, and to be applied outwardly.

22. Of Lead Ore.

Pomet. WE have three Sorts of *Lead Ore* that differ one from the other, only according to the Digestion they have receiv'd in the Bowels of the Earth. The first, that is to say, that which has receiv'd the least Heat, and by Consequence is most weighty, is that which has the Name of *Lead Ore*, and is made into Lumps call'd *Pigs*, by the *French*, *Salmons*.

This Lead Ore is a weighty Mineral, easy to break to Powder, and difficult to melt, which is taken out of the Mine in Pieces of different Bigness; sometimes clean and neat, sometimes mixt with Stones, resembling a certain Sort of Marble.

This Lead Ore being broken, parts into shining Flakes, of a white enclining to black, very like the Shoots of Antimony.

The *English* met this Lead, and afterwards cast it into Moulds of the Shape we see the Pigs in. The Lead Ore is of no other Use in *France* but for the Potters, who make use of it, having first reduc'd it to Powder to varnish the earthen Vessels of a green Colour with it.

Although this Merchandize be of no great Consequence, yet great Care must be taken concerning it; for if there should chance to

be any other Metal in it, as there is found to be too often, it would spoil all the Potters Ware, to the great Trouble of him that sold the Commodity; for this Reason you should never sell it to the Potters, without shewing it them Piece by Piece, and taking a Note under their Hand, that they are satisfied, to avoid further Trouble.

The Lead Ore that has the requisite Qualities ought to be in large Pieces, heavy, with fine shining Scales, as if fat, that is to say, easily tractable; in a Word, the most approaching to Tin-Glass that it can possibly; and reject that which is full of Stones and Dirt, or Gravel, as good for nothing, as well as that which is mixt with the Lead Ore of the second Sort that I am going to speak of.

The Lead Ore of the second Sort is less weighty and much harder than that before-mention'd, and being broke is of a Mouse Colour, of a coarser Grain, and smooth without, in some Measure resembling the black Lead; which shews that it has not receiv'd Heat enough to be converted into the black Lead Ore. This Quality makes this Lead Mineral to be entirely rejected, as being of no Use: And this Quality is often found in the first Sort, which causes so much Trouble to the Workmen, because they can no more melt it by the Fire than they can do Marble, and it spoils all their Work. However, I must take notice, that some Alchymists desire it to draw their Lead out of it; for they pretend that the Lead drawn from it is more ductile and close than common Lead is found to be. Others will have it that there is some Silver in it, which I leave other Persons to try; but as it is seldom us'd, I should not advise any Person to furnish himself with any Store of it.

The third Sort of Lead Ore is very much us'd, and 'tis that we call *Black Lead*, or *Crayon*, because the most perfect of it serves to make Pencils to design withal. The Antients gave it the Name of *Plumbago*, and of *Sea Lead*, because they pretend they took it from the Bottom of the Sea. Foreigners call it *Potelot*.

We have at *Paris* two Sorts of Black Lead, to wit, the Fine and the Common. The Fine to be perfect, and in good Condition, should not be heavy, of a black shining Silver Colour, not too hard nor too soft, easy to

to be cut, and when divided, compact in the Inside, and not gritty; of a fine close Grain, in moderate Pieces, rather long, proper to cut, and make the long Pencils that are so much esteem'd. *Lead* of these Qualities wants for no Price, the Merchant may have what he pleases, being much sought for by Architects and other Persons for drawing. This Sort of *Lead* comes generally from *England*; but as for the common, it is brought from *Holland*, and is of no great Use.

Monfieur *Morin*, Physician and Mineralist, has assured me that there were a great many *Lead* Mines in *France*, especially in *Auvergne*, from whence we might have these three Sorts of *Lead*; and this may be relied upon, he being a Person that would not affirm an Untruth.

Of Lead in Pigs.

They call *Lead* in Pigs the *Lead Mineral*, melted and purified from the Stone and other Impurities; which being well refin'd, by scumming, and throwing Suet or other Grease into it, is cast into Moulds to make Pigs of different Sizes.

The *Lead* so refin'd, to have its due Requisites, should be soft, that is to say, easy to cut, pliant, and the most white and shining that can be. The different Uses that are made of *Lead*, as well in several Trades, as in chymical Operations, is the Reason of so large a Consumption as there is of it, as well in *Europe* as other Parts of the World.

Of Lead in Powder.

The first Preparation that is made of *Lead*, is the reducing it to Powder; not in the manner some Apothecaries use to reduce it, by rasping it, and beating it in a Mortar, but by melting *Lead* in an Earthen or Iron Vessel; and when it is melted, by throwing into it the Dust of beaten Charcoal, stirring it about: And in this Manner you may sooner reduce into Powder a thousand Weight of *Lead*, than once Ounce the other Way. To clean the *Lead*, that is, to separate the Coal from it, you have nothing to do but to wash it in Water, and dry it. *Lead* in Powder is very little us'd but by the Potters, who use

it as *Lead Mineral* for glazing their Earthen Ware.

Lead in Powder, especially that which is in a Powder almost impalpable, has some Use in Medicine, because it is an Ingredient in some Ointments, as the *Pompholyx* and others. They which refine *Lead*, and make Musquet Bullets, or small Shot, send us their Scum, which we sell to the Potters, and is what we call *Scum*, or *Lead Ashes*.

Of Burnt Lead.

Burnt *Lead*, which the *Latins* call *Plumbum Ustum*, is Plates of *Lead* put into a Pot with Sulphur, and by the Fire the *Lead* is reduc'd to a brown Powder.

Burnt *Lead* has some Use in Medicine, because it dries, and is an Ingredient in some Ointments and Plaisters. As to its Choice, there is no more to be said than that it be clean and well burnt. Some wash it, to separate the Impurities, or the Sulphur that remains in it.

Of Red Lead.

The *Red Lead*, which we call *Minium*, is *Lead* Ore pulveriz'd, calcin'd, and reduc'd to such a red Powder as we see it. It is wrong to think that the *Red Lead* which is brought from *England* is made of the *Pig Lead*; the Cheapness of it shews it to be otherwise, and that it is made from the *Lead* Ore as it comes from the Mine; besides, the *Pig Lead* will never come to that Redness as mineral *Lead*, whatever Fire you give to it.

Minium ought to be chose for its high Colour, the finest Powder, and the cleanest that can be; and Care must be taken that it has not been wash'd, which will be known by its whitish Colour, and the little Lumps that are commonly in it. One may draw Mercury from *Minium* with Lime or File-Dust; but 'tis in so small a Quantity, that it is scarce worth speaking of.

The *Red Lead* is of some small Use in Medicine, because it is drying, and gives a Body to some Ointments and Plaisters. Painters use it as well for painting red, as to mix with other Colours, to make them dry. Potters use a great deal to glaze their

their Ware of a reddish Colour, and there are several other Tradesmen that have Occasion for it.

Of White Lead.

White Lead is Pig Lead reduc'd to Leaves, and afterwards roll'd as you would do a Sheet of Paper, but so that this roll'd Lead does not touch upon the other. This Lead so roll'd is put upon small Sticks, which are laid in Pots, the Bottom of which is covered with Vinegar. These Pots being fill'd, must be stop'd, so as that no Air may get in, and afterwards left in a Dunghill for thirty Days together, after which they open the Vessels and find therein the Lead become white and brittle; taking then these Leaves out, they break them in Pieces, and afterwards expose them to the Air to dry them.

Choice is to be made of such *White Lead* as is brittle, white without and within, in handsome Scales, and with as few blackish Flakes, Dust, and other Impurities as can be.

The *White Lead* has no other Use that I know of, but for the Painters, being ground with Oil or Water, it being then the most beautiful White that we have, and of the longest Duration; but then it is a very dangerous Drugg, both to grind or to beat to Powder.

Of Ceruse.

The true *Ceruse*, or Chalk of *Pomet*. Lead, is white Lead in Powder and ground with Water, and afterwards put into Moulds, and so made up into little Cakes, which they dry, and afterwards put into blue Paper, as we find them. This *Ceruse*, so prepar'd, is that which one may call the Chalk of Lead, and not that which we sell at present, that comes from *Holland* or *England*, it being almost all common Chalk, as I am going to relate.

The true *Ceruse* is that which we call the *Venetian*, because the *Venetians* were the first that made it; but as it is extremely dear, we have little but the other Sort, which comes from *Holland*, because the Painters esteem it as much as the *Venetian*, but they are very much in the wrong; for the *Dutch Ceruse* ground with Oil or Water, is a White

of no long Duration, because of the Chalk that is in it, which does not happen to the true *Venetian Ceruse*, which is only the White Lead ground; so that if one had the true *Venetian Ceruse*, there would be no need of grinding White Lead, and consequently the Dangers would be avoided that Persons meet with by grinding it, which often occasions several Diseases, and sometimes Death itself.

If they who have Occasion for *Ceruse* to use in Medicine, or to make Salt of *Saturn*, would use the true *Venetian Ceruse*, they would find their Operations more perfect: And instead of taking the *Ceruse* in Cake, they might take the White Lead ground, and make it serve all their Purposes; but then it must be bought of honest Persons, for none but they who ground it can answer for it: However, the true White Lead ground is extremely white, soft, and friable.

It is remarked, that the *Hollanders*, to make their *Ceruse*, use only the Dust that comes in bruising their White Lead; and as this Dust could not supply so great a Quantity of *Ceruse* as is us'd in *France*, and other Countries, and they could not otherwise afford it so cheap, they mix a sort of Marle or white Chalk with it. As for that which comes from *England*, it is still worse than that from *Holland*, because they mix more of that Stuff with it, and it is not of so good a Colour. They who grind the white Lead to make *Ceruse* of it, have Water-Mills, and afterwards they cast it in little Moulds to form it into Cakes, which, to have its proper Qualities, should be extremely white, soft, friable, and dry, and the least broke or mix'd with little Dust that can be, especially if it be for Sale. You should reject that which has not a good Body, but cracks in handling it, which proceeds from its being made up before it was well dried, or by having been damag'd by some Wet coming to it.

Cerusa, or *Ceruse*, is a Lead that is penetrated, rarefied, and half *Lemery*. dissolv'd by the Vapour of Vinegar, and reduc'd into a very white Substance that is heavy and friable. When you would make this *Ceruse*, the Lead is to be beat into fine thin Plates, which are suspended or hung over earthen Pots, in which they have put Vinegar; and when the Pots are

full of this Lead, they place it in a proper Heat, so that the Vinegar may, by its Fume or Vapour, have Power to penetrate and attenuate insensibly the Matter. After this has remain'd about a Month in the Fume, they open the Mouth of the Pot, and find all the Plates of Lead reduc'd into a white brittle Substance, which they call *White Lead*, and break these Plates into Pieces, which are us'd by the Painters. This *White Lead* is ground upon a Porphyry, with a little Water, and made into a Paste or Cakes, which being dry'd, are fit for Transportation. The Workmen, in this Commodity, chuse to put it up in blue Paper rather than any other, in order to make the Ceruse look whiter; the best, the purest, and whitest, is brought from *Venice*. That which comes from *England* and *Holland*, is mix'd with a kind of Chalk or Marle, [as has been observed by Pomet.]

Of Sandyx, or Red Ceruse.

The *Sandyx* is nothing but *Ceruse* Pomet. redden'd over a gentle Fire; but as this *Sandyx* or *Red Ceruse*, serves only to the same Purposes as *Minium*, it is therefore but little us'd. Some Moderns have writ that *Minium* or Red Lead, was made of Ceruse turned red upon the Fire: But as there is nothing more false, so there are some who write by Hear-say, as is easy to prove: Forasmuch as the Ceruse comes from *Holland*, and the *Minium* or *Red Lead* from *England*; and besides, the Ceruse is always dearer than the other.

Minium or *Sandyx*, is the Lead Lemery. Ore pulveriz'd, and made red by a long Calcination over the Fire, and this is brought from *England*, whereof that of the highest Colour ought to be chosen. It is astrigent and desiccative, being us'd in Plaisters and Ointments. They likewise use it in Painting, and to varnish Pots of a red Colour. It is call'd *Minium* from the Word *Mina*, because it is made of the Lead as it comes from the Mine.

Of Masticot.

Pomet. There are three Sorts of *Masticot* that are brought from *Holland*, to wit, the White, the Yellow, and the

Gold-colour'd. These different Colours arise from nothing but the different Degrees of the Fire they give the Powder of White Lead, of which they are made. Though the first Sort, which is that which has sustained the least Degree of Fire, is call'd White, yet it is not of a true white Colour, but of a whitish Yellow. The second is yellow, and endures a stronger Degree, and the third of a Gold Colour, and has sustained more Fire than the former; and they might make a fourth, by calcining it 'till it becomes red, which would make it a true *Sandyx*, or common Vermillion. As to the Choice of them, they ought to be heavy, in an impalpable Powder, of a high Colour, according to the Appellation they bear of true *Masticot*; they are only serviceable for the Painters; tho' Lemery says they are desiccative and useful, mix'd in Plaisters or Ointments.

Of Natural and Artificial Litharge.

The natural *Litharge*, which the Ancients call'd by the Name of *Molybdæna*, is a Kind of metallick or mineral Body, in Crufts or Flakes, of the Thickness and Figure of White Lead, of a reddish Colour, easy to break, which is found in the Lead Mines. But as this *Litharge* is known to very few People, and is scarce to be met withal, therefore the *Artificial Litharge* only is us'd, which is improperly call'd Gold or Silver *Litharge*, because the Ancients, and after them the Moderns, pretend that this *Litharge* serv'd to purify or refine Gold and Silver, which is far from Truth, since all the *Litharge* we have now from *Poland*, *England*, or other Parts, as *Germany*, *Sweden*, and *Denmark*, is the Lead made use of in refining Copper. Nevertheless, I do not deny but that those who refine Gold and Silver make *Litharge*; but that is not what is sold, because the Refiners melt theirs into Lead again to serve anew, and to recover the little Gold or Silver that was carry'd off with it. These People ought to be undeceiv'd, who believe, according to what some Moderns have writ, that *Litharge* is the Fume of Lead evaporated in the refining of Gold and Silver, and that it is like Soot that sticks to the Chimney: So also these should be undeceiv'd who

who believe that there is any Difference in the *Litharges* from their Colours, since those are only occasion'd by the Force or Violence of the Fire. The *Dantzick Litharge* is to be prefer'd before the *Engliff*, so likewise that which is most calcin'd, and of a lively Colour, that will easily dissolve in any unctuous Liquors, in which it is usually employ'd. This Commodity is much us'd in *France*, as well by Potters to glaze their Earthen Wares, Dyers, Painters, and others, as by Apothecaries, who make it the Basis of most Part of their Plaisters and Ointments.

Lithargyrus, sive Lithargyrium, Lemery. or *Litharge*, is a Lead ting'd with the Impurities of Copper, and reduc'd into the Form of Dross, or metallick Scum, by Calcination. This is made upon the Purification of Copper in *Poland, Sweden, and Denmark*. There are two Sorts, one call'd *Lythargyrium Auri, seu Chrystitis, or Litharge of Gold*; the other *Lythargyrium Argenti, or Litharge of Silver*. The Difference of Colours makes no Difference in the Virtue of them. There is likewise a *Litharge* made in Refining Gold or Silver by the Cupel, but it is but in small Quantities, though like the other. All the Sort are desiccative, cooling, deterfive, and give a Consistence to several Plaisters, for they dissolve in boiling with Oil and fatty Bodies.

Of Salt, or Sugar of Lead.

Pomet. The Salt, or Sugar of Lead, is made of White Lead, and the true *Venetian Ceruse*, infus'd in distill'd Vinegar, then filtrated, evaporated, and reduc'd into a light Mass, that is white and crystalliz'd, of a sweet sugary Taste, yet nevertheless pretty disagreeable. The greatest Part of those who make Salt of Lead, do it with *Dutch Ceruse*, such as we sell, for which Reason they can sell it nothing near so cheap as that made of *Venetian Ceruse*; because, as I said before, the *Dutch* is mix'd with Chalk, which will yield no Salt; and some make it of Lead in Powder, *Minium*, or *Litharge*; none of which will afford so much Salt, and consequently can't be sold so cheap. Chuse that which is of the Taste aforesaid, white,

in little Shoots, or shining Crystals, and as light as may be, which when dissolv'd in Plantain Water, will look like Whey; which Trial will answer two Purposes, the one to know the Goodness of the Salt of Lead, and the other that of the Plantain Water. Its Use is to cool, being given internally or externally, for which Reason it is reckon'd proper to stop the Flux of the Belly, and for sore Throats, taken from three to four Grains in Plantain Water. Most of those who make this Medicine make it heavy and greyish colour'd, which proceeds from the Lead not being well purified, or that it was not made with good Vinegar. For to make the Salt fine and light, it ought to be purified at least four Times.

Of Balsam, or Oil of Lead.

They call that Balsam, or Oil of Lead, that is made of the Salt dissolv'd in Oil of Turpentine; but others content themselves with putting Salt of Lead in a Cellar to run into a Liquor. The first Balsam or Oil ought to be prefer'd to the other, in that it is proper to cleanse and cicatrize Ulcers, and because it is more capable of resisting Putrefaction. Others make Oil of Lead, by drawing a burning Spirit of Lead, which they make by filling two Parts of a Retort with Salt of Lead, and by the Means of Fire, drawing thence a Spirit that burns like Brandy. But as this Oil is not so strong as that made with Oil of Turpentine, it serves to cleanse the Eyes, especially of Horses and other Beasts. Spirit of Lead is an excellent Remedy to resist the Putrefaction of Humours.

Of Magistery of Lead.

Magistery of Lead is made of Salt of the Lead that has the required Qualities, dissolv'd in distill'd Vinegar mix'd with common Water; and by the Assistance of Oil of Tartar *per Deliquium*, precipitated into a white Powder, which after it is wash'd and dry'd, is very useful to cure Tetters and Ringworms, being mix'd with some Pomatum. It likewise makes, with Vinegar and Water, a Sort of Virgins Milk, that is good to allay Inflammations, and cure Pimples in the Face.

Of Vinegar of Lead.

The *Vinegar of Lead* is Vinegar distill'd, wherein have been digested Ceruse and other Preparations of Lead, which is made use of to cure Tetters, or being well incorporated with Oil of Roses, to make a kind of Ointment, call'd *Butter of Lead*.

Of Natural or Mineral Zinck.

It is not with *Zinck* as with Tin-glass; forasmuch as 'tis not only probable, but certain, that there is a natural *Zinck* which the *Germans* call *Beauter*, and the *Flemings*, *Speauter*, we *Spelter*. The *Mineral Zinck* is found in great Quantities in the Mines of *Gosselar* in *Saxony*; it is at present very scarce in *France*, for which Reason it is much enquired for by some People. This Metal is a kind of Lead Ore, except that it is harder, whiter, and more brilliant. Some People have assur'd me, that the *Zinck* we sell in great square Cakes is cast *Mineral Zinck*, that after it has been fined, is thrown into Moulds of the Figure as we have it, which I can easily believe, it being impossible to make it of

Lead, Arsenick, Tartar, and Salt-Petre, as Mr. *Charas* has observ'd. The *Zinck*, which some improperly call the Female Antimony, ought to be white, in fine Flakes, the least sharp, and the most difficult to break that can be: For the more it endures the Fire, and the finer and larger the Flakes are, the more it is valued by the Workmen that use it, especially the Founders.

The *Zinck* at this Time is much in Use, since the Tin-men have found it more proper to clean their Tin than Pin-Dust and Refin. 'Tis wrong to believe that *Zinck* is mixt with Tin to encrease its Weight; for unto a Fount of five or six hundred Pounds of Tin, they put but one Pound of *Zinck*; and which is wonderful, the *Zinck* has the Quality of purifying and whitening the Tin, and acting upon it as Lead does upon Gold, Silver, or Copper. This *Zinck* is us'd to give Copper the Colour of Gold, especially when mix'd with Turmeric; and works upon Copper as Arsenick does, that turns it of a Silver Colour; or the *Lapis Calaminaris*, that makes it yellowish; or, lastly, as *Hungarian* Vitriol, that turns Iron into a Copper Colour, as hath been observ'd in the Philosophical Transactions of the Royal Society at *London*.



BOOK the Third of the Second Volume.

Of MINERALS.

P R E F A C E.

B*Y* Mineral, in its general Signification, is understood, whatsoever partakes of the Mines, or is increas'd in, or has pass'd thro' them. But as it is the Subject of this Book, it is taken in a more particular Sense; in which it is by some, said to be a fix'd and solid Body, produc'd by Exhalations and Vapours, inclos'd in the Bowels of the Earth, as Meteors are form'd in the Regions of the Air; or, as others will have it, that 'tis form'd of a tender Substance, produc'd in the Earth by Coagulation, and increas'd by the external Addition of sensible Particles, which ostentimes is the Matter that in Process of Time commences Metal; so that I shall comprehend, under the Name of Minerals, every Thing that is of a metallick Nature, and which differs only from Metals, in not being malleable, or that is not capable of Fusion, as the Loadstone, &c. We shall begin therefore with Antimony, which comes nearest the Nature of Metals, and differs from it only in not being ductile.

I. Of Antimony.

M*R.* Furetiere says, Antimony is a Mineral that comes very near the Nature of Metals; and that some are of Opinion it contains all the Principles of them, for that it is found near all Sorts of metallick Mines, more especially near those of Silver and Lead; that it contains a double Mineral Sulphur, the one Metallick, approaching the Purity and Colour of Gold, the other earthy and combustible, not

unlike common Sulphur; a fuliginous, footy, ill-digested Mercury, partaking of the Nature of Lead; and somewhat of a terrene fixt Salt. The same Author observes also, that the Use of Antimony, unless in the Composition of Fucus, or Cosmeticks, was wholly unknown 'till about the twelfth Age; but then a certain Monk, *Basilus Valentinus* by Name, publish'd a Book, intitled, *Currus Antimonii Triumphalis*, wherein he undertakes to affirm, that it was a Remedy against all Sorts of Diseases. Three hundred Years after *Paracelsus* brought it into Vogue; but then in
the

the Year 1566 the Use of it was condemn'd by Act of Parliament; and accordingly one *Besnier*, a Physician, in 1609, transgressing it, was excluded the Faculty. In the Year 1637 *Antimony* was again receiv'd by publick Authority amongst the Number of purging Remedies; and in 1650 the Act of State made in 1566 was repeal'd. Anno 1637 the Faculty caus'd it to be infer'd in their *Antidotarium*, printed that Year, herein following the Opinion of *Matthiolus*; and, in short, on the 29th of *March*, 1668, gave it the Sanction of publick Authority, by which Graduates had a Liberty of making use of it, but with a Prohibition to all others, unless by their Advice. It acquir'd the Name of *Antimony*, according to the Opinion of some, from a *German Monk*, the afore-said *Valentine*, who, in his Search after the Philosopher's Stone, was wont to make much Use of it for the more ready fluxing his Metals; and throwing a Parcel of it to some Swine, he observ'd that they had eaten it, and were thereby purg'd very violently, but afterwards grew the fatter upon it; which made him harbour an Opinion, that the same sort of Cathartick, exhibited to those of his own Fraternity, might do them much Service; but his Experiment succeeded so ill, that every one who took of it died. This therefore was the Reason of this Mineral being call'd *Antimony*, as being destructive of the Monks.

Of natural or mineral Antimony.

Antimony is taken from the Mine in little Stones of different Bigness, resembling Lead Ore, with this Difference, that it is both lighter and harder. And by Reason of this Similitude, some call it Black Lead, or Marcassite of Lead; others *Saturn*, or the Philosophers Wolf, because it devours and consumes all Metals whatever, Gold only excepted. It is also call'd *Proteus*, from the Diversity of Colours it assumes by means of the Fire; but its more ordinary Appellation is mineral *Antimony*, and it is call'd by the more understanding, crude *Antimony*, as never having sustain'd the Fire.

Heretofore *Hungary* was the only Place for Mines of *Antimony*, but now we have none from thence since the Discovery of

those in *France*. The best Mines are those of *Poitou* and *Bretagne*.

Mineral *Antimony* is sometimes met with pure, and sometimes attended with a Sort of Stone, which the Mineralists call *Spar*. There is some full of *Striae*, like so many Needles; others also all over of an odd footy Black. This *Antimony* is of very little use in Medicine, unless it be purified by melting, as will be seen hereafter. The Chymists use it indeed for their particular Preparations.

The purest mineral *Antimony* is to be chosen, that is as free as possible from all Sorts of Stone or *Spar*. It matters not from whence it comes, provided it be good; tho' there are those that pretend the *Antimony* of *Auvergne* to abound most with Sulphur.

Some Gentlemen of the Retinue of the Ambassadors of *Siam* have brought home considerable Quantities of mineral *Antimony*, but no Experiments have yet been made of it. This *Antimony* is white, and full of small Needles; and as far as I can understand, altogether proper for the same Purposes as the mineral *Antimony* of *France*. As for that of *Hungary*, I can say nothing of it, having never yet seen any of it.

Of cast or melted Antimony.

Melted *Antimony* is what we improperly call crude *Antimony*, because it has undergone the Fire to reduce it into Cakes and Needles, after the Manner as we see. To melt mineral *Antimony*, the Mineralists take two earthen Pots, one whereof they fill with the Mineral in Powder, the other they place empty in the midst of a strong Fire, laying a Sort of an Iron Scimmer upon it, upon which they put the Pot of Powder turn'd upside down; then encompassing both the Pots with Fire, the *Antimony* will melt, and pass through the Holes of the Iron Plate, and fall into the empty Pot underneath, and form itself into a Cake, as it is sent to us.

The Iron Plate with Holes, put between the two Pots, serves to keep back the Stone or *Spar* that is found commonly with the mineral *Antimony*. When the *Antimony* is melted, take the Pot off the Fire, and when cold, break it, and take out the *Antimony*, which

which then may be conveniently sent whither you please.

Formerly was to be met with in *France* the *Hungarian Antimony* in Cakes or Loaves, of three or four Pounds Weight, interwoven with small Needles running a-cross each other, of a golden yellowish Colour, and at Bottom white, inclining towards that of Silver. This *Antimony* was found in the Mines of the Mountains belonging to *Presburg*, the Capital of the *Lower Hungary*, where it was melted, and made into the Figure we find it: But this is now so scarce, that it is next to an Impossibility to find out any of it. Those who have work'd upon this Sort of *Antimony*, have assur'd me, that 'twas much fitter to yield whatever uses to be obtain'd from *Antimony* than that of *France*; and withal, that from every Pound of it they could obtain two Ounces of better Mercury than that of *Spain*.

In *France* we have several Sorts of *Antimony*, which differ only according as it is better or worse cur'd. And the next best to that of *Hungary* is what we have brought from *Saumur* in *Anjoy*, whither it is sent purified from *Poitou*.

The *Antimony* of *Poitou* appears with fine beautiful Sort of Needles, long, large, white, sparkling, light, and easily broken, and with as little half-melted *Antimony* as may be, which resembles the Dross of Iron, which is commonly found at the Bottom of the Loaf in *Scoria*, and is call'd the Bottom or Top of *Antimony*. This Defect, however, is seldom found in the *Antimony* of *Poitou*, by Reason they are well vers'd in refining or melting it: And this is the Sort of *Antimony* that should be us'd in all the following Operations, because it abounds less with Sulphur, and affords more of the *Regulus*. We have had, for some Time past, an *Antimony* from *Bretagne*, in small Needles, very pure, and perfectly fit for the same Purposes as that of *Poitou*. A third Sort is that we have from *Auvergne*, which, in one Word, is good for nothing, being very hard, full of Dross, and in small Needles, of a tawny blue, which makes it evident that 'tis not half purified, nor divested of its fetid and malign Sulphur, which gives abundance of Trouble and Difficulty to those who work upon it.

Besides the great Number of chymical

Medicines which are made of, or drawn from: *Antimony*, abundance of Artificers use it both to promote the melting of Metals, and also to make the *Regulus*, especially in *England*, whether we send a great Part to put in their Pewter, to make it the harder, whiter, and more founding. But I observe, nevertheless, that of late Years the *English* don't make so much use of it, because instead of the *Regulus* of *Antimony*, they use Tin-glass. The Letter-Founders for Printing use *Antimony*, to render their Lead the more durable and hard. *Antimony* melted, and boil'd in a Ptifan with *Sarfaparilla*, *Guaiacum*, &c. is a certain Cure for the secret Disease. And how much soever this Drugg has been condemn'd and out of use in Times past, it is altogether as much in Vogue now. When you make use of it, break it in small Pieces, or reduce it into a gross Powder, and put it into a Linen Rag, to be boil'd with other Things. Some give the Powder instead of the Liver of *Antimony* to their Horses, and say it has the same Effect.

I shall not lose Time here to enter into a Disquisition, whether there be Male and Female *Antimony*, as most Authors affirm, and that the Male is the coarser, more sandy, scaly, and light, and consequently less efficacious than the Female, which is more ponderous, bright-colour'd, and more brittle; for I have dealt a great deal in *Antimony*, and never knew any other Difference but that of its Purification. And when it is good, it may serve alike to all Purposes; so that I don't see how there can be two Sorts.

Antimonium, *sive Stibium*, or *Antimony*, is a Mineral approaching very near to a Metal. It is heavy, shining, and in Crystals, shooting like Needles, of a blackish Colour, which is found near the Mines of Metals in several Parts of *Europe*; as *Hungary*, *Transylvania*, *Britany*, *Poitou*, and *Auvergne*. They get it in Pieces bigger or less, full of little hard Stones or Pebbles, which the Workmen call *Gangue*. They take the clearest, or that which has the least of the *Gangue* in it when they make use of it; for several prefer the mineral *Antimony* before that which is cast and purified.

To purify or refine *Antimony*, they melt it over the Fire in Pots or Crucibles, in order to separate the *Gangue* or *Dross*; which cooling, they cast it into Cakes, as it appears when brought to us, which we usually, tho' improperly, call crude *Antimony*, notwithstanding it has past the Fire. *Hungarian Antimony* was formerly brought into *France* in little Cakes, full of small Shoots like Needles, sticking interchangeably one with the other, that shine, and are inclinable to white, like Silver Ore. But since this Mineral has been discovered in *France*, we have none comes from *Hungary*, whence it is become very scarce. The *Antimony* we ordinarily use, is brought from *Poitou*, which you ought to chuse neat, in fine, long, brilliant Shoots, easy to break. It is naturally compos'd of a great deal of Sulphur, like common Sulphur, and of a Kind of a *Regulus* like a Metal. [But you have a further Account of it in Mr. Lemery's Book of Chymistry, to which I refer you.]

Of the *Regulus* of *Antimony*.

The ordinary or common *Regulus* of *Antimony*, without *Mars* or Iron, is made of *Antimony*, Salt-petre, and Tartar, melted together, and cast into a small Mortar greas'd, and so by the Knock of a Hammer the *Regulus* is made to fall to the Bottom; which if it be good, ought to be white, in beautiful Scales, and just like Tin-glass. If the *Regulus* should not prove good at the first Operation, it may be melted and purified again with a little Salt-petre. The oftener it is melted, the more will it decrease, but the better will it also be.

Of this *Regulus* are made the Cups and Pills, and other chymical Operations, as shall be seen hereafter.

Of *Regulus* of *Antimony* with *Mars*.

