A Compleat

HISTORY

OF

DRUGGS,

Written in *French* by Monsieur *POMET*,
Chief DRUGGIST to the present *French* KING;
to which is added what is further observable on the
same SUBJECT,

FROM

Messrs. *LEMERY*, and *TOURNEFORT*,

Divided into Three Classes,

Vegetable, Animal and Mineral;

With their Use

In PHYSICK, CHYMISTRY, PHARMACY,
And several 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 Virtues, *&c.* A WORK of very great Use and Curiosity.

Done into *English* from the ORIGINALS.

VOL. II.

LONDON:

Printed for *R. Bonwicke, William Freeman, Timothy Goodwin, Matthew Wotton, John Walthoe, S. Manship, John Nicholson, Benjamin Tooke, Rich. Parker,* and *Ralph Smith.* 1712.

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LONDON

An Account of the NAMES of the AUTHORS Quoted in this WORK.

Acosta, (*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 *Matthew 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, (*Aloſius*) 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 is added two Figures, one of the *Chamæleon* 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 *Cologn*, 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 with the Natural Hiſtory of the *Weſt-Indies*; printed at *Amſterdam*, 1658, in *Folio*.

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

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

Brunfelſius, (*Otho*) 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 Bauhinus'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.

Ca-

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

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

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

Caſtor Durantes'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, (*Fabij*) *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*.

Cortuſus, (*James*) *Anthony*, a Senator of *Padua*, and Preſident of the Phyſick Garden there, but 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; printed, 1578, in *Quarto*.

An-

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

Creſcentius, (*Peter*) 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*, *Goupiſlius Anſſulanus*, *Johannes Ruellius*, *Johannes Cornarius*, *Johannes Antonius Sarracenus*, and others.

Six Books of the ſaid *Dioſcorides*, with *Ruellius*'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.

Euricius 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

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 *Zurich*, 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 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*.

Hieronymus, or *Jerome* 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 Bauhinus's Hiſtory of Plants, carried on by *Henricus Charlerus*, Doctor of *Baſil*, and enlarg'd by *Chabræus* 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.*

&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.*

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 the Plants of *Lyons*, by *Gulielmus Rovillius*, 1586, it is uſually call'd *Dalechamp*'s Hiſtory in *French.*

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

Marcgravius, (*George*) his eight Books of the Natural Hiſtory of *Braſil*; 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.

Mentrelius, chief Phyſician to the Elector of *Brandenburgh*, his Univerſal *Index* of the Names of all the Plants in ſeveral Languages; with a

ſmall

ſmall one of the ſcarceſt Plants, and ſome Figures cut in Copper; printed at *Berlin*, 1682, in *Folio*.

Meſue's Works of the Choice 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 *Acoſta*, 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 Bleſenſis* enlarg'd by *Robert Moriſon*; printed at *London*, 1669, in *Octavo*.

Moriſon's Botanick Preludes.

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

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

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

Petrus Pena: See *Adverſariorum Opus*.

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

Philip 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 Plukenett'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 Books 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*.

Quadramius, 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 Cutts; 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

Robini Hortus, or the Garden of *John Robin*'s 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 of three Books of *Dioſcorides* into *Latin*, concerning the Nature of Roots; printed at *Baſil*, 1537, 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*.

Schroder's *Pharmacopeia 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*.

Tabernæmontanus 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, Cutts, and ſeveral Medicines, by *Caſpar Bauhinus*, 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.

Thalius, *Silva 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 Cutts, tho' they are deſcrib'd to 800; printed at *Strasburgh*, 1552, 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 CATALOGUE OF THE SEEDS OF

Several ſcarce and curious PLANTS lately brought from the *American* Iſlands; communicated to Monſieur *Lemery*'s Bookſeller, and publiſh'd with *Lemery*'s Conſent, by *Joſeph Donatus* of *Surian*, a Phyſician of *Marſeilles*, a Lover of Botany, and alſo Profeſſor in *America*, being ſent thither by the *French* King to promote *Botanick Knowledge*.

ACOUOUA, 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.

Acououa, the 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 *Bauhinus* has delineated with a black Spot.

Are-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 eateable, of a brown Colour, ſtreak'd with white Spots.

Anou-

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 and *Acacia* of *India*, a fætid Pod, with a long and norrower 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.

Astragallus, 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 a *Anacardium*.

Assourou, 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 *Bauhinus* has delineated.

Boucomibi, with a Periwinkle Fruit, Pods like 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 venemous Herb in the Woods, with a pyramidal Grape Fruit, of wonderful Virtues.

Cay-

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

Cayouti, another Sort, bearing a chast 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 *Annil*, from which *Indigo*, or a Paste is made, with which they dye Wool and other Things.

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

Couyarali, with a flaxen Leaf, and white Flower.

Caatia, with the *Germander* 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 *Courirou*, 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 venemous Creatures, for which Use it yields Precedence to no other Antidote.

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

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

Cururuape, a Fruit bearing three-leav'd venemous 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.

Cacontiba, 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 rib'd Bindweed, with a golden Cluster, and the Seed of a *Polyanthos.*

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

The

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 *Dactiloides* 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.

Caravicou, 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 ſhruby, or ſtalky *Strychnis*, 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.

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

Erecoulibanna, a purple *Creſs*, *Dittander*, or *Piperitis*, gently prickly, with a cauſtick Root, the Smell whereof will ſtupifie Serpents.

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

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

Jamaheu, the famous *Ricinus*, with Palm-Leaves jag'd deeply or indented; *Bauhinus* delineates it the *Purging Hazel*, or *Filbert*.

Inimboy, a thorny winding Fruit with ſtony Kernels; *Cluſius* 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*.

Jynaoa,

Jynaoa, 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: *Bauhinus*, in his *Pinax*, calls 'em *Pignones de los Infiernos*, or the *Devil's purging Nuts*.

Latyrus, the narrow leav'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 venemous and milky Tree, with a sweet Fruit like an Apple, which the *Indians* poison their Arrows with.

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

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

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

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-leav'd Cane.

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

Another *Mantiakeirâ*, 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 leavy Stem, and blackish purple Flower.

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

Noulourhue, another Soapwort, being a Tree that bears a Grape or Berry, which the *Indians* uſe for Soap.

Nhaloubonou, 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 *Oulaboali*, 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*,

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

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

Oucoulihue, 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 *Matthiolus*; the Decoctions of whoſe Leaves and Bark purges downwards.

Ovacobiba, 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 *Bauhinus* has delineated it; the *Piſum Cordatum* of *Lobelius*.

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

Rhaau,

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

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

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

The large *Ricinus*, and *Kerva* 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.

Another *Riboulichi*, 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 *Senſem*, an *Oleran* Herb, or *Indian* Corn or Grain, from whence is drawn a famous Oil amongſt the *Indians.*

Sair of the *Indians*, a Hemp-like branching Sorrel, or ſour Dock, crown'd with a purple Fruit, or *Guiny 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-colour'd Fruit, like a Pear.

Titoulihue, a ſmall milky Tree, with a Citron Leaf, a joynted 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 ſilky Nightſhade, with a white Apple-like Fruit, and a Thorny Leaf.

Another Sort of the *Titoulihue*, 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.

To-

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

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

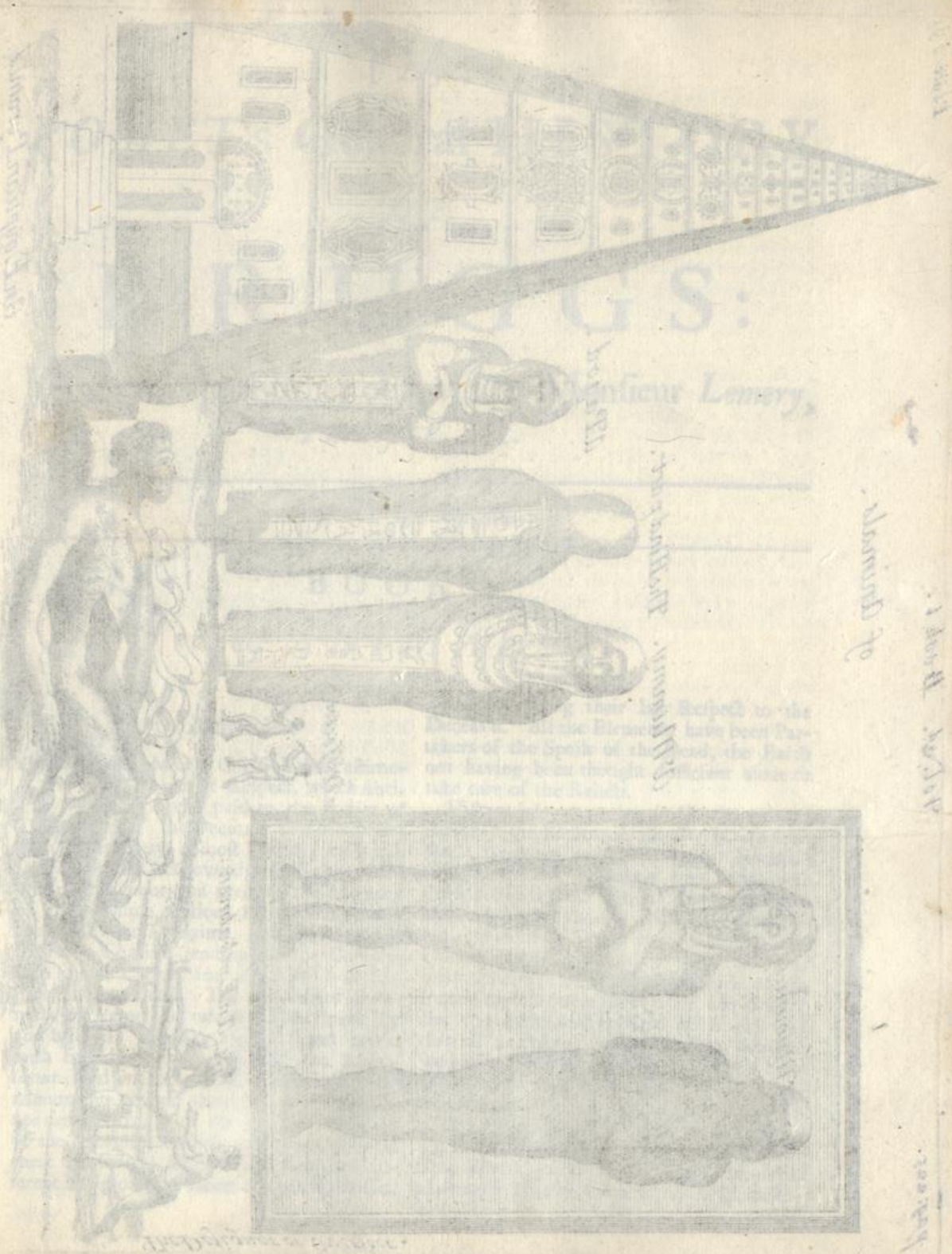
Toulichiba, a Sort of podded, wild, Campion Tree, with the Mallow Leaf; the Seed whereof is a Sort of purpliſh black Pulſe, or the liguminous Kind.

Tobocora, a thorny venemous 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.

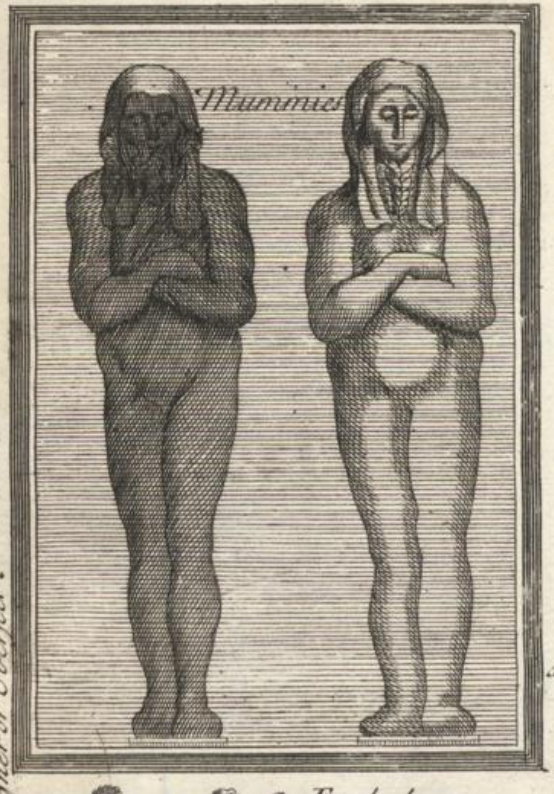
Tapire, great, broad, white Peas, ſtreak'd on the Back with a purple Colour, call'd the *Grand Gorgane*, which the Poor make good Food of.

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

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



of Animals.



a Mummy. The Hind part.

a Pagod.

a Dissector

The Designer or Overseer.

An Embalmer.

a Body Embalmid.

An Egyptian Pyramid

POMET's General HISTORY OF DRUGGS:

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

Volume the Second.

BOOK I.

Of ANIMALS.

1. *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 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 Ancients 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 Relicts.

Hiſtory informs us that the Fire burn'd 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 ancient 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 Dormitories,

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 Livers, at that Time of Day, but reckon'd now wou'd amount to eight thousand Livers, or five hundred Pounds Sterling and upwards.

This Embalming was us'd to none but Persons of the first Quality. Three People us'd to be imploy'd in the Operation; one was a Kind of Designer, or Overseer, who mark'd 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 wou'd 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 Dessector with Stones, and do him all the Injuries they cou'd, 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 Rosin of Cedar, and fill'd it with Powder of Myrrh, Aloes, *Indian* Spicknard, *Bitumen* of *Judea*, 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 wrap'd all the Body in Bandages of fine Linnen dip'd in *Myrrh* and *Asphaltum*; and the *Designer*, which they call'd the *Scribe*, cover'd the Wrappings with a painted Cloath, 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 wou'd 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 Animal 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 gives 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 represents the thirty Days that the Sun makes each Month in passing thro' the Signs of the *Zodiack*: As to the other hieroglyphical Characters, the History of 'em 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 *Judea*; or rather the Bodies were dry'd with *Lime*, or other Druggs of little Value; and sometimes they us'd *Egyptian 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 possesses 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 encrease, 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 ancient *Egyptians* 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 sought 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 exquisitly, 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 wou'd 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 Linnen, which had been before dipt in aromatical Gums; and then they put upon the Head a Napkin, like a Woman's Quoif, 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 tye their Jaws close, so that they cou'd 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 Past-board, or of painted Cloath, resembling the dead Person, and embelish'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 into great Cases of Glass made on purpose, according to the Grandour of the Person, and 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 cou'd not give a better Security than the embalmed Body of his Relation; and that which made it esteem'd so, was, that they wou'd spare no Pains to pay the Money again; for if by Mischance the Debtor cou'd 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 *Egyptians* 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 Linnen, 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 worship'd in their Life-time. The Idols, or Pagods, were made of Gold and Silver, or 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 caused to be built in their Life-time, as is to be seen at this Day by the Pyramids of *Egypt*, which are two or three Leagues from *Grand Cairo*; and Historians relate, that *Chemmis* King of *Egypt* made one, where one hundred thousand Men were imploy'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 their 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*, *Egypt*, *Venice* and *Lyons*, are nothing else but the Bodies of People that dye 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 *Cerecloath* stuft, 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 *Egyptian Mummies* to those who know no better, and don't understand that the *Egyptians* 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 Pary*, have said.

The Sieur *Guy de la Fontaine* being at *Alexandria* in *Egypt*, 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 or Mummies, which he having obtain'd with some Difficulty, the *Jew* at last open'd his Magazine, or Store-House, and show'd him several Bodies pil'd one upon another. Then after a Reflection 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 cou'd 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 *Judea*, 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 Compariſon much better than that which comes from the Hands of the Hang-Man. This *Adeps* or *Axungia* is reckon'd very good for Rheumatiſms, 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, diſcuſſive, anodine, and antiparalitick; it is good againſt the Gout and contracted Nerves, made into an Oyntment, 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 Oyntment, by melting all together. Man's Scull 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 Scull.

The *Engliſh* Druggiſts, eſpecially thoſe of *London*, ſell the Heads or Sculls of the Dead, upon which there is a little greeniſh Moſs, which is call'd *Uſnea*, 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 Excreſcence that grows two or three Lines high, on the Top and round Mens Sculls who have dy'd violent Deaths, and lain ſome Time on the Ground, or hung in Gibbets, or the like: It only begins to grow when the fleſhy Subſtance about the Scull 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 Sculls 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 Sculls cover'd with Moſs, to put into the Compoſition of the ſympathetick Oyntment, 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, ſtrip'd of the fleſhy

Mem-

Membrane, and the Brains taken out, being well wash'd and dry'd, and separated with a Saw from the lower Part, is what the Druggists sell by the Name of *Human Scull.*

Lemery. A Mummy is a dead Body of a Man, Woman, or Child, which is embalm'd and dry'd: The first Mummies were taken from the Burying Places of the ancient *Egyptians*, near the Pyramids, where the finest were to be seen a few Leagues from *Grand Cairo.* This Embalming was made with Balsams, Rosin of Cedar, *Jews* 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 entring, 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 dryer, more impregnated with Salts and Bitumens, 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 show 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 ancient 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 endeavour'd 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 Ancients 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 wou'd 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 charg'd with the whole Operation; and after the Apothecary has prepar'd 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 perform'd on the Dauphiness. We are not to be supriz'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 advantagious Hints, which seem'd to him to favour his Opinion: But having perform'd that Embalming my self, 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 passed, 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.

The

The Plummer being ſent for, comes to take the Surgeon's Order about the Size of the Coffin; becauſe if he ſhou'd content himſelf with taking Meaſure of the Body, that Caſe wou'd 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: 2*dly*, The Gums and odoriferous Druggs beaten to a fine Powder; and, 3*dly*, 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 eaſie 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 powder'd, 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, Cinamon, white Pepper, Sulphur, Alum, ſalt Peter; all which are to be well powder'd, 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 order'd to be ſet near him the leaden *Barrel*, the Surgeon takes ſome handfulls 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 contain'd in the Head, Breaſt and Belly, except the Heart, which he ſeparates and puts to ſoak in Spirit of Wine, 'till he has finiſh'd 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 ſolder'd 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 Scull 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 ſow 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 Liniment;

niment; 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 lumbary 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 faſten'd: Whilſt the Operator is thus employ'd about one Arm, an Apprentice is to do the ſame to the other, conform to this Example.

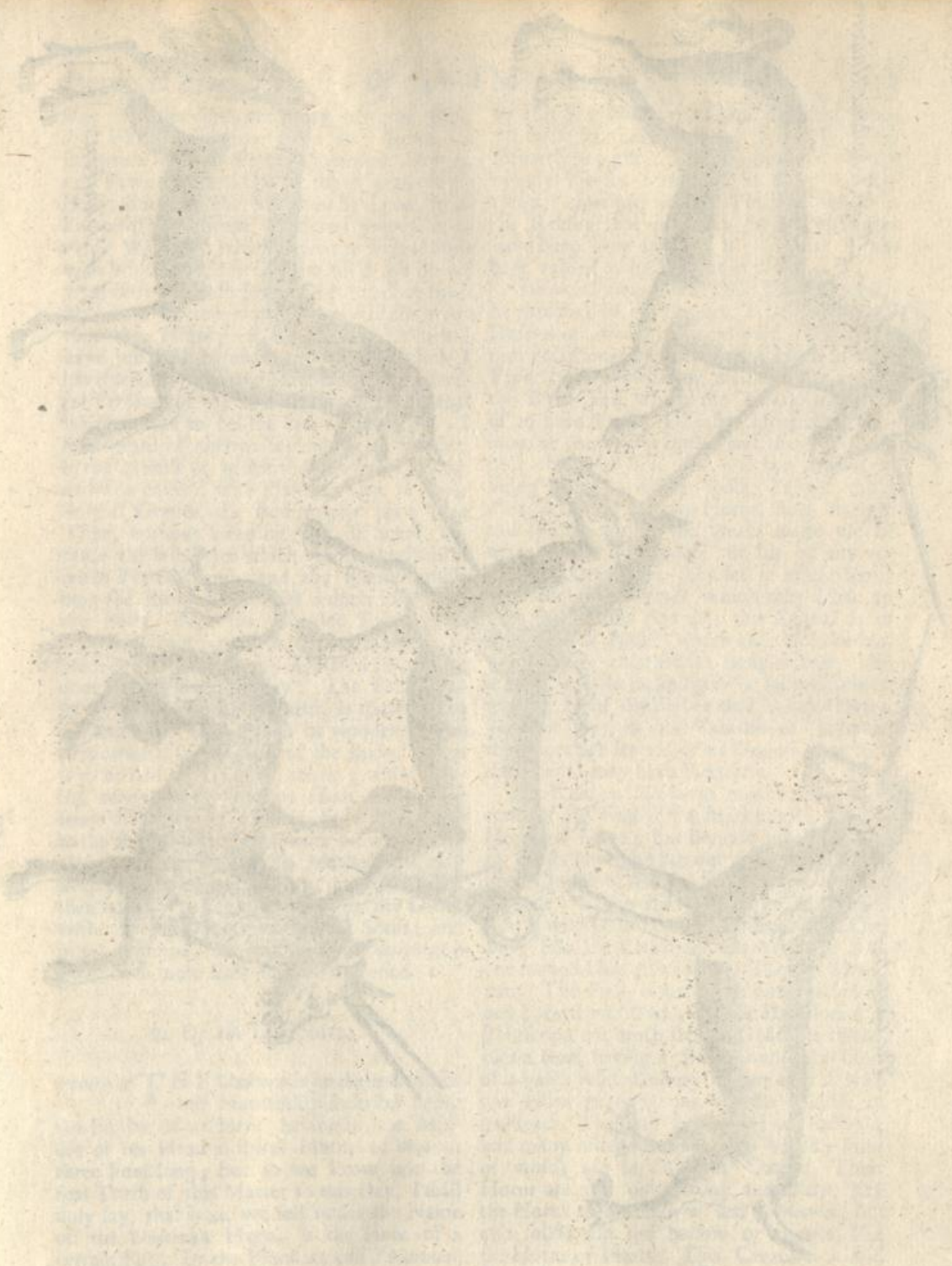
The ſame Operation is to be perform'd to the Thighs and Legs, with this Difference only; that the Inciſions are to be longer, deeper, and more numerous than in the Arms: Theſe Parts, thus cut, look like *Switzers Breeches*. After they have ſufficiently imbib'd the Spirit of Wine, they are to be fill'd 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 is 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 uncover'd.

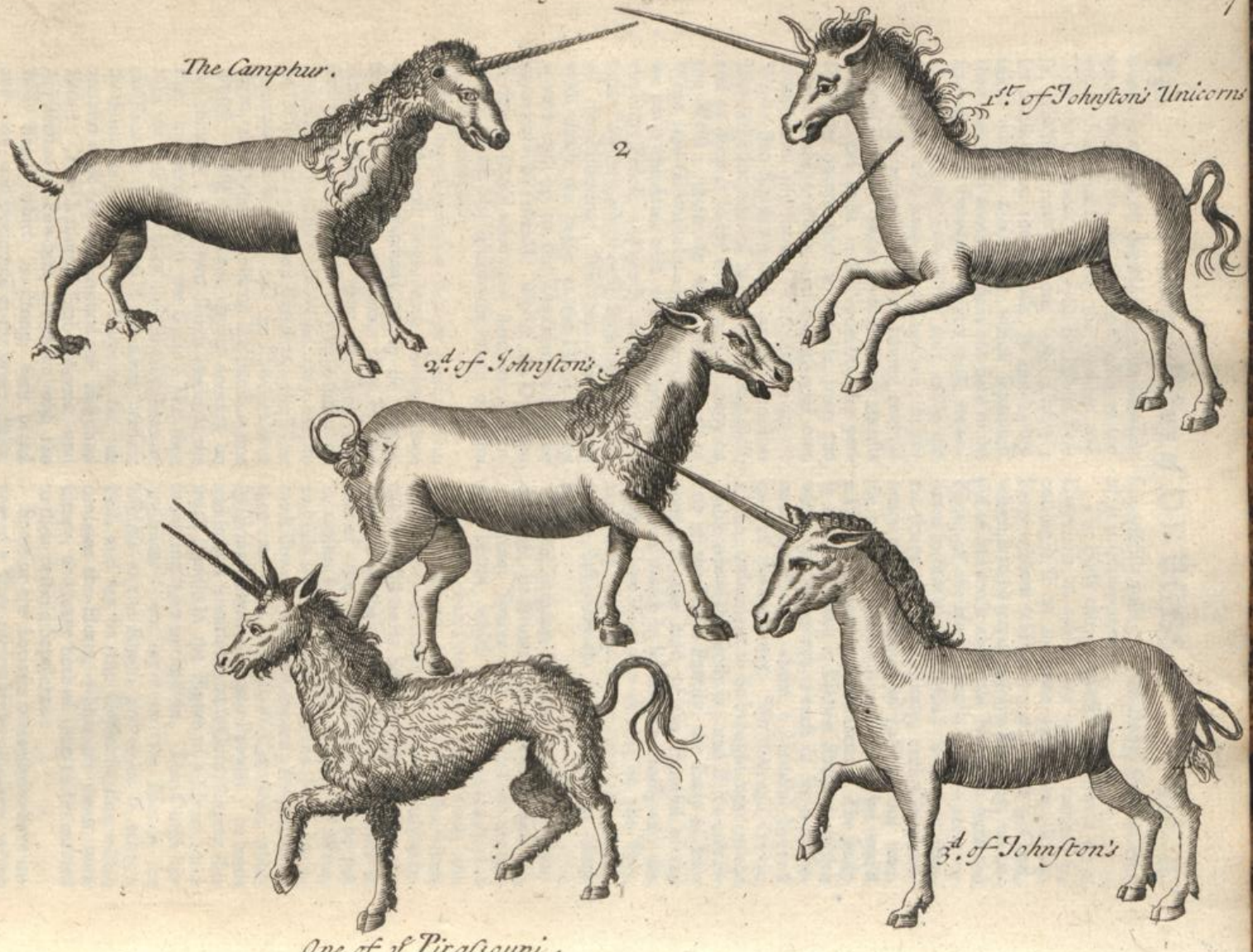
The Body thus enamell'd, we lay it on a Cerecloth in which we wholly encloſe it, cutting it ſo as to come cloſe over all the Parts without folding it; and with a Cord, which is to be ten or twelve Ells long, we begin to ſtraiten it about the Neck, to form the Figure of the Head, that it may be accomodated 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 wou'd a Pack to be ſent by the Carrier. The Body is then put into a Linnen Shrowd, which with a String we tye 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 Shrowd 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 Powders 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 ſolders on as expeditiouſly and neatly as he can: Whilſt he is Soldering 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 expreſly 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 ſolder'd, 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 Ancients 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; but 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 my self in acquainting you that the History of Embalming, which I have just laid before you, is that which I have perform'd 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 ancient 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 Peter 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 shou'd 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, proportion'd 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 through 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 call'd *Narvual*, 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 Ancients, 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 Pareus, in a little Treatise which he compos'd of the *Unicorn*, says, That in the Deserts of *Arabia* he found wild Asses, which they call *Camphurs*, 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, streight 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 Deers. *Johnston* says, in his Treatise of Animals, that there are several other *Unicorns* to which the Reader may have Recourse.

The Kinds of *Unicorns* now come to be consider'd: 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, *First*, The *Orix*, or one-horn'd wild Goat: 2*dly*, The one-horn'd Ox: 3*dly*, The Hart with one Horn: 4*thly*, The one horned Hog; and 5*thly*, The one horned Ass. The First is certainly but a Kind of one horned *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 hoof'd, 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

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 Lyon.

The one horned Ox, Bull or Cow, is bred in *Aonia* 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 call'd 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*. These *Unicorns* are somewhat lesser than Elephant, 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 *Ass*, is the *Indian Ass*, which equals in Bigness a Horse; all white on the Body, but purple headed and black ey'd, having one Horn in his Forehead, near three Foot long, whose upper Part is red or black; the Middle black, and the neather 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 Ass 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 of 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* Ass comes neareſt to this Description, for the true Unicorn and he agree in these four Things: *First*, 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; *First*, In that the *one horned wild Indian Ass*, is whole hoof'd, 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 Weasle-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 wou'd take 'em 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^t bears y^e Bezoar or y^e Bezoar Goat.

4

The Musk Goat.

Horns, none of our Authors have yet made appear; and if all the Circumſtances be conſider'd, it is much to be doubted, whether any of them were the Right or no; 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. But this Horn is not produced by a four footed Beaſt, but comes from a Fiſh, call'd the *Sea Unicorn*, and is brought from *Davis*'s Straits, near the *North* Paſſage.

Authors have aſcrib'd almoſt incredible Things to it; the chiefeſt of which are to reſiſt all Manner of Poyſons, and to cure the Plague with all Sorts of malignant Fevers, the Biting of Serpents, mad Dogs, *&c.* and is chiefly us'd 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 Broths, *&c.* after the Manner of Shavings of Hart's Horn.

3. *Of the* Bezoar.

Pomet. THE *Bezoar*, which the *Indians* call *Pozan*, is an Animal that produces in his Stomach, or in a Bladder, a Stone that is call'd 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 'em 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 *Golconda* lying on the *North-Eaſt*: It is found in the Dung that is in the Maw of the Goats that browze 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 Sort have nothing 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 its 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 Livers; but if it be one Stone of an Ounce Weight, it will ſell for a hundred Livers: I have ſold one of four Ounces and a Quarter for two thouſand Livers.

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 six 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 produc'd 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 observ'd 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 arm'd 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 gain'd 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, mention'd 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, mark'd 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 mark'd C, where this Stone is contain'd, to which they give the Name of *Bezoar*, which we may see is contrary to what all Authors have wrote of it; and I shou'd not have had the Confidence to have advanc'd 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 Dearness.

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 *Ambergrise*, smooth to the Touch, and which, rub'd on Paper done with Cerusse, makes it become yellow; the less it is broken in Pieces, and full of Bits irregularly shap'd, the better; and take care that the False ben't 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 Medicins have their Modes as well as Cloaths; notwithstanding which, this is a Preservative from pestilential Air, and a Remedy for the small Pox, Measles, or other contagious Diseases: It is reckon'd also proper against Vertigo's, Epilepsies, Palpitation of the Heart, Jaundice, Colick, Dysentery, Gravel, to procure Labour Pains, and against Poisons; Dose from four Grains to twelve: The *Jews* call this Stone *Bel-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 Laminæ or Crusts, 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 Tenis 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 into the Cup, in order to give a Flavour to it before they drink it.

Lemery. *Bezoar* is a Stone taken out of 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 Superfices of all of them are smooth, polish'd, shining, of an olive or grey Colour: Their Substance, when broke, divides like Laminæ or Scales, that are form'd successively by different Accessions of saline Humours, which petrifie 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 Crust 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, *Capricerva*, because they partake of the Dear 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 cover'd with an ash-colour'd Hair, inclining to Red, much shorter than that of the Goat, and nearest to the Dears; 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 *Ambergrise*; they divide into Laminæ 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 sulphureous 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 *Laminæ*, 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 solio*, the *Portuguese Pedro de Vassar*, or *Piedra de Puerco*; and the *Dutch*, *Pedra de Porco*: It is very scarce, and much valued, so that they sell it in *Holland* for four hundred

hundred Livers, 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 or 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 'em 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 Wall-nut, 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 Overcomer, or Maſter of Poiſons.

4. *Of the* Musk-Cat, *or* Goat.

Pomet. THE *Musk-Cat* is an Animal which comes very near to the Colour and Figure 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 *Aſia*.

That which we 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 itſelf 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 Bloud, 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 into that Shape. Others would have it, that the Musk is a bruiſed Bloud, 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 ſow 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 encline to which Opinion he likes beſt.