The *Regulus* of *Antimony* with *Mars*, is made of *Antimony*, Salt-petre, and Points of Horse-Nails, or small Nails melted together; which by means of the Fire, and proceeding much after the Manner as in the preceding Operation, is reduced into a *Regulus*.

This *Regulus*, if good, is much like the other, but withal ought to have a Sort of

Star upon the Top. I shall not think it worth my while to recount the many fabulous Stories of the Antients concerning this Star, and the Cause of it, but shall only take Notice that it appears more or less, according to the Degree of Fire the *Regulus* has undergone.

Of this *Regulus* is prepar'd the purging, or rather the emetick Wine: And here you ought to be caution'd to throw away the three or four first Wines you make with the Cups, lest they should produce some ill Accident.

Whereas most People who have Occasion for the Goblets or Cups of the *Regulus*, find difficulty to come by them, let them apply to a Founder, and they may have what Sorts and Sizes they will, at a cheap Rate, without troubling themselves with Moulds, as several have done to their Labour and Cost, who have at last been oblig'd to give over the Attempt, not being able to make one Cup without a Hole or some other Defect. You may also get these same Founders to make you the perpetual Pills, or you may easily make them yourself with a Musket-Ball Mould.

The Pills serve for those that have the Twisting of the Guts, or *Miserere mei*, so call'd. When they are return'd from out of the Body, 'tis but washing and cleaning of them again, and they'll serve as oft as you please; which gives them the Name of Perpetual. They may also be infus'd, as well as the *Regulus*, in Wine, cold, for the Space of twelve Hours; which is said to be a good Medicine for strong Constitutions.

Of Glass of *Antimony*.

The Glass or *Vitrum* of *Antimony*, is an *Antimony* separated from its Sulphurs, which are a deadly Poison; and for that Reason ought the Operation to be perform'd in a Chimney, to avoid the Exhalations: Then it is to be melted in a Crucible, and cast upon a hot Marble, to make it in the Manner we behold it, and as it comes to us from *Holland*.

'Tis an Operation I cannot advise any one to undertake, not only upon Account of the great Difficulty and Hazard attending it, but also because we cannot make it turn to that Advantage as the *Dutch* do.

Chuse

Chuse the *Glass* of *Antimony* that is flat, of a bright red, and transparent, having as few small, thick, black, and grey Pieces in it as possible. I am told the *Hollanders* mix half broken Glass in melting it, to discharge its black Colour the better, and to make it so fine coloured as we see it; but the Truth of the Fact I know not. Instead of throwing it upon Marble, one may put it in a Founder's Mould, and so make the Goblets or Cups; but this is a Work only for the Curious, there being no Demand for them.

This *Vitrum* of *Antimony* serves for a Vomit, taken from two to six Grains. Apothecaries make a Syrup and the emetick Wine with it.

Of the Liver of Antimony.

The *Liver* of *Antimony*, improperly call'd *Crocus Metallorum*, is made of Antimony and common Salt-petre, mix'd and incorporated well together, and by Means of lighted Charcoal reduc'd into a Stone, after the Manner as we have it.

This *Liver* of *Antimony* ought to be chosen in fine shining Pieces, starr'd, smooth, brittle, and when bruis'd or pulveriz'd, of a reddish Saffron Colour, which is the Reason of its being called the *Crocus* or Saffron of Metals; but in Pieces it ought to be Liver-coloured, from whence also comes the Name of *Hepar*, or *Liver* of *Antimony*.

This *Liver* is a Sort of *Catholicon* for Horses; more especially to purge and put them in Case, if taken from one Ounce to two in wet Bran, as Mr. *Scylesel* directs, in his Book call'd *The Compleat Farrier*: 'Tis of some Use in Medicine, but so little, it is hardly worth speaking of; but on the contrary 'tis much us'd for Horses, as well under the Names above, as under that of Imperial Powder.

This Operation, which seems the easiest in the World, is notwithstanding very difficult to be perform'd with Success, more especially if one has not good Antimony and Salt-petre, or if it be fill'd with Salt, which but too frequently happens: Those therefore that undertake this Operation, must dry the Salt-petre, and make choice of the *Antimony* of *Poitou*, not of that of *Auvergne*, as well because

it is very full of Sulphur, as because it is not so well cleans'd as the former; and after it has been expos'd some Time, being mix'd together, to the open Air, put a sufficient Quantity thereof into a Mortar, or Iron Pot, plac'd in a Chimney; and upon Application of the Fire, a great Noise, which the Chymists call a *Detonation*, will happen; and when that is over, and the Vessel cold, it must be separated from its Dross or Scum, which is white, and the Bottom will be a Stone, such as I have describ'd. *Note*, You had not best make use of a cast Mortar for fear of breaking, which sometimes happens, or be apprehensive of the Fire thereupon. On the contrary, this Operation is the best Thing imaginable for sweeping a Chimney; but observe to put a Cloth before the Chimney, and to get far enough off for fear of the Vapours, and that you don't perform it in any publick Place. It is an Operation of a very capricious and uncertain Nature; for I have seen a great Quantity of Salt-petre and Antimony mix'd and prepar'd together, that has made a very charming Composition: And again, when one has proceeded after the same Manner, in all Particulars, the Result has been less beautiful, and sometimes it has altogether miscarried. Those therefore that have Occasion for it in Powder, will take Care that it be of a fine red, not such as sticks to the Tods or Sides of the Vessel, which is in small, thin, brown Scales, or such as has been spoilt, which is the Reason some sell it so much the cheaper than others, which must be taken Notice of.

Those that would have a Saffron of Metals, or the *Crocus Metallorum*, fit to be taken inwardly, must make it with equal Parts of *Antimony*, and refin'd Salt-petre, and then reduce it to a subtil Powder, which is to be wash'd often in warm Water, as well to free it from any remaining Salt-petre, as to make it a little more emetick. The more emetick you'd have it, the more Salt-petre must be us'd; but it considerably diminishes the Quantity, and makes it a great deal the dearer; tho' this ought to be no Consideration, since, in such small Quantities it is sold at such a Rate, that it amply rewards the Labour and Expence.

One may give what Colour he pleases to the Imperial Powder, or *Liver of Antimony*, according to the Preparation, or according to the Salt-petre that is made use of; which if it be of the ordinary Sort, will make it a little darker, or upon the *Liver Colour*, more than if it was of the best and finest Salt-petre; and if you add decrepitated Salt, that is, such as has been dry'd and half calcin'd, 'till it has done Crackling, 'twill be a good Red enough, inclining to that of Opal, and therefore it has obtain'd the Name of *Magnesia Opalina*, or the Ruby of *Antimony*.

Some make use of the white Dross, as well for Horfes as to draw from it a Salt, or fix'd Salt-petre with Water, which is a very good Medicine for Horfes, and to which the Name of *Polychrestum*, or general Remedy, is therefore given; both wash'd, and other *Crocus Metallorum*, is us'd in making the emetick Wine, which is done by putting the *Crocus*, or *Liver of Antimony*, in White Wine, and infusing of it for twenty four Hours.

Of Diaphoretick Antimony.

Antimony Diaphoretick, or the *Calx of Antimony*, is the *Antimony of Poiçtou*, and finest Salt-petre incorporated together, made into a Powder by the Means of Fire and warm Water; which before it is quite dry, is form'd into small Troches, and so dry'd by Degrees, and kept for Use. This Medicine is sometimes us'd in malign Fevers, wherefore some prescribe it in the Plague, and other contagious Diseases, it being a Sudorifick, and an Expeller of the *Virus*; tho' there are others very diffident of its Qualities, supposing it to have no manner of Virtue, being only a Sort of Chalk, which I will not pretend to judge of, but leave it to the Physicians to do it; who since they substitute for it such Things as Men would hardly believe, such as *Ceruse*, and the like, which ought carefully to be avoided, and may make one careful to buy it only of faithful honest Men; for I know no certain Proof of it, unless it be that genuine *Diaphoretick Antimony* ought to be extremely white, soft, brittle, and wholly void of all Taste or Smell, being perfectly insipid. Some ingenious Men have assur'd me, that the Quality of this Medicine is quite alter'd by keeping: For where-

as, when newly made, it is diaphoretick, it becomes emetick when old, but this is what I have not experienc'd; and be it how it will, the new ought always to be prefer'd.

Two Sorts of Salt may be drawn from Lotions made of it; but considering the small Quantity that is to be obtained, I cannot advise any one to trouble himself about it.

Of the Flowers of Antimony.

The *Flowers of Antimony* are made in Pots put upon one another, call'd *Aludels*, being a Vapour rais'd by the Force of Fire, and found in the Top of them in white Powder, which may be gather'd with a Feather. *Note*, if you make use of an Earthen Retort instead of *Aludels*, you'll have the Flowers red.

The *Flowers of Antimony* are esteem'd good against the Epilepsy and intermitting Fevers, the Dose is from two to six Grains; and of the red, being more emetick, from two to four, taken with any Sort of Conserve, or Lozenges, or in Broth. And I cannot but observe, by the bye, that a Man ought not to deal in chymical Medicines, without Advice of a faithful and experienc'd Physician; Empiricks killing more than the Sword. How effectual soever a chymical Preparation may be, aptly and duly taken, it may be altogether as pernicious unseasonably prescribed.

Of the Butter and Cinnabar of Antimony.

The *Butter and Cinnabar of Antimony*, arise from the same Matter, the Degrees of Fire only making the Difference: The Matter then is a Mixture of *Antimony* and corrosive Sublimate put into a Retort. That which comes over first is a transparent Oil, next an Oil as thick as Wax, which being well wrought, 'tis like white Sugar Candy; and the third Sort produc'd by the Violence and Force of the Fire, is a reddish Matter in small Needles, pretty much resembling *Mineral Cinnabar*, from whence it has its Name.

This *Butter of Antimony* is a strong Caustick, but its principal Use is to make the Angelick Powder, as will be seen hereafter; the

the *Cinnabar* is fudorifick, wherefore 'tis made use of sometimes in the Small Pox, from six to fifteen Grains.

The best *Butter* of *Antimony* is very white, and perfectly like to white Sugar-Candy; it ought to be as dry as possible, and for that Reason kept in a Bottle well stop'd.

The *Cinnabar* ought to be chosen in little Pieces, red, and as full as possible with those *Striæ*, or little Needles; that which is blackish is to be rejected.

Of the Powder of Algarot, or Mercurius Vitæ.

The *Powder of Algarot*, or the *Emetick* or *Angelick Powder*, so call'd, is a white Powder made with *Butter* of *Antimony* dissolv'd and thrown into warm Water, and several Times wash'd, and then dry'd, and so kept in a Glass Vial for Use.

This Powder is a very good Purge; the Dose from two to eight Grains, in Broth or any other Liquor. This Powder ought to be very white, and made with the coagulated Oil or *Butter* of *Antimony*; that is to say, with that which was made of the *Regulus*, as we shall see hereafter; for when the *Emetick* Powder is made with the *Butter*, which was made of *Crude Antimony*, it is by no Means so white as when with that which was made of the *Regulus*.

Of Bezoar Mineral.

Bezoar Mineral is made of *Butter* of *Antimony*, prepar'd with Spirit of *Nitre*, and by this Means reduc'd into a white Powder, to which are attributed the same Virtues as to the *Diaphoretick Antimony*, which therefore is by many us'd for it, but ought to be avoided. Its Dose is from six to twenty Grains.

Of the coagulated Oil of Antimony.

The coagulated Oil, or *Butter* of *Antimony*, is made of the *Regulus* of *Antimony*, and *Sublimate corrosive*; which, by Means of the Fire, are reduc'd into an Oil, and of the Consistence of that we spoke of before. Note, When the Oil is come over, if you encrease the Fire, and take away the Recipient,

and put another in its Place with cold Water, you'll have a very good and beautiful running Mercury.

This Oil is very corrosive, and serves to consume fungous Flesh; 'tis of this Oil you ought to make the Powder of *Algarot* and *Bezoar Mineral*.

Of the Caustick Oil of Antimony.

The *Corrosive Oil of Antimony* is made of Powder of *Antimony*, Spirit of Salt, and corrosive Oil of *Vitriol*; out of all which, by the Means of Fire, is drawn a whitish Liquor, to be kept for Occasion; it is of use in carious Bones, being a strong Echarotick; also for Gangrenes, and to deterge old Ulcers.

This Liquor is not, properly speaking, an Oil, not being at all fat. One may also draw another Liquor from *Antimony*, with *Antimony* and *Sugar-Candy*.

Of the Tincture of Antimony.

The *Tincture of Antimony* is made of Salt of *Tartar* and *Antimony*, dissolv'd or melted together; from which, with Spirit of Wine, is drawn a red Liquor, esteem'd a very good Antiscorbutick; as also to be good against hysterick Vapours in Women, as well as the scorbutick Itch. Dose from four to twenty Drops.

Of the Magistery and Precipitate of Antimony.

This *Precipitate* is made of a very fine Powder of *Antimony* and *Aqua Regia* mix'd together, and afterwards thrown into an Earthen Pan of Water, and the Powder found at the Bottom is to be dulcified by washing, and is properly the Sulphur of *Antimony*, being inflammable, like common Sulphur: Its Use is in Apoplectick and Paralytick Cases. Dose from two to twelve Grains in some convenient Vehicle. Besides this Sulphur of *Antimony*, there is moreover another call'd the *Golden Sulphur of Antimony*, which is made of the *Scoriæ*, or Dross of the common *Regulus* of *Antimony*, without *Mars*; from which, being boil'd in Water, filtrated and precipitated with Vinegar, you will have at Bottom a red Powder,

which when dry'd serves to provoke to vomit. The Dose whereof is from four to fix Grains in Broth or Pills. Let it not seem strange that I enlarge not more upon the chymical Process, since it's hardly to be allow'd Merchants so to do; and seeing Messieurs Charas, Glacer, and Limery, have so amply done it already.

2. Of the Load-Stone.

Pomet. **T**HE Load-Stone, according to some Authors, is a black Mineral Stone, and is endu'd with surprizing Qualities; such as directing its Poles towards the North and South, its attracting Iron or Steel, and the communicating its Virtue to it by the Touch. It is found in almost all Sorts of Mines, more especially in those of Copper and Iron, of whose Nature it participates. A good Load-Stone is very solid, not porous nor very heavy, and of an homogeneous Substance, of the Colour of Water, or a shining black, and sometimes of a grey or obscure blue, inclining to red. Observe that the Virtue which the Load-Stone communicates to Steel, is lost when the Figure of it is alter'd, whether it be with a Hammer or one's Fingers, as may be seen with a straight or crooked Needle, after it has been touch'd, as Father *Grimaldi* takes Notice of in his Physicks. The Load-Stone that attracts Iron very forcibly, is call'd a generous or noble Stone. The Way of keeping it is in a dry Place, wrap'd in Scarlet Cloth, or rather to preserve its Virtue, to hang it up by its *Equator*, with a Cat's Gut, that it may have its free Tendency to the South. If it chance to fall, it loses something of its Strength for a-while: Its Poles are found by applying to it a common Needle; for the Pointing of the two Ends, shews the Places of them. It is said this Stone taken inwardly, intoxicates and renders stupid; and that its Antidote, or Counter-Poison, is Gold or Emerald Stone. *Matthiolus* tells us, that red Brass melted with some of this Stone, becomes as white as Silver, after the same Manner as Copper does of a golden Colour, with *Lapis Calaminaris*. *Pliny* says, *Dinocrates* the *Alexandrian* began to vault the Temple of *Alsinoe* with Load-Stone, in order to have his own Statue, which

was made all of Iron, suspended in the Air. The same Thing, and with the like Truth, has been affirm'd of *Mahomet's* Temple. It is called in *Latin* *Magnes*, from a Shepherd nam'd *Magnes*, that happened to discover it upon Mount *Ida*, by hitting upon it with the Iron of his Sheep-Crook, according to *Nicander*. It is also called, *Lapis Lydius*, or *Heraclius*, because found in *Heraclaea*, a City of *Magnesia*, which belongs to *Lydia*: In *French* it has the Name of *L' Aimant*, from its Love or Attraction of Iron. It is besides call'd *Lapis Herculis*, because it directs to find out the Ways, over which *Hercules*, by Antiquity, was said to be the presiding Divinity: And lastly, *Sideritis*, from its Adhesion to Iron, which the *Greeks* call *Sideros*.

Besides the fore-mention'd Sort of Load-Stone, the Abbot *de Vallemont*, in his Treatise, tells us of another, which he found upon the Top of *Chartres* Steeple, in the Year 1691, and which he had experienc'd to attract Iron, and to direct its Poles North and South, and to have the same Declination as the ordinary Load-Stone. It were to be wish'd therefore, that it could be oftner met with and sought after amongst the Ruins of old Buildings, it certainly being of a very extraordinary Nature. Mr. *de Vallemont* has shewn me one of them of a surprizing Excellency and Force, in attracting Iron of a great Weight. I would willingly enlarge upon this Sort of Load-Stone, were it more common, but it is very scarce; and since the King has had one presented to him, it is sought after with great Diligence, therewithal to adorn the Cabinets of the *Virtuosi*: However, I refer the Curious to Mr. *Vallemont's* aforesaid Treatise, who has obliged the Publick with the Description of this Load-Stone, and explained how it was form'd by Nature in the aforesaid Place. There is a third Sort, but very rare also, which is what we call *White Calamine*, or the *White Load-Stone*. There is moreover, a fourth Sort, very frequent and common amongst us, being no better than a sort of Dross of Iron, but what is commonly sold, as well because the true black *Ethiopic* one, by Reason of its great Excellency, is so scarce, as that we cannot shift without it, especially those that go to Sea, because it always tends towards the North, and shews

the

the Pilots where they are. The *White Magnet* also, being of great Virtue, is much sought after, but seldom met with; and in its Place is sold a worthless Sort of Marle, or white Earth, found sticking to the common Load-Stone, but easily distinguish'd from the true White, which is of a sort of greyish White, ponderous, and attracts Iron as forcibly as that of *Æthiopia*, which that which is sold for it cannot do; besides, the Cheapness sufficiently argues its being spurious. We therefore are oblig'd to content ourselves with such as are brought from divers Places, particularly from *Auvergne*, which we can hardly get ten Groats a Pound for; much less could we be able to sell 'em at the Price of genuine Stones, which some have exchange'd for their Weight in Gold; but tho' we find much Fault with what we sell 'em for, it does not follow but there are some good, though in Truth you'll scarcely meet with above ten amongst a Thousand. However, those of ours that can raise small Needles, or make the Filing of Iron move upon a Plate, by only passing the Stone along underneath, without touching it, or have Force enough to make Steel-Dust stick to them, when thrown upon them, may very well serve for any medicinal Use, and for the *Emplastrum Divinum*, which is their chief Use therein.

Magnes, Lapis Heraclius, Lapis Lemery. Sideritis, Lapis Nauticus, or the Load-Stone, is a compact, hard, Mineral Stone, pretty heavy, and of a black or brown Colour, or obscure blue, which is found in Iron or Copper Mines. The best is found in *India* and *Æthiopia*; but it is likewise brought from *Italy, Sweden, and Germany*: It has a great many excellent Properties, both for Travellers and Artists, which are too tedious to relate. The most valuable *Magnet* is that which attracts the greatest Weight of Iron. I have seen several Times a Load-Stone no bigger than a common Apple that would attract and suspend a Bar of Iron that weigh'd twenty-two Pounds. This Stone was sold for an hundred Pistoles.

They make the Load-Stone one of the Ingredients in the Composition of Plaisters appropriated to Wounds that are made with a Sword, where they think some Pieces may be left behind; for they believe that the *Load-Stone* which is in the Plaister, attracts and

draws the Iron out of the Wound, tho' all the Virtue in the *Load-Stone* could never produce this Effect: For first of all, being powder'd finely, as it ought to be, it loses all its Force of Attraction: And, secondly, being mix'd in the Plaister, tho' its Virtue should remain, it would not have Power to act, being confin'd by the Viscidity of the Gums and Resins. There is a white Load-Stone, but it is very scarce; it ought to be of a greyish White, heavy, and attractive. All these Stones are astringent, and stop Blood, outwardly apply'd.

3. Of Natural Cadmia, or Calamine Stone.

Cadmia, or Calamine-Stone, or Lapis Calaminaris, is a Mineral, where-*Pomet.* of there are two Sorts, grey and red.

The first is not unlike grey Bole, only 'tis harder; it is found in *Germany* and *England*, near the Lead Mines, and also near *Liege*.

The second Sort is also a Stone of a reddish Colour, interlaced with white, hard, heavy Veins, full of round hard Grains, the Bigness of Pepper. These Stones are found in great Plenty in *Berry*, near *Bourge* and *Saumur*, where there are whole Quarries of them, and are of so little Value, that one may have what Quantity he will for the Digging. They may be had also in many other Places; but since those of *Berry* aforesaid are as good as any, 'tis not worth while to have them brought from more distant Places.

This Stone is of some small Use in Medicine, in some Galenical Compositions, for which it ought to be prepar'd upon a Porphyry, and made into Troches, with Rose-Water, and is what the Apothecaries call *Lapis Calaminaris*.

As for the first Sort, how genuine soever, it is of very small Use in Physick; its chiefest being to turn red Copper into yellow, which is call'd *Leton*, or *Yellow Brass*.

Cadmia, in *Arabick* *Clinia*, *vel Chilimia*, in *English* *Cady*, is a *Lemery.* Mineral Substance, whereof there are two general Kinds, one natural, and the other artificial; the natural is metallic

tallick as *Cobalt*, or not metallick as *Lapis Calaminaris*: The Artificial is a Kind of *Scoria*, which is separated from the Metals in the Founders Works, when they make Leton, Pompholyx, or Tutty.

4. Of the Hæmatitis, or Blood-Stone.

Pomet. **T**HE *Lapis Hæmatitis*, or *Blood-Stone*, is a Mineral of a reddish Colour, hard, ponderous, with long pointed Needles, very dangerous to such as are prick'd by them.

This *Stone* is brought us from many Places, there not being any Iron Mines wherein they are not found.

Chuse as near as you can those Stones that are of the highest Colour, with fine *Striæ*, or Needles, as much like *Cinnabar* as may be.

This Mineral has little Use in Medicine. Mr. *Charas* observes in his *Pharmacopœia Chymica*, Page 823, that if you drive it over the *Helm*, in a Retort, with *Sal Armoniack*, you may draw Flowers of the Colour and Smell of Saffron, which is what they call the *Flores Aromatici Philosophorum*: And moreover you may make with it a chalybeate acid Spirit, and with Spirit of Wine a Tincture and Flowers; both which have great Virtues, according to the afore-mention'd Author, to whom I refer you.

'Tis said this *Stone* has a sovereign Virtue to stop Blood, from whence it derives its Name of *Lapis Hæmatitis*, or the *Blood-Stone*.

This *Stone* being powder'd, as is said of the *Load-Stone*, enters the Composition of some Galenick Medicines: Also those that work in Metals, or in quest of the *Philosophers Stone*, make use of this.

Goldsmiths, and those that gild in Gold, use it too, to polish their Work, whether it be in Silver, Copper, Iron, Wood, or the like.

There is also another Sort of *Blood-Stones*, call'd *Red Pencil*, us'd by such as design and draw Sketches, and like to those of *Spain*, with this Difference, that they don't appear so sparkling with Needles, but dull and unpolish'd, like Earth.

These Crayons are brought us from *Eng-*

land, and are of two different Sorts; the one good, which is pretty tender, soft, and easy to saw or cut into Crayons; but the other, not worth any Thing, is hard and gravelly, and will not admit of cutting.

Hæmatitis, Lapis Sanguineus, or the *Blood-Stone*, is a hard, solid, *Lemery.* heavy Stone, participating of Iron, dispos'd like Needles, of a reddish brown Colour, but becoming red as Blood, according as it is reduc'd to Powder; they take it from the Iron Mines. The best and most esteem'd is that of *Spain*, which is clear, heavy, hard, and solid, in fine Shoots, of a reddish brown Colour, with Streaks that are blackish without, and resembling *Cinnabar* within; it is very astringent and drying, stops Blood, and is given internally, as well as externally, in fine Powder: The Dose from fifteen Grains to a Dram. There is another Sort of *Blood-Stone* brought from *England*, call'd the *Bastard Hæmatitis*; it differs from the former in that it neither shoots into Needles, nor is so hard: Chuse such as is of a brownish red, weighty, solid, and smooth; it is astringent, and is call'd *Hæmatitis* from αἷμα, Blood, because being powder'd, it is of the Colour of Blood, and stops Bleeding.

5. Of Spanish Emery.

EMERY of *Spain* is a *Marcasite* or stony Mineral, with small *Pomet.* Veins of Gold running through it, which is found in the Mines of *Peru*, and elsewhere: 'Tis of much Account amongst those that seek the *Philosophers Stone*, because of these golden Veins that adorn it; and 'tis at this Day so valuable and scarce, that those that have any of it may sell it for its Weight in Gold; and therefore the King of *Spain* has forbidden the Exportation of it out of his Kingdom, which is the Reason 'tis so very scarce to be found. This same *Emery* is of little or no Use in Physick, tho' Mr. *De-meurve* says it is of a corrosive and caustick Quality.

There are, besides this, two other Sorts of *Emery*, one whereof is reddish, and found in Copper Mines, as well in *Sweden* as other Places, and is what some sell for *Emery*

emery of *Spain*, but easily distinguishable from it, being more rough, solid, and hard, of a fine red Colour, but not vein'd with Gold.

The third Sort is that which is commonly used, especially by Armourers, Cutlers, and in short, by all those that work upon Iron or Steel, there being nothing that polishes like to pounded *Emery*. It is also us'd in polishing Steel, Looking-Glasses, several Sorts of Stones, and upon a great many other Occasions in the mechanick Way.

The common *Emery* is brought to us from several Countries where there are Iron Mines, and likewise from *England*; and there are none but the *English* that trouble themselves about grinding or pounding of it in Mills, which serve only for this Purpose, or to grind Stones of a like Nature; for this ordinary or common *Emery* is so hard, that whoever wou'd pretend to powder, or beat it in a Mortar, wou'd be apt to make Holes with the Pestle in the Mortar: And as this Mineral is made much use of, especially in Powder, that ought to be chosen which is like Pepper, pure and clean; if in Stone, let it be as bright-colour'd, and as free as you can from Spar.

Emery cuts Glass as the Diamond does, but makes no Impressions upon Diamonds as it does upon other precious Stones. It is said, if melted with Lead and Iron, it increases their Weight, and hardens and makes 'em become red, which I have not experimented. Some also mix *Emery* with the soft pale *Madagascar* Gold, but it must be that of the second Sort, which comes from the Copper Mines.

It is made use of also to cut and divide Marble. They affirm likewise that it becomes an impalpable Powder, if put into Brandy or Spirit of Wine, which I cannot vouch for, having never try'd it; that which falls from the Lapidaries Mills, and looks no better than Mud, is by some made up into Balls, and sold to several People under the Appellation of the *Putty* of *Emery*.

Smyris Lapis, or *Emery*, is a *Lemery*. Kind of *Marcasite*, or very hard Stone, whereof there are three Sorts; the first and most esteem'd is call'd *Spanish Emery*, because it is found in the Gold

and Silver Mines of *Peru*, and several other Parts of *New Spain*; it is reddish, mix'd with Streaks of Gold and Silver. This Kind of *Emery* is very scarce, for because of the Gold contain'd in it, the King of *Spain* has forbid the Transportation of it. The Second is smooth, and red, but has nothing of Gold or Silver in it; it is found in the Copper Mines. The Third is common *Emery*, whose Colour is blackish; it is got in the Iron Mines; they powder or grind it in *England*, by certain Mills made for that Purpose, which they cou'd not do in Mortars, because of the great Hardness of this Stone. This powder'd *Emery* is us'd to polish or clean Arms, Knives, Looking-glasses, &c. You must chuse that which is in the finest Powder, pure and clean. All these Stones are made use of to cut and polish precious Stones, Glass, and Marble, and are of no Importance in Physick, except only that they may serve to clean the Teeth. What falls from the Lapidaries, in working with this, they dry and call *Putty* of *Emery*.

5. Of the Magnesia.

Magnes, *Magnesia*, *Magne*, or *Magnes*, is a Mineral pretty *Pomet*. near approaching to Antimony, only it is softer, and brittle, like Free-Stone, and not so brilliant as Antimony.

There are two Sorts of *Magnesia*, grey and black; the former is very scarce, and so not much in use, but the black very much, as well by Enamellers, as Potters and Glass-Makers, who purify and whiten their Glass, by putting in a small Quantity of it; whereas thou'd they add too much, it would be of a blue and purple Colour.

We have it from many Places, as particularly from *Piedmont*, where it is found in the Mines in Pieces of different Figure and Bigness; as to the Choice of it, let it be as brittle, as sparkling, but as little attended with Spar; or other extraneous Bodies as may be.

Monfieur *Furetiere* affirms *Magnesia* to be the same Thing as *Safre* or *Perigueur*, both which I am going to treat of, and first of *Perigueur*.

7. Of Perigueur.

Pomet. **P**ERIGUEUR, or *Perigueux*, is a Mineral, or black Stone, like heavy black Coal, hard to be reduc'd into Powder.

Enamellers and Potters make use of it. There needs no other Choice about it than to see that it be pure, and clean from Impurities; for if there be any other Mineral mix'd among it 'twould spoil all; therefore they that sell it to the Workmen, must take the same Care as they do in Lead Ore.

The *Perigueur* which we sell at *Paris* is brought us from *Daubiny* and *England*.

Lapis Petracorius, Perigord, or Lemery. *Perigueux*, is a Kind of Marcasite or hard Stone, that is heavy and solid, black as Coal, difficult to reduce to Powder: It is met withal in several Mines of *Daubiny*, and in *England*, from whence it is brought us in Pieces of different Sizes; the Enamellers and Potters use it: You ought to chuse it pure and neat; it is deterfive and astringent.

8. Of Safre.

Pomet. **S**AFRE, or *Zafre*, is a Mineral of a bluish or Partridge-Eye Colour, which the *English, Dutch, and Hamburgers*, bring us from the *East Indies*, and especially from *Surat*.

Most of the *Safre* we have is in a grey Powder, like Ashes, from which it so little differs in Appearance, that we are forc'd to consult such as are vers'd in its Qualities e'er we can well distinguish.

There are two Sorts of *Safre*, the fine and the common; the former is in a bluish or cineritious Stone, the latter in Powder; and very often so bad, that 'tis hardly good for any thing, and being so very weighty must needs be mix'd with Spar, the other being much lighter.

Safre is much us'd by *Delft* Ware and Glas Makers, to give a blue Colour to both Sorts of Ware: 'Tis also with *Safre* that they colour calcin'd Pewter, in order to make the false Stone, which I've noted in

the Chapter of *Enamels*: And lastly, with *Safre*, it is that the azure Colour of Glas is produc'd, as is before observ'd, and of which is made the counterfeit *Sapphires*.

Saphre, Safre, Zafre, or Sapphire, is a Mineral whereof there are two *Lemery*. Kinds; one call'd *Fine Sapphire*, and the other common: The fine Sapphire is a pretty soft Stone, of a bluish Colour; the common Sapphire is a greyish, heavy Powder; both Sorts come from *India*. The fine Sapphire is us'd to give a blue Colour to Enamel, to Earthen Ware, and Glas, to make an Azure; they likewise colour counterfeit Sapphires with it, whence it takes its Name.