" The beſt Sort, and greateſt Quantity of " Musk comes from the Kingdom of *Boutan*, from whence they carry it to *Patna*, a principal City of *Bengal*, to traffick 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 Belly, 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 clotted Blood. When the Country People " would adulterate it, they put the Liver " and Blood chop'd together inſtead of ſome " of the Musk they take out. This Mixture produces in the Bladders, in two or " three Year's 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 Bladder, 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 weighty. Merchants who buy and transport it " into other Countries are more easie under " this Deceit than the other, because those " little Animals don't engender in it; but " the Cheat is still more difficult to be discover'd when they make little small Purses of the Skin of the Belly of the Animal, and sow them up so neatly with " Threads of the same Skin, that they seem " to be real Bladders, and fill these Purses " with that which they have taken out of " the real Bladders, together with the fraudulent Mixture they would add to it; " which the Merchants can have no Knowledge of. It is true, that if they tye up " the Bladder as soon as they have cut it off, " without giving Air and Time for the Perfume to lose a little of its Force by Evaporation, 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 immediately 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 Headach, 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 56 Degree, " but in the 60 there is a great Number, " the Country being full of Forests. It is " true, that in the Months of *February* and " *March*, when these Creatures have endur'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 Passage, and kill them with their Staves and " Arrows. Some Persons 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 least these " Tricks which are play'd with the Musk " should spoil the Trade for it, since it can " be had from *Tunquin* and *Cochinchina*, " 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 sow'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 these which I bought were of this " Kind; but notwithstanding all the King's " Precautions, the People have a cunning " 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 Bladders, where the Skin that covers it is very thin, and there is but little Hair upon it, because 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* Bladders, which is much more esteem'd, and better than that of *Bengale*, 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 unsupportable Smell; of a bitter Taste, and has as few hard and black Clots in it as is possible; and being put upon the Fire, will burn and be consum'd; but 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 leave an Oilinefs when press'd with the Fingers. But as this is a Commodity 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 Penniworth, 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 their 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 easie 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 mixt with the Blood and Liver of the Beast, there will remain only a little whitish or grey Dust; 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.

Lemery.

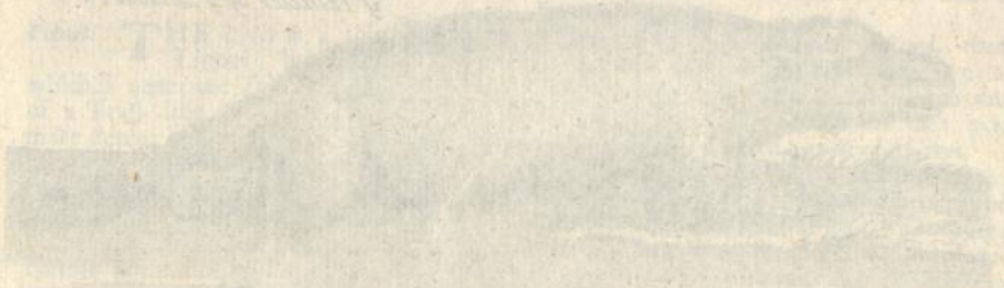
Moschus, or *Musk*, is a Kind of bilious Blood fermented, coagulated, and almost corrupted, which is taken from a thick Bladder or Pouch, as big as a Hen's Egg, which is found under the Belly towards the genital Parts of a wild four-footed Animal, call'd, *Moschus*, *Moschius*, *Dorcas Moschi*, *Capreolus Moschi*, *Gazella 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 disagreeable 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 'em 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, least it shou'd 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 it 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 these 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 wou'd 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, but 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 *Bengale* is wrapt 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 Cool-



# of Animals

5

The Civet Cat.

6

The Beaver.

ꝑ Testicles of ꝑ 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, diſcuſſes and rarefies 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, call'd the Mother.

5. *Of the* Civet-Cat.

Pomet. THE *Civet* is a thick unctuous Liquor, 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* and *Weſt-Indies*, and likewiſe in *Holland*.

Authors differ extreamly 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 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 ſhow'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 believ'd, 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 call'd *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 Certifi-

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 open'd, 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 rub'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 Livers 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, Zetum, 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 call'd in Latin, *Hyæna, Catus Zibethicus, 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. *Lemery.*

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 prefer'd 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 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; Ambergrise two. *Civet* put up in a Pessary, or Piece of Spunge, 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 any 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 Glans, just before Coi-

Coition it is said to cause Impregnation, and cure Barrenness. *Civet* is anodine and good for the Colick in Infants, if applied to the Navel.

6. *Of the* Castor *or* Beaver.

Pomet. THE *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 it's 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 us'd 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 in sunder 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 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 o 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, furnish'd with all the other Vessels and Instruments necessary for Generation, which the Royal Academy have discover'd some Years ago in the Thighs, and near the Groin of the *Beaver*: But having never seen these little Testicles plac'd in the Rank of Druggs, nor any thing sold for *Castoreum* but that Part of the Animal which the Ancients call'd *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, contain'd 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, cover'd by a common Skin that encloses the whole Body, and there outwardly representing two Testicles, like those of a Boar; which though they lye within, yet may be distinguish'd without the Skin, and taken in the Hand, altho' they don't hang down as the Testicles of other Creatures. Having open'd the hairy Skin, you meet with the common Pouch, and in that the two others distinct from one another, which contain the Matter that we call *Castor*.

The Custom is to tye these two Pouches as they are found, and hang them in the Chimney 'till they are well dry'd, and the Matter contain'd in them be grown hard, and the outward Pouch has contracted a brown Colour.

When these internal Pouches are open'd, 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 extreamly strong. There is likewise found in each of these lesser Pouches, a little above the fleshy Matter another Pouch, distinct, but much less, and fasten'd 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 assur'd 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 Flesh; and appearing like Testicles, which Shape they retain'd when dried, that they then weigh'd fourteen Ounces; and being cut open had all the inward Parts, as I have describ'd 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 *Rosne*, the *Lisere*, 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 contain'd the Testicles of Lambs and Goats, then they hang them in the Chimney, and pass them off for true *Castor*: But it is easie 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 easie to escape by plunging into the Water.

Castor diversly prepar'd is recommended in Diseases of the Brain and Womb, both inwardly and outwardly. The oily Substance is likewise us'd in Oyntment, 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 Pound: 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 Creatures 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 dispos'd 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 with-

without, and of a bright Red within, inclining to a baſtard Saffron: It had ſixteen Grinders, eight of a Side. The Claws behind were joyn'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 cover'd 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 joyns 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 Swiming, and to beat 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 Luſitanus* 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 fœtid 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 fill'd 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 eaſie Delivery to a Woman in Travel bringing away both Birth, and after Birth, and dead Child. It has been found effectual in Epilepſie, Apoplexy, Fits of the Mother, Gripings of the Belly and Cholick. It is prepar'd ſeveral Ways; but the Powder may be prepar'd 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.

Lemery.

The *Caſtor* or *Beaver* is a four-footed Animal, amphibious, for it 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 cover'd 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 Joynts, running into one another. Its Legs are ſhort, thoſe before reſembling a Dog's, and the hinder ones, 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 reckon'd good, but the Tail and hinder Legs are sweet like the Tuny, 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 making of which, they draw the Timber on the Belly of their Ancients, 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 plac'd at the lower Part of the Belly, between the Thighs near the Fundament, but they lye within under a fleshy Skin, which is hairy, and covers all the Belly; however, they may be distinguished 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 tye them by the Neck, and hang them in the Chimney, leaving them 'till they be dry and hardned, 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 cur'd 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 discover'd by being black, mouldy, and not apt to crumble; whereas the Genuine is of a fœtid, 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 viscous 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 annex'd to the Testicles of the *Beaver* has the same Virtue, and is strengthening to the Nerves.

7. *Of the* Elk.

Pomet. THE *Elk* is a wild Creature 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 Ancients 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 5 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 effected Part with them. The Horns are said to be *Antiepileptick*; but the chief Virtue is said to lye 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 filed like Harts-horn.

Alce sive Alces, or the *Elk*, is a four-footed wild Beast, of a large Size, betwixt a Deer, an Ass, and a Goat, having great branched Horns, bending towards 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 almost of the same Colour, and sometimes of a brown Russet: He has a strange Kind of a 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. *Lemery.*

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; wherewith 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 entring 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 Tushes, 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. *Pomet.*

I shall not trouble myself to give an Account of all that has been writ upon this Subject, by the Ancients, 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 further 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 Foot Diameter; and it weigh'd ſo heavy, that he cou'd 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 comes from *Angola*, *Ceilan*, 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 Raſpings of Ivory, half a Dram; Powder of Man's Scull, 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, eaſie 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 Prepar'd Troches of Ivory or *Spodium*. The ſame Virtues are attributed to theſe, as to Coral and other Alkalies. The Ancients, beſides Ivory, burn'd 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

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 call'd, because of the Horn that grows out of his Snout, which is black, about a Foot and 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 Hoof's, 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; their 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 us'd as the Unicorn's, is said to be good against all contagious and malignant Fevers; for being a high Alkaly, 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 deformed; 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 throw 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* breaths, 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.

Lemery.

He is said to have four *Venters*, or Bellies, and Lungs four times as big as an Ox; his genital Member is like a Horse, but less, and the Testicles lye inward about the Reins: The fore Legs are much longer than the hind Legs, of short Joynts, and of equal Bigness, both above and beneath the Knees; the Ancle-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 enclos'd in a Sort of flat Cowl,

for which Reason, according to the Rev. Father *Le Comte*'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 advantagiouſly placed, he becomes formidable to the *Bufflers*, *Tygers* 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 Poyſon, ſtrengthen and fortify the Heart, procure Swear, 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 domeſtick Animal, whereof there are great Numbers throughout all *Africa*, and particularly in *Barbary*, and the Deſarts of *Getulia* and *Libya*, and are the greateſt Riches of the *Arabs*. Thoſe of *Africa* are better than 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 Burthen 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, Ruſhes 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 *Bechet*, 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 *Dromadaries*, which are the ſmalleſt and fineſt, but 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 Burthen; 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 *Mecca*, 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 call'd 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 Ammoniac.

Sal Armoniack, or rather *Natural Ammoniac*, 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 *Libya*; 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 teſtified by a Tryal made of a Piece which Mr. *Tournefort* gave me the 6th of *March*, 1693, whoſe Figure is here repreſented and mark'd A, and which I keep by me as a great Rarity. This Salt is criſtalliz'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

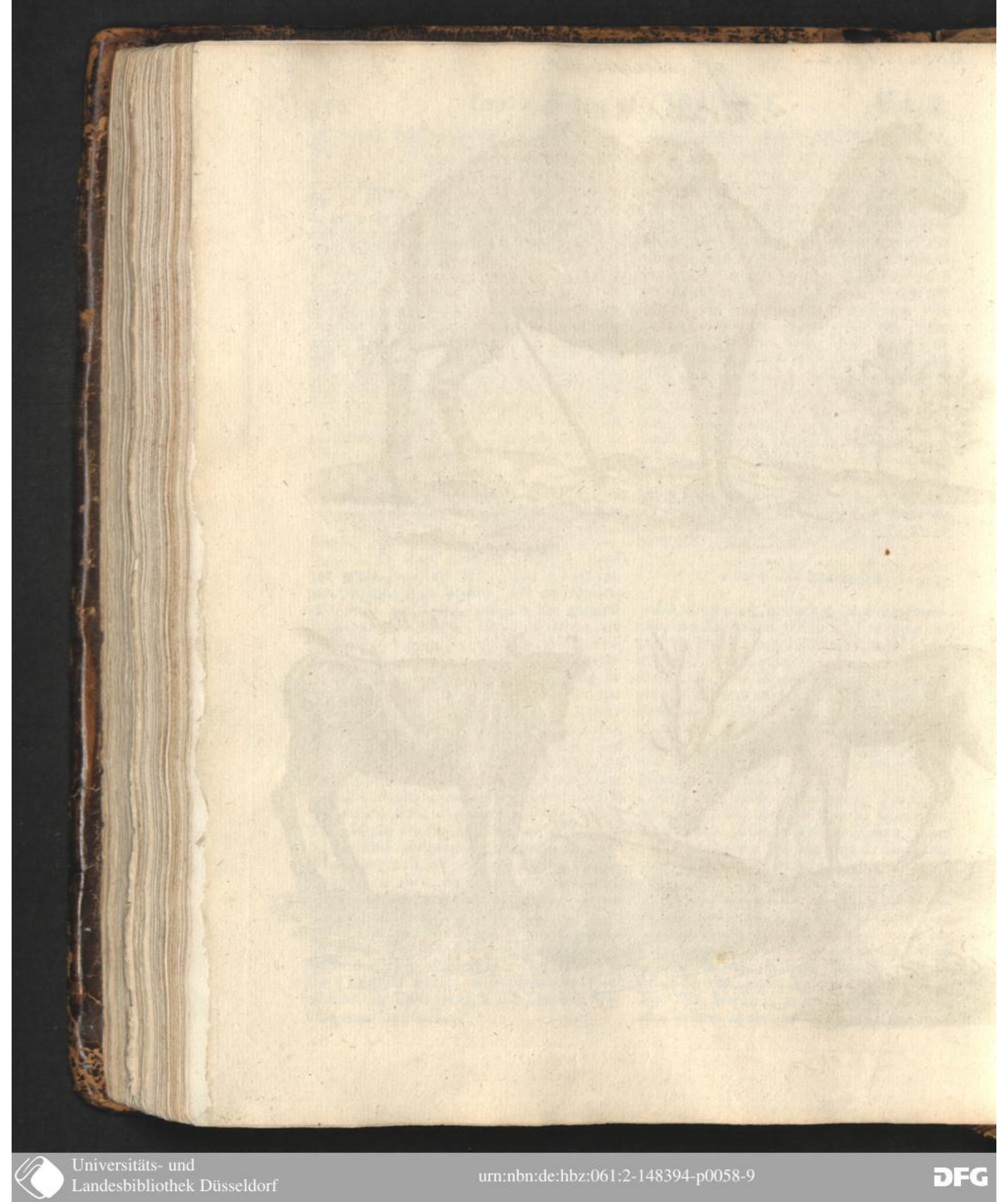
is

The Camel. 9

12
The Hart.

The Bull.
10

11
The Ram.



is ſome Sand, which ſhows that the Salt is ſublim'd by Means of the Sun, which raiſes it above the Sands that are very hot.

The Ancients univerſally agreed, that there was a natural *Sal Ammoniac*; that this Salt was found in the *Libyan Sands*, and that it was made from the *Camels* Urine, which travel'd 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 Ammoniac, or Natural Armoniac, 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*, *Thanuſſeri* and *Tzerbint*: But as theſe two Salts are almoſt unknown to us, and that we meet but with 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 altogether, 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 dryeſt; 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 mention'd 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 Alcaly fix'd, and Volatile; and accordingly two different Spirits, or Salts, may be drawn from it, *viz.* a volatile alcalious Spirit and Salt, and an acid Spirit and fix'd Salt.

To purifie 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 it 'till a Pellicle ariſes, and ſet it to chryſtalize according to the uſual Way. You may alſo purifie *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 ſtopt; 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 Clothes be made wet therewith and applied.

Of volatile Spirit of Sal Armoniack.

Take *Sal Armoniack* and Quicklime 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 or Urine; put them quickly into a Retort, the Half whereof is empty; set 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 stopt for Use, you will have four Ounces of Spirit or better: This is stronger than that made with Tartar, being endow'd 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 subtil 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 chrystalize, 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 stop'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 Resuscitation 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 'em with Burthens 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 Burthens; 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. *Lemery.*

These Camels are the usefullest Creatures in *Africa*; the *Arabs* make great Advantages of 'em, because they wil 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 them

go

go the faster and more chearfully. There are three Sorts of 'em; 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 Dromadarius*, the *Dromedary*, which the *Arabs* call *Raguahil*; 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 dry'd 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 Apperite, relieves or 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 Armoniack* of. The Dung is vulnerary and detersive, 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 wou'd be useless 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 diverse Crusts 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 waste 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 Physick, 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, easie 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 thereabouts 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 *Roüen*, a great Quantity of Ox Hides from *Barbary*, of which the Merchants of *Roüen* make a considerable Business, but at *Paris* they sell but few; the greatest Share comes from *Senegal* with the Gum and the Gold Dust. As the Merchants of *Roüen* are oblig'd to give Credit for three Years to the Tanners; if by Accident any Tanner comes 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 come 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, or Cow, are sluggish horned Beasts, *Lemery.* 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 Oxes. Veal is a pleasant Meat, easie 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, Oyntments, and Plaisters; it eases Pains proceeding from Cold; cures Kibes and Chilblains, and heals the Chapping of the Hands, Lips, Nipples. Fundament, *&c.* The Chymical Oil is good against the Gout, Palsies, 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, Palsies, 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 *Colliry* against Blood-shot, Clouds, Films, Haws, or Pearls in the Eyes; mix'd with *Myrrh* and *Aloes*, it cures Ulcers of the Yard and other Parts, together with the Piles; mix'd with Nitre, it removes Scurf and Leprosie: The Dung is temperate, discussive, anodine, *&c.* The Urine drunk cures the worst Kind of Jaundice and Dropsie, 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 little Finger; it is of a reddish grey Colour: This Ball is made of the Hair which the Ox or Cow licks off her self, 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 Spunge, 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*, *Moscovy* and *Scotland*; but those in *Scotland* are white; it is call'd *Vacca Pæonica* in *Latin*, in *Greek*, *Bison*; they differ nothing from the common Cow or Ox, save that their Mane is like a Lyons; 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 Vertue 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.

11. *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 Climates makes ſome Difference in their Colour and Shape. The Sheep in *Greece* are leſs than the Sheep of *Egypt*, and the *Oves Pyrrhicæ* were like *Boves*, by reaſon of their exceeding Largeneſs, their Name being deriv'd from *Pyrrhus* their Maſter. The *Sheep* of *Chius* 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*, *Betica*, and *Erythrea*, red like Foxes; at *Canuſium* they are yellow, or Lyon Tawny; and ſo alſo at *Tarentium*; 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 to *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 *Ethiopia* the Sheep bear no Wool at all, but Hair like Camels Hair. In *Gortynis* the Sheep are red, and have four Horns. In ſome Part 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 Ancients call'd *Oves Umbricæ*, 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 *Corſica*, *Sardinia* and *Spain*; and are ſaid to be got between a Ram and a She Goat, as the *Cinirus* is between a He Goat and an 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 tarries no longer in the Water, than 'till his Belly is full: This Sheep is of a bright yellow Colour, like thoſe of *Crete*, but its Wool is not ſo rough; it has two large Horns upon its Forehead, ſwims well, and is very greedy after Blood. This 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 shorn; 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, Dropsie, Cholick, Pleurisie, 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 of it made in Claret, by Bathing in it as hot as can be endured, will asswage Tumours, strengthen weak Joynts 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*.

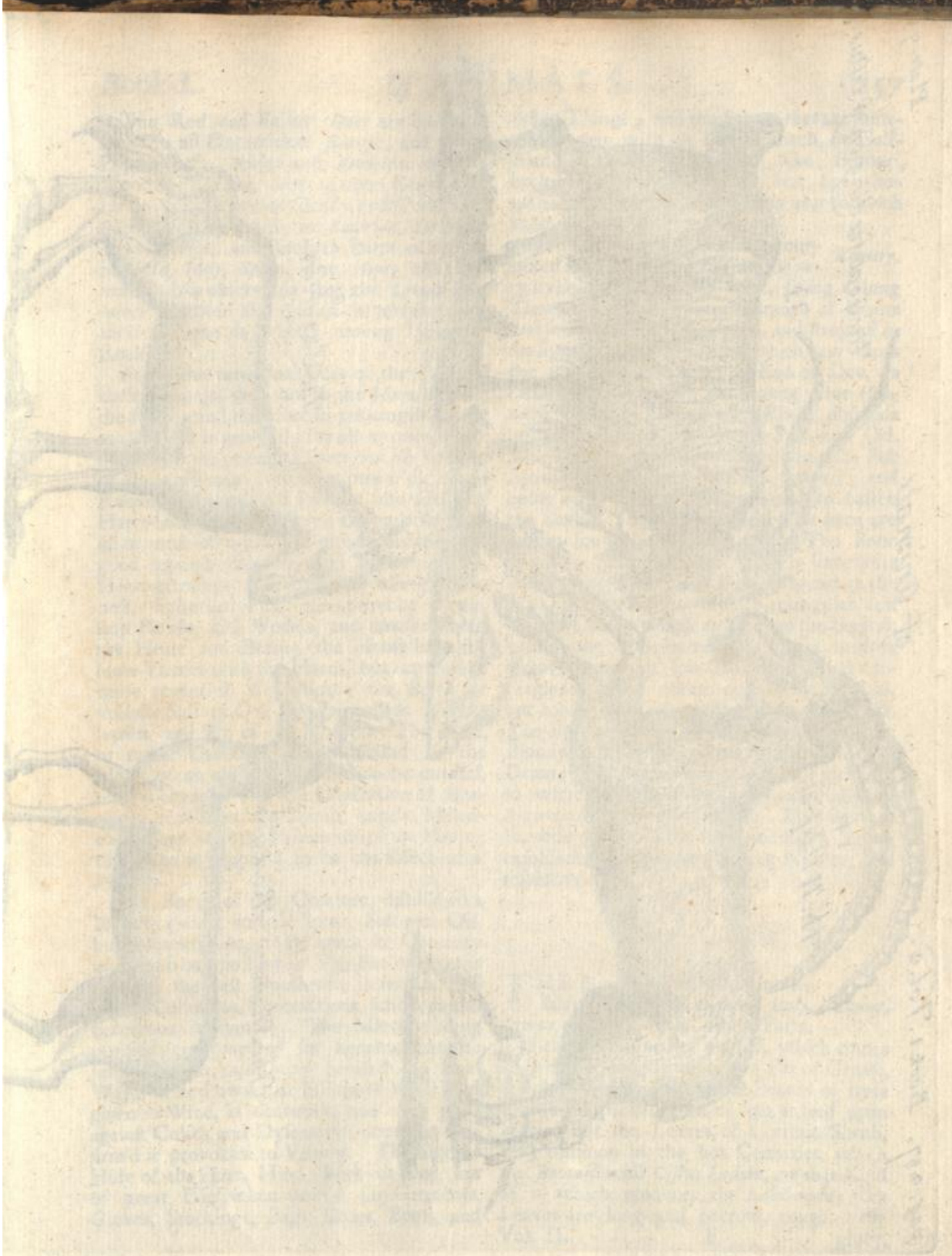
The Tallow and Cawl serves for making Balsams, Oyntments, and Emplaisters, and the Marrow is good against the Colick, Gripings of the Guts and Exulcerations of the same. The *Oesipus* is only the Sweat of the Sheep condensed upon the Wool, and making it greasy; it is emollient, discutient and anodine, being useful against Contusions, Strains and Weakness of the Joynts 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.

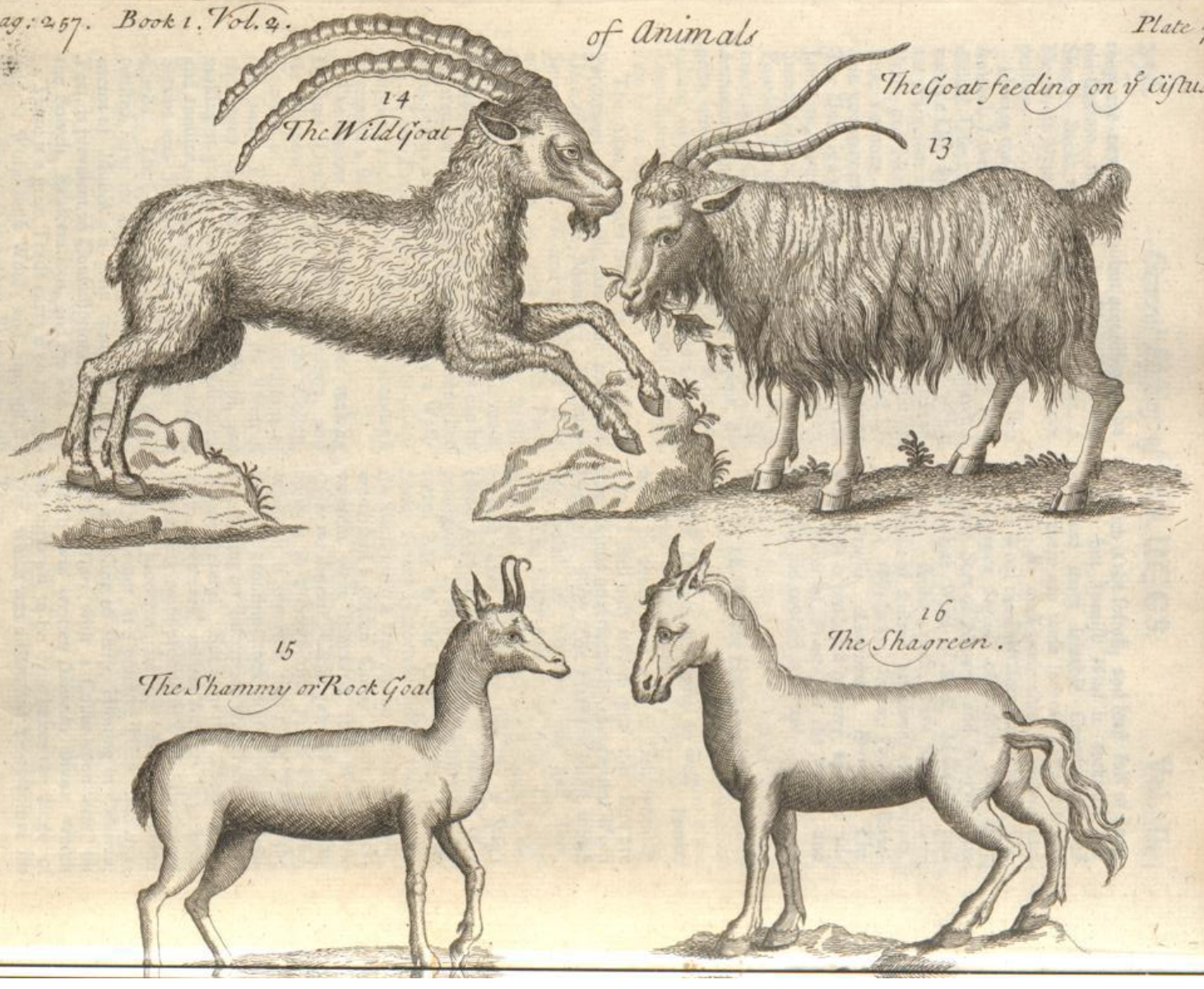
There is a great Trade carry'd on throughout the World with Wool; and amongst the rest, *Persian Wool* is in great Vogue; the best of which is the softest, and least full of long Hairs; but *Spanish Wool* is reckon'd the finest and more saleable Commodity, of which there are these several Sorts that are esteem'd the most preferable. *Vigognia* and *Segovia* Wool the finest Sort, the small *Segovia* and *Segewen Segovia* of *Castille*, &c. The ordinary Sort of *Navarre* and *Arragon*; the finest white Wool of *Sevil*, *Mallaga*, and *Portugal*. Besides these, there are the *German Wools* of *Rostock*, *Stralsunt*, and *Anclam*, *Newmark*, *Weydacker*, *Stetin*, *Thoorn*, *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 wou'd 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*. 2*dly*, The *Fallow Deer*; and, 3*dly*, 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 extream 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 engraved 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 these Creatures, ancient 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 *Pomet.*

The





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 prepar'd; as the Raſpings, the calcin'd Powder, the Gelly 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 *Hyacinth*; 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 concerous 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 Colick 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 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, 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 *Ptiſans*, *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 impos'd 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 reſolutive. *Lemery.*

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 'em 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

gluey, of a dark Green, that continues all the Year.

The Inhabitants of the Country gather this Greaſe 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 *Ladanum*, 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 wou'd be conſiderably valued; they have taken Care to melt it, and ſtrain it thro' Cloths, as well to take out the Droſs, 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 cleaneſt 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 *Ambergriſe*, which has given Occaſion to ſome Merchants to ſell liquid *Labdanum* for black *Ambergriſe*. 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 Ancients 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 dry'd, it ought to be put into a Glaſs Vial 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 *Auvergne* 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 Goats Skins, and dye 'em of a red Colour, by the Help of Stick-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 ſhou'd be of a beautiful ſcarlet Colour, and a fine Grain. We make this Kind of Leather at *Marſeiles* 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 *Roüen*, 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 Fawns of the wild *Goats*, of " which there are great Plenty, they bring " 'em 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 ex- " ceed the common *Goat* in Bulk, but they " have no less Flesh upon 'em than a large " Deer, and they are cover'd with the " same Sort of Hair, short and thick, not " like the Goats. We have some of 'em " also on our Mountains, and especially on " Precipices that are difficult of Access; and " one wou'd wonder to see such a little Ani- " mal 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 *Monsieur Le Bail- ly* of *Lyons*. There are some Peasants on the " Tops of the highest Mountains of *Crete*, " that are such Archers, especially about " the Mountains of *Sphachia* and *Madara*, " that they can wound with their Arrows " five and twenty Paces distant; and in or- " der to come at them, they take the She " Goats which they have tam'd, and brought " up from young ones, and tye them in some " Passage of the Mountains where the He " Goats use to go and ly in wait on the con- " trary Side to the Wind, for fear the wild " *Goat*, who is so exquisite of Smell, as to " scent you a hundred Paces, shou'd 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 Ar- " row sticks in his Body, he knows how to " cure himself; for he runs to the *Dittanny*, " which is an Herb that grows upon the " Rocks in *Crete*, and browses 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.

Caper vel Capra, *Hircus vel Hirca*, the He or She *Goat* are both the Tame and the Wild, one or other of which are Inhabitants of most Parts of the World; besides which are the *Rock Goat* and 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 wast Places, and eat almost all Sorts of green Things whatsoever; so that they live and grow fat, upon what any other living Creature wou'd 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 *Cocao Nuts* do in others. *Lemery.*

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 dry'd 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 compar'd 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 carry'd 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, Waſt-coats, Petticoats, Caps, *&c.* becauſe they may be waſh'd as Linnen 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 Vertue to the *Oriental Bezoar*.

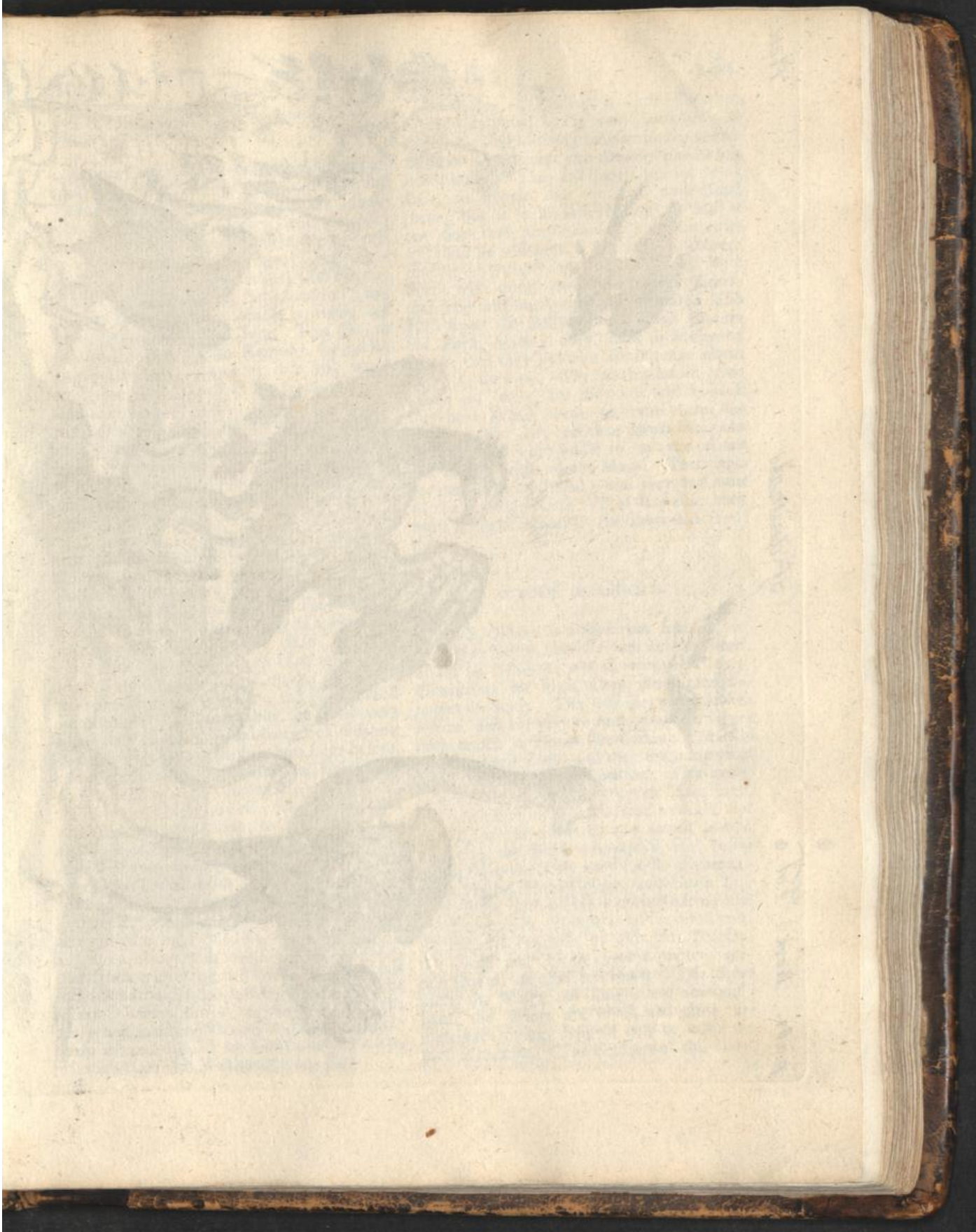
The *Shamoy* is of the Size of the common Goat; his Horns are ſmall, black, bent forwards, and very ſharp; the Tail not above three Inches long; they have large Eyes, and never ſtep but on the Tips of their Toes; they are coated like a Faun, and have a Streak running all along the Back.