9. Of Rufma.

RUSMA is a Sort of Mineral, in Colour and Figure resembling *Pomet*. the Dross of Iron, found in great Plenty in *Galatia*, call'd at this Time *Changer*. This Mineral is in such Vogue amongst the *Turks* to take off Hair, that those of all Ranks use it, by which the *Grand Signior* has an Income of 30000 Ducats *per Annum*. This Depilatory is very little used in *France*, but I'm sure if 'twas better known 'twould be prefer'd to Lime and Orpiment upon that Occasion, it being stronger and more efficacious, if there be no Danger in it.

Rufma is a Mineral that is like the Dross of Iron, both in Colour and *Lemery*. Figure; there is abundance of it in *Galatia*; it is a Depilatory very much us'd by the *Turks*.

10. Of Orpiment.

ORPINE, or *Orpiment*, is a Mineral commonly found amongst *Pomet*. Copper Mines, in Stones of different Bigness, Colour, and Figure; some being of a golden, other of a reddish, and some of a greenish Yellow, and sometimes also almost quite red; which last proceeds from the different Degrees of Heat in the Bowels of the Earth where 'tis form'd. The Mines of Copper in which this *Orpiment* is found are never without some little Gold; and for that Reason those that work in them don't fail to make

make Separation of it after the ordinary Method.

The yellow *Orpine* is found to be of different Colours; wherefore 'tis that the *Dutch* and *English* send it to us in such Variety of Forms and Figures; but the best and most valuable is in thick Pieces, and in handsome bright Scales, gilt as it were with Gold, and which easily exfoliate, that is to say, which without much ado are separated and divided into thin *Laminae*, or Scales, glittering like Gold.

A second Requisite in the yellow *Orpine*, is, that it be half yellow, half red; that is, full of reddish Veins: So that which is in small Stones, and of a greenish yellow, is utterly to be rejected, being nothing but mere Earth; as well as that which is in Powder.

Orpiment is made much use of by Persons of several Professions, especially at *Rouen*, to dye their Wood yellow, of which they make Combs, and sell them for Box. Farriers use it upon several Occasions, as also Painters when it is ground. 'Tis one of the greatest Poisons we have, therefore we ought to take care to whom we sell it.

'Tis this same reddish natural *Orpiment*, which ought to be denominated the *Sandarach* of *Greece*, and not the following, as most Authors have written; for the red factitious *Orpine* is made of this, as I'm going to make appear.

Of red Orpine, or Ratsbane.

Red *Orpine*, which we ordinarily call red *Arsenick*, as Mr. *Morin*, a Physician of the Faculty of *Montpellier*, has assur'd me, is made of the yellow *Orpiment*, as it is drawn out of the Mines, by heating it in the Fire till it has acquir'd a red Colour; and afterwards putting it into a Crucible with Linseed Oil, or Sallad Oil, or Nut Oil, evaporating the Oil; then adding more, and proceeding after the same Manner, till the *Orpiment* becomes vitrified, and fit to be cast into Moulds of the Form of a Cake, and reduc'd to a Stone, as we see it. This Process, seeming very feasible, I was willing to attempt it but could not succeed in it; for the *Orpiment*, instead of red, became calcin'd and white, altogether like Plaister: But tho' I could not, yet I won't say the Thing can't

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be done; Mr. *Morin* being a Man of too much Honour to affirm a Thing he did not certainly know to be true.

Yet however this be, *Orpine*, or red *Arsenick* ought to be chosen in thick heavy Pieces, and as high-coloured as possible.

Red *Orpine* is but little made use of, except when ground into a fillamot Colour, by Painters.

II. Of natural white Arsenick.

WHITE natural *Arsenick* is a Mineral pretty much resembling the common or factitious white *Arsenick*, only it is whiter and more replendent, but not so scaly. This Mineral, or natural white *Arsenick*, is found also in Copper Mines; and when Miners meet with it, 'tis a certain Indication to them that Copper is near. It is found generally in the *Interstitia* between the true Spar and fat Earth; and sometimes it is met with in separate Pieces amongst the dry Clay. This *Arsenick* is very little known, and little used.

Of the white factitious Arsenick.

Tho' I have taken some pains to discover what this white *Arsenick* that we sell is, yet it has not been in my Power to inform myself; so that I am forced to rest myself contented, and to say with others, that it is a Composition of *Orpiment* and common Salt sublim'd together: Which does not stand to Reason, since if it were so, I don't see how the *Dutch* could possibly sell it at the Price they do; for *Arsenick*, in Times of Peace, at *Paris* is not worth above sixteen or seventeen Shillings the Hundred, which would bring *Arsenick*, and what 'tis made up of, to a matter of a Halfpenny a Pound. But not knowing what to determine in this Matter, I will only remark that it ought to be chosen in thick Pieces, white within and without. Most of what we have from *Holland* is white, and rough without, and if you break it, transparent like unto Glass within, which gave occasion to the Antients to call it crystalline *Arsenick*, which is in mighty request at this Day with some, but by others undervalued and rejected.

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Arsenick

Arsenick is of some small Use in Physick, to perform some Operations, as shall be seen hereafter; but chiefly made use of by Dyers, and in the Country to destroy the Rats and Mice, &c.

Of the Regulus of Arsenick.

Regulus of Arsenick is made of *Arsenick*, Pot-ashes, and Soap put into a Crucible, and by the Flame of a Lamp melted and cast into a great Mortar. It is much milder than the *Arsenick* itself. If the Dross of this *Regulus* is boil'd in Water, and the Liquor filtrated, by throwing Vinegar into it, a yellow Powder will be precipitated, which is call'd the Sulphur of *Arsenick*, and acts with more Violence than the very *Arsenick* itself.

Of Caustick or Corrosive Arsenick.

Corrosive *Arsenick* is made of *Arsenick*, Salt-petre and Sulphur, put into a Mortar to be set on Fire, as in preparing a *Crocus*. When the Noise or Detonation is over, and the whole is sufficiently burnt and grown cold, the Mass is to be pulveris'd, and put a-new into a Crucible to be calcin'd. If you would have this Caustick *Arsenick* in Liquor, 'tis but placing it in a Cellar for a few Days.

One may draw a Butter or corrosive Oil of *Arsenick* with Sublimate. This Oil, or Butter of *Arsenick*, is a very strong Caustick, and therefore proper for making an *Escar*. But as all Preparations of *Arsenick* have a pernicious Quality, they are to be used with great Caution, and not without the Advice of some skilful Person.

Calcin'd *Arsenick* may be sublim'd with Sea Salt decrepitated; and with this, as some do affirm, they counterfeit the *Venetian* Sublimate, which is what we call *Smyrna* Sublimate; but not being certain of this, I cannot avouch it for Truth, as I before hinted, when treating of Sublimate Corrosive.

Of the Arsenical Load-Stone.

The *Arsenical Magnet* is made of *Poictou* Antimony, Sulphur, and crystalline *Arsenick*, powder'd together, and put into a proper Vessel that will bear the Fire, that the whole

may become one transparent Mass, such as the artificial Magnet ought to be.

'Tis said this Preparation is a gentle Caustick, and that it may be prepar'd with a great deal of Facility. It is an Ingredient in the magnetick Plaister of *Angelus de Sala*, describ'd in Treatises of *Pharmacy* by many Authors, such as *M. Charas*.

Arsenicum, sive Arrenicum, or Arsenick, is a Mineral that is *Lemery*. weighty, shining, brittle, sulphureous and caustick, of which there are three kinds; one yellow, one red, and one white. The first is called in *Latin*, *Auripigmentum*, or *Orpiment*: This is a yellow shining Stone, taken from the Copper Mines, in Pieces of different Shapes and Sizes. There are several Sorts, that are distinguish'd by their Colours; for one is of a resplendent gold Colour, the other of a paler yellow. The beautifullest and most valued, is in large Pieces, of a golden shining yellow. They easily separate by little thin Scales that glitter like Gold. The reddish yellow Orpiment, receives its Colour from the subterranean Fires that calcine it: It is ting'd from the *Orpin* and the *Realgal*; both which are used by the Painters, after being finely ground on a *Porphyry*.

The second Sort of *Arsenick* is call'd *Sandaracha Græcorum*, *Realgal*, *Reisgar*, *Resgalum*, or *red Orpiment*. Of this *Arsenick* there are two kinds, one natural, and the other artificial. The natural is that which is calcin'd in the Mine by the subterranean Fires; the artificial, which is more common, being calcin'd by the ordinary Fire. You ought to chuse the *Realgal* that is in largest, heaviest Pieces, shining, and of the highest Colour: It serves the Painters. This Name of *Sandaracha* is given to *red Orpine*, because of the Resemblance it has in Colour with *Minium* or *Red Lead*.

The third Sort of *Arsenick* is call'd white *Arsenick*, or simple *Arsenick*, by way of Excellence, as being the strongest of all. This is a Mineral in large Pieces that are hard, heavy, brittle, very white, shining, or crystalliz'd without and within. There is the natural and the artificial Sort. The natural is found in Copper Mines, but is scarce; the artificial is made with equal Parts of *Orpiment*, and common Salt mix'd and sublim'd

lim'd together. All the kinds of *Arsenick* are corrosive Poisons, but the most active and dangerous is the white. It does not usually work violently till half an Hour after it is taken; because the Salts that make the Corrosion are lock'd up, and naturally fetter'd in the Sulphurs, which makes it some Time before they are at Liberty; when they produce great Pains, Inflammations in the Guts, violent Vomitings, Convulsions, Restlessness, a general Loss of Strength, and at last Death, if not prevented. The Remedies proper on this Occasion, are, melted Fat, Oil, Butter, &c. in order to sheath the Points of the caustick Salts, and to evacuate upward and downward; then Milk being taken in good Quantities, sweetens and corrects the Acrimony of the Poison.

12. Of Sal Gem.

Pomet. *SAL Gem* is a natural Salt, so call'd from its Clearness and Transparency, like unto a precious Stone, which the *Latins* call *Gemma*. This Salt is found naturally in the Bowels of the Earth, in several Parts of *Europe*, principally in *Poland* and *Catalonia*. And since I have not myself been upon the Spot where it is, to confirm the Truth of what I say, it may not be amiss to let you see what *Dr. Perou* of the Faculty of *Montpellier* has written to me upon the Occasion, who says, That he was in *Poland* in the Month of *March*, 1674, with his Eminence Cardinal *Janson*, who having the Curiosity to take a View of the Salt-Pits of *Willisca*, near *Cracow*, had a mind to go down into them, which he did on a Hearse, as they call it, made for that Purpose, attended by divers of his Servants, with Flambeaux in their Hands. Being come to the Bottom, which was very deep, he was receiv'd by the subterranean Inhabitants, who live there with their whole Families, but look extremely pale, and was presented by them with Beads and Crucifixes, which *Dr. Perou* afterwards examining by his Taste, found them to be a Salt, and to have the same Taste as that which the Druggists call *Sal Gemma*. But the Cardinal had a further Curiosity, and so was conducted to the Workmen, who with Chissels

and Hammers get this same Salt out of the Rocks, as they do Stones out of a Quarry. There were two Sorts of Salt in these Mines, and in the same Veins, the one finer, being more pellucid and transparent, and which they separate from the other of less Value, but which the *Poles*, and other Northern People, use in their Kitchens, and for their Tables: So that *Dr. Perou* was able to determine concerning the Pieces of Workmanship that his Eminence had presented him, that they were of the purest acrid Taste, and the true *Sal Gem* us'd by the best Dyers. As to the Salt of *Catalonia*, hear what *Mr. Tournefort*, who has been upon the Spot, says also in a Letter to me. There are four Sorts of Salt in the Mountains of *Cardona*, a pretty considerable City in *Catalonia*. The first, and most common, is a fossile Salt, white, and pretty much resembling Sea Salt, only not granulated, but cut out into large Quarters, as we do Stones in our Quarries. The second is a Salt of an Iron Grey, or Slate Colour, which differs only from the Fossile, in that it has a little blackish Earth mix'd with it. The third is a red Salt, near the Colour of Conserve of Roses, and differs from the other, in having a Mixture of Bole, or a kind of Rust of Iron. The fourth is the purest of all, and indeed the true *Sal Gem*, as transparent and bright as Rock Crystal. These several Sorts of Salts lie in *Strata*, or Beds, in this Mountain, and are very proper for any Uses of Life, and enter or penetrate into the Flesh, better than Sea Salt, being not so fix'd, and approaching nearer the Nature of Salt-petre. *Sal Gem* is easily wrought into what Figures you please; and accordingly little Boxes, Beads, and Crosses, and other the like Things are made of it. But nothing comes up to the Beauty of a certain Cavern in this Mountain, which is adorned on all Sides with most admirable Congelations of this Salt.

The People hereabouts affirm, that this Salt grows in its respective Abodes, and the Holes that you empty fill again after some Time; but this wants Confirmation.

Of the several Sorts of *Sal Gem* which I have spoken of, we deal in none but the best; that, as has been said, is in thick Pieces, is easily broken, clear, and transparent, and for Dyers Use. 'Tis very observable of this

Salt, that it grows red-hot, like Iron in the Fire, and crackles there but very little, tho' on the other Hand it easily dissolves, being expos'd to the Air; yet it may be cleans'd from Dirt, by washing it, without Injury. *Sal Gem*, which some call fossile Salt, is brought us from many Places, but in greatest Quantities from *Poland*. Mr. *Furetiere* and other Authors say it comes from the *East-Indies*, and that there is a Kingdom called *Danzal*, which signifies with them a Country of Salt, and which affords yearly a Loading for six hundred Camels, which in *Æthiopia* is ready Money. I do not think it worth while to waste Time in controverting what *Pliny* and others have observed concerning this Salt, when they tell us, that in *Charros*, a Town of *Arabia*, Houses are built of that Salt, and Water is us'd instead of Mortar to bind the Salt Stones; or that the Sea derives its Saltness therefrom, &c. I must not here forbear to relate that there are Vegetables of Salt produc'd in the Mine, inasmuch that Mr. *Tournefort* has a Vegetation of fossile Salt as white as Sugar, almost two Foot high, like a Shrub, growing out of a Root of the *Seseli* (Hartwort) or *Marfeilles*, which without all Peradventure, is one of the greatest Curiosities in all *Europe*.

Sal Gemmeum, Sal Fossile, or Sal Lemery. Gem, is a Mineral, white and crystalline Salt, which grows in Form of Stone, or a Rock, in several Mountains in *Catalonia, Poland, Persia*, and the *Indies*. This Salt being broken, is shining and transparent as Crystal. They say that certain People of the *Indies*, which inhabit in the Countries where it is met withal, but rarely, build transparent Houses with *Sal Gem*, which they work like Stone. The Taste of *Sal Gem* is like that of Sea Salt, but a little more penetrating; they use it with their Meat. Out of the Salt Waters of their Springs and Pits, in the *French Country* and *Lorrain*, they make *Sal Gem*; they evaporate these Waters to make the Salt which they use in those Countries as we do Sea Salt. There is made by Distillation of *Sal Gem* an acid Spirit, altogether like Spirit of common Salt. *Sal Gem* is incisive, attenuating, penetrating, resolving, aperitive, laxative, proper in the Cholick, and to open Obstructions; They substitute in

the Compositions *Sal Gem*, for *Indian Salt*, called *Sal Indum*, which some believe to be a Kind of Mineral Salt, and others Sugar.

13. Of Sea-Salt.

SAL Marine, or Sea Salt, is a Crystallization made of Sea *Pomer.* Water, perform'd by the Sun, and reduc'd into Grains of a Cubick Figure, as Monsieur *Des Cartes* has made appear. As to its Origin, some will have it to proceed from the above-mention'd Fossil Salt, or *Sal Gemmæ*; but since I cannot decide this Affair, it may not be amiss to transcribe here what Monsieur *Lemery* has written concerning it, p. 345.

Sea Salt is made at *Rochel* in the Salt Marshes, which ought to lie a little lower than the Sea, and to be of a Clay Mould to retain the Salt Water that is drawn off into 'em; so that all Places that are contiguous to the Sea, are not fit for the Purpose.

When the Season begins to be hot, which usually happens in the Month of *May*, the Water that has lain in the Marshes to be preserv'd there all the Winter, must be drained off; then the Sluices or Dams are to be open'd, to let in what Quantity of Salt Water you please, which must be contrived to pass through many different Channels, where it is purified and becomes hot; then 'tis convey'd into plain level Places, in order for the Salt to cream. This Salt does not shoot throughly, but during the excessive Heats, the Sun evaporating some Part of the Humidity, and the Breezes from the Sea, which happen after the Heats, by their Coolness condensing and crystallizing the Salt.

But if it should chance to rain during this Process, only two Hours, there would be no making Salt again in fifteen Days Time, because the Marsh must be made clean, and all the old Water taken out, and other new let in its Place; so that if it rains but once in all the fifteen Days, there is no making Salt after this Manner.

Besides the aforesaid *Sea Salt*, there is the White Salt of *Normandy*, which they make with Water out of a sort of Mud or Sand that the Sea throws up in the Summer, and upon

upon which the Sun has shone some Time; and when the Water is sufficiently impregnated with the Salt that it will dissolve no more, which is found by swimming of an Egg in it, (for every Body knows that Water can be charg'd but with a determinative Quantity of Salt or Sugar) then the Water is to be strain'd or filtrated through Straw; and when it is very clear, to be put on the Fire and boil'd 'till it comes to a Skin, and afterwards put into Baskets to reduce it to what we see it. The more this Salt is wrought, the whiter, pleasanter, and better Quality 'tis of; its constant Softness is besides very peculiar to it, as well as its growing the more insipid the longer 'tis kept. There are still other Sorts of Salt in *France*, as that of *Lorraine*, which is made with salt Water cast upon hot Plates of Iron; that of *Franche Compté*, and many more, which I forbear to speak of, not having any Commerce in them.

Of the Purification of Sea Salt.

To purify Salt, it ought to be dissolv'd in Water, and the Dissolution filtrated through brown Paper, then the Humidity to be evaporated in an Earthen Pan, and so there will remain a very white Salt; but it will be purer and better, if instead of evaporating all the Humidity, Part is left to crystallize in a cool Place; for at the Bottom of the Vessel is found the finest Salt, which may be separated from its Moisture and dry'd; then ought Part of the salt Liquor to be evaporated again, and having put the Vessel into a Cellar, let it crystallize; thus must you continue to evaporate and crystallize, 'till at last all the Humidity must be evaporated, because it will not shoot into Crystals any more; the Salt that is behind being fill'd with an oleaginous or bituminous Matter that hinders Crystallization. If you'd make the Salt up into Loaves like to those of Sugar, it must be put into Moulds when 'tis a little more evaporated to a Skin, and after it has lain a little to coagulate and stiffen, it must be put into a Stove to dry it perfectly. This Salt, well purified, differs not in Appearance from double refin'd Loaf Sugar.

Decrepitated Salt is a Sea Salt calcin'd by the Fire, which serves for many Purposes.

Of Spirit of Salt.

Spirit of Salt is an Amber-colour'd Liquor drawn from dry Sea Salt, by the Assistance of dry'd Potters Earth, a Retort and Fire. The best *Spirit of Salt* we have comes generally from *England*, and if 'tis good must be void of Phlegm, that is faithfully and carefully prepar'd, of a fine yellow Amber Colour, and of a very acid and pungent Taste. I shall not spend Time, at present, to run through all the Particularities and different Sorts of *Spirit of Salt*; Monsieur *Lemery* hath done it at large already, only I must observe of *Spirit of Salt*, that which is right and good is much in use in many Cases, as in *Hernia's*, *Apoplexies*, *Survy of the Teeth*, *Gums*, &c. The Way of taking it, may be a few Drops by itself, or in Water, or any other Vehicle almost, *ad gratum acorem*; for cleansing the Teeth, mix it with clarified Honey of Roses. Those that would have a dulcified Spirit of Salt, to be taken in a greater Quantity, may make it according to *Basil Valentine*, by mixing Spirit of Wine, and Spirit of Salt, equal Parts, and digesting them together in a Sand Heat for three Days.

Sal Marinum, *Sal Commune*, or *Sea Salt*, is a Salt they make from *Lemery*. the Sea Water by Evaporation and Crystallization. I believe that the Origin or Rise of that Salt comes from *Sal Gem*. and several Reasons confirm me in this Opinion. The first is, That Sea Salt is altogether like *Sal Gem*, or that Salt made from the Springs in the *French* County, the Pits of *Lorraine*, and several salt Lakes in *Italy* and *Germany*, whence Salt comes, as all the World know. The second is, That there is no Salt whereof there is such Plenty as of the *Sal Gem*. It fills not only in *Europe* abundance of Mountains of a great and vast Extent, but it is found in almost all the Mines in *Agypt* and the *Indies*; and there is no doubt but it is at the Bottom of the Sea, as well as the Earth we live upon, where we meet with Mountains, Rocks, and Mines, full of *Sal Gem*. The third is, That the Naturalists have at all Times observ'd, that the Waters which pass thro' the Mines of *Sal Gem*, and are loaded with the Salts, flow by an Infinity of Channels into the Sea.

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The Fourth is, That the Sea Salt must necessarily be made in the Land; for if but a little vers'd in Chymistry, one may know that fix'd Salt compos'd of an acid Earth, as the Sea Salt is, could never be evaporated, or perfected in the Sea Water; it wants the Earth to imbody the acid Liquor, otherwise it would always remain a fluid Salt, and never become solid. If we make a chymical *Analysis* of Sea Salt, one may draw from thence a great deal of acid Liquor, which being separated from the Earth, can never gain again its Consistence of Salt. This Argument being clear and demonstrative, it is likewise plain, that the Sea Salt must receive its Elaboration in the Earth before it is convey'd into the Sea: But as we see no Salt so plentiful in the Earth as *Sal Gem*, we may well believe it is that which gives a Saltiness to the Sea; besides, the Salt that we now take from the Sea is entirely like it in Taste, in Quality, and in Principles.

But I shall propose some Objections made against this; they say, that it is difficult to conceive that the Sea, which is so large, and of so prodigious an Extent, should receive all its Saltiness from *Sal Gem*; for tho' there is great Quantities of Salt in the Bowels of the Earth, there does not appear enough to salt so much Water.

To answer this Objection, I say, that the Difficulty we apprehend of the *Sal Gem*'s being sufficient to salt the Sea, proceeds from this, that we do not see the Quantity of Salt Mines, as we do the Extension of the Sea Water: But if we consider that the Earth is full of *Sal Gem*, or the like, in Millions of Places, and that it discharges itself into the Sea perpetually, there is no doubt but we may have Room to comprehend that the Earth in all its Parts, contains Salt enough in it to make the Sea salt.

Another Objection they bring is, that according to my Argument the Sea ought every Day to encrease in Saltiness, since it perpetually receives fresh Salt, which cannot be dispos'd of otherwise. I answer that we cannot perceive any Augmentation of the Sea's Saltiness; for if there be a great deal of Salt that is brought into it, there is likewise a great Consumption by Evaporation and the Motion of the Waves that are driven with

such Rapidity and Violence, that they volatilize a great Share of Salt that is receiv'd in Vapour, as may be sensibly perceiv'd by the salt Air we breathe in, when upon the Sea, and which contributes much, with the Agitation of the Ship, towards the Provocation to Vomiting. This Salt is driven by the Winds upon the Shore, where it is useful to make the Land fertile, and by a perpetual Circulation it is brought to the Sea again.

In *Normandy* they make Sea Salt by evaporating Sea Water over the Fire in great leaden Cauldrons to a Dryness; there remains a white Salt that is less piquant and less salt than that of *Rochelle*, because of the Evaporation, and perhaps occasion'd from some Particles of Lead that are dissolv'd in it, which has blunted its Points. This kind of Salt loses its Strength as it encreases in Age.

There is a Salt prepar'd by Crystallization at *Brouage* and *Rochelle*, besides several other Parts of the Country where there are Salt Lakes. The *Rochelle* Salt is grey, because of a little Earth that it carries along with it; it is nevertheless more penetrating, and saltier than the white *Normandy* Salt, which is made by Evaporation, but it is not so piquant as *Sal Gem*, because of the violent Motion of the Sea Waves which blunts its finer Points. It may be render'd white as Sugar, by dissolving in Water, filtrating the Dissolution, and evaporating to a Dryness: But as in this Purification we separate it from a great deal of Earth, which made it weaker, it does not by this Means increase its Strength; but on the contrary it is less biting, because that the Fire has carry'd off, or blunted several of its more subtile Points. Sea Salt contains a great deal of Acid, a small Quantity of Sulphur and Earth. It is incisive, penetrating, desiccative, apperitive, resolute. It is us'd in Apoplexies and Convulsions; they mix it in Baths and Suppositories, and being apply'd hot behind the Neck, it rarefies and dissipates Catarrhs.

14. Of Nitre, or Salt-Petre.

SALT-Petre, which the Chymists call *Dragon*, *Cerberus*, or the *Infernal Pommet*. Salt, is an artificial or factitious Salt, drawn from several Sorts of Materials, as from

from old Stones, whence it has its Name, from Earth, from Ashes, and also from Pigeons Dung. I shall not describe here the many different Ways of making Salt-Petre, seeing they are largely describ'd in the Transactions of the Royal-Society at London; and also because 'tis easy to see it made in very many Places in France, and especially at the Royal-Arsenal at Paris, where 'tis made in great Quantities, and where they divide it into a matter of half Dozen Sorts, according as 'tis more or less purified; but the finest and best is what will hardly dissolve in Water, which they send in Casks to the Frontiers; and this Salt-Petre may be kept almost in any Place without Loss or Decay, but is not at all expos'd to Sale.

Besides the Salt-Petre of several Sorts made in Europe, we have it brought in large Pieces from the East-Indies, sometimes rough and unpolish'd, and at other Times as well purified and refin'd as any whatever. There are moreover other Sorts of natural Salt-Petre, such as is found sticking to Rocks and old Walls, in small white Crystals, and is what the Antients call'd *Aphronitum*. Salt-Petre is made also in Egypt, with Nile Water, after the same Manner as common Salt is made with us at *Broüage* or *Rochelle*; and this same Salt-Petre, made of the Water of the River Nile, is that which was so common in France, about twenty Years ago, and which used to be sold at a cheap Rate to the Whitstiers, to blanch or whiten Linen, under the Name of *White Pot-Ashes*, *Alkali*, *Natrum*, or *Anatrum*.

There is nothing almost has more perplex'd the Antients, as well as Moderns, than the *Natrum* of Egypt, even whilst it was the commonest Thing in the World; for at Paris alone, was consum'd of it more than 2000000 Pounds yearly, without reckoning what the Butchers and Tanners made use of to salt their Skins and Hides, which was the Reason it was prohibited afterwards; and since it is become so scarce, that at present 'tis at its Weight in Silver, and is also prohibited to be sold by Merchants under large Penalties. Some will have this *Natrum* of Egypt to have been a natural *Borax*, or a Salt drawn naturally out of the Earth in grey hard Pieces; some that it was the volatile Salt

and Froth of Glass Metal taken from the Pots and Furnaces of Glass Founders, and that it is either grey, white, brown, or bluish, altogether unfit for Vitriification, and fit for nothing but to throw to Sheep or Pigeons; but nothing can be more wide of Truth than this, since the true Salt of Glass is still so common among us, that it's sold not above a Groat or five Pence a Pound, and never given to any Sorts of Cattle or Beast, but us'd chiefly by Potters, and Dutch Ware-makers, to prepare the Sand wherewith they whiten and varnish their Things: And again Light and Darkness are not more contrary than those two; for the Salt of Glass is in Cakes or Stones, extremely heavy like Marble, contracting no Moisture by the Air; whereas the *Egyptian Natrum* is a white Salt in great crystal weighty Masses, salt and nauseous to the Taste; and besides, easily dissolving into Liquor, when expos'd to the Air, and is of some Use to in Medicine, being an Ingredient of the *Lap. Crolii*. As for natural Salt-Petre, we have but very little of it, and consequently make use of the Artificial or Factitious, which ought to be made choice of good and well-work'd, according to what Degree or Quality it is of; but however, let it be always dry, and as void as possible of Salt. The common Sort, when good, must be as white, dry, and free from Salt as may be; the Refin'd also, the whither, dryer, and more beautiful, long and large Crystals 'tis in, the better, and more valuable.

The Use of Salt-Petre is very considerable, as well upon Account of the great Quantities employ'd in making Gun-powder; as that abundance of Artificers make use of it, and that divers chymical Preparations are made thereof. This great Consumption is the Reason why the Sale of it is forbidden to Grocers and others; and that those in and about Paris that employ any of it, are forc'd (under Pain of Confiscation, and a Fine) to buy it at the Arsenal; and even then are not to use it to the Purposes of seasoning Meat, or the like, though it be proper enough for that End, as Mr. Lemeroy assures us.

Nitrum, *Sal Nitrum*, *Sal Petrae*, *Salt-Petre* or *Nitre*, is a Mineral Lemery. Salt, partly volatile, and partly fix'd, which they make from Stones and Earth upon

upon old Walls, Buildings, and the Urine of several Animals, which has lain a long Time on Cellar Floors, or on the Stones. This Salt being form'd by the Acid of the Air, which after it has penetrated and rarefied the Stones of Earth, is thus fix'd and embodied.

Salt-Petre is separated by Dissolution, Filtration, and Coagulation; they powder grossly the Stones and Earth that have lain a long Time in the Air, or which are taken from old Buildings; they steep this in a great deal of hot Water, in order to dissolve the Salt: they throw this Infusion upon Ashes to make a *Lixivium*, or Lye; they pass and re-pass the same Liquor several Times upon the Ashes; then being clear, they evaporate three or four Quarts of the Humidity over a Fire; then they set the Liquor to cool and crystallize, taking the Crystals off to dry, and then evaporate almost all the Moisture away, and cool again as before. They take off the Salt-Petre that contains a great deal of lixivate Salt, and which is almost like Sea Salt, only that the lixivate Salt being Alkali, it changes its Nature, because the Pores are fill'd by the Acid of the Salt-Petre. The Salt-Petre, made by this first Purification, is call'd *Common Salt-Petre*; the last Sort of which ought not to be mix'd with the first, because it is almost fix'd, and consequently not so good.

They purify common Salt-Petre by dissolving it in Water, filtering the Dissolution, and evaporating the Water over the Fire, 'till there appear a small Scum upon it; then leaving it to cool, without stirring, there will shoot fine, long, white, clear, transparent Crystals; pour off, by Inclination, the Water that swims upon it, and take out the Crystals to dry, evaporating again Part of the remaining Water, and leave it to cool; new Crystals will be form'd, which dry as before; and in short evaporate the rest of the Liquor, 'till you find nothing at the Bottom but a little Salt, like Sea Salt. Repeat several Times the Purification of your Salt-Petre after the same Manner, and every Time separate some of the fix'd Salt; the more it is purified, the finer, larger, more shining, and transparent are the Crystals, freed from the fixed Salt, and difficult to melt. There is likewise a natural Salt-Petre, sticking against Walls and Rocks in little Crystals, which is

preferable to common Salt-Petre, and which the Antients call'd *Apbro-Nitrum*.