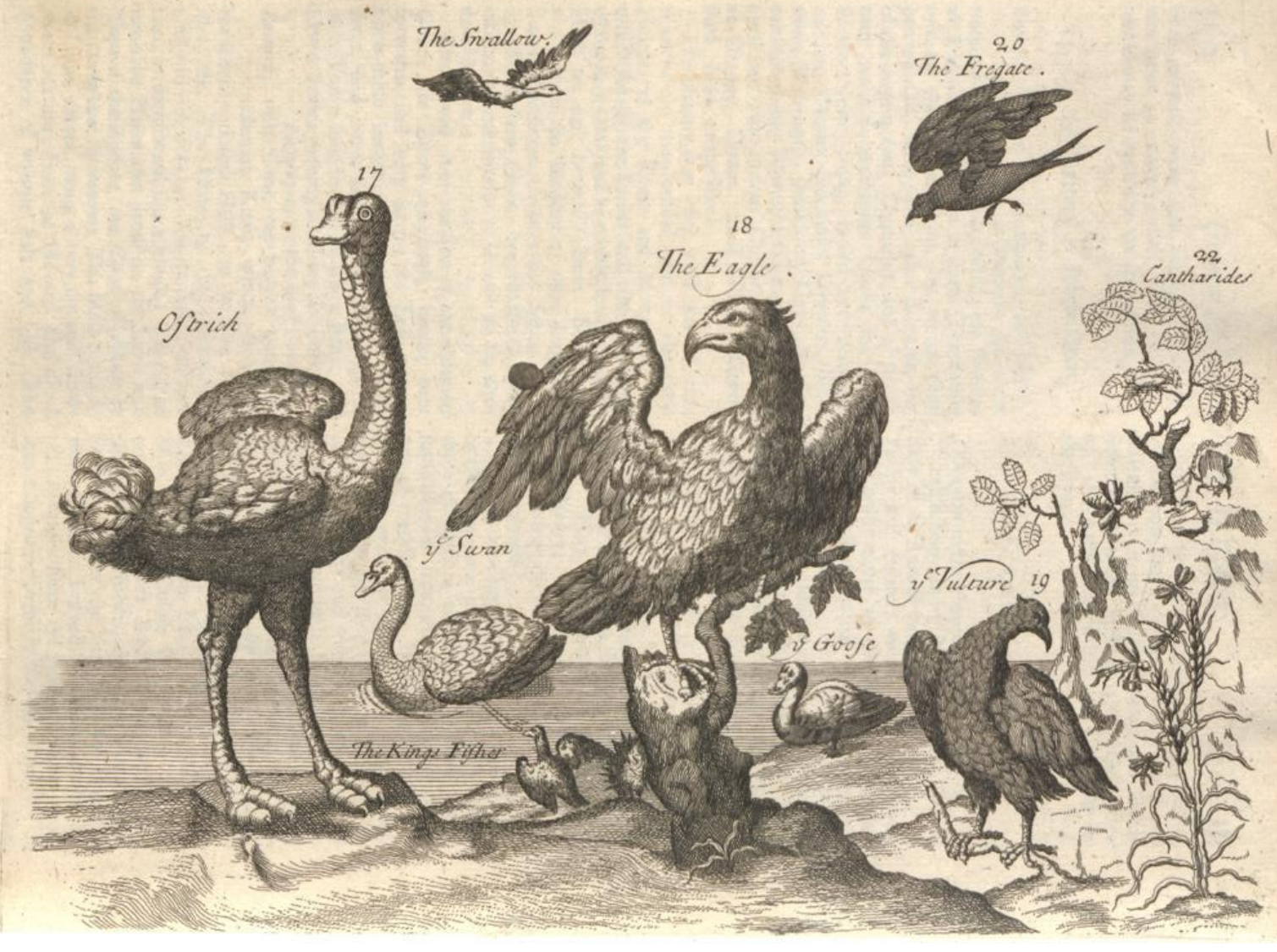
Lemery. *Rupicapra*, or the *Rock Goat*, is a wild Goat, no bigger than the common Kind, which frequents the Rocks and high Hills; as the *Alps*, *Pyrenees*, &c. The Horns of this Animal are oddly turn'd, for they riſe upright firſt, and then wind forward like a Hook: They feed upon the Plants that grow 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 Vertigo's: The Fat is excellent for Ulcers of the Lungs and Phthiſicks, being taken in Milk; the Gall dries up, and waſts away Films and Cataracts in the Eyes.

16. *Of the* Shagreen.

Pomet. *CHagrin* in the *French*, or what is call'd *Shagreen* in *Engliſh*, is the 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 'em thus expos'd to the Weather ſeveral Days, then take 'em in and tan them; and when they are dreſs'd export them. This Skin is very hard when dry, and ſoft when ſteep'd 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-colour'd, 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 *Algiers* 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: Theſe 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 this Skin 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





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, to 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 but 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 Caſes, and Sciatica Pains; ſo we have alſo Pencils made of the Badger's Hair for the Painters 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 griſled 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 Colick. We alſo ſell the Greaſe and dried Lungs of the *Fox*; the laſt are eſteem'd excellent againſt Coughs, Aſthma's, Phthiſicks, Wheeſings, 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, Palſies, 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 eaſie 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 *Martinigo* eat 'em; 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 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 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 uſeleſs for flying, deſign'd only to aſſiſt the Bird in running. The Feathers of the Back, *Pomet.*

in

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 duskish; 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-joynted annulary 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 'em, 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 Eye-brows; 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 straight 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 to nourish 'em, or to digest it, as the Ancients 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 longways; 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 Vermillion red; as is also the lower Part of the Back-side of the Neck: Its Bill is of a moderate Thickness, and streight, 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, is 17 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 lye 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, Hens-Eggs, Oranges, and almoſt any thing that is offer'd it; its 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 its Rump, Wings and Feathers; but in Regard of the Shortneſs of its Legs; it looks like a Pigmey 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 blueiſh 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 ſhows 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 *Vulturine*. *Pomet.*

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 *Fœtus*, 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. *Jame'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 eaſie 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 *Pomet.*

a dead Carkaſs many Miles: Many are of Opinion that he differs not in Kind from the Eagle, but only in ſome other Characteriſticks, 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 Craw hangs down like a Bag before the Stomach or Breaſt; that the Bill being ſtreight for two Inches, does then grow crooked: That among all rapacious Birds, none fly together in Flocks but the *Vulture*: 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 Cheſnut, the Hare *Vulture*, the Golden, the White, the Braſilian, and the Vulturine Eagle: The two Firſt differ in nothing but their Colour: The Cheſnut colour'd is leſs than an Eagle, having the whole Plumage of its Body of the Cheſnut Colour; the Feathers of the Crown are very ſhort, if compard 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 *Braſilian 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, tranſverſly 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 ſtreight 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 Cheſnut, 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 Palſies and other nervous Caſes.

20. *Of the* Frigat.

THE *Frigat* is a Bird which the *Indians* call ſo, becauſe of the 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 Eagles; the Bill is likewiſe pretty thick, and altogether black, about ſix or ſeven Inches long, and ſtreight 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 imploy'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 *Pomet.*

and then he throws himself down like Lightning; not so as to strike upon the Water, for then it wou'd 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 *Herons* 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 *Guadeloupa*, their Habitation; in like Manner as the Rooks, have a Rookery, where all of that Species thereabout come to roost at Nights, and build their Nests in the proper Season. This little Island was call'd, 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 forc'd to abandon the Isle.

The Revernd 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 'em 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 easie Matter to beat 'em down with long Sticks. There was not one of those, says this Author, that flew away, but what were 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 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* 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 Posideonis*, which are very common in *France*, especially in *Normandy*: These Birds frequent the Sea Coast, Rivers, and watery Places; they are of the Size of a Swallow, or 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* Kings-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*. *Pomet.*

The *Chinese* 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 valued at fifty *Tahers* the hundred, which is about six hundred Livers, or fifty Pounds of our Money. They assign mighty Vertues to it, as that it nourishes extreamly, 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 'em 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, Pensils, and *Down* from the Swans, Geese, and other Fowl, which are brought us from *Gascoigny*, *Normandy*, &c. as also

the Swallow Stones, which are like little Stones taken out of Crey-fish, and are us'd to take out any Filth or Dirt that falls into the Eyes.

22. *Of* Cantharides.

Pomet. THE *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 venemous, and of a fetid 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 'em, and make them specifical in a *Gonorrhœa*, Suppression of Urine, Ulcers of the Bladder, Stone, Gravel, *&c.* They are most frequently administred 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 Navil, with the Oil, wherein *Cantharides* have been boil'd.

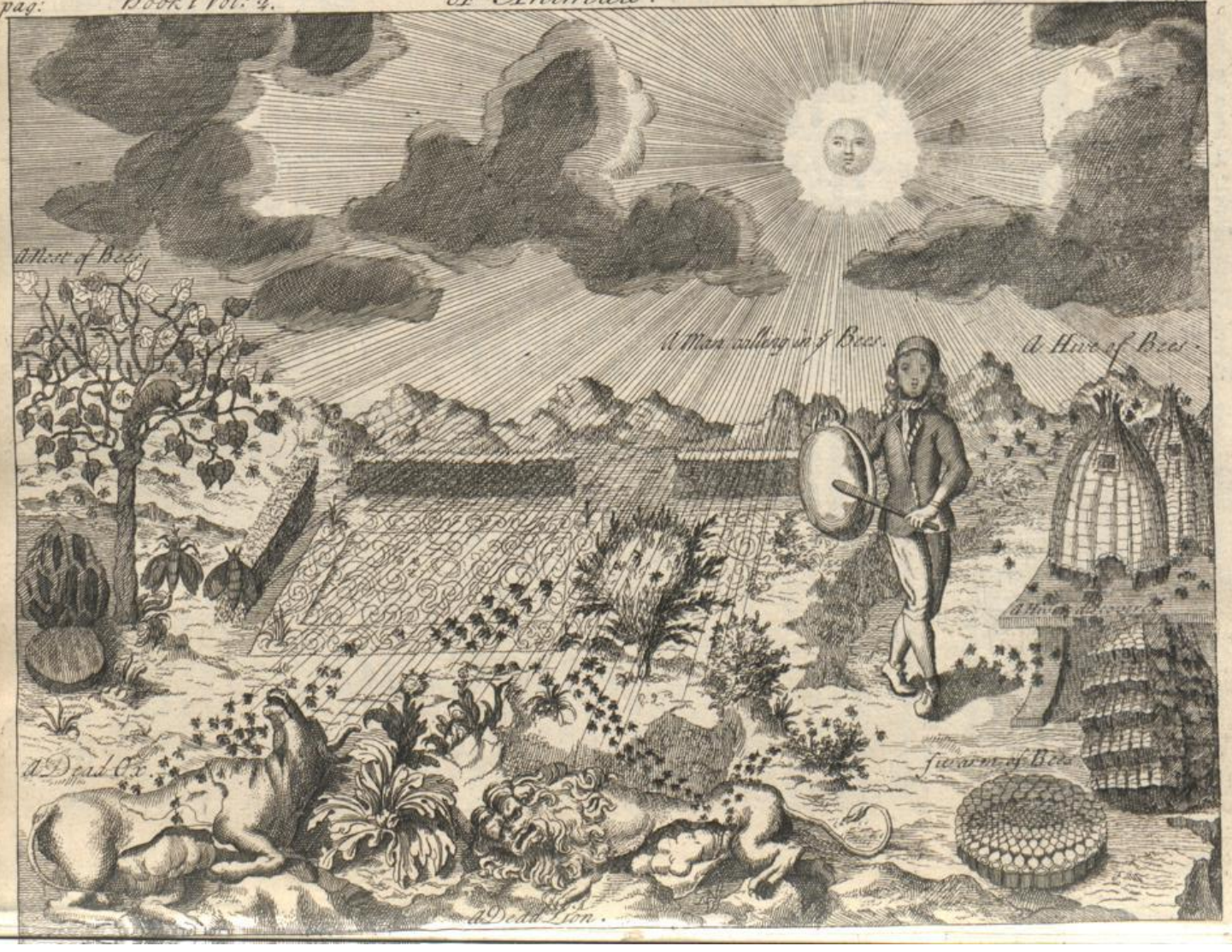
Some at this Time use all the Parts of the *Cantharides* promiscuously; but the Head, Wings, and Legs are to be cast away: If a Blistering Plaister made of them be applied to a tender delicate Body, or upon most fine skin'd Women, it will cause a Strangury, or Scalding, and Heat of Urine, which is easily 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 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. *Pomet.*

Some Naturalists will have it, that the Origin of *Bees* comes from the dead Lyon 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 Lyon 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* appear'd to me to be an Author " of Solidity enough to ground a probable " Opinion upon, and whose Credit was suf- " ficient to induce me to make a Tryal, " which I unluckily did, and thought I had " poison'd the whole Village; for I caus'd to " be strangled a young Bull, *Bina cornua* " *ferens*, giving him a thousand Stroaks with " a Cudgel,



" a Cudgel, as he was dying, which was " more than I cou'd warrant from the Poet; " for his Burial, I took the bruis'd Members, " with the two Horns, and put them into a " great wooden Tub, with four little Windows " open to the four Quarters of the Wind, in " order, as *Virgil* says, to produce Thousands " 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 Neighbour- " ing States, both by Sea and Land; he mar- " shals his Army in Battalia; he rewards his " Captains and Generals; he punishes the " Cowards with Death, and makes the " Rogues and Deserters 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 wou'd have in- " fected all the Neighbourhood; and the " Stink was so great, that all the Country " fancy'd they were threatned with the " Plague". You may see from hence how wide Opinions are; and as I am not a capable Judge, I shall content myself to make some Observations, founded upon Experience, as you will find in the following Relations; and those who desire to be instructed further, must consult the best Authors, who have writ upon this Subject.