The ordinary Salt-Petre ought to be chose well purified, in long Crystals, as hath been said, cooling upon the Tongue, and that casts out a great Flame, when thrown upon hot Coals. It is aperitive, resolute, abates Thirst, provokes Urine, resists Putrefaction, allays the Heat of the Blood, drives forth the Stone from the Kidney or Bladder. The Dose is from half a Scruple to a Dram.

Of melted Salt-Petre, or Salt of Nitre.

Sal Nitri is a purified or refin'd *Salt-Petre* melted by the Fire, and *Pomet*. put into a Skillet, and so reduc'd into Cakes of three or four Fingers Thickness.

The Salt of Nitre, made after this Manner, is very little in use, but instead of it is much us'd a Preparation call'd *Crystal Mineral*, which is made by casting a little of the Flowers of Brimstone upon some of the afore-mention'd melted Salt-Petre.

Sal Nitri, or *Salt-Petre*, is fix'd with Charcoal, and said, when fix'd, to have the same Properties as Salt of Tartar, and that a red Tincture of it may be drawn with Spirit of Wine, like that of *Sal Tartari*.

Of Spirit of Nitre.

From any of the Sorts of Salt-Petre, by Means of a little dry'd Potters Clay, a Retort and Fire, is drawn a Spirit extremely strong and violent, but very proper for all Occasions where 'tis requir'd.

Spirit of Nitre, when good, is as clear as Rock Water, and sends forth Fumes continually, if the Bottle is unstopt. Some rascally People sell *Aqua fortis* instead of it, therefore Care must be taken about it, but 'tis easily distinguish'd from *Spirit of Nitre*, by what I have said before, and by the low Price they sell it at; whereas true *Spirit of Nitre* cannot be afforded under eight Shillings the Pounds, or upwards.

We have but little *Spirit of Nitre* now come from *Holland*, either through the small Occasion we have of it, or rather through the Covetousness of Workmen that will not afford it, but chose to make use of *Aqua fortis*

fortis instead of it, whereby their Manufactures are neither so good nor so well wrought.

Spirit of Nitre, being a strong Corrosive, is very seldom us'd internally; wherefore 'tis dulcified, or soften'd, by adding as much Spirit of Wine to it; and this is observable in this Mixture, that it wants no Fire to make it; for as soon as those two Spirits come together, there arises as great an Ebulition and Bubbling, as if they were upon a good Fire. In performing this Operation, Care must be taken to avoid the Fumes and Vapours which are very hurtful and offensive. When this Mixture is become clear, it may be taken a few Drops of it in any proper Vehicle, and is said to be very good in flatulent and nephritick Cholicks. *Sal Armoniack* dissolv'd in this Spirit makes the *Aqua Regia*, or *Royal Water*, so called from its Capacity of dissolving Gold, the King of Metals.

Of Aqua fortis.

Aqua fortis is a Spirit drawn from Salt-petre, and *German* or *English* Vitriol calcin'd to Whiteness, by Means of some dry'd Earth or Clay, a Retort and Fire.

Aqua fortis, so call'd from its Strength, though it be not so violent as Spirit of Nitre, is very much in Use with a great many sorts of Workmen, such as Coiners, Mint-men, Goldsmiths, Engravers, Cutlers, and Abundance of others, as well as by those that dye in Grain.

The best *Aqua fortis* we have comes from *Holland*; not but that it can be made as good in *France*; but to sell it a little the cheaper, 'tis not above half deflegmated with us, and consequently not above half so strong as it should be.

With *Aqua fortis* and Clippings or Filings of Copper, is made a second Sort, as they call it, of Water, of a blue Colour, which Farriers make use of, or otherwise that which the Workers in Silver make with Phlegm of Vitriol, or Spirit of Vitriol, that is made of *Aqua fortis*, and to which the Name of the *Aqua secunda*, or second Water, is given.

There is no fear of counterfeiting *Aqua fortis*, or selling any other Spirit for it, there being none can be afforded at a lower Price.

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When this Water has no Phlegm in it, to be sure it is good and genuine.

Of Crystal Mineral.

Crystal Mineral, which some call *Sal Anodynum*, or *Mineralis Lapis*, or *Sal Prunellæ*, is a refin'd Salt-petre melted in a clean Iron Pot, throwing a small Matter of Flowers of Sulphur into it. When it is thus in Fusion, the Salt-petre being thoroughly melted, and the Sulphur consum'd, let it stand a-while; then take off the Scum with an Iron Spoon, and pour out the Salt-petre into an Iron Skillet, or Porringer, to make it thin, after the Manner as we see it. We send to *Holland* for our best and whitest *Crystal Mineral*, but it being in little thick Cakes, we have but small Sale or Demand for it, since it's only fit to be sold by Weight, and to those that make use of it themselves.

Crystal Mineral ought to be chosen very white, new made, and thin; and when it is to be retail'd, let it be as dry as you can. That which is made with the purest Salt-petre, is to be prefer'd to that which is made with the common or ordinary Salt-petre, and this is easily known by its Whiteness, and keeping well. 'Tis a Mistake to believe, as an Author of late observes, that those who hawk *Crystal Mineral* about the Streets, make it up with Alum; for 'tis impossible to make Alum and Salt-petre unite, the Alum becoming immediately a Scum when 'tis thrown into the Salt-petre, as it does with Sugar, tho' 'tis pretended to be made use of to whiten it; so that those that make *Crystal Mineral* for Cheapness, must use the common Salt-petre; for 'tis but melting it twice, and it will be as white as the other, and the only Difference will be in keeping but a short Time, which they to their Cost know that buy of those Strollers. Care must be taken not to wrap it in Paper, which being porous, attracts Humidity, and moistens the *Crystal Mineral*, and renders it unsaleable; for this Commodity ought not to be moist, or in Powder: Wherefore, by the Experience I have had, the best Assurance you can have that 'tis good, will be to have it made by yourself.

Crystal Mineral is very much in use in Physick; it has acquir'd the Name of *Sal Prunellæ*,

Prunellæ, 'tis said, from its specific Quality of curing Inflammations of the Throat, and the Quinsy, which some call *Pruna*, or *Prunella*; and, according to others, from the essential Salt, which is drawn from the *Prunelle*, or *Sloe*, resembling crystal Mineral; or because it is much made use of in inflammatory Fevers, compar'd to a Fire, which the *Latins* call *Pruna*; or, lastly, because the *Germans* give it the Figure of a wild Plumb.

Of Sal Polychrestum.

The *Sal Polychrestum*, so called from its many and great Virtues, is made of the finest Salt-petre and *Holland* Sulphur powder'd together, and by Means of a gentle Fire wrought into a very white light Salt.

This Way of making it is very different from that of all Authors who have treated of it, who recommend a Crucible made red-hot by keeping a Fire about it for three or four Hours. I will not say this Process is not good; but the Impossibility there is of felling it when 'tis heavy, and of divers Colours, is the Reason why it can't be dispos'd of: And I believe my Method will be prefer'd, since with two lighted Charcoals, and in the Space of one Hour, a Salt may be made both white, bright, and well qualified, also more saleable, and that costs less. And since I disapprove the ways of making the *Sal Polychrestum* hitherto used, it will not be amiss to declare the manner of succeeding best in it. Take therefore equal Parts of Sulphur and fine Salt petre, and having heated a Crucible, not varnish'd in the Inside, and plac'd it upon five or six lighted Charcoals, so that the Bottom be red-hot, throw into it a Spoonful of the Mixture of Salt-petre and Sulphur; and when the Detonation is over, and the Sulphur and Salt-petre are sufficiently burnt, another Spoonful in like Manner must be thrown in, and so till all is calcin'd; then take the Pot off the Fire, and after it is cool break it, and therein you'll find a *Sal Polychrestum*, both white, light, and very saleable. And what I say stands to Reason enough, since this Salt cannot be made heavy, and in a Mass, but by the great Violence and Strength of the Fire. They that would be still more curious, and would have a *Sal Polychrestum* purer and more beautiful,

that is to say, crySTALLIZ'd, let them dissolve it in Water; and after having filtrated, and evaporated to a Pellicle, it must be put in a Cellar, or some other cool Place, to shoot into Crytals; which when dried, ought to be in small Plates, moderately thick, and brilliant, or shining like Diamonds, and of a clear white, and solid, that is, that are hard to break; for that which is easily reduc'd to Powder, is not well made.

This *Sal Polychrestum* crySTALLIZ'd, is preferable to the first Sort, how well soever made, being free from that ungrateful Taste and evil Quality, which the Sulphur, that is inseparable from the other, gives it.

In felling of this Salt there are great Cheats and Abuses committed, instead of which, those who trade in it expose to Sale only the Salt-petre itself melted and cast into a Mass like a Stone. But it is easy to discover the Imposture, for as much as the true *Sal Polychrest* neither cracks nor flashes in the Fire, but will become red-hot; whereas the Counterfeit flames and crackles as Salt-petre itself, and is also to be known by its exceeding Whiteness, and the cheap Rate it is sold at.

The Rock or Crystal *Sal Polychrest*, that is, as it comes out of the Crucible, was some Years since much in Vogue in Physick; but at present being out of Fashion (as there is a Mode in Medicine, as well as in every thing besides) is now seldom made use of; losing, as it were, its Virtues with the Opinion of the World.

This Salt has had the Appellation of fusible Sulphur or fix'd Nitre given it, as *Penatus* describes at large, and which shews it to be no new Composition, since it has been known a long Time by the Name of fix'd Nitre.

Of the Antifebrifick Salt.

The *Sal Antifebrilis*, or Salt against Fevers, is made of the finest Salt-petre, Flowers of Sulphur, and distill'd Urine, all mix'd together, proceeding after the same Manner as is directed in Treatises of Chymistry, whither the Reader may have Recourse. This *Antifebrifick Salt* is esteem'd an excellent Remedy for Fevers, taken at the Beginning of the Fit, or upon the Return of it, from eight Grains

Grains to half a Dram in any agreeable Vehicle.

Of Nitre Vitriolated.

Vitriolated Nitre is made of Salt of Nitre dissolv'd in Spirit of Vitriol, and then prepar'd; and to which is attributed the same Qualities as to the vitriolated Tartar. *Note*, It ought to be white, light, and in small *Striæ* or Needles, like *Sal Saturni*.

There is also a Sort of Butter prepar'd of Nitre, by the Means of Tartar; the Process whereof may be seen in Monsieur *Charas's* Chymistry, *Page 853*.

15. Of Natural Borace.

THE *Natural Borace*, to which the Antients have given the Name of *Chrysofocolla*, or *Tinca*, is a Mineral Salt of the Figure of the common *Sal Gem*, found in the Bowels of the Earth in many Places of *Persia*; and at the Bottom of a Torrent, among the Mountains of *Purbeth*, in the Country of *Radzioribron*, that reaches to the Confines of the *White Tartary*. When this Mineral is taken out of the Earth, it is expos'd to the Air, that it may contract a Sort of fat reddish Rust, which nourishes and preserves it from being calcin'd, as it were by the Influence of the Weather; and when it is as it ought to be, the *Persians* carry it for the most Part to a Place call'd *Amadabat*, from whence the *English*, *Dutch*, and we, have it; and this is what we call *Natural Borace*, or the unpolish'd, rough, fat *Borace*, which some Workmen employ for the same Uses as they do the refin'd.

We have another Sort of *Natural Borace* brought us, which differs only from the former, in that it is a little drier, and of a grey Colour, which proceeds only from its having been longer expos'd to the Air, whereby the reddish fat Substance, wherewith 'tis covered becomes dry, and like to the *English* Copperas that has lain a great while above Ground. Those that have Occasion for one Sort or t'other, must take Care that it be not mix'd with Stones, or other such Refuse, as it frequently happens to be. 'Tis of either of these Sorts of *Borace* the *Venetians* and

Dutch make that which they send us under the Appellation of refin'd *Borace*.

The Antients were not out when they said there was a greenish *Natural Borace*, of the Colour of a Leek, no more than *Agricola*, who rightly enough observes, that he had seen a Fossil Nitre, solid and hard, like a Stone, of which the *Venetian Borace* is made: But the same Author is very much mistaken, when he says, that then no *Borace* was in use but the Factitious or Artificial, made of the Urine of Boys that drank Wine, Brass Rust, and sometimes Nitre beaten together in a Bell-metal Mortar to the Consistence of an Ointment; which is far from Truth, since the *Borace* he means is only the fat *Borace* refin'd and shot into Chrystals.

Borax, *Chrysofocolla*, *Capistrum Auri*, *Auricolla*, or *Gold Flux Powder*, is *Lemery*. a Mineral Salt that has the Colour and Transparency of *Sal Gem*, but a great deal more Pungency; it is found in certain Mines of *Persia*, and several other Places: When they take it from the Earth, they expose it to the Air, where it becomes greasy and reddish on its Superficies. This is that which is call'd *Fat Borace*. This Fat covers the Salts that they cannot be penetrated and dissolv'd, or melted by the Air. There is likewise found a grey or greenish *Borace*, which Colours proceed from the various Impressions, that the Air being hotter or colder makes upon the Salt, by opening it more or less.

The *Venetians* and *Dutch* purify or refine their *Borace* as they do other Salts, by dissolving in Water, filtrating the Dissolution, leaving it afterwards to evaporate, and setting it to crystallize. They bring us this *Borace* under the Name of *Borace* refin'd. Chuse your *Borace* in fine white Pieces, neat, crystalliz'd and transparent. One may, by refining, separate from *Borace* a vitriolick Matter, which gives it a great deal of Sharpness; for which Reason the refin'd *Borace* is much softer than the Natural, and ought to be prefer'd in Medicine; it is incisive and penetrating, proper to open the Obstructions of the Glands of the Mesentery, and dissolve the *Schirrus* of the Liver and Spleen. The Dose is from four Grains to twenty. They also use it externally to consume the Excrecences of Flesh. They may draw a Spirit from *Borace* like that of Alum, by a very

strong Fire; it is appetitive, and very like Spirit of Salt: It is call'd *Chryſocollo*, *Gluten Auri*, *Capiftrum Auri*, and *Auri colla*, becauſe the Goldſmiths uſe it to flux Gold withal.

Of Refin'd Borace.

As *Natural Borace* is found of different Colours, ſometimes greeniſh, and other whiles yellowiſh, the *Venetians*, who were the firſt that brought Borace into Vogue, finding it could not be well made uſe of with its natural Fatneſs and Unctuoſity, conſider'd of a Way of purifying of it, by diſſolving it in Water; then filtrating and cryſtallizing it, in order to which they made uſe of Cotton Matches, upon which the *Borace* is cryſtalliz'd, after the ſame Manner as Sugar-Candy or Verdigrife does on Sticks or Splinters of Wood.

As for others that don't uſe Cotton, they reduce the *Borace* into little Stones of the Form and Figure of the Tag of a Lace or Point; but as this Sort of *Borace* had a greeniſh Caſt, the *Dutch* have taken it to Taſk, and made it whiter and more vendible, and reduce it into larger Pieces, which is what we ſell at this Day.

Borace, whether it be the *Venetian*, or that of *Holland*, ought to be choſen clear and transparent, of Taſte almoſt inſipid, taking Care that it be not mix'd with *Engliſh Alum*, which is difficult enough to diſcover, if the Alum has been ſoak'd in Water, and then expoſ'd a few Days to the Air, to give it the natural rough Appearance of *Borace*; but this Cheat may be eaſily found out, if you'll put it to the Teſt: For, firſt, it will by no means folder Metals, nor being put upon lighted Charcoal, will it ſwell and heave like *Borace*, or is it ever altogether ſo white or light.

Refin'd Borace is much in Uſe by a great many Sorts of Workmen, and ſerves as well to folder, as to melt and diſſolve Metals: Some uſe it alſo in *Fucus's*. 'Tis of ſome ſmall Uſe too in Medicine, ſince 'tis an Ingredient of the *Ung. Citrinum*, &c.

16. Of Alum.

Pomet. **ALUM** is a Fossil Salt drawn from Stones of different Bigneſs and Colour, in ſeveral Parts of *Europe*, eſpecially

in *Italy*, *England*, and in *France*. After Alum is taken out of its Bed or Quarry, as you take other Stones, it is burnt in a Kiln made on Purpoſe as you do for Lime, or the like; and when it is calcin'd, its Salt, which is the Alum, is drawn out with Water; proceeding after the ſame Manner as in making Salt-Petre. A certain Perſon in the World, in the Preſence of a Man of Worth, maintained that Urine was made uſe of inſtead of Water in drawing this Salt; but ſince his Authority was not ſufficient to make him credited, I chuſe rather to reſt ſatisfied with what *Matthiolus*, upon *Dioſcorides*, has written of it, who having been an Eye-Witneſs of the Faſt, has given us an ample Deſcription of it in his Book, *Page 733.* to which my Reader may have Recourſe.

We commonly ſell fix Sorts of Alum, to wit, the plumous Alum, or Earth Flax; the *Roman*, *Engliſh*, *Liege*, Burnt Alum, and the Sugar Alum. As for the round Liquid and Black Alum I know nothing of it.

Alumen, or *Alum*, is an acid mineral Salt, made from a Kind of *Lemery*. Stones of different Sizes and Colours, which are found in the Quarries of *France*, *Italy*, and *England*. They calcine this Stone, and then make Alum of it by Solutions, Filtrations, and Coagulations, as they make Salt-Petre. There are ſeveral Sorts of it, as *Roman Alum*, *Roch Alum*, and *Sugar Alum*.

The *Roman Alum*, or that of *Civita Vecchia*, call'd *Alumen Romanum*, is a Salt in Stones of a moderate Size, that are reddiſh within, of an acid ſtyptick Taſte: They uſe it outwardly for ſtopping of Blood, and inwardly in Gargarifms for Inflammations of the Throat, and to clean the Teeth. They dry it or calcine it upon the Fire to free it from its Phlegm, then it is call'd *Burnt Alum*: This is an Eſcharotick, and ſerves to eat away proud Fleſh, diſſolve Excreſcences, and open Ulcers and Shankers.

Roch Alum, white or *Engliſh Alum*, call'd *Alumen Rupeum*, or *Rock Alum*, is a Salt in large great Lumps, that are clear, white, and transparent as Cryſtal, which is brought from *England*. This Alum has the Virtues of the former, but is not ſo ſtrong. The Dyers, &c. uſe it. The Alum, call'd *Alumen Saccharinum*, or *Sugar Alum*, is a Compoſition made

made with Roch Alum, Whites of Eggs, and Rose Water boil'd together, to the Consistence of a Pafte, and form'd, while hot, into little Cakes, like Sugar Cakes, whence it takes its Name. *Alumen Catinum*, or *Dish Alum*, because it is made in a Platter or Dish, is what we call *Pot-ashes*, or the *Ashes of Kali* calcin'd, or some other *Ashes*, or *Alkali Salt* made from Vegetables. They call it *Catinum*, because they use to dry it in a Plate or Dish.

Of Plumous Alum.

Plumous Alum, or *Earth Flax*, is a *Pomet*. Mineral found in the *Negropont*, which some will have to be the Stone which the Antients call'd *Lapis Amiantus*; but as I am not sure of the Thing, I will content myself to say, that the *Plumous Alum* which we sell, is a Sort of thready Stone of divers Colours, but most commonly of a greenish white, in Figure pretty much resembling *Venice Talk*, excepting only that it is not so green nor shining; and instead of parting into Scales, this rises in white soft Threads or Filaments, like the Feathers of a Quill, from whence comes its Name; and accordingly most Part of the Plumous or Feather Alum one meets with, is almost ever in small Fibres, and but little in Stone, proper to spin and make the perpetual Matches. This *Plumous Alum*, to which some have given the Name of that of *Sicily*, is of very little Use in Medicine, and at present it is almost of no Use, since the Secret of drawing it out into Threads, or spinning it, has been lost. The Cloth made with this Sort of Alum when dirty, to be made clean, needed only to be thrown into the Fire, and it would come out thence as white as Snow. And with this Sort of Cloth did the antient *Romans* preserve the Ashes of their Emperors, and separate them from those of the aromatick Wood, wherewith their Bodies were burnt. Some People, at this Day, also make use of this *Plume Alum*, instead of Cotton to make Matches; and to that End it ought to be in long Wicks, and as soft as possible. This *Alum* is a strong Corrosive, or Eucharotick; for what Part soever of the Body it touches, it causes Whelks and Blisters, and a most intolerable *Pruritus* or Itch,

which is to be appeas'd only, that I know of, by anointing the Part with Oil of Olives. Besides this *Plume Alum*, we begin to sell a certain Stone Mineral, ponderous, white, woolly, and, in a Word, wholly like to *Plumous Alum*, and incombustible also, wherefore it has obtain'd the Name of *Asbeston*, which in *Greek* signifies incombustible; and by Corruption we call it vulgarly *Albestos*.

This Stone Mineral is found in many Places in *France*, more especially in the County of *Foyx* in *Gascoign*, where there are Quarries out of which Stones of a surprizing Magnitude are taken, and from which Cotton Threads may be drawn fit to make Cloth, and to endure whitening or cleansing in the Fire, like that of Feather *Alum* already spoken of. And besides this *Albestos*, is found in *France* (particularly about the *Pyrenees* in the Valley of *Campan*, near the Stone Quarries, about three Leagues from *Grippa*) certain Plants about two Foot high, which have Stalks all as it were silver'd over, their Leaves like those of a Nettle, excepting only that they are white underneath, of a dark green at Top, and resembling Shagreen. This white Stalk steep'd in Water, like Hemp, may be run into a long and round Sort of Flax or Tow, of which good Cloth may be made, that will resist the Fire like *Plumous Alum*, only it will not whiten so well. And it is to be remark'd, that when this Flax is put into the Fire, it immediately grows red, but black if applied to a Candle. Perhaps what I say may not easily meet with Credit; but since I have some of it in my Possession to shew to those who won't believe, and the Person who has collected it is still in Being, and a Man of Reputation and Fidelity, I thought it might not be amiss to advertise the Publick, that *Plumous Alum*, and what we call the *Albestos*, are not the only Druggs in Nature capable of enduring or resisting the Fire.

This incombustible Plant might be call'd *Asbestos*, and the Tow that comes of it *Incombustible Flax*, being long, large, and soft, like Flax.

Alumen Plumum, sive *Alumen Sciffile*, or *Feather'd Alum*, is a *Lemery*. Kind of stringy Talk, like the Feathers of a Quill, whence they call it *Feather'd Alum*. It is very soft to the Touch, of a white, greenish, shining Colour, is produced

duced in the Mines of *Negropont*. It will neither flame nor consume in the Fire. Some Alchymists use it for Wicks in their Lamps; 'tis call'd *Sciiffile*, because 'tis easy to break and divide.

Of Alum of Rome.

Roman Alum, which we also call *Pomet*. Alum of *Civita Vecchia*, because great Quantities are made in the Neighbourhood of that City, is a Stone Alum of a middle Size, red without, and within clear and transparent, and of a disagreeable styptick Taste. This Alum is of a reddish Colour; the Mine from whence it is drawn being of the same.

Chuse the *Roman Alum* that is reddish throughout, in the Inside as well on the Outside, because there are some who colour the *English* and *Liege* Alum of a dark red, but the Cheat is easily discovered; for if you find it not as red within as without 'tis a Sign it is counterfeited. It ought to be as free of small or broken Pieces as possible; which yet is no Disadvantage to those who use it, provided the Alum be pure and genuine, but only to such as retale it.

Roman Alum is much in Use with Dyers, Tanners, and others, that make counterfeit Pearl, but it ought to be very good for all of them.

Of English Alum.

English Alum to which the Antients have given the Name of *Roch* or *Rock Alum*, white and *Glass Alum*, is an Alum clear and transparent as Crystal, which is sent us from *England* in Pieces of different Figure and Bigness; since sometimes 'tis to be met with in Lumps as big as a Man's Body, sometimes clear and white as Crystal, and at other Times blackish and moist: In fine, the *Glass Alum* is more or less beautiful, according as it has been more or less purified.

As this Alum is much made use of by several Sorts of Trades, particularly by *Mint-Men* or *Coiners*, and *Dyers*; as also for many Preparations in *Phyick*, as will be taken Notice of hereafter, Care ought to be taken in the Choice of it, that it be white, clear, and transparent, as dry and as free from

any sort of Filth as may be: Also Care must be had that it be not *Leige* or *Meziere* Alum, which is greater and fatter than that of *England*, and not so fit for *Dyers Use*, and which they never make use of but for want of the true *English*. We had not long since a greenish Sort of Alum, like *Salt-petre*, drawn from a Stone taken out of the Mines in the Neighbourhood of *Soissons* in *Picardy*; but as this Alum is of no Account, as well by reason of its ill Looks, as because we continue ignorant of its Virtues, I shall say no more concerning it. From the *English* Alum is distill'd a clear and acid Water, which we call *Alum Water*, and which is us'd as an *Ophthalmick* for the Eyes. After the *Phlegm* comes over an acid Spirit, useful in Fevers, whether continual or intermitting; and also good against small Ulcers or Excoriations in the Mouth, from four to eight Drops; that which remains in the Vessel being a light white Substance or Mass, is what we call *Burnt Alum*: But as this Water and Spirit of Alum is in little Request, those that have Occasion for *Burnt Alum* do not trouble themselves about distilling, but only put the Alum into a Pot, which they place in the midst of a good Fire; and when the Alum is become very light and white, they take it out and keep it for Use.

Calcin'd or *Burnt Alum* ought to be light and friable, that is, easily reduced to Powder, so that Care must be taken that it be not such as has been pass'd through a *Silk Searce* or *Sieve*, which is put into a Bag tied close, to make it into Stones or Lumps, but this Cheat is easily discover'd; the Counterfeit Alum, being heavy, extremely white, more like *Paint* or *Plaster* than any Thing else, and of a styptick Taste.

True *Burnt Alum* is esteemed a very good *Escharotick* to eat away proud luxuriant Flesh. Persons of Distinction commonly wear it in little Bags under their Armpits and their Feet, to prevent Sweating, but then it ought to be extremely fine.

Of Saccharine, or Sugar-like Alum.

Saccharine Alum, because it resembles *Sugar*, is made of *Glass Alum*, *Rose Water*, and *Whites of Eggs* boil'd together 'till it is stiff; and this Alum so boil'd, and reduc'd

reduc'd into a Pafte, what Figure or Form you please may be given to it, and when it is cold, it becomes as hard as a Stone.

Some make this Sugar Alum enter into the Composition of their *Fucus's*.

There is moreover other Sorts of Alum, namely, that which is in a white transparent Stone, in every Particular almost like the Crystal Rock Alum, and to which the Name of *Scayolle Alum* is given, or that of *Muscovy Glafs*, which is found in the Quarries of *Paffy*, and which after it is calcin'd is of a very beautiful White; but that of it which is counterfeited is more like Plaister. Not

long since great Quantities of this Sort of Alum were found in the clayey Earth of *Paffy*. There are others that make use of another Sort of *Muscovy Glafs*, which we call *Gip* or *Plaister*. Pot-ashes also have obtain'd the Name of *Alum Catin*, as is observ'd in its Place.

Some say the Name of *Alum* is deriv'd from the *Latin Lumen*, which signifies Light, because *Alum* gives a Lustre or Brightness to dyed Colours, and that without it there would be no dying or colouring to any Purpose.



BOOK the Fourth of the Second Volume.

Of Bitumens, or Sulphureous Minerals.

P R E F A C E.

THE Word Bitumen, to speak properly, signifies a fat, sulphureous, inflammable Matter, which is found of different Colours and Consistence, either within the Earth, or upon it, or swimming upon the Face of the Waters. Of these we have several Sorts, some hard, others soft, and some liquid, like Oil. The hard Bitumens that we sell, are the Yellow Amber, Black Amber, or Jet; Jews Pitch, Natural and Artificial; Pit Coal, Kennel Coal, or Black Stone, and Sulphur. The soft Sorts are Naphtha, the Bitumen of Colao, of Syrniam and Copal. The liquid are Naphtha of Italy, and the Petroleum, or Rock Oil. Of all which hereafter in their Turns.

1. Of Yellow Amber.

Pomet. **Y**ellow Amber, to which the Antients have given the Name of *Succinum*, or *Carabe*, is a Bitumen of different Colours, being either white or yellow. This Bitumen is liquid when 'tis in its natural Place of Production; but as it comes from thence, it hardens, and becomes such as we see: And as it passes from its Recesses in the Earth, in a State of Fluidity, swimming upon the circulating Waters, it is apt to carry with it what is in its Way; which is the Reason we find many extraneous Bodies in our Amber; which also not hardening all at once, but by Degrees, a great ma-

ny Insects stick to it, and there die. Most of the *yellow Amber* we have is found upon the Banks of certain small Rivers, running into the *Baltick Sea*, in the *Ducal Prussia*. It is also found upon the Sands, which have been cast up by the Winds, and is a Commodity which brings no inconsiderable Profit to the King of *Prussia*, for he raises above 20,000 Crowns *per Annum* from these Places where it is found, over and above the great Charge they are at in securing and preserving it from others; so that it necessarily follows, that this same *yellow Amber* yields a yearly Rent of more than 100,000 Livres.

What I say may, perhaps, seem strange to those who don't know the great Use there
is

is of *Amber* in *China*, and amongst the *Savages*, as well as in *Europe*; but the greatest Consumption of it is in *Austria*, *Germany*, in *Poland*, and in the Neighbourhood of *Venice*; and the *Venetians* were the first that brought it into such a Vogue and Fashion thereabout, there being few People in *Lombardy*, or all along the *Po*, but wear *Amber* Necklaces, believing they keep 'em from Quinies, and other ill Effects of the Neck and Throat, to which they are very subject, by Reason of the bad Waters they are forc'd to drink in those Parts: And History informs us, that the *Romans* made such Account of it, that *Nero* caus'd great Quantities of it to be imported; but no where is *Amber* more esteem'd and valu'd than in *Poland* and the *Lower Hungary*, a pretty handsome Piece, without Fault or Flaw, being there as valuable, and prefer'd even to *Gold*; such Lovers and Admirers of this Commodity are they. As for *France*, 'tis by no Means so much in Esteem there, though 'twas not many Years ago that all People of Quality and Fashion wore Necklaces of it, and at present it's become so vulgar and common, none but Servants make use of it. Besides the great Use of *Yellow Amber* for Trinkets, &c. 'tis of some Use too in Medicine, not only to powder, but to draw a Tincture, a Spirit, volatile Salt, and an Oil, and to make a Varnish with Spirit of Wine.

Amber ought to be clear and transparent, capable of attracting Straws, whence comes its Name of *Carabe*, which in the *Persian* Language signifies *draw Straw*. When it is design'd for any Piece of Workmanship, or to powder, it shou'd be white; but when it is to undergo the Fire, it matters not of what Colour it be, provided 'tis genuine *Amber*; for there are a great many that sell the *Copal* of *America* for it, of which I have spoken above, but it is easily distinguish'd from it, the *Copal* being in Pieces of the Bigness and Figure of Gum Araback, and the true *Carabe* ordinarily in great Lumps, and also most commonly in a Sort of Film or Skin, which serves as a kind of *Matrix* for it; and then again *Amber* burnt at the Candle sends forth an exceeding strong Smell; and moreover, as hath been noted, will attract Straw, which *Copal* will not do. Some have assur'd me that *Yellow Amber* is counter-

feit with Turpentine and Cotton, or with Yolks of Eggs and Gum Araback: But as this Sort of false *Amber* wou'd be worth little or nothing, I cannot conceive how any one need fear its being disguis'd with those Druggs.

Amber is powder'd upon a Porphyry, and reduc'd into Troches, which are of some Use in Physick, particularly to restrain Spitting of Blood, and to stop Dyfenteries and other Laks. Dose from ten to thirty-six Grains in any appropriate Vehicle. Also from Powder of *Amber*, with Spirit of Wine, is drawn a yellow Tincture, endow'd with a great many good Qualities, especially in apoplectick and epilectick Fits, and paralytick Cases, taken from ten Drops to a Dram in any agreeable Liquor: Some dissolve pure fine Camphire in this Tincture to make what Monsieur *Soleyfel* calls the *Flaming Balsam*, and recommends for Wounds, Bruises, or cold Humours in Horse or Man, which may be seen describ'd in his Book, Page 274.

Karabe, *Succinum*, *Electrum*, *Ambra Citrina*, or *Yellow Amber*, is a *Lemery*. hard Matter, like a Stone, yellow, citron, or white, of a fine, shining, transparent Colour, that is brought from the *Ducal Prussia* in Pieces of different Shapes and Sizes: This *Amber* is thrown by the Waves of the *Baltick Sea* up the Rivers of *Prussia*, especially by certain Winds. They likewise find both the liquid and solid on the Banks of several little Rivers, and upon the Brooks that are about the same Sea; that which is liquid hardens in a little Time, and becomes solid as the other.

Opinions are divided upon the Nature and Origin of *Amber*. The Antients believ'd that it was a Mixture of Gum and Resin that flow'd from Poplars, Pines, or Firs, which being confusely carried by the Winds into the *Baltick Sea*, incorporated with the Salt, and was elaborated or work'd up, and then thrown by the Waves upon the Banks of the Rivers. This Notion is rejected by the modern Authors, who have all writ that *Succinum*, or *Amber*, is a *Bitumen* or Juice of the Earth, which the Sea has rais'd up, and the Waves thrown ashore about the *Ducal Prussia*, where it is form'd, and hardens after the Manner we see it in. I myself fol-

low'd this last Opinion in my Book of Chymistry: But as I have been convinc'd since by several Circumstances, I have changed my Opinion, and found that the Thoughts of the Antients, on this Subject, were preferable to those of the Moderns: For first of all, Travellers know that about the *Baltick Sea*, on the Coast of *Sweden*, there grows abundance of Poplars, Pines, and Firs, from which there flows in Summer a great Quantity of Gum and Resin, which is partly blown into the Sea by the Winds.

In the next Place, the Substance, the Colour, and the Transparency of that resinous Gum, resembles much those of *Amber*; for we have *Gum Copal* brought us that flows from Poplars, in the *Antilles Isles*, and has no other Elaboration than what it receives from the Torrent of the Water in the Rivers, from whence they take it, as has been said in its proper Place; and it is so like *Karabè*, that those who know it not well may easily be deceiv'd; from whence it is call'd, *Falſe* or *Counterfeit Karabè*. *Amber* indeed is something harder, of a higher Colour, more transparent and resplendent than *Gum Copal*, but these Perfections come from the Salt that is mix'd in it, a long Fermentation and Working it meets with in the Sea, besides the Mixture of the Pine with the Refins of Poplar, &c. In the third Place the Principles that are drawn from the true *Karabè* by Chymistry, are likewise those that are taken from *Gum Copal*, or the resinous Gum.

Chuse your *Amber* in fine, large, hard Pieces, clear and transparent, that will attract or draw to itself Straws, and several other little light Bodies, when the *Amber* is rubb'd in your Hand, or otherwise, and apply'd near the same. The white *Karabè* is preferable to the yellow, but the Difference is not considerable: They use both Sorts to make Necklaces, Bracelets, and little Cabinets, with several other Nick-Nacks that are carry'd into *Persia*, *China*, *Turkey*, where the Natives esteem them as great Rarities. They likewise make Amber Necklaces in *Austria*, *Germany*, in *Venice*, and sometimes in *France*.

In Pieces of *Amber* there are sometimes found Spangles, Leaves of Trees, or little Insects; as Spiders, Ants, Flies, &c. This

Circumstance has given Occasion to Naturalists to enquire how these little Bodies become inclos'd in the *Amber*; and it appears to me that the Difficulty is easy to resolve, since from the Opinions given, touching the Nature of *Amber*, it has been thought necessary to admit that the Substance of it was some time liquid or soft before it harden'd; that during that Time these small Bodies adhered to it, as to Glue, and were wrapp'd up in it, or rather were cover'd and enclos'd therein by the Addition of fresh Matter of the same Kind; so that when the Whole was harden'd, these little Bodies remain'd wholly embalm'd, as we now see them.

The *Karabè* contains in it a great deal of Oil and volatile acid Salt; it stops the Flux of the Belly, Hemorrhage, *Gonorrhœa*, and resists Poison: The Dose is from ten Grains to half a Dram; they likewise burn it over the Fire to receive the Fume of it, which checks the Violence of Rheum from the Head, and Catarrhs. *Karabè* is a *Persian* Name that signifies *draw Straw*; and they have given this Name to *Amber*, because it attracts Straws, especially when it has been a little rubb'd in the Hand. The Reason of that Effect proceeds from this, That the subtil and insensible Particles of the Matter having been put into Motion with some kind of Heat that follows the Friction, they emit on all Side their *Effluvia*, and spatter it in the Air within their Circumference; but as they lose their Motion according to the Distance they are from their Centre, they become so much weaker, and are on all Sides repell'd by the Air, and in their Return they stick by their Viscosity to a Straw, or any other light Body they meet with in their Way, and drag it along with them. The same Effect happens to several other Substances, which are rubb'd after the same Manner, as Wax, Suet, and divers Gums. This is call'd *Succinum*, from *Succus*, because it is suppos'd to be the Juice of the Poplar, or of the Earth.

Of the Spirit and Oil of Amber.

From *Amber* grossly powder'd, put into a Glas or Earthen Retort, may be drawn a reddish Spirit, and greenish fetid Oil.

The

The *Spirit of Amber* is esteem'd an excellent Aperitive or Deobstruent, and very good against the Scurvy, taken in any Liquor, from ten to twenty-four Drops.

As for the *Oil* it is chiefly in Use to allay and drive down Vapours, being put upon Silk or Cotton, and rubbing the Wrists, or Pulse, or Nose therewith. If you'd have this *Oil* of a fine clear reddish Colour, you have nothing to do but to mix with it a little Earth or Sand, and to distil it again.

Those that wou'd have a volatile Salt, or *Spirit*, or *Oil of White Amber*, may perform all the three Operations very well, with a Glass Retort, and a Sand Heat. As for the volatile Salt, if you find it not good and fine enough, you need only put it into a small Vial, or Glass Bottle, and to sublime it upon a gentle Fire, taking Care to keep it well stop't; for this is a ticklish Commodity that will evaporate and lose itself in the Air, and that which you'll find in the Retort, is of a fine shining Black, resembling the *Bitumen of Judæa*, or *Jews Pitch*.

2. Of Black Amber, or Jet.

Pomet. **J**ET, which, with good Reason, may be call'd *Succinum Nigrum*, or *Black Amber*, is also a Sort of *Bitumen* found in the Bowels of the Earth, but seldom near the Waters; it is a sulphureous Fossil very hard, and of a glittering or shining Black, found in several Places of *Europe*, as well in *Germany* and *Sweden*, as in *Ireland*; as also in *France*, between *St. Beaume* and *Toulon*; and in *Ireland* it is so common, that as you go along you may see Veins of it running through the Stones and Rocks. Some Authors are of Opinion that *Jet* is the *Yellow Amber* divested of its Oil, drawn out by the subterranean Fires, and that from thence proceed *Naptha* and *Petroleum*, which does not seem very repugnant to good Sense.

Jet is of a like Use with *Yellow Amber* for Ornaments and Decoration, but in Medicine it is only made use of for its Oil, which serves for the same Purposes as that of the other.

As to the Choice of it, 'tis sufficient to be of a shining Black, as the Proverb speaks it.

Gagates, in *French Gest*, *Jays*, or *Fayet*, and in *English Jet*, is *Lemery*. a bituminous Stone, that is hard, black, and smooth, found in several Parts of *Europe*; as *Germany*, *Sweden*, *Provence*, and *Ireland*, in the Stone Quarries amongst the Rocks; it yield a good deal of Oil, and a little volatile penetrating Salt.

Some People are of Opinion that *Jet* is an *Amber* whose volatile Parts have been separated by the subterranean Fires, and become what we call *Petroleum*: Chuse such as is neat, hard, and of a fine shining Black; it digresses, is emollient, expels Wind, and allays Vapours. The Dose from a Scruple to a Dram. The Name comes from *Gaga*, a River and City of *Lycia*, from whence *Jet* is sometimes brought.

6. Of Jews-Pitch.

THE *Jews Pitch*, or *Asphaltum*, is a *Bitumen* found swimming up- *Pomet.* on the Waters of the Lake where heretofore stood the Cities of *Sodom* and *Gomorrhah*, and the Name of *Asphaltum* comes from the *Dead Sea*, or *Lacus Asphaltites*, which signifies the Lake of Trust, being so very strong, that every Thing almost swims that is thrown into it; and it is call'd *Mare Mortuum*, or the *Dead Sea*, because no Fish or other Beast can live in it, through the extreme Saltness and Bitterness, and noisome Smell of its Waters; but in Recompence there are great Quantities of this *Bitumen* found floating thereupon like Grease or Fat, of which the Coasters, who are *Arabs*, make very considerable Advantage; it being what they use to lay upon and besmear their Ships and Boats with, as the Northern Nations do with common Pitch: And one Thing is very remarkable, that when this Lake is very full of this *Bitumen*, there arises such a Stench in the Air, that the Inhabitants thereabout are necessitated to gather it and put it ashore; and so noisome at that Time is the Smell, that all Birds that fly over it fall down dead; and this is the Reason why the People in the neighbouring Places are so short-liv'd.

The *Bitumen* of *Judæa*, or *Asphaltum*, so much resembles the best black *Stockholm Pitch*,

Pitch, that were it not for the strong Smell of *Pitch*, and that it is not so hard as the *Asphaltum*, no one could distinguish the one from the other.

The Use of this *Bitumen* is to make the fine shining Blacks of *China*. It is also of some small Use in Medicine, for that it enters the Composition of the *Venice Treacle*, for which Purpose it needs no other Preparation than to be true or genuine, that is to say, of a most beautiful, shining, polish'd Black, reflecting the Image of the Sun, and of no Manner of Smell; and to see that it be not adulterated, or mix'd with *Black Pitch*, which is what is call'd the *Artificial* or *Fætitious Pissasphaltum*; it is no difficult Matter to discover this artificial *Bitumen*, being of a very base Black, and a strong Smell. 'Tis a Mistake to believe, as some Authors do, particularly Monsieur *Furitiere*, that we have no *Bitumen* of *Judæa* brought us now-a-days; and that the Apothecaries, instead of it, sell a Composition which they make of *Pitch*, and the *Oil of Petre*, a Thing that don't stand to Reason, nor can I conceive Apothecaries to be such Knaves and Fools, to do any such Thing, since the true *Bitumen* is reasonable enough in its Price; so that it wou'd have been better for these Scribblers, and all such as have undertaken to write of Druggs without understanding them well, to have been silent; for they have made, and still do make horrid Blunders about *quid pro quo*, or in substituting succedaneous Druggs or Medicines, which is a Matter concerns the King and the Commonwealth.

Bitumen Judaicum, *Bitumen Lemery*. *Babylonicum*, *Asphaltus*, is a solid, brittle, black Matter, resembling *Black Pitch* that is sulphureous and inflammable and in burning sends forth a strong disagreeable Smell: It is found swimming upon the Surface of the *Lake*, or *Asphaltite Sea*, otherwise call'd the *Dead Sea*, where stood some Time ago the Cities of *Sodom* and *Gomorrhah*. This *Bitumen* is cast up from Time to Time in the Nature of liquid *Pitch*, from the Earth that lies under this Sea, and being thrown upon the Water, it swims like other fatty Bodies, and is condens'd by little and little thro' the Heat of the Sun, and the Salt that is in it.

The Inhabitants of the Country are con-

strain'd to take it from thence and carry it ashore, not only because it brings them Profit, but also because the *Lake* being too much loaded with this *Bitumen*, yields a stinking and malignant Smell, which spoils the Air, affects their Health, and shortens their Days: The Birds that fly a-crofs it fall down dead, and it is call'd the *Dead Sea*, because of the Stench, Bitterness, and excessive Saltness of it; so that neither Fish or any other Creature can live upon it. The *Arabs* use this *Bitumen* of *Judæa* to pitch their Ships as we do common *Pitch*, and there was a great deal of it employ'd in the Embalming of the Antients.

Chuse such as is clean, of a fine shining Black, solid, and harder than *Pitch*, having no Smell but when it is held to the Fire; take Care it be not mix'd with *Pitch*, which may be known by the Smell: They use this to make your fine shining Blacks of *China*. It yields a good deal of Sulphur, partly exalted, with volatile Salt and a little Earth; it fortifies and resists Putrefaction, resolves, attenuates, and cleanses cicatrized Wounds, and is us'd externally and internally.

It is suppos'd that the Word *Bitumen* comes from the Greek Word $\pi\iota\tau\upsilon\varsigma$, which signifies a *Pine*, and which has been chang'd by Corruption, the π being alter'd into a β , from whence they pronounc'd it *Bitumen*, instead of *Pitumen*: This Etymology is taken from the Opinions of the Antients, that the *Bitumen* of *Judæa* was a *Pitch* that flow'd from Pines and several other Trees about the *Lake of Sodom*: So were the *Jews* of that Opinion before: The Prophet *Esdra*s, speaking of *Sodom* and *Gomorrhah*, says, that the Earth is founded upon *Pitch* and Heaps of *Ashes*.

4. Of Pit-Coal.

EARTH or *Pit-Coal*, is a Sort of *Bitumen* chiefly us'd by Farriers *Pomet*. and other Sorts of Smiths to heat their Iron. That of *England* is esteem'd the best, though there are some that say ours of *Auvergne* comes very little behind it; 'tis made a great Traffick, being a Commodity much us'd in *France*; the best is pretended to be most void of Sulphur, and consequently that which will keep Fire longest. Some will

will have it that this Stone of Coal is the Result of *Petroleum* made in the Bowels of the Earth, which is probable enough, since out of it may be drawn an Oil together like the Oil of *Petre*.

It is called in *Greek*, *Lithan-Lemery*. *thrax*; in *Latin*, *Carbo Petrae*, or *Carbo Fossilis*; and in *English*, *Coal*; and is distinguish'd into *Sea Coal* and *Pit Coal*, only upon the Account of that which is generally carried by Sea; all Coal being properly speaking, *Pit Coal*, which is chiefly found in *England*, *Scotland*, *Ireland*, *Germany*, &c. and is an impure Sulphur, mix'd with many gross and earthy Parts, and a volatile Salt, being strong, friable, and black: In Distillation it yields an acid Spirit, reddish Oil, black Balsam, and volatile Salt, like Amber; which is but too well known to the Chymists of this Age, who adulterate most of the Preparations of their Shops, that are either chargeable or troublesome, and tedious in the Operation. The Virtues of these are in a lower Degree subservient to those of Amber, as well internally as externally apply'd.

5. Of Terra Ampelites, or Kennel Coal.

Pomet. **T**erra Ampelites, or Kennel Coal, is a dry *Bitumen*, impregnated with Sulphur, that easily splits into Scales, and is reduced to Powder, found in the Entrails of the Earth in many Places of *France*. We have two Sorts of it, the one soft, the other hard, which comes from near *Alençon*, in the Province of *Maine*; the Propriety of the Quarry whence 'tis taken belongs to a Curate of a Parish, who makes seven or eight hundred Livres per Annum of it. The Quarry is a matter of forty or fifty Foot deep; and though this is a Merchandise of low Price, yet they make a good Trade of it; there hardly being any Artificers in Stone or Wood, but what make use of it more or less. That which is good must be lately taken from the Mine, for when 'tis stale and old, it resolves into a Powder, and becomes a Salt-petre; it ought to be light, neither too soft nor too hard. Some have given it the Name of *Vine Earth*, because it kills or drives a-

way the Worms from the Leaves of Vines. Also it is called *Pharmacitis*, because 'tis us'd in Medicine.

Ampelitis, sive *Pharmacitis*, the Black Stone, or medicinal Earth, *Lemery*. is a very bituminous Stone, black as Jet, splitting into Scales, and is easily reduc'd to Powder. They get it from a Quarry near *Alençon* in *France*. There are two Sorts of it, one soft and the other hard; it affords Abundance of Sulphur and Salt; it is proper to kill Worms, apply'd to the Belly, and to dye the Hair black. Some use it as an Antidote to destroy all Vermin, apply'd to the Vine Roots.

6. Of Sulphur Vivum, or Native Sulphur.

Sulphur Vive is an Earth or Clay *Pomet*. easily inflammable, that in burning emits a bituminous Smell, brought us from *Sicily* and other Places. As to the Choice of Live Sulphur, so called, because it is sold and made use of just as it comes out of the Earth, let it be tender or soft, friable or easy to be broken, smooth, shining without as well as within, and of a sort of Mouse Dun, or Grey, as free from Gravel and Dust as possible.

This Sort of Sulphur is very little in Use, unless it be for some particular Operations, and certain galenic Compositions, but pretty much us'd by Vintners, who mix it with Sugar, *Anis*, Cinnamon, Nutmeg, Cloves, &c. to sweeten and preserve their Vessels.

Some Apothecaries pound it with *Scammony*, which they call *prepared Scammony*, or *Diagrydium*, and so make a better Market of it than their Neighbours, who take Pains to prepare it as it ought to be.

7. Of Mineral Sulphur.

Sulphur Mineral is a hard earthy *Bitumen*, of a yellow Colour, and bright enough, of a foetid sulphureous Smell, easy to be melted or burnt, and is more or less beautiful, as 'tis more or less mixt with Impurities it meets with in the Mine.

This Mineral Sulphur comes from Mount *Vesuvius*; as to the Choice of it, though indeed 'tis made but very little Use of, let it be in handsome Lumps, of a golden Yellow, bright and shining, and as little as may be mix'd with Earth or other Filth.

Its Uses and Qualities are no other than like those of the common factitious Brimstone that is made of this, which we are going to speak of under the next Head.

Of Sulphur in Rolls, or Common Brimstone.

The common factitious *Sulphur Pomet.* or *Brimstone*, is made of yellow Mineral Sulphur melted, and by the Assistance of right Train Oil and Moulds, cast into the Form in which we see it.

This Sulphur is more or less beautiful, and endow'd with good Qualities, according to the Degree of its Purification, and the Places where 'tis made; for that of *Holland* is much better, and more beautiful than that of *Venice*, or that of *Marseilles*, the three Places whence it comes, and where 'tis made: The Gentlemen of the *Royal Arsenal*, indeed, manufacture great Quantities, but make use of it all themselves.

In your Choice of this factitious Sulphur, or Brimstone, take such as comes from *Holland*, in large thick Rolls, of a golden yellow, light, easy to break, and being held close, or grasp'd in the Hand, and apply'd to the Ear, crackles and makes a Noise, and at length breaks to Pieces, and being broken, appears as it were in Crystals, which are the true Marks of that of *Holland* and *Venice*; none of which were to be found in the *Marseilles* Sulphur, it being little better than a grey sort of Earth, 'till of late, since we could have none from *Holland*, they have learnt the Art of well-working it there; and I think it has been our own Fault that we have suffered other Nations so long to run away with the Profit of refining it as it ought to be. The Reason has been that no Merchants have undertaken to write of it, or enquire into the Manner of doing it; only a few Physicians, and some Apothecaries and others that have travell'd, but understood nothing of the Mystery of Trade, have set Pen to Paper concerning it, who acquit themselves but indifferently, when they tell

us that ordinary Sulphur in Rolls, or common Brimstone, is made of *Sulphur Vive*; for that would be to turn Pewter into Lead, since the latter, tho' natural, is more valuable, that is, will sell dearer than the former, notwithstanding it be wrought; however, I would not be thought to discourage Authors, few Books being so ill written, but may contribute, in some Measure, to the Advancement of Knowledge; only in general it may be said, that the Subject one is going to treat of, ought to be understood before we begin to write.

There are several other artificial Sulphurs, as I have already taken Notice of, proceeding only from the different Preparations of different Countries; so the ordinary Sulphur of *Marseilles* is in small Rolls, the green Sulphur of the same Place, both in large and small Rolls, which Sort is esteem'd the best for Distillation, as shall be shewn hereafter.

There are a great many other natural Sulphurs, besides the two Sorts we ordinarily make use of, but they are not very common with us, because they come a great Way off, and we have 'em not in large Quantities.

The first and most desirable is that of *Quitto*, of a golden Colour, and an Amber Figure, found in great Abundance near the Gold Mines.

A second Sort is that of *Nicaragua*, which is in a yellowish grey Mass, altogether like that which was found, some Years since, in that Bank of Earth which was levell'd by *St. Martin's Gate*.

A third sort is of *Switzerland*, resembling that of *Quitto*; and many more there are which I shall forbear to mention, there being no Demand for them.

The Use of Sulphur in Rolls, or common Brimstone, is well known to all, and that it is one of the chief Ingredients of Gunpowder; for which Reason, those that sell great Quantities of it to the *Arsenal*, for that Purpose, ought to discover it when 'tis faulty, that what is made of it may not fall short of Expectation. This Sulphur is us'd too in whitning Gauzes, Stockings, &c. for nothing blanches any Thing of Woollen like the Fume or Vapours of Sulphur.

It is also of some Use in Medicine, as well in the Body of many Prescripts, as to perform

form a great many Operations in Chymistry, as will be seen hereafter.

It is besides a Specifick in the Itch ; but Care ought to be used in the Exhibition of it, for it now and then produces very ill Symptoms, nay even Death itself sometimes.

Sulphur or *Brimstone*, is brought *Lemery*. to us from the *Caribee* Islands of the *West-Indies*, and is found also in *Italy*, *Bohemia*, *Sicilia*, and *Melos*, being generated of the Fat and Refin of the Earth, filled with an acid and vitriolick Spirit. It is twofold, *viz.* Natural and Artificial. The Roll Sulphur is the latter ; but if you would make right Oil of Sulphur, you must chuse the *Natural*, or *Sulphur Vivum* ; but if that cannot be got, you must make use of the other, which yet you are to try, whether it easily inflames and burns constantly, if not 'tis not good, but is impure and adulterated with Refin, and such like Matters, whereby it becomes harder to kindle, and is easily extinguish'd, being *Caballine Sulphur*.

It is a noble Mineral even before Preparation, and is generally appropriated to the Breast and Lungs, and to cure all Diseases which disturb the same ; it kills Worms, opens, cuts, resists Putrefaction and Poison, provokes Sweat, and is given in Coughs, Colds, Phthificks, Wheefings, Shortness of Breath, &c. Outwardly apply'd it resolves all hard Tumours, cures corroding Tettors, Scabs, Itch, Scurf, Morpew, &c. dries up old Sores and Ulcers. Though this being finely ground, is sometimes us'd internally, yet the Flowers are more commonly us'd, as being a Sulphur open'd and purified from all Filth, whereby it is fitter for all internal as well as external Uses.

Of Flowers of Sulphur.

Flowers of Sulphur are prepar'd of *Pomet*. *Sulphur* calcin'd in Pots made for the Purpose, and then reduc'd into *Flowers* as we see. The best and most beautiful come from *Holland* ; but of late, since they have been made at *Marseilles*, *Roan*, and *Paris*, we have little thence. The true *Holland's Flowers of Sulphur* were wont to be brought us in Cakes that were light, soft, friable, and rather white than yellow ; but through Avarice and the present Wars, there is no

such now ; and the best that we have at present is from *Marseilles*, which tho' very good, does not come near that I've mention'd of *Holland*, that us'd to be in an extraordinary fine impalpable Powder, of a bright golden Yellow, and of an agreeable Taste.

The third Sort is that of *Roan*, which usually is of a whitish Yellow, made up of Sulphur raised by a violent Fire, and Meal or Wheat Flower, or fine powder'd Starch added to it, which is all a Cheat. In like Manner is that which is generally hawk'd about, made of the Dust or Drofs of *Holland* Sulphur beaten up, and then pass'd thro' a very fine Taffety or Silk Searce ; but the Cheat is easily discover'd by the low Price this spurious Stuff is sold at.

Upon the whole, *Holland's* Flowers of Sulphur are preferable to any other ; next to them those of *Marseilles* ; and these are the only two that ought to be given internally.

The true Flowers of Sulphur are natural Balsam for the Lungs, and endow'd with so many good Qualities, that 'twould be endless to recount them all.

Flowers of Sulphur are also made after another Manner, to wit, by adding to it fix'd Saltpetre, or *Sal Polychrestum*, which is the Method we use to make it white ; but there being little Demand for this Sort, it's seldom made, though it be a very good Medicine, and as agreeable to take as the above-mentioned.

To make Flowers of Sulphur, Take Sulphur grossly powder'd, *Lemery*. half a Pound ; put it into a Glass Body, or Cucurbit ; place it in a small open Fire, and cover it with another Glass Body, or earthen Cucurbit ; turn the Bottom upwards, so as that the Neck of the lower may enter into the Neck of the Upper ; change the upper Cucurbit every half Hour, fitting another in its Place ; adding likewise, new or fresh Sulphur ; the elevated Flowers sweep together with a Hare's Foot, and continue to do thus so long 'till you have what you desire. These Flowers are good against Diseases of the Lungs ; Dose ten or twelve Grains in any fit Syrup, Pulp, or Electuary ; outwardly you may mix them with Hog's Lard, for Scurf, Tettors, and the Itch ; but be cautious of using it to Infants, especially anoint not any where upon the Trunk of the Body

Body, and especially the Belly. If your Sulphur be sublim'd with *Sal Polychrest*, you will have white Flowers.

Of Salt of Sulphur.

The *Salt of Sulphur* is made several Ways, but the best and easiest is according to Monsieur Charas's *Pharmacopœia*, p. 887, whither the Reader may have Recourse. This Salt is compos'd of Salt-petre refin'd, and Spirit of Sulphur, made in a Retort with a Sand Heat, into a white Mass, which has many good Qualities; or it may be made with the *Sal Polychrest*, or otherwise, as may be seen in Abundance of chymical Processes which treat of it.

Salt of Sulphur is much in Use to temper and allay the Heat of Fevers. The Dose is not adjust'd, but 'tis sufficient to give it in any common Drink to an agreeable Acidity.

What Form one pleases may be given to this Salt; some will have it in a Mass, others in Crystals; some granulated, and others in Powder, or finally in Rolls; which last is a curious Method, and known but by few.

Of Magistery, or Milk of Sulphur.

The *Magistery*, or *Milk*, as 'tis call'd, of *Sulphur*, is made of the Flowers of *Sulphur*, and Salt of Tartar boil'd in Water; and then adding distill'd Vinegar to precipitate a Powder, which when dry'd will be white, and is esteemed very good for the Lungs, and for Asthmatick Persons.

If half a Pound of Flowers of *Sulphur* be mix'd with a Pound and an half of Salt of Tartar, or Pot-Ashes, and be boil'd in two Gallons of Water for six or seven Hours, the Sulphur will be all dissolv'd, and the Liquor become red: This filtred and mix'd by little and little with Spirit of Vinegar, or some other Acid, presently becomes white like Milk. Let it stand to settle, and a white Powder will precipitate, which beingedulcorated by five or six Times washing in hot Water, and dry'd, is the *Lac Sulphuris*, which is better

than the Flowers for all the Diseases aforesaid, given from six Grains to fifteen. This is powerful against all Manner of Catarrhs and Fluxes of Rheum from the Head, that fall upon the Throat and Lungs; for it consumes and dries up all ferous and watry Superfluities.

Of Spirit of Sulphur.

Spirit of Sulphur is a Liquor drawn from the green Sulphur, by the Assistance of Fire and certain Vessels, as Messieurs Charas, Lemery, &c. teach us; and as it is of different Colours, according as 'tis more or less divested of its Phlegm, so it has two different Names assign'd it: That which is just as it comes out of the Vessels is call'd Spirit of Sulphur, which when good ought to be as clear as Rock Water, and of an agreeable Acidity, and which put upon blue Paper, will turn it red; but the best and surest Proof is to deal with honest Men for it.

The second sort, to which improperly the Appellation of Oil of Sulphur has been given, is such as has been separated from its Phlegm or superfluous Humidity, and has a bright Yellow, or golden Colour, and is so very strong that it can't be endured upon the Tongue.

Some Hawkers counterfeit this Oil of Sulphur by a Mixture of Vinegar and Spirit, or rather Phlegm of Vitriol, or with Vinegar and Water, adding a few Drops of *Aqua fortis*, and sell it to Abundance of People, especially to Vintners, who use a great Quantity of it upon Occasion.

Great Virtues are attributed to the Spirit and Oil of Sulphur in Fevers and pulmonary Cases especially.

Not long since it has been discover'd, that Spirit, or rather the Oil of Sulphur, is the only Thing to give Lustre to the *Peridot*, as will be seen where we treat of precious Stones, and also to give Flowers that never-fading or immortal Colour as we call it.

Of Balsam of Sulphur.

Balsam of Sulphur is made two Ways; First, With the green or express'd Oil of Anniseed, and the best Flowers of Sulphur melted

melted or dissolv'd together, which is call'd *Balsam of Sulphur* annifated, and has great Qualities given to it, as will be seen hereafter.

Monfieur *Charas* says in his Book, p. 470, that some are of Opinion this *Balsam* is in Quality but little behind the *Natural Balsam*, or *Balm of Gilead*, because it heats and dries moderately, and resists Corruption or Putrefaction; it therefore is a celebrated Medicine in pectoral Cases, being very beneficial in Coughs, Asthma's, Pleurifies, and Ulcers of the Lungs. It is good also against Weaknesses and Indigestions of the Stomach, restores the Appetite, expels Wind, eases all Sorts of Cholicks. 'Tis said to be good also against the Plague, and all epidemical Diseases, venereal Effects, continual or intermitting Fevers, and the Epilepsy. It may be taken internally in any agreeable Liquor, from three to ten or twelve Drops. The Stomach or Navel may be anointed therewith in any Illness of the former, or in Cholicks, &c.

The distill'd or chymical Oil of Anniseed, might be made use of for this Composition, were it not that in the Operation it is apt to evaporate and fly off, do what you can, more than the green or express'd Oil.

The second Way or Method of making it, is with Oil of Walnuts cold drawn, Flowers of Sulphur, Salt of Tartar, and white Wine mix'd together, which by the Assistance of the Fire, is made into a Balsam very good to digest, discuss, or resolve any crude Fluxion impacted in any Part of the Body, made use of by Way of Uñction. It is also the Basis of the *Emp. Sulphuris*.

Some use Oil of sweet Almonds, white Poppy-Seed and Turpentine instead of Oil of Walnuts in the Composition of this Balsam, in which every one may do as seems best to him.

Some again add to this Balsam, Myrrh, Aloes, Saffron, and the like.