Observations upon Bees, *according to an Account deliver'd 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 Beginning of its Formation, has no Resemblance 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 Socket. 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 valued, because they are stronger, than those that are later; because the Season is more favourable, 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 observ'd, with particular Care and extraordinary Application, having spent a great deal of Time, watching the Hives every Hour of the Day, to satisfie my Curiosity in seeing the *Bees* work, having provided them Glass 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* venter 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 hind Part of their Thighs; and which when entred 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 almost as transparent. It is observable, that the same Hollows, or Sockets, are those wherein they depositе 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 Honey, 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 the 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 damag'd by certain Rains, Blites, *&c.* which are favourable for other Sorts of Flyes, 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 Flyes 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 this 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 hive them, for fear they shou'd desert; for shou'd they stay long 'till the Sun shine 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 easie to be known by its Colour; for the first Year it is whitish, the Second 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 inform'd of this by several of my Friends, and particularly by an Officer of the Kings, who having *Bees* in a Garden at *Argenteüil*, 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 ask'd him, what he thought of it? And he told me that it was a Thing he had always observ'd 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 *July* and *August* the Butterflies breed, enter their Hives, and engender large, short, hard Maggots, which lay the first Steps for Spiders Webs, which joyning the Combs together, produce a Heat, so that in two or three Days the *Bees* will be gone, and quite forsake it after having pillag'd 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 appears two little Horns like transparent Skins, which are yellow at the End. In *Poland* and *Moscovy* 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 *Moscovy*, 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 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 Ancients pretended, that the *Bee* was generated from the Lyon or the Bull; but the vain Tryals 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 Lyon, that had been kill'd some Days before, a Swarm of *Bees* and Honey, but they were never generated from the Flesh of the Lyon. *Lemery.*

The Origin of 'em 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 reduc'd to Powder, and mix'd with Oil of Lizards, they make a Kind of Liniment, wherewith they rub the Head. The essential Salt of 'em is so volatile, that it is difficult to keep it in a dry Form; it is a most subtil and penetrating Thing, and one of the most powerful Diuretick and Diaphoretick.

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 cleans'd, 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 is too much heated, instead of being of 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. *Pomet.*

The finest and most esteem'd *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 call'd *Narbonne Honey*; tho' falsely so, for at *Narbonne*, they do not know what you mean by *Narbonne Honey*, but only that of *Corbiere*; but the Name has been given to it, because *Narbonne* is a great City, and much better known than *Corbiere*, which is 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 aromatick. 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, Stæchas, *&c.* therefore the *Honey* is better, and of a more pleaſant Smell, and more bought up, eſpecially to make pectoral Ptiſans of, which is its chief Uſe; the Country *Honey* being principally imploy'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 *Touraine*, *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 compounded 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 preſſed 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 Deterſive. 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 Opthalmicks 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, Metheglin 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 rectified Spirit of *Honey*; then let 'em ſtand in Digeſtion in a *Cucurbit*, having a flat Bottom, 'till the Spirit is ting'd of a golden Colour, which decant, pouring new Spirit 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, Phthiſicks 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, Cinamon, 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 make it to their 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, Savory, Roman Wormwood, Geranium Moſchatum, Origanum, Nutmegs, Mace, Cloves, Cinamon, Ginger, or the like, in the Boyling of the Liquor; and in Tunning of it up, ſome add black Currans, others Raiſins in the Sun. *Hydromel* is made 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 purifie 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*, *Britaigny*, and ſeveral Parts of *France*, furniſh us with a great deal of yellow *Wax*; but that of *Dantzick*, *Britaigny*, and *Champagne*, is reckon'd the beſt: Chuſe ſuch as is of a high yellow Colour, a good Smell, eaſie 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 Roſin, white Frankincenſe or Pitch, colour'd with Turmerick 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 Oyntments 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, or 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

entring; this Wax is sweet scented, and smells almost like *Storax*, and will chew and mould 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 thiner; 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 *Bretagny*; which when it is well done, as that usually is of *Chateau-Gontier*, eight Leagues from *Angers*, 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 *Angers*; 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 Verdegrise 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 deposite their Honey in little Vessels of black Wax, which are of the Size and Shape of Pigeons 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 *Heirat*, 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 its 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 Oyntments, Cerecloths, and Plaisters.

26. *Of* Ambergrise.

Ambergrise is the deares 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 shou'd relate what Authors have said upon this Subject, it wou'd 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, but 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 Property 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.

Many

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 cou'd 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 *Zelander* that was of one of the best Families of *Middleburg*, who was Governour for the *Dutch East-India* Company, in the Isle of St. *Maurice*, which is on the *East* of *Madagascar*, found on the Shoar 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 Solidity. The best Tryal of it is a Dissolution in Spirit of Wine; for that which is purest, and leaves the least *Feces* 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, Aloes 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 counterfeited: 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 call'd 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 Matrass, with a blind Head luted in the Junctures, 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 stopt: The Dose internally may be given to three Drops in Cinamon 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 Cinamon, 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

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 open'd, 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 *Ambergiſe*, 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.

Lemery. *Ambra-griſea, 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 *Moſcovy* 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: Chuſe 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, but it is nothing ſo ſtrong, or 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 Parts of *France*, but chiefly in *Poictou*, 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; inſomuch that there are very few People of Quality, in Places where they are to be had, but what make uſe of 'em as good Diet, and a ſpecifical Remedy againſt ſeveral Sorts of Diſeaſes, as may be ſeen in Mr. *Charas* his Treatiſe of 'em, wherein he has ſaid 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, livelieſt *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 'em into a Tub with Bran or Moſs; not that it ſerves 'em 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 ſix 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

Pomet.

Pair

The Viper dry'd.

27

ye Heart & liver of ye 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 'em ought to be very cautious; the Keepers of them ought to be ſo likewiſe, leaſt by Miſchance they ſhou'd eſcape and get into any Houſe, which wou'd be very dangerous, eſpecially where there are Children.

We have a great many dry'd *Vipers* brought from *Poictiers*, 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 'em 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 *Poictiers*. There is, beſides, a great deal of Vipers Powder ſold; but thoſe that buy ſhou'd take ſpecial Care, becauſe there is nothing more lyable 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 *Poictiers*, 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 Glaſs 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 rectifie it, put all this diſtill'd Matter into a Glaſs Matraſs, with a long Neck; place it in a Sand Heat, cover it with its Head, and joyn to it a ſmall Receiver, luting well the Joints, and give 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 Glaſs Bottle, ſtopping it very cloſe; continue the Rectification, ſeparating and keeping apart 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 Matraſs, 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 venemous Creature: It is alſo prevalent againſt the Meaſles, Small-Pox, *Plague* or *Peſtilence*; it reſiſts Putrefaction in the higheſt Degree, becomes ſpecifical in Intermitting Fevers, chiefly the *Quartan*; and there is ſcarce a Medicine known in the World more able to purifie the Maſs of Blood, and give it its natural Fluidity, whence it does ſuch conſiderable Feats in chronick Caſes; as Scurvies, Eryſipela's, ſcal'd 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 ſudorifick; ſo that it drives out any corrupted or malignant Humours, through the Habit of the Body; it diſſolves coagulated Blood, removes Inflammations, prevents Apoſtems, and cures Pleuriſies: 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, Gellies, Wines, Eſſences, Troches, Elixirs, Extracts, *&c.* compar'd 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 fetid, that it cannot be taken inwardly; outwardly it may be us'd 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 tartariſed, it is a moſt fragrant Medicine, clears 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, diſſolved in its own Flegm, 'till the Effervescency and Striſe 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 tho' 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.

Lemery. *Vipera*, or the *Viper*, is a Kind 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*, tho' 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 viſcous 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 fork'd: 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 venemous, but it contains no manner on harm in it; the Eyes are very ſmall. The *Vipers* breed in wild ſtony Places in *Dauphiny* and *Poictou*; they live, being at Liberty, on Rats, Frogs, Worms, and ſeveral other Inſects; but when taken and confin'd, they will live above 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 Connexion of their *Vertebræ*, 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

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 is 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 dye, because the Blood growing sharper, and coagulating still more and more, the Passage of the Spirits is entirely stop'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 Mischief, 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 scarifie 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 shou'd 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 useless, 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 alcaline, 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 Scull. *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 rarifie and discharge them.

The largest *Vipers*, and such as are well fed, ought to be chose, that 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 administred against Poisons, to purifie the Blood, in 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, resolutive and anodine, taken internally or externally; the Dose from one Drop to six. The Liver and the Heart of the *Viper* being dry'd 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 Ancients 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, rip'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 Electuary, 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 ſatisfied the Magiſtrates wou'd preſently put a Stop to this Abuſe, both as to that which is ſold about at Markets and Fairs, as well as to what is ſold at *Paris* for ſixteen 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 *Flower-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, where it is prepar'd with all the Exactneſs 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 fourty 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 Meſſieurs *Charas*, *Geoffroy*, *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 Tryal 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 Receit, 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 entitled, 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 prepar'd, of each three Ounces; red Roſes, Florentine Orrice, Juice of Liquorice, wild Navew-Seed, Balſam of *Judea*, fine Cinamon, Agarick, of each one Ounce and an half; powder'd Myrrh, *Arabian* Coſtus, Saffron, *Caſſia lignea*, *Indian* Spicknard, Flowers of Camels Hay, *Olibanum* in Tears, white and black Pepper, Dittanny of *Crete*, Tops of white Horehound, fine Rubarb, *Arabian Stœchas*, *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 Spicknard, ſeal'd Earth, Germander, *Indian* Leaf, natural Chalcitis, Gentian Root, Aniſeſeed, Juice of Hypociſtis, Fruit of the Balſam-Tree, Gum-Arabick, Fennil-Seed, common Cardamum, *Marſilian* Hartwort, Treacle-Muſtard, Flowers of St. *John*'s Wort, the true *Acacia*, Gum-Sagapen in Tears, of each four Drams. Caſtor, ſmall Birthwort; Candy Carrots, *Jews* Pitch, Flowers of the leſſer Centaury, Opoponax, 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-Mastick, the less Marjoram, Asarabacca, Rose-Wood, of each two Drams; Camel's Hay, Calamus Aromaticus, the great Valerian, Wood of the Balsam Tree, true Balsam, Cinamon, *Arabian* Costus, of each three Drams; Myrrh, Saffron, *Indian* Leaf, Spicknard, *Cassia lignea*, of each six Drams; true Amomum, one Ounce and an half; Mastick in Tear, 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 *Contrayerva*, *Virginia* Snake Root, Angelica, the great Valerian, Spignel, Gentian, Birthwort, Costus, *Indian* and Celtick Spicknard, Cinamon, 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* Stæchas, Amomum, small Cardamoms, *Macedonian* Parsley-Seed, Bishops-Weed, *Marsilian* Hart-wort, and Myrrh, of each eight Ounces; Rosin 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 insert into 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 *Poors 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 Purslane-Seed, of each half an Ounce; Betony, Marygold, Balm, Water Germander, Borrage and Bugloss, of each one Handful; fine Cinamon and Mace, of each, two Drams; Vinegar of Roses, made of white Wine, two Pounds; Juice of Citron and Verjuice, of each, six 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 Vertues 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 Seur *de Pelerin* 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*, *Master-wort*, *Valerian*, and *Contrayerva*, of each two

two Ounces: Citron and Orange-Peel, not candied, but dry, fine Cinamon, Cloves and Juniper-Berries, of each one Ounce; Water Germander, and St. *John*'s Wort Flowers of each, one Handful: Spirit of Wine, Wallnut 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 refift all Poifons, and prevent Infections; the Dofe is from one Dram to four, in a convenient Liquor: Likewife it is given fometimes alone, in a fmall Quantity. Mr. *Charas* fays, that there is a Treacle Water made, by diffolving of Treacle in equal Parts of Spirit of Wine, and Vinegar diftill'd; fo they make Treacle Vinegar, fometimes, only by diffolving it in ftrong Vinegar, which is us'd againft the Infection of the Air. and to wafh the Hands, Temples, and Noftrils with.

Befides Treacle Water; at firft, when the *Roman Orvietan* was known in *France*, we had it from *Rome*, and fome other Parts of *Italy*, as *Orviette*, from whence it takes its Name; but fince that the *Sieur Contugi* came to *Paris*, and under Pretence of the King's Permiffion, took upon him the whole Management of this Medicine, the Druggifts have left off to trade in it, either thro' Fear, or becaufe the Profit to be got by it was not confiderable enough: But fince they underftood, that when the King gave his Authority to the *Sieur Contugi*, to fell and trade in *Orvietan* at *Paris*, he did not intend to exclude the Druggifts or Apothecaries at *Paris* from making it, as has been declar'd by an *Arreft*, leaft he fhou'd deprive *France* of a Remedy fo valuable and neceffary for the Publick. But fince the Sieur *Contugi* and his Wife are both dead, I have thought fit to give the World a true Defcription 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 rob'd of a great many of my Papers and Memoirs, I was hindred in my Attempt, and plung'd into a vaft Expence, which I was oblig'd to in the Impreffion of this Book, befides the great Charges I had been at for fixteen or feventeen Years in gaining a particular Knowledge of the fcarceft Druggs, and making all Sorts of Tryals I cou'd upon this Subject, agreeable to my Profeffion and the Defign of this Work.

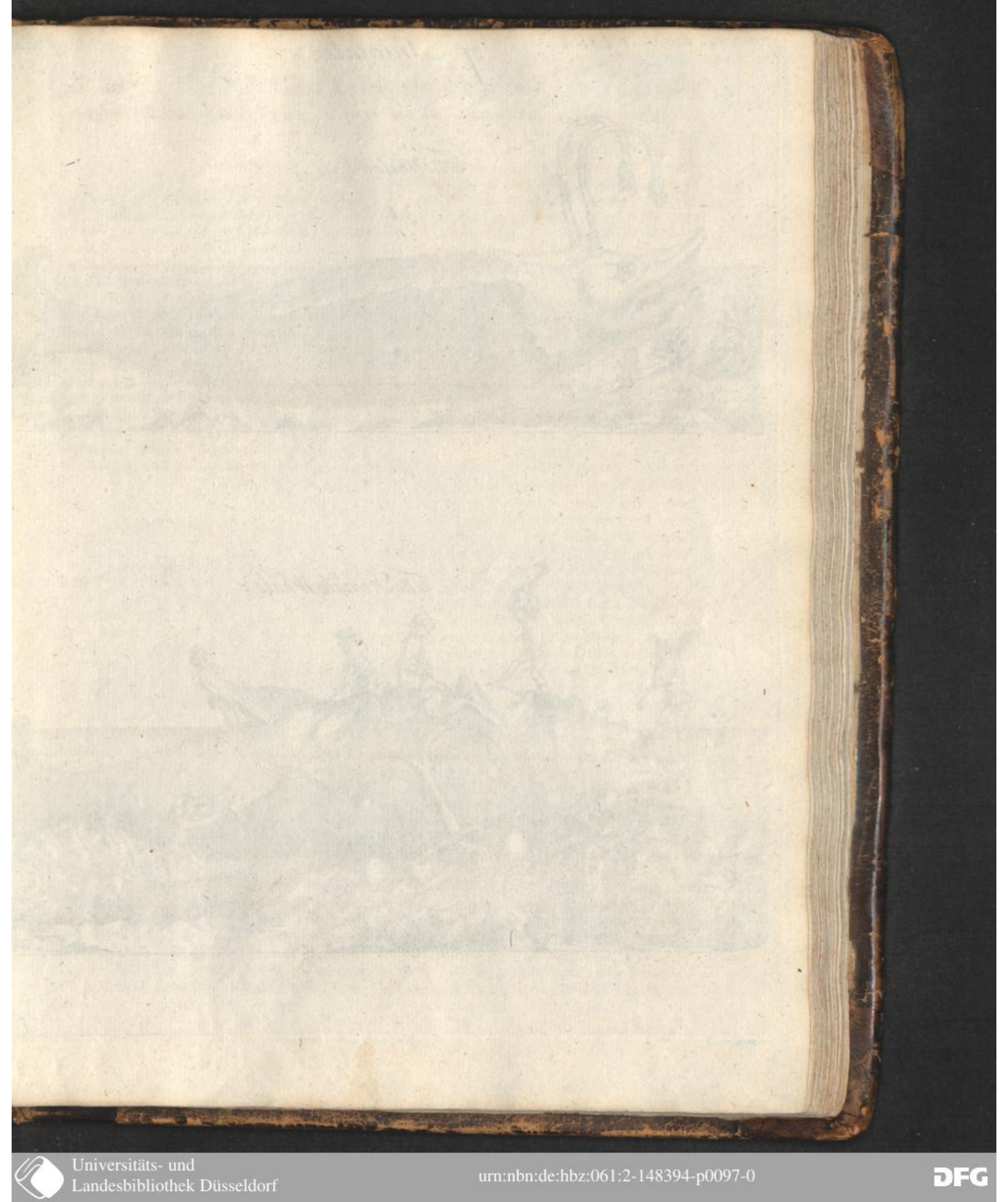
Orvietan.

Take Roots of Vipers Grafs, *Carline* Thiftle, Maft-wort, Angelica, Bitumen, Birth-wort, Contrayerva, white Dittany, Galingal, Gentian, fmall *Arabian* Coftus, true Acorus, *Macedonian* Parfley-Seed, Leaves of Sage, Rofemary, Goats Rue, Carduus Benedictus, Dittany of *Crete*, Bay and Juniper-Berries, of each one Ounce; Cinamon and Cloves of each half an Ounce; dry'd Vipers, with their Hearts and Livers, old Treacle, four Ounces; white defpumated Honey, eight Pounds to the whole Druggs; to make it into a Body: by conſulting of *Bate's Pharmacopœia*, you may fee how far this Recipe differs from that which he fays, Sir *Robert Tabbor* coumunicated to him, and which we may fuppofe he brought from *France*.

29. *Of the* Sea Skink.

THE *Sea Skink* is an amphibious Animal, pretty much like a fmall Lizard: This Creature is about half a Foot long, and an Inch Diameter, having a fharp Nofe, being cover'd with Scales; it has two little piercing Eyes, with the Mouth divided to the Place where the Ears fhou'd be feated 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 thofe of an Ape; it is cover'd with little round Scales, different from thofe of the Head, that are long and large; they are greyifh, inclining to brown upon the Back, and of a Silver Grey under the Belly; the Body of this Animal grows ftill fmaller to the End of the Tail like the Viper's. *Pomet.*

There are a great many of thefe 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 fmall End of the Tail is cut off: Chufe fuch as are the biggeft, longeft, heavieft, moft dry and entire, and leaft Worm-eaten, to which they are very fubject; they are



The Male Whale.

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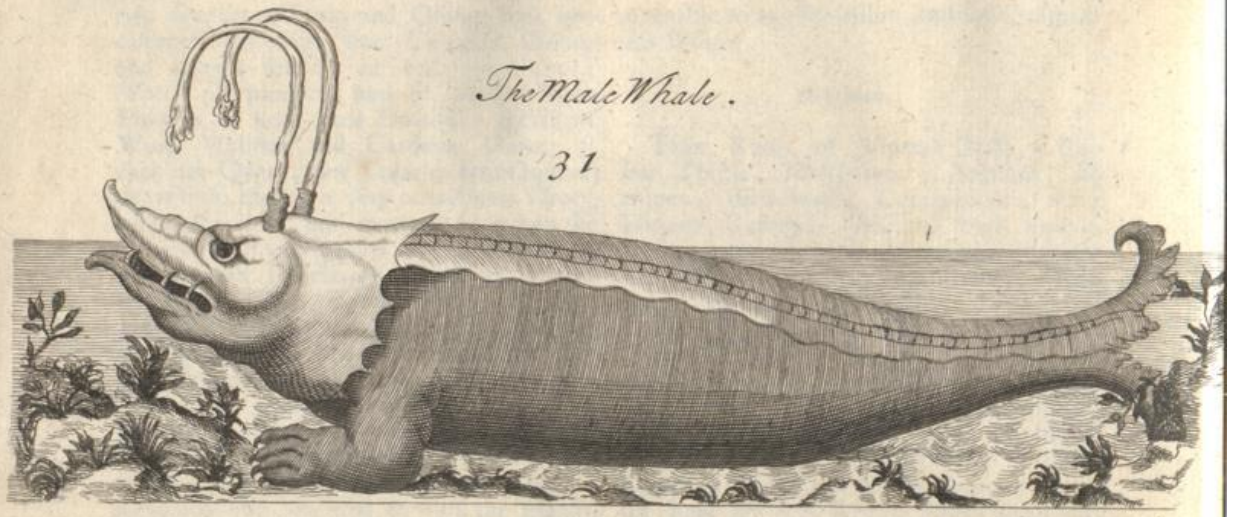
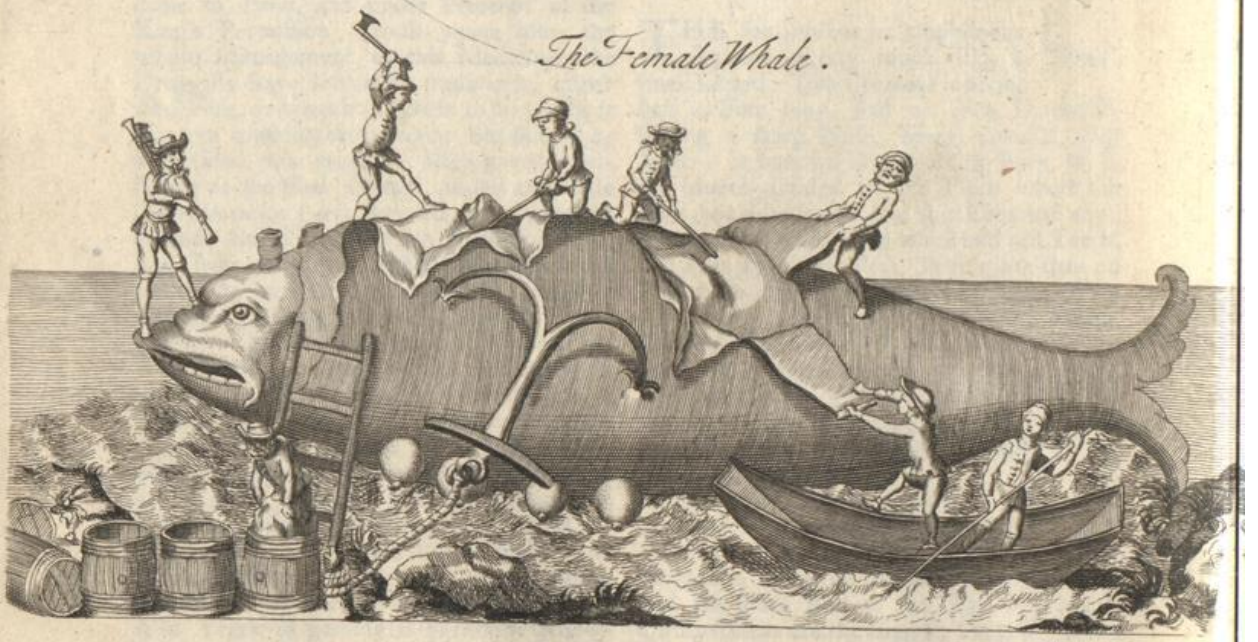
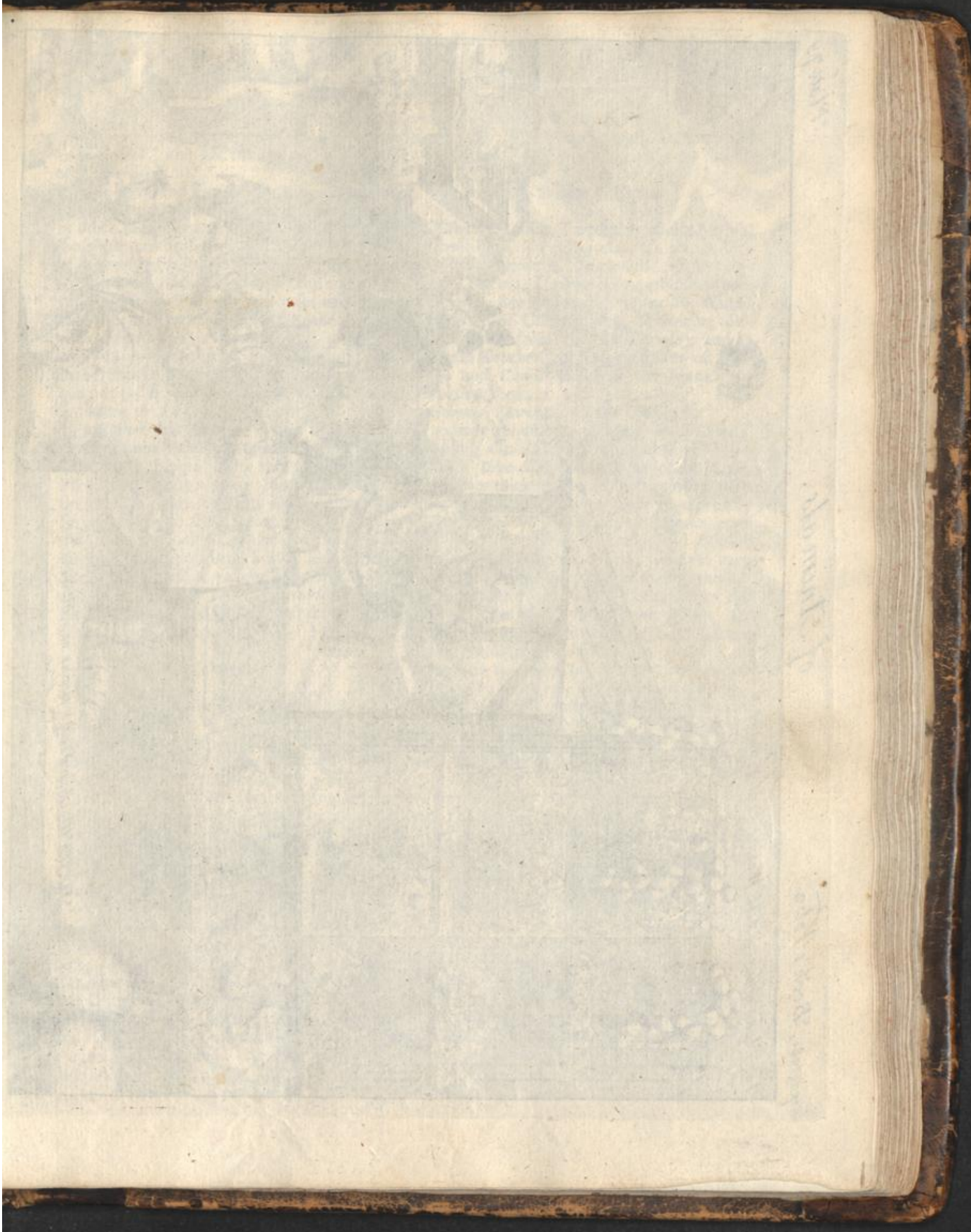


The Female Whale.





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 *Egypt*. It is a Sort of *Lizard* which, by the Inhabitants of *Guadaloupa* is call'd *Maboüya*, 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* wou'd 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 Shape Skin and Head 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 Cinamon, *Indian* Spicknard, Frankincenſe, and Thlaſpi, or Treacle-muſtard-Seed, of each ten Drams; *Marſilian* Hartwort, Balſam of *Judea*, Camels Hay, *Arabian* Stæchas, Coſtus, Galbanum, Turpentine, long Pepper, Caſtor, Juice of *Hypociſtis*, Storax in Tears, Opoponax, and *Indian* Leaves, of each one Ounce: Caſſia lignea, Poley Mountain, white Pepper, Water Germander, Candy Carrots, Fruit of the Balſam Tree, Troches of *Ciphi* and Bdellium, of each ſeven Drams; Celtick Spicknard, Gum Arabick, *Macedonian* Parſley, Opium, the leſſer Cardamom, Fennil, 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 an half; *Spaniſh* Wine a ſufficient Quantity; fine Honey, nine Pounds, eight Ounces, and two Drams.

Of Troches of Ciphi.

Take fat Raiſins, Turpentine, choice Myrrh, Camels Hay, fine Cinamon, Calamus Aromaticus, Bdellium, Spicknard, 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*, ſhow 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 *Egypt*, and feeds upon aromatical 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 aromatical 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. *Lemery.*

30. *Of* Silk-worms.

THE *Silk-worms* 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-Leaves *Pomet.*

" Leaves are ready to gather, which shou'd " 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 pro- " ceed 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 Silk-worms 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 wou'd be troublesome to dwell upon this Subject; besides it has no Relation to my present Purpose; and since Mr. *Isnard* has writ an intire Book upon it; I shall refer to it those who wou'd know further. These little Animals supply us with a Commodity so valuable, that formerly those only of the best Quality were cloathed with it. There are several Colours of Silk; as white, yellow, and the like; these different Silks are found upon little *Clue's*, of the Size and Shape of a Pidgeon's Egg; and by the Means of warm Water, and certain *Windles*, they wind it into Scains, 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 Ancients 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 easie 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 wou'd have the best, use nothing but 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 that is white, or of a Gold Colour, and which has not been dyed.

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 these 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, that are to be met with in clear running Water, and throw away the venemous 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 Ancients attributed

ted 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 Vertues: 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 more frequent in theſe Provinces. The Oil of Scorpions ſimple, is only made of Scorpions, and Oil of bitter Almonds: The Compound is that of *Mathiolus*, which is made of the following Druggs, *viz.* of Scorpions, old Oil Olive, the Flowers, Leaves and Seeds of St. *John*'s Wort, Germander, Mountain Calamint, Cardnus benedictus, Water Germander, leſſer Centory, Vervain, Dittany of *Crete*, Zedoary, white Dittany, Gentian, Tormentil, round Birthwort, Storax, Benjamin, Juniper-Berries, black Cummin Seed, fine Cinamon, the odoriferous Reed, long Cyperus, white Sanders, Rubarb, Myrrh, Aloes, *Indian* Nard, Saffron, Treacle, Mithridate and white Wine; mix all together, and make an Oil: The Doſes you will find in *Mathiolus*'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 viſcous; they are cloath'd with a very thin tender Skin, eaſie to break and waſt 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 Silkworms; when they are grown to their full Size they eat no longer, but ſpue out of their Mouths a Kind of thick, gluey, or viſcous 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 wrap'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 Cloathing, pierce thro' the *Clue*, and ariſe a fine, white, gawdy, 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 careſſing, and making Love; from whence, afterwards, you have Eggs when the Animal is dead. *Lemery.*

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 purifie 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 Houſe, 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 Silkworms in Chambers, where they are disposed 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.

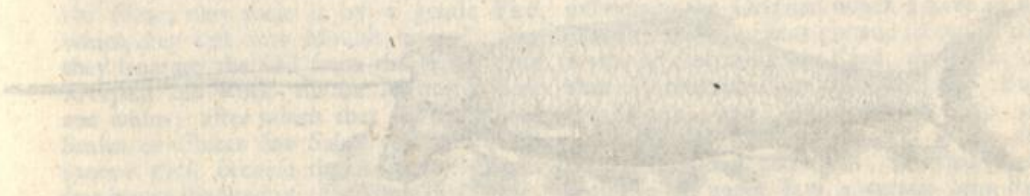
31. *Of the* Whale.

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 shown at *Paris* in 1658, whose Scull 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 Joynts of the Back, from the Head to the End of the Tail, forty-five Foot long; the first Joynts 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 melted; 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 *Hogoo*. The great Quantities we have of Whale Oil, comes from the Northern Sea, especially *Greenland*, from whence the *Hollanders* are supplied.

Of Sperma Ceti.

The *Sperma Ceti*, according both to the Ancients 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 Finister*, on the Coast of *Galicia*, and in *Norway*; in the Year 1688, there was one taken by a *Spanish* Sip, 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 undeceiv'd 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.

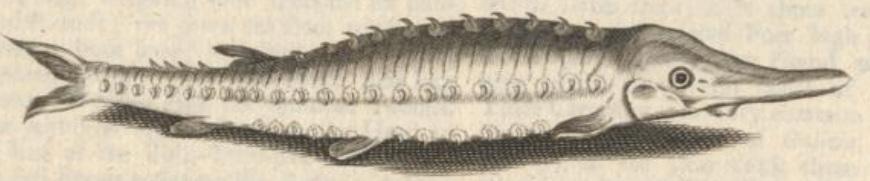
This *Sperma Ceti* is usually prepar'd at *Bayonne*, and St. *John De Luz*; and this Work is so rare in *France*, that there are not above two Persons at the latter Place who know how to prepare it. Those who perform this take the Brain as aforesaid, and melt it over a gentle Fire; then they cast it into Moulds like those wherein they refine Sugar; and after it is cool'd and drain'd 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 augmented



32

The Ising-glass Fish

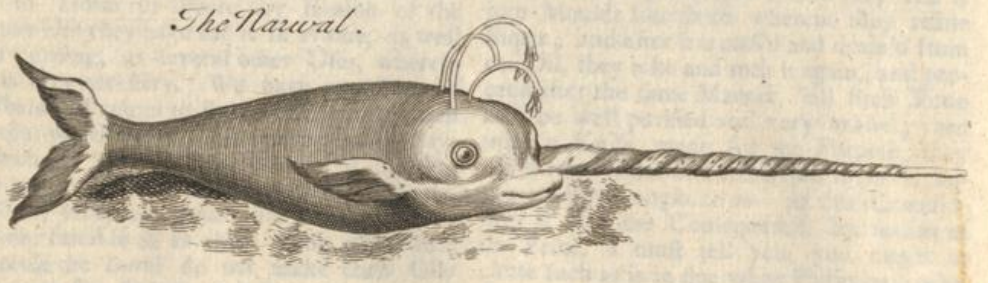
The Silurus.