Besides the Sulphurs afore-mention'd, we have a sort of Earth or yellow Stone, which Mount *Ætna* casts forth, call'd by us *Naples Yellow*, which Painters make use of: But this Sort of Earth is scarce enough amongst us. *Note*, The Marks of its Goodness are, that it be sandy, and of as high a Colour as may be. This Earth is nothing but a Sulphur

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harden'd in the Bowels of the Earth, which makes it dry and brittle.

You may make a Balsam of Sulphur in a small Time, by taking to *Lemery*. one Part of Flowers of Sulphur four or five Times as much good Oil of Turpentine, Oil Olive, or the like, and boiling them in a Pipkin, so big, as it may be but half full, 'till the Flowers are perfectly dissolv'd into a Blood-red Balsam; let the Fire be pretty quick, yet not too quick, and continually stir it all the while it is making, till it is cold, otherwise the Flowers will be apt to coagulate into a Mass, and so you will have no Balsam. It is good against Coughs, Colds, Asthma's, Consumptions, &c. outwardly apply'd, and is taken inwardly from four Drops to twenty.

8. Of Naphtha.

Naphtha is a *Bitumen* or Slime, found in many Places of *Europe*, *Pomet*. and the Name *Maltha* has been given first of all to a Sort of *Bitumen* found near *Comagene* in *Syria*. And *Pliny* tells us that this *Bitumen* is so glutinous, that it sticks to whatsoever it touches, from whence comes its Name of *Maltha*; and accordingly he relates, that at the Siege of *Samozata*, which *Lucullus* undertook, it was of great Advantage to those in the Town; for that as soon as it touch'd any of the Soldiers, it set them on Fire in such Sort as could not be extinguish'd but by throwing Earth upon them, being of the Nature of other *Bitumens*, which the more you cast Water upon them, the more they blaze. There is another Sort of *Bitumen* found near *Ragusa*, which has the Smell of, and serves for the same Purposes as common Pitch, and therefore has the Name of *Maltha*, or *Natural Pissasphaltum*, or *Earth-Pitch* bestow'd upon it: But these two Sorts being unknown to us, and we having none of them in *France*, I shall content myself to speak of that of *Auvergne* only.

The *Bitumen* then of *Auvergne* is a Sort of Pitch of a disagreeable Smell enough, found between *Clermont*, *Montferrat*, and *Rion*, in a Place call'd *Pege-well*, where it is in such Abundance, that it makes its Way out of the Earth, and causes a great deal of

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Uneasiness to Passengers, who when they tread on it can hardly draw up their Feet 'tis so sticking, and who by Reason thereof are very often forc'd to leave their Shoes behind them. 'Tis this same famous Drugg the Hucksters dry, and then sell to Grocers and ignorant Apothecaries, and others, instead of the true *Bitumen* of *Judæa*, tho' it be easily distinguishable from it by its strong Smell, whereas the true *Judæa Bitumen* is almost without any Smell at all: 'Tis from its foetid Smell, some, as to *Affa Foetida*, have given it the Name of *Stercus Diaboli*, or *Devil's-Dung*. There are also many other Sorts of *Bitumen*, that come from the Bowels of the Earth; but we having no Commerce in them, as having none of them, I shall not trouble myself to speak any Thing about them.

9. Of Naphtha of Italy.

THE *Naphtha* of *Italy* is an Oil of different Colours, flowing from a Rock situate in the Valley of *Montfestin*, in the Dutchy of *Modena*; and this Oil has been known to us but a few Years since, by the means of one *Roque Foura*, a Native and an Inhabitant of the Village call'd *Prat*, near *Briançon*, in the *Upper Dauphiné*, of whom I bought the different Sorts of *Naphtha* that I have by me, and had the following Account.

The *Italian* or *Montfestin Naphtha*, comes from a Rock which is upon a Mountain, whither it is convey'd by subterranean Veins, and it is gathered into Oil of different Colours, by means of certain Canals and Copper Cauldrons which separate it: Or, to speak more intelligibly, the Duke of *Sara* and *Darce*, and the Marquis of *Arpia* in *Modena*, to whom the aforesaid Rock belongs, have caused Trenches, and Copper Canals, or Pipes, to be made, which are purposely plac'd to receive the Oil as it distils from the Rock, by means of which it falls into the Cauldrons or Coppers, from whence it is taken or gathered for Use. It is observable, that this Oil changes Colour according as it is nearer or farther off from the direct Light of the Sun; so that that which is of the sunny Side is white, and clear as Water, and most esteem'd; that next to it clear and red like

Wine, the next yellow, afterwards green; and, in short, that which is at the other opposite Side of the Rock, quite off from the Sun, is black.

White *Naphtha*, which we commonly call Oil of *Petre*, or white Rock Oil, because of its Whiteness, Clearness, and Beauty, is immiscible with any Thing in the World besides, being lighter than whatsoever can be put to it, and consequently it will be uppermost; as also by Reason of its strong piercing Smell, coming near that of Sulphur, which renders it extremely volatile. It is easy to catch Fire, which may serve as a Precaution to those who sell it, to be as careful of it as of Gun-powder.

The great Virtue of this Oil is the Reason why I will not say any Thing of it here, but rather refer my Reader to what the aforesaid *Roque Foura* has printed concerning it. As for the red, yellow, or green *Naphtha*, they are so little in Use, that we don't see any of 'em at all: And moreover, another Reason may be, that the *Italians* mix them with the black Oil before they send it to us; and this makes the Oil of *Petre*, which we have thence instead of being black and thick, as it comes out of the Rock, to be red, transparent, and yellowish, and moderately sulphureous in its Smell. And as this Oil is pretty dear, some counterfeit it, as will be seen in the next Chapter.

Naphtha, Pissasphaltum Naturale, is a kind of soft or liquid *Bitumen*, of different Colours, very inflammable, which is brought from several Parts; as the Place where antient *Babylon* stood, and about *Ragusa*; likewise from a certain Lake or Marsh of *Samosata*, and divers other Parts. But we have no other *Naphtha* brought but what comes from *France* and *Italy*; the last of which is a sort of *Petroleum*, or clear Oil, that is sometimes white, sometimes red, sometimes yellow, sometimes green, and sometimes black. It flows from a Rock situate on a Mountain near *Montfestin*, in the Dutchy of *Modena*. The white is most valued. The *Bitumens* call'd *Naphtha* are almost all Sulphur or Oil mix'd with some acid and volatile Salt. They are incisive, penetrating, deterfive, digestive, vulnerary and strengthening, and so are prevalent against Palsies, Weakness, and Relaxation

laxation of the Nerves. Outwardly apply'd they relieve the Tooth-ach; and dissolv'd in a Turpentine, or vinous Clyster, prevail against Dyfentery and *Diarrhæa*. *Petroleum* is by many us'd instead thereof.

10. Of the black Oil of Petre, or Oil of Gabian.

Pomet. **T**HE *Petroleum*, or black Oil of *Gabian*, is a liquid *Bitumen*, that comes from the Bowels of the Earth, and by subterranean Channels is thrown upon the Waters of a small River near a Village call'd *Gabian*, in the Bishoprick of *Bezier* in *Languedoc*. Formerly this Oil was so plentiful and common, that 'twas made but little Account of; for considerable Quantities might be gather'd of it daily: But now *Mondays* are only set apart for that Purpose; and the Place where it is, is enclos'd with a Wall, and guarded by a Man. And I have been told at *Gabian*, that the Bishop makes a great Penny of it, which notwithstanding is not of such Account as 'twas heretofore.

This Oil ought to be of a middle Consistence, of a strong stinking Smell, and of Colour black.

In the Choice of it, one must see to it that it be not Oil of Turpentine, thicken'd and coloured with Tar and black Pitch. The best Characteristick I can give whereby to know it, is to buy it of honest reputable Merchants, that won't do an ill Thing, and sell one for another, and not to expect it at an under Price.

The black Oil of *Petre* of *Italy*, or of *Gabian*, is somewhat in Use of Physick, but chiefly employ'd by Farriers, and those that make artificial Fire-Works.

There are moreover other Sorts of Oil of *Petre*, or *Bitumens*, found in many Parts of the World, as those of *Colao*, of *Sirnam* and *Copal*; but since we have none of them, nor any Trade or Dealing in them, I'll not pretend to say any Thing concerning them,

Petroleum, sive *Oleum Petræ*, or *Lemery*. *Rock Oil*, is a kind of *Naphtha*, or bituminous Liquor that flows from the Clefts of several Rocks, Stones, and Quarries, in many Parts of *Italy*, *Sicily*, and *Languedoc*. It is brought of several

Colours; as black, red, white, and yellow. The black *Petroleum*, usually brought us from a Village in *Languedoc*, called *Gabian*, and from thence Oil of *Gabian*, is of a very unpleasant Smell. All the Kinds of *Petroleum* are incisive, penetrating, resolute, attenuating, resist Poison, destroy Worms, expel Wind, strengthen the Nerves. Some Drops may be taken inwardly and outwardly. The Joints, Emunctories, and Navel, may be rubb'd with it.

It is hot and dry, and of thin Parts, and is of admirable Use against Aches and Pains, and all cold Distempers of the Muscles, Nerves, and Joints. It is prevalent against Gout, Palfies, Cramps, Convulsions, Apoplexy, Megrims, and other cold Diseases of the Head and Brain. Anointed upon the Region of the *Abdomen*, Bladder, Reins, Spleen, or Womb, it gives Ease to all Pains and other Disorders of those Parts, disswells Swellings, &c. It is said to cure ulcerated Kibes and Chilblains, to help Bruises, and heal old Sores; and is of singular Use against the Rheumatism, or running Gout. Some say that that which comes out of *India* is the best and pleasantest, and is thought to have all the Virtues of the *Naphtha* foregoing.

11. Of China, or Indian Ink.

CHINA Ink is a hard solid Paste, which, according to some *Au-Pomet*. thors, the *Chinese* make of a black bituminous Earth, which they powder, and with Gum Dragon form into a Paste, which they after lay upon little Sticks, and having mark'd it with some *China* Character, they dry and sell it as we have it. Others will maintain that it is made of a Black produced from the Smoke or Fume of Oil of Olives burnt; but as it is impossible I should be able to determine of which 'tis compos'd, I will only remark in the Choice of it, that the true genuine Ink of *China* is to be prefer'd to that of *Holland*, and is distinguishable from it, in that it is in small square Cakes of the Thickness and Length of one's Finger, and of a very black jet Colour, whereas *Holland's* Ink is in flat Lumps, and of a footy musty Black.

China, or *Indian Ink*, serves for Geographical Charts: In short, 'tis very useful for all such as mark or take Sketches in Black, being a portable Ink.

12. Of Gun-powder.

Pomet. **G**UN-Powder is a Composition of Salt-petre, Sulphur, and Coal made with Willow, or any other white light Wood, which by Means of Vinegar, and a Sieve, or any other Instrument full of Holes, is made into Corns big or little, or what Size you please: But I will not enlarge upon this Occasion, not being thoroughly acquainted with the Manner of making it best; and by the Bye, I would not advise any Merchant to deal in this Commodity, whose profess'd Business it is not, it being too hazardous.

Sal Pyrium, Sal Bombardicum, Lemery. and *Pulvis Pyrius*, and *Bombardicus*, or *Gun-powder*, was a Thing wholly unknown to the ancient *Greeks* and *Ara-bians*, and therefore they have no Name for it. It is made in many Parts of the World, but most plentifully in *France* and *England*, and is compos'd of Salt-petre, Sulphur, and Wood-coal.

You are to chuse good and pure Nitre, with fair and large Crystals or Shootings: If it be not good, you must purify it as we have before taught. This purified Nitre put into a Kettle, which set upon a Furnace with a moderate Fire, which gradually encrease to such a Degree of Heat, 'till it begins to smoke and evaporate, lose its Humidity, and grow very white; keep continually stirring it with a wooden or Iron Ladle, for fear it should return to its pristine Form, whereby its Greafiness will be taken away; then pour so much Water into the Kettle, as will cover the Nitre; and when it is dissolv'd, and is brought to the Consistence of a thick Liquor, then with a wooden Stick or Ladle, keep continually stirring it without any Intermiffion, till all its Humidity is again evaporated, and it be reduced to a most dry white Meal.

You ought also to chuse the purest and best Sulphur; that which is in very great large Lumps, clear, perfectly yellow, not very hard nor compact, but porous, nor too much

shining is the best. If when it is set on Fire, it freely burns all away, leaving little or no residend Matter, it is a Sign it is good. So also if you press it between two Iron Plates that are hot enough to make it run, in running it appears yellow, and that which remains be of a reddish Colour, you may conclude it excellent, and fit for your Purpose; but if it be impure and foul, Powder-Makers prepare it after this Manner. Melt your Sulphur in a large Iron Ladle or Pot, over a very gentle Fire of Coals well kindled, but not flaming, then scum off all that which riseth on the Top, and swims upon the Sulphur; presently after take it from the Fire, and strain it through a double Linen Cloth, letting it pass at leisure: so will the strained Sulphur be pure, (the gross filthy Matter remaining behind in the Cloth,) which powder finely.

You ought also to chuse Charcoal large, clear, free from Knots, well burnt, and cleaving; but if you be where 'tis not to be had, you must make it after this Manner: Cut down your Wood when it is full of Sap, and is apt to peel, *viz.* in *May* or *June*, and chiefly Hazel, or Ash, or Juniper, &c. which cut into Lengths of two or three Foot long, of the Bigness of ordinary Billets, taking away the Rind and superfluous Branches. Being very dry, make them into Bundles, and in a plain even Place, fit for that Purpose, set them upright one by another, and one upon another, cover them with Earth or Turf very close, leaving only some few Vent-Holes; then kindle the Fire, and when it is well lighted, and all in a red burning Heat, being reduc'd into burning Coals, stop up every Vent-Hole for the Fire, close with moisten'd Earth, so that there be not the least Breathing-Place. The fire being thus extinguish'd, the Coals will be pure and whole, without any Ashes, and in twenty four Hours after, you may take them out for Use. But for a present and small Occasion do thus: Cut the Wood into small Pieces, dry them well, put them into a large earthen Pot, cover it all over the Top well with Clay, then make a good Fire round the Pot, gentle at first, but so as it may be made red-hot; covering it also all over with Fire, leaving it so for the Space of an Hour or more in that strongest Heat; let the Pot cool of itself, and then

then take out the Coals for Use, which reduce into a fine Powder.

Of these Ingredients the Country People in the *Ukrain* in *Poland*, and the *Cossacks*, make it with their own Hands, thus: They put their Proportions of *Nitre*, *Sulphur*, and *Charcoal*, (being all in fine Powder) all together in an Earthen Pot, upon which they put fair Water, then they boil it upon the Fire 'till all is evaporated, and the Matter becomes thick like Paste, and taking it from the Fire they make it yet drier in the Sun, or in a Stove, or the like, 'till it is fit to corn; then they granulate it by passing it through a Hair Sieve, making the Grains of what Bigness they please; and this serves their rural Occasions, as well as if it had been made by the most skilful Artist in the World.

But in order to the truly knowing and making of Gun-power, it is fit that you should first know the Kinds thereof, and then the different Strength of each. The Kinds are threefold; I. Cannon Powder; II. Musquet Powder; III. Pistol Powder; and of each of these there are two several Kinds, viz. a stronger and a weaker, all which Differences arises only from the various and differing Proportions of the above enumerated three Ingredients. The exact Limitations of which we come now immediately to declare.

	Cannon.	Musquet.	Pistol.	
Nitre	10.0	10.0	10.0	Strong.
Sulphur	2.5	1.8	1.2	
Coal	2.5	2.0	1.5	
Nitre	10.0	10.0	10.0	Weak.
Sulphur	2.0	1.5	1.0	
Coal	2.4	1.8	1.8	

The Preparations declared, I. Cannon Powder, 1. The Stronger. To every 100 lb. of Salt-Petre there is Sulphur 25 lb. Charcoal 25 lb. 2. The Weaker. To every 100 lb. of Salt-Petre, Sulphur 20 lb. Charcoal 24 lb. II. Musquet Powder. 1. Stronger. To Salt-Petre 100 lb. Sulphur 18 lb. Charcoal 20 lb. 2. The Weaker. To Salt-Petre 100 lb. Sulphur 15 lb. Charcoal 18 lb. III. Pistol Powder. 1. The Stronger. To Salt-Petre 100 lb. Sulphur 12 lb.

15 lb. 2. The Weaker. To Salt-Petre 100 lb. Coal Sulphur 10 lb. Charcoal 18 lb. as in the Table annexed, which are the Numbers, and in the same Proportion, but in lesser Quantities or Decimals.

The Way of making it. All these Ingredients are to be finely powdered, and they are to be moistned with fair Water or Vinegar, or Spirit of Wine, or Water and Spirit of Wine mixt together, or Urine, which is usual; then let all be well beaten together for the Space of twenty-four Hours at least, and then granulated after the following Manner:

You must prepare a Sieve with a Bottom of thick Parchment made full of round Holes, and the former beaten Mass must beforehand be moistned with the following Liquor. R. Spirit of Wine ℥xx. Spirit of Wine Vinegar, ℥xij. Spirit of Nitre, ℥iij. Spirit of Sal Armoniack, ℥ij. Camphire, ℥j. dissolved in Spirit of Wine, mix together for the Purpose aforesaid. Or instead thereof, if all these Things cannot be had, with this, R. Brandy, ℥xl. Camphire ℥j. mix and dissolve; the Mass being made up into Balls as large as Eggs, which put into the Sieve, and with them a wooden Ball, which so move up and down about the Sieve that it may break the Balls of Powder, and make it pass thro' the little Holes into Corns.

But in making of vast Quantities for a natural Use, to do it all by the Hand, would be a most tedious and slavish Work, and therefore Kings and the supreme Rulers of Countries have provided Mills for that very Purpose, by Help of which they can do more in one Day than a Man can in an hundred.

You may make Powder of various Colours, if you so please, but then you must leave out the Charcoal, and put in as much for it of another Thing of the Colour you intend, which may be as apt to kindle or take Fire as Charcoal is; but for real Service, whether for War or Hunting, &c. the black Powder is much to be prefer'd; yet for Satisfaction Sake, we will give you the Directions for making white Powder.

White Powder. Take Salt-Petre, 10 lb. Sulphur, ℥j. Saw-dust of Elder, or the like Wood, dried and powdered fine, ℥ij. mix and make Powder by the former Directions. Or thus: R. Nitre 10 lb. Sulphur, ℥j. S. dried and finely powdered, Saw-dust ℥ij. mix and make Powder. Or thus: R. Nitre 10 lb. Sulphur, ℥ij.

℥ij. Rotten Wood dried and powdered ℥ij. Salt of Tartar, ℥ij. mix and make Powder, to be kept close from the Air.

This is also to be noted, that in making *Pistol Powder*, if you would have it stronger or more violent, you ought to stir it up several Times while it is in the Mortar, and moisten it with Water distill'd from Orange or Lemon-Peels in an Alembick, and then beaten for twenty-four Hours, as aforesaid.

Moreover, you ought to know, that Powder, when it is corned, is of much greater Force and Power than when in Dust or Meal; and from hence it is concluded, that the larger Grains are stronger than the smaller, and for that Reason Cannon Powder is granulated larger than Musket, Musket than Pistol; and therefore being put into Ordnance, Muskets, or Pistols, it ought not to be forced or beaten so home or hard into the Piece, as to bruise the Grains, lest it thereby loses much of its Strength.

To know the Goodness of Gun-powder. It is tried three Ways, by Sight, by Touch, and by Fire. *First by Sight*; If it be too black, it is too moist, or has too much Charcoal in it; so also if rubb'd upon white Paper, it blacks it more than good Powder does. If it be of a kind of Azure Colour, or a little obscure, something bordering upon red, it is a Sign of good Powder.

Secondly by Touching. If in crushing of it with your Fingers Ends the Grains easily

break and turn to Dust, without feeling hard, it has too much Coal in it. If in pressing under your Fingers upon a smooth hard Board, some Grains feel harder than the rest, or as it were dent your Finger's End, or very hardly yield to pressing, the Sulphur is not well mixt with the Nitre, and the Powder naught.

Thirdly by Burning. Lay little Heaps of Powder, three Inches or more asunder upon white Paper, and fire one of them; if it only fires and burns all away, and that suddenly, almost imperceptibly, without firing the others, and makes a small thundering Noise, and a white clear Smoak rising in the Air, almost like a Circle, the Powder is very good: But if it leaves black Marks behind it, it has too much Coal in it, or is not well burnt. If it leaves a Greasiness behind it, the Sulphur or Nitre are not well cleansed or ordered as they should be. And if two or three Corns of Powder be laid upon a Paper an Inch asunder one from another, and you put Fire to one of them, and they all fire at once, leaving no Sign behind but a white smoaky Colour in the Place, and the Paper not touch'd, the Powder is good; so also if fired in your Hand, and it burns it not; but if black Knots, which burn downwards in the Place where Proof was made, remain after firing, it is not strong enough, but wants Nitre.



BOOK the Fifth of the Second Volume.

of STONES.

P R E F A C E.

I Mean by the Word Stone, a solid and hard Body that will not melt in the Fire, or be extended under the Hammer, form'd in the Earth by Course of Time, being a kind of Mineral. I shall divide Stones, the Subject of this Book, into two Classes; to wit, into precious and common Stones. By precious Stones I understand those that are dear, either because they are scarce, or that they come from far distant Parts, and such as are very hard, small, and sparkling. And by the Common, I mean such as are of little Value: I shall begin with the Hyacinth or Jacinth, as being the Finest of all those we deal in, and of which we make the most Use. And by the Way, the Reader may be pleas'd to take Notice, That I shall only speak of such as we deal in, not meddling with the fine Stones the Jewellers and Lapidaries trade in, as knowing little or nothing of them.

i. Of the Hyacinth, or Jacinth.

Pomet. **T**HE Hyacinth that is us'd in Medicine, is a Stone of which there are three Kinds, to wit, the soft milky Hyacinth, which is a little Stone of the Size and Figure of a moderate Grain of Salt, very pliable, and of the Colour of Milk, from whence it derives its Name. The Second is a reddish Stone without and within, cut naturally like a

Diamond Point, that is found very frequently in Poland, Bobemia, Silesia, and Italy: In this same Stone or Jacinth, you will often meet with white mix'd with red, or yellow sometimes with other Colours; but as these different Sorts are not us'd by any, yet Apothecaries and Hucksters, who chiefly consider the Cheapness, or don't know 'em from others, they ought to be entirely rejected, being nothing else but a Sort of Sand; as also another Sort of false Hyacinths, that are little Stones about the Bigness of a Pin's Head, of a shining

shining red, that are found very commonly in several Parts of *France*, but chiefly in *Auvergne*, which are what we call *Jargons*, or *faux Hyacinths*: Wherefore those that wou'd have the *Jacinth* for the Confection that bears its Name, and is after describ'd, must use no other than the *milky Hyacinth*, as being the true Oriental, and fit for medicinal Use, it requiring no other Preparation than to be ground to an impalpable Powder.

Of the Confection of Hyacinth.

The *Confection of Hyacinth* is a liquid and cordial Electuary made up of *Hyacinth*, red Coral, Bole from the *Levant*, seal'd Earth, of each four Ounces and a half; 'Grains of *Kermes*, Dittany of *Crete*, *Tormentil* Root, Citron Seed, Saffron, Myrrh, Provins Roses, the three Sanders, the Bone of a Stag's Heart, Shavings of Harts-horn and Ivory, Sorrel and Purslain Seed, of each ten Drams and two Scruples; of Sapphire, Emerald, Topaz, fine Pearl, raw Silk, Gold and Silver Leaf, of each five Drams and a Scruple; Musk and Ambergris, of each two Scruples; powder all the Druggs, and grind the Stones on a Porphyry, then make 'em into an Electuary with Syrup of Lemons. Those who desire to know further of it, let 'em consult *Monsieurs Charas* or *Bauderon's* Dispensatories. The Confection of *Hyacinth* ought to be of a good Consistence, fresh and faithfully prepar'd, of a reddish Colour upon the Yellow: All those that prepare this Medicine ought not to put in Musk and Ambergris, except by the Direction of the Physician; because the greatest Part that is us'd is by the Women, and that is very improper for the Sex, especially in any hysterical Case. This Confection made as it ought, is much prescrib'd, because of its good Qualities in fortifying the Heart, resisting of Poison, &c. and it is of the same Nature with Confection of *Alkermes*, being much us'd in the *Lionnois*, *Provence*, and *Languedoc*, where you meet with few People without a Pot of this Confection, or of *Alkermes*, or *Treacle*, about them, of which they take a small Quantity every Morning. The Dearness of this Medicine, and the Demand for it, is the Reason that you have a thousand Sophisticians of it, who do it so grossly and scanda-

lously, that they afford you no better than Honey, Bole, Myrrh, and some Leaf Copper for this Confection, and sometimes they allow you a little Bastard Saffron; therefore the best Way is never to meddle with this except you have it from an honest and reputable Dealer.

Hyacinthus, sive Lapis Hyacinthinus: The *Jacinth* is a precious *Lemery*. Stone, of which there are a great many Sorts that differ in Size and Colour; for some are as small as a Grain of Salt, of a white Colour, and this Kind is call'd the *soft milky Hyacinth*, which is the oriental, others are as big as Peas, very hard, of a red Colour, enclining to the yellow, bright and resplendent. The Oriental are to be prefer'd to those of *Silesia* and *Bobemia*, which are known by their Bigness, their Beauty, and their Hardness; for the Oriental exceed not the Size of a Pea, and are finer and more brilliant than the *European* Kind. There are others much about the same Size, of a yellowish Colour, almost like Amber; some are white, partaking of red or yellow, and several other Colours; others are as small as Pins Heads, of a bright Red: This last Kind is found in several Parts of *France*, and particularly in *Auvergne*; all the Sorts are very cordial and restorative: Dose half a Scruple.

Of the Topaz-Stone.

THE *Topazes* that are us'd in Physick are Stones of different *Pomet*. Magnitude, very heavy and transparent, altogether resembling the *Muscovy* Glass found in the Plaister of *Mont Martre*: This Stone is found in the *East* and *West-Indies*, *Bobemia*, and *Germany*. The *Topaz* needs no other Preparation for Medicine than to be ground with Rose-Water on a Marble like *Hyacinth* and other precious Stones.

The true *Topaz* of the Antients, which was afterwards call'd a *Chrysolite*, is a transparent Gem of a diluted green Colour, that seems to have some Yellowness, or a Gold Colour in it, very glorious; some will not have it to be properly the *Topaz*, but rather the *Chrysolite*, or Mother of the *Emerald*: It is reported to be good against *Hemorrhages*, and all Manner of Fluxes of Blood; as like-

wise

wife to stop Bleeding. This Gem is so hard that the File cannot touch it. It has been a Stone of great Esteem and Value, not only for its own Glory and Brightness, but for its sacred Use recorded in Scripture. It is sometimes counterfeited with double Crystals or diaphanous Stones, with a proper green Foil interpos'd, and being thus set in Inclosures, with a like Foil underneath, the Cheat will be hard to discover.

Topazius, Chrysolithus, Chrysolimery. *patius*, the *Topaz*, is a transparent precious Stone, of a greenish Cast, mix'd with a little Yellow, shooting forth golden Rays. There are two Sorts of it, the oriental and occidental: The first Sort is harder, finer and more valued. We have 'em brought from *Arabia, Ethiopia*, and about the *Red Sea*. It's said they grow among the *Alabaster*, and some pretend them to be the Mother of the *Emerald*, because these two Stones are something like one another in their Colour. The second Sort are found in *Bohemia*, and are larger than the Eastern Kind, but not so beautiful.

3. Of Emeralds.

Pomet. THE *Emerald* is a greenish Stone that is found in different Parts of the World; as *Ethiopia, Egypt, Persia*, and both the *Indies*. The highest priz'd, or most valued *Emeralds*, are those call'd the *Prime Emeralds*, in that they are commonly pure and neat, that is to say, of a fine beautiful Green, inclining to the Blue, without Rock or Marble. There is some Grounds or Appearance that *Emeralds* are found in Iron Mines, because I have seen where the Iron has stuck to them. It is by some affirm'd, that the *Emerald* takes its green Colour in the Mine, according to the Degree of its Perfections, as Fruits ripen upon the Trees; which I cannot confirm, having never seen the Truth of it.

Some Authors have made twelve Kinds of *Emeralds*, as the *Scythian, the Bactrian, Egyptian, Cyprian, Attick, Ethiopick, Medick, Calcedonian, Samian, Sicilian, Laconick*, and *Cyprian*, or *Chalco-smaragdus*; to which of late has been added a thirteenth, call'd the *Smaragdites*, or *Bastard Emerald*. This Stone

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has been of great Esteem, not only for its Glory, but the Use it was applied to, being set in the Breast-Plate of Judgment.

The *Smaragdo-Prasinus, Smaragdites*, or *Bastard Emerald*, is a transparent green Gem, of a mix'd Beauty, between a *Prasinus* and an *Emerald*. Being compar'd with the *Prasinus*, it has the Greenness of Grass, without Yellowness; but being compar'd with the *Emerald*, it has a yellowish Greenness, which is not in the *Emerald*. It is seldom perfectly transparent, because of some Clouds in it, and is of two Kinds; first, the *Bohemian*, which is almost transparent; and, 2dly, the *American*, which is but half transparent. This Stone is said to be diuretick, expels Gravel, hinders the breeding of the Stone, and eases Pains of the Kidneys, and the Gout.

Smaragdus, Prasinus, or the *Emerald*, is a fine, green, precious *Lemery*. Stone that is diaphanous, shining, resplendent, but moderately hard. There are two Kinds, one oriental, and the other occidental. The first Sort is harder, finer, and more esteem'd. It represents by its agreeable Colour and Pleasantness the Verdure of the Field, and fills the Eye with a sudden glaring Light. It is brought from the *East-Indies*. The second Sort may be distinguish'd into two Kinds, *Peruvian* and *European*; the *Peruvian* shews a very fine, pleasant, green Colour, but does not shoot its Rays like the oriental, and is sometimes fill'd with little greenish Clouds. They are plentiful in *Peru*, and pretty large. The *European* Sort is not so hard or resplendent, but the least valued of all. They are found in *Cyprus, Great Britain*, and several other Places. The Western are generally much larger than those of the East; for they are sometimes met with as big as the Palm of a Man's Hand. Both Kinds are proper to stop the Flux of the Belly, and Hemorrhages, to sweeten the too acrid Humours, being finely powderd, and taken inwardly. The Dose from six Grains to half a Dram.

4. Of Saphirs.

WE sell two Sorts of *Saphirs*, *Pomet.* to wit, the reddish and the blackish. The *Saphirs* are little Stones of the

A a

Size

Size of a Pin's Head, extremely hard, and therefore difficult to bruise or pound. The reddish, which are usually of the Colour of Wine, ought to be employ'd for physical Uses; for as to the blackish *Saphirs* they are rather like Rust of Iron than a precious Stone, and turn the Confection of Hyacinth black when added thereto. Some substitute in the Room of the red oriental *Saphirs*, those little Stones, very common in *Holland*, that we call *Vermel*, or small *Granats*, which beware of, tho' it is not difficult to distinguish them, because the true *Saphirs* are of a very fine, clear, transparent Red; which are contrary to the *Granats*, that are of a very deep Red, and very solid.

Saphirus vel Sapphirus, or the *Sa-Lemery*. *phir*, is a fine, precious, brilliant, diaphanous, resplendent Stone, of which there are two Sorts, one call'd the Male, the other the Female. The Males are of a pale blue, or a Water of the Diamond Lustre. These last are call'd white, or Water *Saphirs*; they are less enquir'd after than the blue. The female *Saphirs* are of a deep blue; these are more valuable, and especially such as come from the *East-Indies*; as *Calecut*, *Pegu*, *Bijnagar*, and *Zeilan*. They are found likewise in several Parts of the Western World, as on the Borders of *Bobemia* and *Silesia*; but they are neither so perfect nor fine as the Oriental, but have their Lustre defac'd or sunk by the Fire.

They use in Physick the Fragments or Pieces which the Lapidaries cut off from the *Saphirs*, which are much about the Size of large Pins Heads, reddish or blackish; but the red are preferr'd, because the black are full of Iron Stone, by which we may perceive they have some Analogy to the Load-Stone, for they will be attracted like Iron. There are a great many Virtues attributed to the *Saphirs* which they have not; as the fortifying the Heart and other noble Parts, purifying the Blood, resisting of Poison. Their true Properties are to stop Fluxes, sweeten the Blood, and dry up Ulcers of the Eyes.

5. Of the Ruby.

Pomet. THE *Rubies* are likewise little reddish Stones that are brought us from the *East-Indies*, and are of very lit-

tle Use in Physick, for which Reason I shall say nothing of them, nor of a great many others which we might sell had they attain'd to their Perfection, the Names of which are subjoin'd, referring the Reader to a Book, entitled *The Perfect or Compleat Jeweller*, or, *The History of precious Stones*, compos'd by *Anselmus Boetius de Boot*, Physician to the Emperor *Rodolph* the Second; or to the *Indian Mercury*, made by *Rosnel*, who has made a very large Treatise thereof. The precious Stones we have, besides those mentioned before, are the *Diamonds of Alençon*, the *Amethysts of Auvergne* and *Cartagena*, the *Girafole*, the *Peridot*, the *Agats*, the *Berils*, the *Sardius*, the *Corallines*, the *Granats*, the *Malaquits*, and several Sorts of Marble, *Florence Stones*, &c. And as I have seen the vast Difference betwixt the Stones that we sell, and the fine Stones the Lapidaries use, I advise all those who would make the Confection of *Hyacinth*, to take rather the Chippings of the fine Stones, than fancy he can buy better at the Druggists. Besides, I am of Opinion with those who allow no other Virtue in all the precious Stones, than to absorb Acids.

Rubinus, Carbunculus, Pyropus, Anthrax, the *Ruby*, or *Carbuncle*, is *Lemery*. a fine, diaphanous, precious Stone that is very hard, and resists the File. It is resplendent, and of a Colour as red as Blood, mix'd with a little Tincture of blue. There are several Kinds of it; but the finest, hardest, and most valuable, is that from *Zeilan* in the *Indies*. Stones that are of a Flesh Colour, they are whitish at first, and grow reddish as they approach to Perfection. There are some likewise in *Gambaya* and *Bijnaga*; but these are not so fine.

There is assign'd to the *Ruby* the Virtue of resisting Poison, strengthening the Vitals, driving away Melancholy, reitoring of lost Strength; but we know by Experience it has no other Quality than that of an Alkali Powder, that sweetens the Sharpness of the Humours, and breaks their Points, and consequently stops the Flux of the Belly. Dose from half a Scruple to two Scruples. 'Tis call'd *Rubinus* from its red Colour, and *Carbunculus* from its Reflection, looking like a red-hot Coal of Fire.

6. Of Lapis Lazuli, or the Azure Stone.

Pomet. THE *Azure Stone*, which is most commonly call'd *Lapis Lazuli*, and by some *Lapis Cyaneus*, and *Lapis Stel-latus*, is a heavy Stone of a Sky Blue, sometimes full of Rock Stone, and most frequently streak'd with Veins of Copper, which the Antients, and some Moderns, believ'd to be Gold. The greatest Part of the Stone that we have comes from *Persia* and the *East-Indies*; and some affirm that it is usually found in Gold Mines, and that it is the *Marcafite* of that Metal: However it is certain that this Stone is got out of a Quarry, as other Stones are here, which is the Reason we have it of all Sizes; the *Lapis Lazuli* to be perfect and fit for making the *Ultra-marine*, which is the chief Use it is put to, except the fine Works made of it, ought to be heavy, of a deep Blue, like fine Indigo, with as few Copper or Sulphureous Veins as possible, and take Care it be not rubb'd with Oil Olive, in order to make it appear of a deeper Blue; but the Cheat is not hard to discover, because it ought to be of as fine a Blue within as without; likewise refuse such as is full of Stones, and the pretended Veins of Gold; so that when it is burnt to make *Ultra-marine* it will stink extremely, having a sulphureous Smell, which shews that it proceeds from Copper, and not from Gold.

There is an Error some People are guilty of, in believing, as some have pretended, that this Stone, when fine, will encrease its Weight in the Fire: This is certain, that the finer this Stone is, it will lose the less in the Fire; and that there is some of it that loses so little that 'tis not worth speaking of; but let it be never so good it will always lose something; so far is it from being encreas'd in Weight: You ought to put the Stone into the Fire to see if it be good, for if so, it will not change its Colour for being heated hot. The Choice of this Stone is quite otherwise than has been described by others, who say, that that which is full of yellowish or golden Veins ought to be most valued; which I maintain to be false, since the more it is so, the less it is esteem'd, especially by those

who know what Use they design it for, namely, to make *Ultra-marine*, wherein you must beware of the greenish Stone, very common in *France*, which is found about *Toulon*, or that it be not a counterfeit Stone, made up of Tin and *Saphre*, as has been observ'd. This Stone is of some small Use in Medicine, because it is put into several Galenical Compositions, as Confection of *Alkermes*, &c. There are Authors who attribute great Virtues to this Stone, and amongst others Monsieur *Demeuve*, to whom the Reader may have recourse; and there are several others who say that *Lapis Lazuli*, and the *Armenian Stone*, are almost alike, which will be found to be false, as you will see in the next Chapter.

Lapis Lazuli, *Lapis Cyaneus*, *Lapis Cæruleus*, or the *Azure Stone*, is *Lemery*. of different Sizes and Figures, being opaque, heavy, and of a blue Colour, intermix'd with the Streaks of Gold and Copper; it is found in Quarries in the *East-Indies*, and in *Persia*, and some say in the Gold Mines; its Use is chiefly to make *Ultra-marine* of, for which Purpose chuse the cleanest, weightiest, of the highest Colour, and best Blue; it contains a great deal of Sulphur and Salt. To make *Ultra-marine*, they calcine this Stone, and grind it fine on a Porphyry, and mix it up in a PASTE made of fat Pitch, Wax, and Oil; then they wash this PASTE well to separate the blue Part, which precipitates to the Bottom in a very beautiful Powder; they pour off the Water leisurely, and dry this Powder, which is for the Painters Use. *Lapis Lazuli* prepar'd purges melancholy Humours, fortifies the Heart, and is us'd in the Confection of *Alkermes*: The Dose from half a Scruple to a Dram. There is found near *Toulon* in *France*, *Germany*, and several other Parts of *Europe*, a false or Bastard *Lapis Lazuli*, that is greenish and thicker, which is employ'd for common Uses.

Of Ultra-marine.

Ultra-marine is, properly speaking, a *Precipitate* made from *Lapis Pomet. Lazuli*; [as you have it describ'd by *Lemery* above] and some say it took its Name of *Ultra-marine*, from being made

beyond the Seas; the first of the Kind coming from *Cyprus*; but others will have it that the Name was given it because this Blue is much more beautiful than that of the Sea. A Friend of mine assur'd me that the first *Ultra-marine* was made in *England* by one of the *East-India* Company there. You ought to chuse that which is of the highest Colour, well ground, which is known by chewing of it betwixt the Teeth, and if it is gritty it is a Sign that it is not well ground: And to discover if it is genuine and not sophisticated, heat a little of it red-hot in a Crucible; if its Colour is not chang'd, 'tis the true; for if it is adulterated there will be black Spots in it: Its Use is for Painting in Oil and Miniature. The Manner of preparing *Ultra-marine* is describ'd in so many Books, I thought it needless to repeat it here; I shall only say, that those who prepare it make it into four Sorts, which proceeds from nothing else but the different Washings of the Powder, whereof the first is abundantly more beautiful than the last.

7. Of the Armenian-Stone.

Pomet. THIS is a little Stone of the Size of a Bullet, of a greenish Blue without and within, adorn'd with small white glistering Sparks, rising beyond its Surface, like Spar, or small Diamond Sparks. They attribute great Virtues to this Stone, as that it is good to cure the *Falling-Sickness*, *Melancholy*, and the like. This Stone is ground and wash'd to free it from the Spar and little Sparkles, as it were Sweepings of Gold, tho' 'tis only Sand, and afterwards dry'd and brought to us by the Name of *Powder Green*; or *Verditer*, which is us'd by the Painters, but more especially by those, who to encrease their *Mountain Green*, mix equal Parts of both together to make this come cheaper, that so they may get more Money by it; for which Reason never buy any *Mountain Green* but of Persons you can trust, and such as has the Marks describ'd, when treating of it; and besides, when a little of it is put upon Paper, stains it not, but is like Sand, which is a Sign 'tis not mix'd with *Verditer*. We sell several Sorts of *Verditors*, which have no other Difference but according to the Pre-

paration given them; the finest Sort ought to be very dry, fine, and of a high Colour.

Armenus Lapis, seu Lapis Armenis, seu Melochites, the *Armenian Lemery Stone*, is of different Shapes and Sizes, but most commonly round, uneven, rough, as big as a Nut, of a Mixture of Colours, blue, green, white, &c. It is brought from *Armenia*, whence it derives its Name; but at present it is also found in *Germany*, as in the County of *Tyrol*; it differs from *Lapis Lazuli*, in that it is not so blue, but fuller of a drossy Stone and other Impurities; and that this is taken from the Silver Mines, whereas the other is found in the Gold Mines. Chuse that which is of the deepest Colour. They grind this Stone and wash it, to separate the finer Parts, or the Sand which shines like Spangles of Gold; and this, when dry'd, they sell by the Name of *Verditer*, for the Painters Use. This *Armenian Stone*, prepar'd, is detersive and deficcative, or drying, being outwardly apply'd, and inwardly purges melancholy Humours; it is good for the Epilepsy, &c. The Dose from a Scruple to a Dram.

8. Of Smalt, or Powder Blue.

Powder Blue is either a Composition, or a Stone pulverized, *Pomet.* which we have from *England* and *Rouen*, whither it is brought by the *Swedes*, *Hamburgers*, and *Danes*: The greatest Part of this *Smalt* comes from *Dantzick* in *Poland*, as well as several other Colours, with Zink and Tin-glass; but this being a Trade known but to few People, therefore those who deal in these Commodities directly from *Dantzick*, sell cheaper than those who trade from *Holland*, *England*, or *Rouen*. After all the diligent Enquiries I cou'd make, I found it impossible to find out what this *Powder Blue* was, some assuring me that it was a Composition made at *Rouen*; but as those who made it kept it as a Secret, I never cou'd discover of what it was; it ought to be very fine, of a deep Colour, and as dry and like to *Ultra-marine* as possible; its Use is for the Painters.

9. Of the Jasper.

Pomet. **T**HERE being various Sorts of *Jaspers*, such as the green, the purple, *cerulean*, *Aurora*, or Crystal-like, I shall speak only of that which is sold in the Shops, which is the *green Jasper*; and if it had not been of some small Use in Medicine, I should not have spoke of it. Being a very precious Commodity, it is very liable to be counterfeited in Glafs. Chuse such as are of a fine deep Green, smooth, and shining, full of red Spots, as if they were little Drops of Blood, and which can take no Impression from the Point of a Needle drawn upon it, which is a Sign that it is truly Oriental. Some People affirm that the green Jasper is very proper to cure the Epilepsy, and that it is a good Cordial. It is prepar'd as the *Hyacinth* and other precious Stones.

Jaspis, the *Jasper*, is a fine, hard, *Lemery.* smooth, replendent, precious Stone, which differs little from the *Agate*, only that is not so hard and pure. There are a great many Kinds of it, but the Oriental is the best. It ought to be very hard, of a deep green spotted with red, and it is of some Use in Physick, ground fine upon a Porphyry. The prepar'd Powder is astringent, proper to stop Blood and the Scour of the Guts. Great Virtues are assign'd it in the Epilepsy, also to strengthen the Stomach, and bring away the Stone in the Kidneys, &c.

10. Of the Jade Stone.

Pomet. **T**HE *Jade* is a greenish Stone, inclinable to grey, extremely hard, and very rare. This Stone is little us'd in Physick, but pretty much in several Sorts of Works that are very valuable, it being very difficult to cut. The *Turks* and *Poles* use a great deal of *Jade* to make Handles for their Knives, Sabres, Swords, and other Things, which they adorn with Gold. The Oriental is the finest *Jade*.

Jade is a very hard Stone, of a greenish grey Colour. The finest *Lemery.* comes from the *East-Indies*. The *Turks* and *Poles* make several Uses of them, and it is difficult to work because of its excessive Hardness. Some pretend, that applied to the Region of the Kidneys, they are proper to bring away Stone and Gravel, but I can give no Credit to such Remedies.

11. Of the Nephritick Stone.

THE *Nephritick Stone* is a greyish Stone, with a little Mixture *Pomet.* of blue in it, so that it is usually of a bluish grey Colour, being fat and oily like *Venetian Talck*. This Stone is much valued by certain Persons for the Cure of the Gravel, which makes it so scarce, and so much enquired after, because of its Virtues, which it performs by hanging about the Thigh of those who are troubled with the Stone or Gravel in the Kidneys, from whence it is called the *Nephritick Stone*. The Dearness and Rarity of this Stone is the Reason why some have substituted in its stead a Kind of green Marble, furnam'd *Malaquitte*, and cut and carve it like a Bird's Head, because the Ancients believed that the true *Nephritick Stone* resembled a Bird's Head, or the Beak of a *Perroquet*. The true nephritick Stone comes from *New Spain*, and whoever would know further of it may read Mr. *Warms*, who has writ a large Description of it, too long to be inserted here.

Lapis Nephriticus, or the *Nephritick Stone*, is of different Sizes, *Lemery.* pretty hard, opaque, of a bluish Grey or Ash Colour, but sometimes mix'd with white, yellow, or black, and is not perfectly smooth, because it is unctuous like *Talck*. It is found in *New Spain*, sometimes with the Jasper, and sometimes alone. Some reckon it among the Kinds of Jaspers, making no great Difference, but only that this is the harder: For the most Part they are found like Whet-Stones in the Fields in great Lumps, so big, that a Cup may be made of them. *Carolina* affords pretty large ones, of about eight Inches long, three broad,

broad, and two thick, and of an Ash-coloured Green. They are likewise gathered in *Bohemia*, and several Parts of *Spain*, but those are not so much esteem'd as what comes from *America*.

This Stone has the Property to ease the Stone Cholick, to break the Stone in the Reins, and expel Gravel by Urine, being hung about the Neck, Thigh, or Arm: Some prescribe it to be taken inwardly, from four to fifteen Grains. Of latter Years there is brought into Use for the same Diseases, a brown, smooth, shining Stone, which they call, from its great Virtues, the *Divine Stone*. This breaks the Stone in the Kidneys, and forces it away by Urine. They tie it in their Clothes about the Back.

12. Of Venetian Talck.

Pomet, **T**HE *Venetian Talck* is a Kind of greenish Stone in Scales or Flakes, which though it be fatty, is nevertheless very dry and heavy. The finest is that which is found in the Quarries, situated near *Venice*, from whence it is call'd *Venetian Talck*. It is found also plentifully in *Germany*, *England*, and about the *Alps*. The best *Talck* is that which is in large, white, greenish, shining Stones, that being broken sparkle like Silver Spangles, and which being in small Leaves, are white, clear, and transparent; but take Care that they be equally fine throughout; for that which is in great Stones is very subject to be bad, by reason of a great many yellow or reddish Veins that are found within, accompanied with a Kind of Earth that spoils the Sale of it. There are some of them also of a greenish White, instead of a reddish Yellow; so that we had better take that which is in moderate Pieces, which we may know at Sight.

Talck is much in Regard with the Ladies of Quality, who use it for a Cosmetick; and as it is exceeding difficult to reduce it into Powder, yea, or to calcine it, the Way is now to grate it with a Fish-skin, and then to searce it, so using it as Occasion shall require. Hence it is that almost none but such *Talck* as is in moderate Pieces of a Size fit to be held in the Hand, is now call'd for.

Venetian Talck, while it is whole, is of a greenish Colour; but being broken, or divided into thin Scales, it is known from *English Talck* by its Inclination to Friability, its green Colour and Fixedness in the Fire: For some who have kept it forty or fifty Days in a Glasse-House Fire, have taken it out at the End of the Time, and found no Alteration in it, neither in Respect of Resolution, Colour, or Weight, but it has come out absolutely the same Thing as it went in. This *Talck* therefore being of so fixed a Nature, our Labour now must be to shew how to open its Body in order to make those Preparations of it which we desire, at least the noble White, which Ladies, with so much Curiosity and Charges, seek after and pursue. It is true, there are a great many Men that boast what Preparations and Secrets they have of *Talck*; but this we certainly know, that there is no liquid Substance of it yet invented or known, made out of the simple Thing itself; but such as is compounded by the Mixture of such Salts as are able to penetrate the Stone; so invincible is the Fixedness of the true *Venetian Talck*: Therefore to attempt to calcine it, with the Addition of some piercing Salt, is an unpardonable Vanity; but by the help of some Salts, and acrid Spirit, I confess a good Cosmetick may be made of it, to change and whiten the Skin.

The Ancients, and especially the *Arabians*, were sometimes of Opinion, that from *Talck* might be drawn a Remedy of such Efficacy as ever to preserve the Body in good Case, for which Reason they gave it the Name of *Talck*, as much as to say, an equal Disposition of Body; according to which it is in perfect Health; and from hence, undoubtedly, hath proceeded the vulgar Error concerning an Oil of *Talck*, which is so much commended, and to which such extraordinary Virtues are attributed; and so prevalent hath this Error been, and still is at this Day, that whoever could find the Secret of getting an Oil from *Talck*, without the Addition of Salts or Acids, might be sure to sell it for its Weight in Gold; yea, I may venture to say twenty times more. But since as I believe the high Commendations, and wonderful Virtues usually ascrib'd

to

to it, proceed upon Supposition it could be had, which is impossible, therefore I shall say no more of it, but that some Persons who flatter themselves with a Belief that they have the Secret of making it, affirm that it is incomparably good for whitening the Skin, smoothing the Face, and in a Word to make old People renew their Youth.

If *Venice Talck* be heated red-hot, and put into an Iron Mortar almost as hot, it may be beaten in a small Time to a most fine impalpable Powder, which being fear'd, may be mix'd with *Unguents* and *Pomatum*, and us'd as other Cosmeticks of the like Kind. This *Talck*, thus pulveriz'd, may be strew'd among Shell Snails, and left in a glaz'd Pipkin 'till they have suck'd it all up; then having bruised them with all their Shells, put the Mixture into a Glass Cucurbit, covered with its Head, distil the whole Mass, and you will have a Cosmetick Water good to cleanse and beautify the Skin with.

We have another Sort of *Talck* brought us from *Muscovy* and *Persia*, which they call Red or Leaf *Talck*, because it is of a reddish Colour, and easy to be divided into Leaves as thin as you please. This Red or Leaf *Talck* is only us'd, so far as I know, by the Monks and Nuns, who put it, instead of Glass, before their Pictures and *Agnus's*, but don't, as some Authors affirm, employ to this Purpose the *Venetian Talck*. This then, as I have said, being the only Use of the Leaf *Talck*, we ought not to meddle with any but what is in large Leaves, and when split or divided into very thin Pieces, is of a crystalline Clearness and Transparency. There is not almost a more curious Commodity in the World, than Leaf *Talck* with the required Qualifications, for as much as it is very rare to be found. 'Tis a Thing so very hard to understand, that I would not advise any one to buy any but what is approved by those who work in it. That which, being thick, is blackish, and may be divided into Leaves extremely thin, is judged to be the best.

Talcum, or *Talck*, is a Kind of Lemery. Stone, or a Mineral Matter, that is fine, white, smooth, soft to the Touch,

shining and transparent, dividing into Leaves or Scales that will not burn. Some call it *Stella Terræ*, because it shines like a Star: There are two Kinds of it; one call'd *Venetian Talck*, and the other *Muscovy Talck*. The *Venetian* Sort is soft, scaly, heavy, and appears greasy to the Touch, tho' it is dry, of a Silver Colour, tending to green, something transparent: Chuse the finest white shining Pieces, upon the green Cast, that separate into little nice clear Leaves, or Flakes, that shine like Pieces of Silver. When you would reduce this into Powder, rasp it with a Sea Dog's Skin, or rather calcine it in a Crucible about a Quarter of an Hour; then heat it in an Iron Mortar almost red-hot, and sift it thro' a Sieve. It is us'd in Cosmetick Pomatums by the Ladies.

The *Muscovy Talck* is hard, smooth, shining, and soft to the Touch, dividing or breaking into thin Leaves, that are almost as transparent as Glass, and sometimes it is reddish. This comes from the Quarries in *Muscovy* and *Persia*. Chuse the finest and clearest. It serves them for Lanthorns, as we use Horn; but the *Talck* is more commodious, for it is more transparent, and not so subject to burn. *Talck* is difficult to reduce to Ashes by the Fire, because the Pores of it being small, the Parts of Fire slide thro' without making any Impression. I attempted to calcine both Sorts by a Burning-Glass. That of *Venice* was chang'd by the solar Fire into a grosser, yellowish, opaque Matter; and that of *Muscovy* into a light farine, being very fine white Powder.

13. Of Brianson Chalk.

THE *Brianson Chalk* is a Kind of Stone, or a mineral Substance, almost like *Venetian Talck*, but harder, and that does not so readily split or separate into Scales: There are two Kinds of it, one white, and the other green, they are found in the Quarries or Pits near *Brianson*. They serve to take Grease-Spots out of Clothes, and for Taylors to mark or score with. Chuse the neatest, smoothest, green, and soft.

14. Of Spalt.

Pomet. **S**Spalt is a scaly bright Stone, very like Parget Stone, except that this is whiter. They find Abundance of these Stones in *Germany*, especially about *Ausburg*. There are some likewise in *England*, but not so good. We sometimes see Fragments of this Stone adhering to and mixt with Frankincense, a Sign that it is found in the Places whence it comes. It should be in long brittle Scales that may be easily crumbled to Powder with the Nail of one's Thumb, which can't be done by that of *England*, being more hard. Spalt is used by several Sotts of Workmen, being good to assist the Founders in melting of their Metals, which I cannot affirm to be Fact, having never seen it try'd.

Spalt is a scaly Stone that is *Lemery.* bright, and looks like Plaister-Stone, or Crystal of *Montmartre*, but it is much whiter. It is met with in *England* and *Germany*. The Founders use it to flux their Metals with. It is deterfive and drying, outwardly apply'd.

15. Of the Lapis Judaicus, or Jews-Stone.

Pomet. **T**HE *Jews-Stone* is of different Sizes and Figures; but the most common Size is that of an Olive, adorned with little Streaks or hollow Lines, running from one End to the other, and sometimes it is altogether smooth. This Stone is usually grey, and sometimes of a reddish grey, and shines like our little Flint Pebbles, of which I believe it to be a Species. These Stones are brought us from different Parts of *Judæa*, from whence they take their Name. They are likewise call'd *Syrian* and *Phœnician* Stones. This Stone, tho' it be like a Flint, it is nothing so hard, yet not so easy to break as some Authors have asserted; but being broke it is of a whitish Grey, and shining. Mr. *Charas* in his Book of Chymistry, at the 821st Page, says, that this Stone being calcin'd with Sul-

phur from it, with distill'd Vinegar, Spirit of Salt, and Spirit of Honey, may be drawn a Salt that is admirable for breaking the Stone; where those who desire to prepare it, may be instructed therein.

Lapis Judaicus, Lapis Syriacus, Phœnicites, Tecolitus, or the *Jews-Stone*, is of various Forms and Bignesses, but most usually is shaped like a small Olive, streak'd all over with Lines that run thro' the Length of it, and are equally distant one from another. Some are found smooth without any, and some in a cylindrical Form. The Colour is grey, and sometimes reddish without, and whitish within. It appears to be hard like a Flint, but is soft and may be easily beat to Powder; they are distinguish'd into Male and Female. The Male is that which is large, long, and of a cylindrical Figure. The Female is that which is of the Shape and Size of a small Olive. They are both indifferently us'd in Physick, being first ground to a fine Powder on a Marble. This Powder is given to stop Fluxes of the Belly, to provoke Urine, and to break the Stone in the Kidneys and Bladder.

16. Of the Lapis Lyncis, or Thunder-Stone.

THE *Belemnites*, falsely called the *Lynx Stone*, is a Kind of *Pomet.* Flint made in a pyramidal Form, to which the Ancients gave the Name of *Belemnites*, from its Resemblance to a Dart or Arrow, and others of *Dactylus Ideus*, from its Likeness to a Finger, and because it is found on Mount *Ida*; others say it was call'd *Lapis Lyncis*, because it was believed that it was form'd from the Urine of the *Lynx*. This Stone is harder than the *Jews-Stone*, notwithstanding they attribute the same Virtues to it: And Mr. *Charas* told me it might be prepar'd after the same Manner, and used for the same Purposes. This Stone being broke, is of the Colour of Horn in the Concavity, in which is found a Sort of grey dry Earth, of an insipid Taste, and like to be good for nothing. At the End of the Stone there also appears, as it were, the

the Resemblance of a Sun. Plenty of these Stones are found about *Paris*, in digging and labouring the Ground, especially in sandy and gravelly Soils.

Belemnites, sive Lapis Lynceis, Lemery. sive Daëtylus Idæus, the Thunder-Stone, or Thunder-boli, is about the Length and Thickness of a Man's Finger, sometimes more, and sometimes less, round-pointed, or in a pyramidal Form, like an Arrow. They are found of different Colours, sometimes white, and sometimes grey, and sometimes brown, brought usually from *Candia*; but they come likewise from *Germany*. They find the same about *Paris*, in the sandy Grounds; and there are two Sorts of 'em, one that being put upon the Fire will yield a bituminous Smell, and the other none at all. The first is plainly that which the Antients call'd *Lyncurium*, and believ'd falsely to be a Kind of *Succinum*, or Amber that was made from the Urine of the *Lynx* coagulated. The Stone being broke, they find in its Concavity, that looks of a Horn Colour, a little dry grey Earth, without Smell or Taste. This Stone is us'd to break the Stone in the Kidney, and to expel it by Urine, being taken inwardly. It is also us'd externally to cleanse and dry Wounds. It is ground on a Marble to reduce it to Powder.

17. Of the Bolognian-Stone.

Pomet. THIS is a heavy Stone of a shining Silver grey, very like in Figure to the *Nephritick-Stone*, which is found very commonly about *Bologna* in *Italy*; whence it takes its Name. This Stone is of no other Use, than, after Calcination, to make the *Phosphorus*, of which Mr. *Lemery* treats so largely at the End of his Book of *Chymistry*; and likewise Mr. *Worms*, he having writ a long Discourse of it, whether those who desire to make it may have recourse. The *Bolognian-Stone* is not yet well known amongst us, which is the Cause we fell so little of it. Some call this Stone calcin'd, the *Sun* or *Moon Sponge*, the illuminated Stone, *Lucifer*, *Cassiopeus* his Stone, or *Kercher's Phosphorus*.

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Lapis Bolonienfis, Chrysolapis, or the Bolognian-Stone, is a Stone where-*Lemery.* of a *Phosphorus* is made. It is ordinarily of the Bigness of a Walnut, bunch'd, uneven, flattish, and dispos'd in such a Manner, that the Side opposite to the Bunch or Knot, makes a Kind of Cavity. It is heavy, grey, soft, shining in several Parts, crystalline within, almost like *Talc* of *Montmartre*. It is found in several Parts of *Italy*, but chiefly at the Bottom of Mount *Paterno*, which is a Part of the *Alps*, and distant from the City of *Bologna* about a League. They are easily discover'd after the Floods of Waters that happen from the great Rains; for then the Earth is wash'd and clean'd that surrounded them, and hinder'd them from being seen. They are distinguish'd from other Stones of the Mountain by little Sparks that appear on their Surface; and we may see, in the Cabinets of the Curious, some of those that weigh to five Pounds. These large Stones are no otherwise valuable than for their Scarceness, they being more earthy than the small ones, and not so good to make the *Phosphorus* of.

The best *Bolognian-Stones* are those which are found cover'd on the Outside with a thin, white, and opaque Crust; but these are very rare. And since we can't come at them, we use the common Sort, which shou'd be chose with the fewest Spots, and that are bright. The worst are those where there appear Veins of Vitriol or Iron: These contain in them much more of Sulphur and Salt.

The *Bolognian-Stone* is prepar'd and reduc'd into a *Phosphorus*, by a moderate Calcination, that purifies and exalts the Sulphur more than it was. This Calcination is made in the following Manner: Take seven or eight of these Stones cleans'd on the Outside with a Raspy or Knife, and powdering very finely one or two of the most shining of them in a Brass Mortar, throw the others whole, one after another, into clear Water; and having taken 'em out, cover them intirely over with the Powder, by rolling them in it, that they may lick up as much as they can; then put them into a little Furnace or Stove, with a Brass Grate, upon which you must lay them in order, with a Fire under them to calcine;

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which

which when done, let the Fire go out of it self; and when all is cold, take off your calcin'd Stones gently from the Grate; separate the Crust, which comes from the Powder in which you have roll'd them, and keep the Stones in a Box with Cotton; preserve likewise the Crust, which is to be reduced into an inspalable Powder.

These calcin'd Stones are the *Phosphorus*, which being expos'd to the Day in an open Field or Street, are lighted as it were in an Instant; after which, if they are carried into a dark Place, they will appear like lighted Coals, without any sensible Heat, and you may extinguish them by little and little; but if you let in the Light they will burn again: And thus they will last for two or three Years together, according as they are more or less frequently expos'd to the Light. And when these Stones have lost their Virtue, they may be restor'd again, by observing the same Circumstances as before, but their Brightness will be much less. The Crust reduc'd into Powder is likewise finer and more illuminating, when expos'd to the Air, than the Stones. They fill little Bottles of fine Crystal with it closely stoppt, which they keep to give Light when they please; for they are not oblig'd to expose it to the Air, as they do the Stones, the Crystal not giving any Obstruction to the Light from the Powder.

One must not imagine that any of the several Circumstances that I have shewn for the Calcination of the *Bolognian Stone* are useless; for they are so necessary, that if they be not all exactly observ'd, the Operation is lost, and the Stone will give no Light. This Stone acquires, by Calcination, a sulphureous Smell, like melted *Orpiment*; and when it is boil'd with Lime and Water, it yields likewise a little *Arsenical Salt*.

The Reason why it appears light, proceeds from the Fire mixing with the Sulphur in its Motion, which raises to the Superficies an Infinity of Particles that are so subtil and delicate as to take Fire upon Light, or the Motion of the Air. But those who desire to be more fully inform'd in this Matter, may read what I have said in my Treatise of Chymistry, where I have spoke not only of this Kind of *Phosphorus*, but of several others; and have

likewise given you the Figure of a Furnace that is most convenient and proper for calcining this Stone, which is a *Depilatory*; and being powder'd and mix'd with Water to the Consistence of a Paste, may be apply'd to any Part of the Skin where there is Hair to be taken off. It is call'd *Phosphorus*, or *Lucifer*, from bringing of Light; and *Crysolapis*, from casting a Light of a golden Colour.

18. Of the Pumice-Stone.

THE *Pumice-Stone*, which the *Latins* call *Pumex*, are Stones *womet.* of various Colours, Shapes, and Weight, being white, greyish, light, heavy, big, little, round, and flat. They are valued more or less according as they are demanded; for some esteem the white, others the grey, some the light, and some the heavy: Notwithstanding which, I must tell you, that the largest and lightest are most set by, especially for those who make Parchment, and Stone-Cutters, who consume abundance; but the small are scarce, us'd but by the Pewterers, who reduce them into Powder. As to the flat *Pumice-Stones*, they are not us'd but by the *Curriers*: In a Word, the *Pumice-Stones* are of such Use that we have scarce any Commodity whereof there is a greater Consumption, there being such abundance of Workmen that use 'em. As to Physick, the little Use made of it is not worth speaking of, save only that after Calcination and powdering, it makes a Dentifrice for the cleaning of the Teeth.

As for the Nature and Constitution of this Stone, I have not yet been able to come to the Knowledge thereof; wherefore I shall rest satisfied with what several Authors say of it, namely, that it is a Stone thrown out of Mount *Vesuvius*, or Mount *Ætna*, and by the Violence of the Winds carried into the Sea, where it is found swimming on the Surface, from whence 'tis taken. Others say they are the Stones of Mountains that have been burnt by subterranean Fires. However, 'tis certain, that the *Pumice-Stone* is a calcin'd Stone, because it is light and porous, or full of Holes, and that it has been in the Sea,

Sea, or is of a salt Nature, for as much as all the *Pumice Stones* we sell are of a salt and brackish Taste, and full as it were of little Needles.

Pumex, or the *Pumice Stone*, is a Stone or Earth that has been calcin'd by subterranean Fires, thrown out by Eruptions of the Volcano's, and by the Force of Winds carried into the Sea, where it is found floating. There are several Kinds of it, the large, small, round, flat, light, heavy, grey, white, &c. the most valued are the biggest, lightest, and the cleanest; they ought to be porous, spongy, of a salt, fenny, or marshy Taste, full of small Needles. They are found likewise in *Sicily*, near Mount *Vesuvius*, from whence they come; and in *Germany*, about *Conflans*, the *Moselle*, and the *Rhine*; they are alkaline, deterfive, drying, us'd for old Ulcers, sore Eyes, and to clean Teeth.

19. Of the *Aëtites*, or Eagle-Stones.

Pomet. WHAT we call the *Eagle-Stones* are certain Stones that are hollow in the Middle, and contain in them a stony Nut or Kernel, that makes a Noise when we shake them. We commonly find but four Sorts of them, that are indifferently call'd in *Latin* *Lapis Aëtites*, but the Kernel *Callimus*. The first Sort is brown, oval, usually the Length of two or three Inches, and half a one broad, rough or knotty, and that takes a good Polish: The Second is something less than the other, and seems to partake much of Iron, for it is cover'd with an Ocre like the Iron *Marcafit*. The third Sort is rough and uneven, as if it was compos'd of Fragments of little shining Flints of different Sizes, whereof some are brown, and others of a ruffet Colour, and some as it were transparent; and all these Flints are strongly knit together by a natural Cement, and most commonly nothing is found within it but some Grains of Sand. The fourth Kind is of an Ash-Colour, and contains within it white Clay or Marle. This Sort comes from *Germany*: The First and Second are found in the Bogs of *Cape St. Vincent* in *Portugal*, and in the Mountains near

Trevoux in the Principality of *Dombes*. It is now no longer believ'd that they are found in the Eagle's Nest.

It were to be wish'd that the Virtues attributed to the *Eagle-Stone* were as certain as they are considerable; Authors affirming that it facilitates the Birth, if tied to the Thigh of a Woman in Labour, and that it hinders Miscarriages if tied to the Arm; they believe that reduc'd to Powder, and mix'd in a *Cerate*, it lessens the *Paroxysms*, or Fits of the Epilepsy, if apply'd to the Head: 'Tis also said, that the Marle or Clay that is found in the Hollow is sudorifick, and will stop the Flux of the Belly.

Aëtites Lapis, or the *Eagle-Stone*, is a Stone commonly round or oval, of the Bigness of a Walnut, and sometimes of a small Pullet's Egg, of a greyish or dark Colour, hollow in the Middle, wherein is contain'd a Sort of stony Kernel, that rattles in the Stone when you shake it. There are four Kinds, [according to *Pomet's* Description] all which have great Virtues assign'd them, which are nothing but imaginary, Experience not confirming them with any Pretence of Certainty: It is astringent, and proper to stop Loosenesses and Hemorrhages, taken inwardly; the Kernel, which is softer than the Stone, is more advantageous for all the same Purposes: They are call'd *Aëtites*, that signifies *Aquiline*, or of the *Eagle*, because it was believ'd that the *Eagles* furnish'd their Nests with these Stones to preserve their Young.

20. Of the Toad-Stone.

THE *Toad-Stone*, call'd in *Latin*, *Bufoinites*, and *Batrachites* in *Pomet*. *Greek*, is a Stone likewise found in the Mountains, or the Plains. It has been believ'd that it was bred in the Head of an old *Toad*, whence it was voided by the Mouth of that Creature when put upon red Cloth: But *Boëtius*, and those who have made exact Enquiries after it, affirm that this Stone is form'd in the Earth. There are commonly two Sorts, to wit, the round and the long: The round *Toad-Stone* is of the Shape of a small Bonnet, round Circumference, hollow

low below, convex above, and very smooth, about half an Inch broad at the Bottom; some of them are of a deep Grey inclining to blue; and there are others of a reddish Colour; but both Sorts are usually of a much lighter Colour at their Bottom. The long *Toad-Stone* is most frequently of an Inch long, and above four or five Lines thick, hollow'd like a Trough on one Side, and of a convex Figure on the other: Some of those are of a deeper, and some of a lighter Grey, marked with some reddish Spots, and smooth as the round: They set them, especially the round Sort, in Rings; but that is more for Ornament than any Virtue in them, for they are very uncertain in their Effects, especially when they pretend that they allay the Inflammation occasion'd by the Sting of Bees, or other Insects. It is false that it changes its Colour, and sweats when it approaches a Cup wherein there is Poison; tho' *Boëtius* and others affirm, that the *Toad-Stone* is found in the Ground, nevertheless I shall not contest or dispute, but that it may be bred in the Head of old *Toads*, tho' it is certain what we now sell comes not from these Animals, but is found in the Earth, as has been observ'd. This Description of the *Toad-Stone*, and that of the *Eagle-Stone*, were given me by Mr. *Tournefort*, who is a Person on whom we may depend.

Busonites, Chelonites, Batrachites, Lemery. is a Kind of precious Stone, whereof there are two Kinds, one round, and the other long. The first is round in its Circumference, hollow on one Side, and convex on the other, in Form of a little Cap or Bonnet, about half an Inch broad at the Basis, very smooth, sometimes grey, brown, black, green, and of various Colours. The second Sort is sometimes more than an Inch long, and above four or five Lines thick, [according to *Pomet's* Description.] The Size of these Stones are sufficient to undeceive those who believe that they are taken from the Heads of *Toads*; for they are found in the Mountains, and the Plains where they are produc'd.

Some pretend, that being powder'd and taken inwardly, they are capable of resisting the Plague and other malignant Diseases; that being apply'd to the stinging or Bitings of venomous Beasts, they draw out the Poison.

Some hang them about their Neck for *Quar-tan Fevers*; but all these Virtues are imaginary, for the *Toad-Stone* has nothing in it but an alkaline Quality proper to absorb Acids, and to stop Looseness, taken from a Scruple to half a Dram; but it is not in Use.

21. Of the *Lapis Amiantus*.

THE *Lapis Amiantus* is a Stone of a greenish Black without and *Pomet.* within, pretty heavy, that being broken is almost like *Plumous Alum*, in that it rises in Threads of a whitish Green, or rather of a Horn Colour. This Stone is incom-bustible, and the Antients were not much deceiv'd when they said the *Lapis Amiantus* and the *Plumous Alum* were the same Thing: There is notwithstanding some Difference, in that the *plumous Alum* arises in long, and this in short Threads; besides, the Extremities of the *Plumous Alum* are not of a Colour with those of the *Lapis Amiantus*. This Stone is found in *Turkey*, for all that we sell comes from *Constantinople*; as to the Choice of it, or its Use, I know nothing.

Amiantus, sive Albestes, sive Albestes Lemery. is a Stone of a mineral Substance, or a Kind of Talck that has a near Resemblance to *Plumous Alum*, which several People confound one with the other, believing them to be the same Thing. It is found in two different Forms; for the one is in Filaments or Strings, like those of *Plumous Alum*, but much longer; the other is in a brown or blackish hard Stone, but that will spread under the Hammer. The Antients spun *Amiantus* and made incom-bustible Linen of it, which amongst other Uses, served them to wrap their dead Bodies in when they burnt them to preserve their Ashes: The Corps burnt while the Linen remain'd entire. This Stone is found in the Quarries near the *Pyrenees*. *Amiantus* is us'd in some Remedies; they believe it resists Poison, cures the Itch, and is deterfive.

22. Of Cobalt.

Cobaltum, or Kobaltum, is a reddish hard Stone, that is heavy, *Pomet.* and in Grains of the Size of our Peas, that stick

stick several of them together upon a Kind of Spar or Marcasite, like Antimony. This *Cobalt* is usually found in the Silver Mines, and is a Plague to the Workmen, being a dangerous Poison: For if by Chance it fall into the Water, and that the Miners be oblig'd to go into that Water, they are sure of having their Legs all ulcerated. This *Cobalt* is much different from that of some Authors, who have thought it to be *Cadmy*, or *Lapis Calimmaris*; but they are grossly mistaken, since 'tis easy to see the Difference. As to its Uses, they are unknown to me, and its Scarceness makes that there is little Demand for it.

Cobaltum, sive Kobaltum, is a Sort *Lemery*. of Marcasite, or hard, heavy, reddish granulated Stone; many of which are collected together upon a mineral Body like Antimony. This Stone is compos'd of a Kind of natural *Cadmy* that is found in the Silver Mines. It is a strong violent Poison, yielding a burning arsenical Salt, a Sulphur, and an Earth compos'd of some metallick Parts. It is caustick, and being apply'd externally, makes an Escar upon the Flesh, and eats off Excrecences.

23. Of Osteocolla, or the Bone-Binder.

Pomet. **T**HE *Osteocolla*, or *Bone-Binder*, is a sandy Stone, and porous like a Bone, whereof there are two Kinds; the one heavy, gravelly, uneven, and pretty round; the other light and less ragged. The

Osteocolla is found in several Parts of *Germany*, where they call it *Benbiru*, but chiefly near *Spires*, *Heidelberg*, and *D'Armstadt*. They pretend that this Stone has the Power or Faculty of setting a broken Bone when taken inwardly, as well as when apply'd to the Fracture.

Besides all these Sorts of Stones already describ'd, we sell several other Kinds, such as that of *Assa*, the Serpentine and Blood-Stone, which is a Sort of Marble full of little red Spots, from whence it takes the Name of Blood-Stone; as also because it is pretended that it stops Blood; the *Star-Stone*, *Rock-Crystal*, *Alabaster*, and many others, whereof several Authors have treated at large.

Osteocolla, Ostiocola, Osteites, Stelechites, Marocbitus, Holoosteus, Osteo-Lemery. lithus, Lapis sabulosus, Lapis Ostifragus, or the *Bone-Binding Stone*, is a sandy hollow Stone, of an Ash or whitish Colour, having the Shape of a Bone of different Sizes. Some are met withal as big as one's Arm. We have two Sorts of them; one round, uneven, or rough, sandy, and heavy, the other smoother and lighter; it sticks to the Tongue, like *Pumice-Stone*. Both Kinds are found in several Parts of *Germany*, as the *Palatinate*, *Saxony*, and where they grow in sandy Places. It is us'd to agglutinate and restore in a little Time broken Bones, being apply'd upon the Part, and taken inwardly at the same Time. Dose from half a Scruple to two Scruples. It is call'd *Osteocolla* from *Osteon* and *Colla*, which is as much as to say Bone-Glue.



BOOK the Sixth of the Second Volume.

Of EARTHS.

P R E F A C E.

IN this Book are contained not only the Earths that are of Use in Medicine, but likewise those which are serviceable to the Painters; in a Word, all that are soft and apt to crumble, and for this Reason have not been rank'd among the Stones. I comprehend in this Book whatever is made from Earths; that is to say, that are related to our Business. I put into the Number of the Earths the Catecu, or Cachou, not because of its Likeness to an Earth, but that most People will have it to be one, as the Name imports, and will appear in the following Chapter.

I. Of Cachou, Cashew, or Japan Earth.

Pomet. **C**ACHOU, according to Mr. Caen, Doctor of Physick, of the Faculty of Paris, suitably to what was communicated to him by one of his Friends, is an Earth that is found in the *Levant*, where 'tis call'd *Majquiqui*, which is usually met withal upon the highest Mountains where the Cedars grow, under the Roots of which this Earth is found; which of itself is very hard, and in a Lump. To lose nothing of this Earth, the Natives, call'd *Algonquains*, gather it up, Sand and all

together, and wet it with River Water, and make it into a Paste, drying it in the Sun to the Hardness we see it of. The Natives always carry it about them, and use it for the Pain of the Stomach. They also apply it outwardly like an Ointment upon the Region of the Stomach.

Tho' this Description of *Cachou* appears not very conformable to Truth, because there is no Probability of its being an Earth; yet as the Person who gave this Description to Mr. Caen, assur'd him that it was so, and for as much as 'tis call'd in *Latin Terra Japonica*, I was oblig'd to rank this in the Class of Earths, and leave it to those to determine what it is, who understood more of it than I do:

do: All I shall say is, that you ought to chuse *Cachou* of a tawny red without, and of a clear red within, the brightest and least burnt that can be.

Cachou is a very bitter Drugg, and of an unpleasent Taste when taken in the Mouth. It is usual to reduce it into a fine Powder, and to mix it with Ambergrise, which with the Mucilage of *Gum Tragacanth*, is made up into a PASTE, and form'd into little Pellets, in Colour and Figure having the Resemblance of Moufe's Dung, and the smaller these Trochets are made, the more valuable are they.

The Use of *Cachou*, whole or prepar'd, is to strengthen the Stomach, and to make the Breath sweet; and in short it is one of the best Druggs we have, and yet at this Time the least used, which proceeds from the great Use of Tea and Coffee, tho' *Cachou* is of much greater Virtues than either of them.

As *Cachou* is very unpleasent to the Palate, especially when first put into the Mouth; therefore some People, besides the Ambergrise, mix Sugar with it.

Catechu, sive *Terra Japonica*, or *Lemery*. *Cachou*, is a Sort of dry'd PASTE, hard, a little gummy, reddish, having the Form and almost the Hardness of a Stone, of a bitter and austere Taste at the Beginning, but leaving afterwards a soft and agreeable Impression in the Mouth. There are two Sorts of it; the first and most common is compact, heavy, of a reddish brown Colour, streak'd with little whitish Rays. The second is more porous, less weighty, and paler than the first. We are not sufficiently inform'd concerning the Nature of *Cachou*; some saying it is a PASTE prepar'd by the Japanners, with the Extract of *Areca*, *Calamus Aromaticus*, *Liquorice*, &c. mix'd and harden'd together over the Fire. Others pretend that it is made with the Juices of *Areca*, and the green Bark of a thorny Tree of *Japan*, call'd *Catechu*, and thicken'd together by Heat. Others, as some Moderns maintain, that it is an Earth from the *Levant*, call'd *Masquiqui*, [as describ'd by *Pomet*;] but after all *Cachou* does not appear to the Taste to be any Thing of

an Earth, but rather a thick Juice; besides there is drawn from it, by chymical *Analysis*, a great deal of Oil and essential Salt, like what is drawn from Plants. It is good to strengthen the Brain, Lungs, Stomach; against Catarrhs, and to correct a stinking Breath.

2. Of Seal'd Earth.

Terra Sigillata, or *Seal'd Earth*, is a Kind of white *Bole*, *Pomet*. sometimes a little reddish, that is moisten'd with Water, and afterwards form'd into little Cakes half round, of the Bigness of one's Thumb, upon which is stamp'd several Characters. The Variety of Figures, Colours, and different Seals that are found upon the *Terra Sigillata*, makes me think that every one makes them to his Fancy; and that it is nothing but a fat astrigent Earth, that is more or less colour'd, and reduc'd into such Cakes as are brought us. I shall not stop here to relate all the fabulous or true Stories which the Antients have told concerning the native Place whence this Earth comes, and the Ceremonies us'd when it is gather'd, nor how the *Grand Signior* signs it with his own Seal, &c. but I shall tell you that the Earth that is most us'd and esteem'd, is that which is in little reddish Cakes, the least sandy or gravelly, and the most astrigent that you can get.

It is much used in Medicine because of its astrigent Quality. It is also an Ingredient of *Venice Treacle*, and needs no other Preparation than to have the above-describ'd Qualifications.

As to the Earth of *Lemnos*, 'tis said to be the same with the seal'd Earth, but in its natural State, without any Impression upon it.

Terra Sigillata, *Terra Lemnia*, *Seal'd*, or *Lemnian Earth*, is a *Lemery*. Kind of *Bole*, or fatty, clayey Earth, that is dry, soft, and friable; sometimes yellowish, whitish, or reddish, insipid, and astrigent to the Taste. They bring it sometimes into the Isle of *Lemnos*, but it

it comes at present from *Constantinople, Germany, Blois*, and several other Parts. It comes ordinarily form'd into little round Cakes about the Thickness of one's Thumb, roundish on one Side, and flat on the other, by a Signet engrav'd with some Arms or certain Devices that the Prince of the Country causes to be put upon it; and this is the Reason why it is call'd *Seal'd Earth*. That of the Antients was yellow, and made into Cakes much smaller than these at present are; and had engrav'd upon them the Arms of *Diana* under the Representation of a Goat.

Chuse your seal'd Earth that is soft to the Touch, clayey, apt to crumble, and of a whitish red Colour, that will cleave to the Tongue. They tinge or colour it sometimes with Turmeric, or some other Drugg, to make it come up to the Colour of the Antients, which is the true *Lemnian Earth*, and was taken from a Hill where no Plant grew. The *Turks*, who are the present Masters of it, mix this with other Earths of the same Nature; and having kneaded them together with Water, make them up into little round Cakes, which they seal with the *Grand Signior's* Signet to make it pay Duty. This Earth is a good Antidote against Poison, proper for Fluxes, Hemorrhages, Gonorrhæa, Whites, and Vomiting. Dose from half a Scruple to two Scruples. It is outwardly us'd to stop Blood, dry up Wounds, and strengthen the Joints.

3. Of Fine Bole, or Bole Armoniack.

Pomet. IF we have several Sorts of seal'd Earths, we have not less of *Boles*, whereof the most esteem'd is that which has its Name from the *Levant* or *Armenia*, whether because it formerly was brought from those Parts, or that those who deal in it may make it sell the better; but as I have never seen any of that, and what we now sell is found in several Parts of *France*, I must inform you the best is that we have from about *Blois* and *Saumur*, or from *Bourgogne*, and which is of various Colours, as grey, red, and yellow. The yellow is the most valued, because it passes the readiest for Bole

of the *Levant*, and because it fits the *Gilders* best.

As these *Boles* are the dearest, because of the Charge of transporting 'em to *Paris* from *Blois* and *Saumur*, we prefer that of *Baville* and other Places about *Paris*, because the Peasants bring it us at a cheaper Rate than we can buy the other. The best is the cleanest, smoothest, and well-colour'd, of a light yellowish red, which being tasted seems to melt like Butter in the Mouth. Its Thickness is known by sticking to the Tongue. The counterfeit or adulterate Bole is of a sad deep Red, sandy and gritty, being indeed not of a third Part of the Price. It is very drying and astringent, good against Fluxes and Gleet. It thickens thin Humours, resists Putrefaction, and expels poisonous Bodies. It is likewise us'd in spitting of Blood, bleeding Wounds; and also to consolidate broken Bones, strengthen weak Limbs.

Bolus, or *Bole*, is a soft, brittle, reddish, or yellow Earth, which *Lemery* is brought us in Pieces of different Shapes and Sizes. The finest comes from the *Levant* and *Armenia*, call'd *Bolus Orientalis, seu Bolus Armena*; but all the Bole we have, which is in Use amongst us at present, is brought from several Parts of *France*, and the best is about *Blois* or *Saumur*. As there is found in the Quarries or Pits a great deal of coarse and gravelly Bole, they wash it to free it from the Gravel, then make it into a hard Paste, which they form into square Sticks about a Finger long, which is call'd *Bole in the Stick*, and is us'd externally. Bole is astringent and desiccative, proper to stop Looseness, Dysentery, Spitting of Blood, to sweeten the Acids, being taken inwardly. There is also a great deal us'd externally to stop Blood, prevent Fluxion, and strengthen and consolidate. That which is call'd white Bole is an astringent Marble, but not so efficacious as the red Bole.

4. Of Oker.

THE yellow and red *Oker* is one *Pomet.* and the same Thing, for the natural Colour is yellow, and it is turn'd red by

by Means of a reverberating Furnace, in which they put it, to make it red by the Force of the Fire: All the best Mines of *Oker* in *France*, are in *Berry*; and among the rest, that which is at a Place call'd *St. George*, upon the Side of the River *D'Ucher*, two Leagues from the City *Vierzon* in *Berry*, where they dig it out of the Earth, as they do Pit-Coal. This *Oker* is found 150, or 200 Foot deep in the Earth, of four to eight Inches thick; only they find under this *Oker* a white Sand, like that of *Calais*, and above the *Oker* a yellow Clay good for nothing.

There comes likewise yellow and red *Oker* from *England*, which is browner than that of *France*, but not so good, because it is naturally drier, and comes from a stony Ground which they are forced to grind in a Mill; whereas that of *Berry* is more natural, fatter, and works better in Oil; so that the *Dutch* will not use the *English Oker*, but when they mix it with an equal Share of that which comes from *Berry*.

Both Sorts are us'd by the Painters; but that which is most set by, is that which is dry, soft, friable, of the highest Colour, and least gravelly.

There comes beside a *Red Oker* from *England*, which we commonly call *Brown Red*; this is us'd by the Painters; but that which is of a much deeper Colour is call'd *Putty*, and they employ it in polishing of Glafs.

Oebra, in *English Oker*, is a *Lemery*. Mass of Earth, that is dry, fat, will crumble, and is soft to the Touch, of a yellow or Gold Colour, that is taken from some deep Pits in *Berry*. They calcine it in the Fire, 'till it gains a red Colour, and then it is call'd *Red Oker*; both Sorts are us'd by the Painters; they are resolute, drying, astringent, being externally apply'd. Some say there is another Sort of *Oker* call'd *Alanian Earth*, or *Tripoly*, and *Terra Albana*; it is chiefly found in *Alania*, a Place near *Scythia*, but it is brought to us out of the *Mediterranean*, being a *Species* or *Kind* of *Oker*.

5. Of Green Earth.

WE fell two Sorts of *Green Earth*, to wit, that of *Verona*, which is brought from about *Verona* in *Italy*, whence it takes its Name, and the common *Green*.

The Earth of *Verona* ought to be stony, and as green as may be, and take care that it be not inlaid with Veins of Earth.

The common *Green* ought also to be of the greenest, and as near resembling that of *Verona* as you can get.

Terra Viridis, in *French Terre Verte*, is a dry Earth, of a green Colour, which is brought from *Verona* in *Italy*, and is for the Painters Use.

6. Of Cologn Earth.

Cologn Earth is an Earth altogether like that of *Umber*, excepting only that it is browner:

This is of some Use to the Painters. You must chuse such as is tender, easy to crumble, the cleanest, with as little Mixture of Dirt as possible.

7. Of Umber.

UMBER, so call'd because of its being us'd in drawing Shades, is brought to us from *Agypt*, and other Places of the *Levant*, in Lumps of different Bigness.

In the Choice of this Earth, you ought to take that which is soft, in large Pieces of a brown Colour enclining to the Red, for this is better than the grey.

Its Use is for the Painters, and before it is ground 'tis usual to burn it, as well for Painting in Oil as for the Glover, which makes it become more reddish; the Fume of it ought to be avoided, as being stinking and offensive.

8. Of Tripoly.

Pomet. THE Tripoly is of two Kinds in France; the one they bring from Poligny near Renne, in the lower Bretagne; the other from a Place call'd Men-na near Rion in Auvergne. That of Bretagne is most esteem'd, and the best, being more proper for Lapidaries, Goldsmiths, Braziers, and all other Workmen: It is taken from a Mountain at twenty or thirty Foot of Depth, and is found in Veins or Beds of about a Foot Thickness: They carry it to Redon, where it is shipp'd and transported to Nants.

That of Auvergne is not so valuable, being not at all fit for the Use of Jewellers, Goldsmiths, or Braziers, because it has not Substance; and also rises into thin Leaves like Paper, when it is dry. It is only us'd for scouring Household Stuff, and is found almost in the very outer Surface of the Earth.

'Tis said that Tripoly is a Stone that becomes light by Means of certain Veins of sulphureous Earth that are burnt under the Tripoly, and which gives it the Quality of whitening, polishing, and brightening the Copper.

There are also Mines of Tripoly in Italy, and other Places; but as this Commodity is of little Value and Consumption, it is not much sought after; besides which we have it in France, and there is no Occasion to bring it from others Parts.

Alana, in French Tripoly, is a Lemery. light white Stone, tending a little upon the Red, which they take from several Mines of Bretagne, Auvergne, and Italy. 'Tis believ'd that the Lightness of this Stone proceeds from its being calcin'd by the subterranean Fires. We have two Sorts in France; the first, and the best is that from a Mountain near Renne in Bretagne. It is found laid in Beds of about a Foot thick, and is us'd by the Lapidaries, &c. to whiten and polish their Works. The second Sort is brought from Auvergne; this divides itself into Flakes or Leaves, and is of no Use to the Lapidaries

or Braziers, but serves to scour Pots and Kettles, and other Utensils belonging to the Kitchin: It is deterfive and drying apply'd outwardly, but of no Use in Medicine.

9. Of Indian Red.

THE Indian Red, or Persian Earth, is what we improperly call English Red; this is a very dear Drugg, especially such as is in little Pieces, moderately hard, and of a high Colour. This Red is us'd by none but the Shoe-makers, who steep it in the White of an Egg to colour Shoe-Heels with.

We have besides this, several other Sorts of Earths that come from the Pits; as Marle, that some sell by the Name of White Bole, and many other wash'd Earths; as Roüen White, that of Seve and Port Neuille, Champagne Chalk, and others; of which we sell none, because we can easily come at them, as the Smeëtin, or Fuller's Earth, which is a fat, smooth, sticking Earth that is heavy, sometimes yellowish, and sometimes blackish. This is much us'd by the Clothiers in England; and because this Earth does almost the same Thing as Soap, the Latins call it Terra Saponaria, or Soap Earth; also the Mexican Earth, which is a very white Earth, which the People of Mexico make use of to whiten with, and in Medicine like Ceruse; and likewise it serves to polish Silver.

The Marga is a Kind of white Stone very like to Champagne Chalk. The Lithomarga, or Stenomarga, is what we call Stone Pith, or Mineral Agarick, or Moon Milk; this Stone is found in the Chinks or Apertures of the Rocks in several Parts of Germany; and different Names have been given to this Stone, because it is very white and crumbling, and that this Whiteness comes from its being calcin'd by the Vapours which arise from Metals.

There is, besides, several other Sorts of Earths, as the Eretrian Earth, the Samian Earth, Chio, Selinusian and Cimolian Earths, and Tobacco-pipe Clay; with many others whereof several Authors make mention.

As to the Preparation of Stones or Earths, that is done ordinarily two Ways, that is to say, by grinding on a Porphyry or Marble, in like Manner as Sea Shells, Pearl, Hyacinth, Topazes, Emeralds, Sapphires, Corals, Loadstone, *Lapis Calaminaris*, Tutty, and the like, are ground. The second Way is by pounding in a Mortar with Water, in order to reduce them to a fine Powder, as we do Litharge, Ceruse, and *Minium*. The first, after they have been livigated, are made into Troches with Rose Water, and the next into Tablets with common Water.

Terra Persica, or *Indian Red*, is *Lemery*. a dry red Earth that is brought us in little Stones that are of a moderate Hardness. The Shoe-makers use 'em to dye Shoe-Heels red; chuse the deepest colour'd. *Terra Saponaria*, in *French Smeffin*, or *Fuller's Earth*, is a kind of slippery glutinous Earth, that is heavy, of a yellow or blackish Colour, and does the same Thing as Soap, whence it was call'd *Soap Earth*, or the Earth the Fullers use to scour with. The *Terra Selinusia* is a greasy or clayey Earth, that is very like that of *Chio*; it is astrigent and resolute, proper to take away Spots and Chops of the Skin, to soften Tumours of the Breast and Testicles, and to resolve. The *Chio* Earth is a Kind of seal'd Earth, or a fatty, sticky, ash-colour'd Earth, that is brought from *Chio*; it is astrigent,

and removes Spots, &c. *Terra Samia*, or *Samian Earth*, is what comes from the Isle of *Samos*, and is of two Kinds; one is soft, white, and crumbling, that sticks to the Tongue when apply'd to it, and is very like seal'd Earth. Some People call it *Collyrium*, because it serves sometimes to relieve the Eyes; the other is crusty and hard, tho' something unctuous; they call this *Samius Aster*, because it is found in shining Spangles, like Stars.

Besides there is *Marga*, *Lithomarga*, *Stenomarga*, *Medulla Saxorum*, *Agaricus Mineralis*, *Lac Lunæ*, or *Stone Pith*, *Mineral Agarrick*, *Moon Milk*, which is a Kind of soft, friable, pithy, very white Stone, resembling Chalk, which is found in the Clefts of Rocks in some Parts of *Germany*; it is deterfive, astrigent, drying, consolidating, which dissolves coagulated Blood, and may be us'd inwardly and outwardly.

Mr. *Pomet* observes in his Annotations made at the End of his Book, that this *Stone Pith* is found on the Side of the Signiory of *Moscow*, belonging to the Elector of *Saxony*, and near *Gironne* in *Catalonia*; that the Inhabitants of those Parts chuse some of this Earth after the Sun is down and has warm'd it, that has little Balls on it like Meal, with which they make Bread, mixing it with some true Flower, which has been confirm'd by several other Naturalists.

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