33

The Sea Unicorne.

The Narwal.



ed with white Wax, as it happens but too often, which is eaſie to diſtinguiſh, as well from the Smell of the Wax, as becauſe it is very thin, and of a more unpoliſh'd 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 ſtop'd from the Entrance of any Air, leaſt this Drugg turn yellow. Its Uſe is for Ladies of Quality; as well for making of Paint, as for Paſts to waſh the Hands withal: Women in Child-Bed ſometimes take of it, to a Spoonful, to remove After-pains, and aſſiſt their Cleanſings; and it is an excellent Remedy in Bruiſes, Inflammations, Pleuriſies, or the like, taken with Syrup of Violets, Oil of ſweet Almonds, *&c.*

Balæna, ſive Cete, 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 *Galicia* 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 call'd *Sperma Ceti*, becauſe the Ancients believ'd that it was the Seed of the Whale that floated on the Sea; ſeveral Moderns have rejected this Opinion, but wou'd 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 reſolutive 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 Injections 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* Iſinglaſs.

THat which we call *Fiſh-glue* or *Iſinglaſs*, the *Latins*, *Gluten Alcanak*, 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 *Moſcovy Seas*, which is the Reaſon that almoſt all the *Iſinglaſs* 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 Iſinglaſs, and among others *Rondelet*, have ſaid that it was without Bone, which is the Reaſon why it is call'd 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 furniſh'd with them, that there is not any Fiſh, how ſtrong ſo ever, will dare to bite it; and the Scales, tho' they are ſmall, are very ſharp, as repreſented in the Cut, which anſwers to the Original which I have in my Hands. The Ancients pretend likewiſe, that it was of the cetaceous 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 Excreſcence, 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. *Pomet.*

As to the Manner of Making the *Iſinglaſs*, the Skin, Tail, Fins, Stomach and Guts of this 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 dry'd. 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 *Moſcovy*; 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 Diachylum Plaiſter, that all the Apothecaries in *Paris* ſcarce uſe a Pound in a 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 *Moſcovy*, 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 Dyſentry and continued Purging; it is good in Gonorrhea's, 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, to whiten Gawzes; 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 aſſur'd 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, theſe who find 'em ſell 'em for three or four hundred Livers.

Ichthyocolla, *Iſinglaſs*, or *Fiſh-Glue*, is a Paſte or Glue made of the Skin, Fins, Tail, Entrails, Nerves, and other mucilaginous Parts of a great Sea Fiſh, call'd a *Huſo*, or *Exoſſis*, from being without Bones, that is twenty-four Foot long, and weighs four hundred Weight; it is uſually met with in the Seas about *Moſcovy*, 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 boil over a gentle Fire, 'till it is diſſolv'd, and reduc'd into a Jelly; they ſpread this upon Inſtruments made for that 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 imploy'd chiefly as* Pomet *has laid down.*] *Lemery.*

33. *Of the* Narwal *or* Sea Unicorn.

THE *Narwal*, ſo call'd by the *Iſlanders*, and by ſome others, *Rhoar*, by us the *Sea Unicorn*, is a large Fiſh, ſome reckon to be a Sort of Whale that is found plentifully in the Northern Seas, eſpecially along the Coaſt of *Iſland* 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 Guiſe*, 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 authoriſe 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 are 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 uncover'd, he cou'd 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 Hogshead; 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 Vermilion Colour, and all the Body was cover'd with large Scales, as big as a Crown Piece, which were of a Blue, that appear'd 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 thro' 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 waved in Form of a twisted Column, saving that the Furrows were still lessen'd until they became altogether smooth about four Foot two Inches from its Original; the Bottom was cover'd with an ash-colour'd 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 appear'd 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, enamel'd with Yellow, and surrounded with a Vermilion 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 cover'd 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 thereabout, 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 savoury 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 Livers, 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 'em from infectious Air. Those who keep these for Curiosities, have the Horn entire, and choose the longest and most weighty. *Lemery.*

34. Of

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 an 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 Lyon 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 Ancients believ'd that this Animal vomited Fire, when he grinded his Teeth one against the other.

The *Ethiopians*, and other People of *Africa*, eat the Flesh of them, tho' they are an amphibious Creature, living both on the Land and in the Water. Father *Vandenbrock* 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 Tushes in their Mouths like the *Boars*. 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 *Pizzel*, and worn, is said to cure the Cramp; the Testicles have the Virtue of *Castor*.

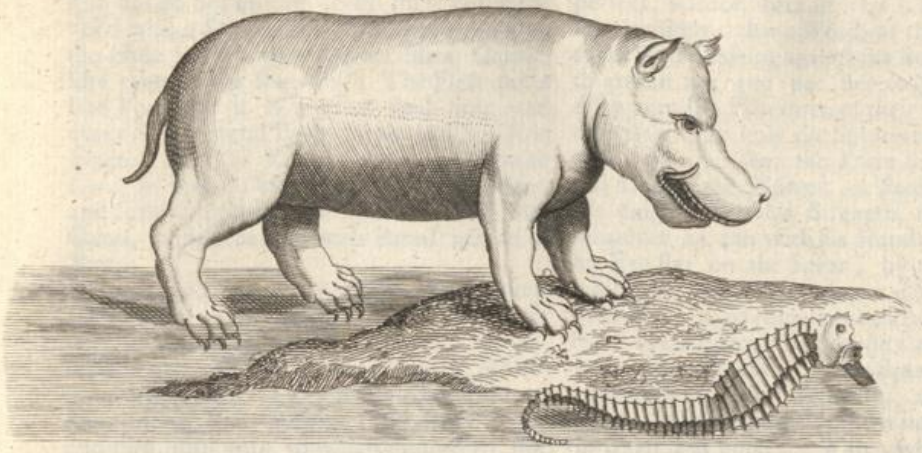
Hippopotamus, or the *Sea Horse*, is a four-footed Animal, as big as an Ox; the Head is very thick, resembling more that of a Calf than a Horse; the Mouth is a Foot long, and the Jaws set with strong hard Teeth, that will strike Fire like a Flint with Steel; and are very proper to make artificial Teeth 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. *Lemery.*

35. *Of the* Sea Cow.

VACCA Marina, *Manati*, or the *Sea Cow*, according to the 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 *Manaty*, 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 Peal; it is a Foot and an half broad, five or six Inches thick, cloath'd *Pomet.*

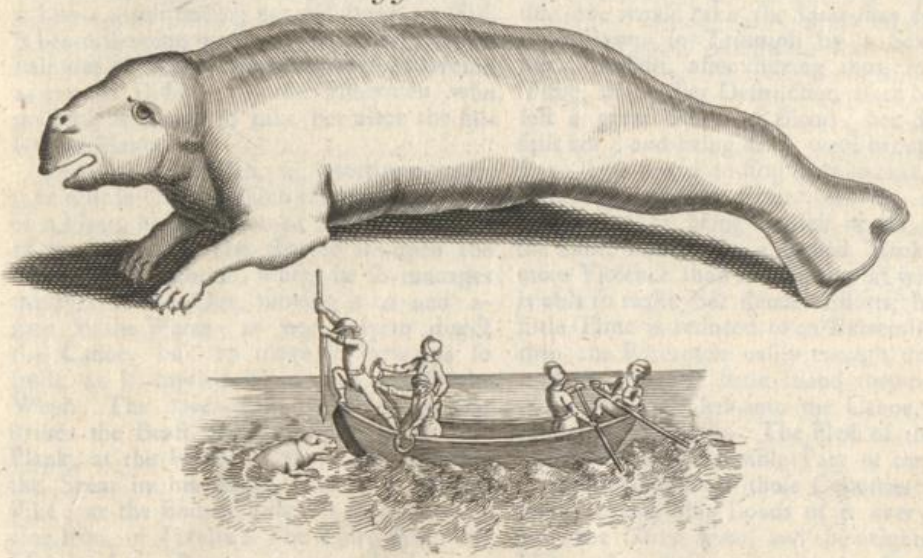
The Sea Horse.

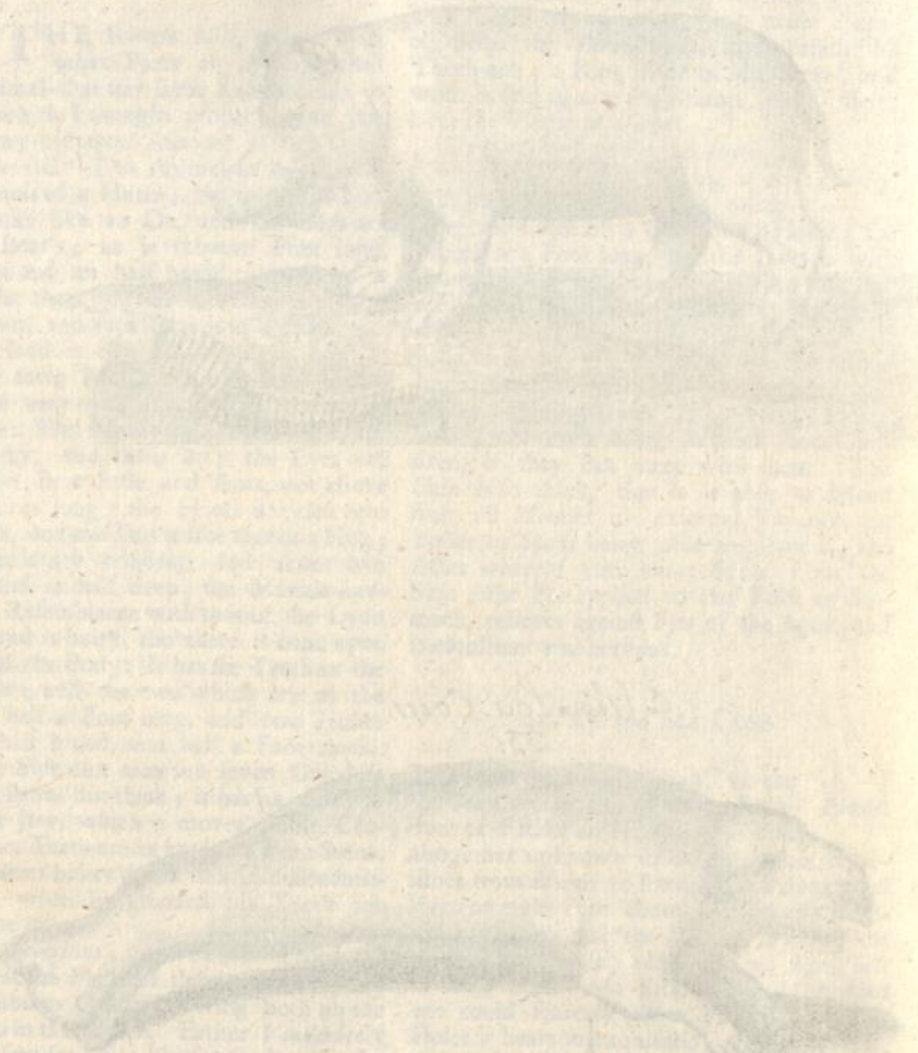
34



The Sea Cow.

35





cloath'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 Hogs; 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 Fields; 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 ſhou'd eſcape, and fancies the Rower, or Steerſman, does not employ half his Strength, tho' he does whatever he can with his Hands, and keeps his Eye fixt 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 lyes 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 Beaſt, 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; inſomuch that one would take the *Spear-man* for *Neptune* 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; but ſhe no ſooner lies by, but the Spear-man, 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, but 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. *Chriſto-*

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 Ancients; 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 *Alcali*, absorbs Acids, eases the Pain of the Stomach, cures Heart-burning and the Colick; is good against Stone and Gravel, and to expell 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.

Lemery. *Manati, vel Vacca Marina*, the *Sea Cow*, is a large Sea 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 Powder, to twelve Grains and upwards, for nephritick Pains, and Stone in the Kidnies and Bladder.

36. *Of the three Kinds of* Tortoises, viz. *The Frank or True* Tortoise, *the* Kaoüanne, *or great Headed* Tortoise, *and the* Caret, *or Least* Tortoise.

Pomet. THE Figure which I have given of the *Tortoise* is so exact, according to the Reverend Father *Du Tertre*, that it wou'd 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 Frittures, 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; but I have since chang'd my Opinion, and believe firmly that they are nothing but the Ears of the Heart; but be that as it will, 'tis certain that when rightly display'd upon a Table, it makes the Resemblance of a Flower-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 *Flower-de-lis* in the Heart of this Animal, as the Hieroglyphick of this Country.

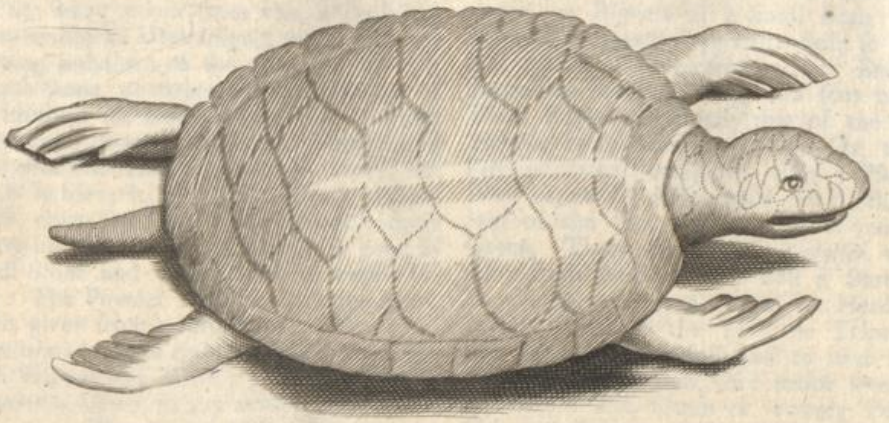
Of the Kaoüanne, *the* Loggerhead, *or great Headed* Tortoise.

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

# of Animals.

36

The Sea Tortoise.



37

The Sea Dog.

The Rousette.

cauſe the Fleſh is black, of a Sea Smell, and an ill Taſte. Thoſe who fiſh for the *Kaymans* mix it with the true *Tortoiſe* to get a Price for it, but it communicates its ill Taſte to it. The Oil made from it is acrid, and ſpoils the Sauces with which it is mix'd, and is only us'd when the others can't be had; however it is not uſeleſs, becauſe it ſerves to burn in Lamps.

Of the Caret, *or ſmall* Tortoiſe.

The *Caret* is the leaſt of all the three Kinds of *Tortoiſes*, the Fiſh is not ſo good as that of the *Frank Tortoiſe*, but is a great deal better than that of the *Kaoüanne*; the Oil drawn from it is excellent for Weakneſs of the Nerves, *Sciatica Pains*, and all cold Defluxions. I know Perſons who have found it very uſeful for Diſeaſes of the Kidneys, caus'd by over ſtraining, *&c.* but eſpecially 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* conſiſts 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 high, and ſeven Inches broad: The fine *Caret Tortoiſe* ought to be thick, clear, tranſparent, of the Colour of Antimony, and marbled brown and white. There are of them that bear ſix Pound of Leaves upon their Back; they make Combs and other fine Works of 'em, that are very beautiful and valuable. The Way of raiſing the Leaves from the large Shell, which is properly the *Tortoiſe*'s Houſe, is by making when all the Fleſh is taken out, a Fire underneath; and as ſoon as the Heat affects the Leaves, they are eaſily 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 uſe it againſt cold Defluxions, Cramps, and Numbneſs of the Joints and Nerves.

Teſtudo, the *Shell Fiſh*, or *Tortoiſe*, is an aquatick four-footed Animal, that is very ugly in all its Limbs, but cover'd with a fine large Shell, ſmooth, hard, bony, oval and marbled, or ſtain'd with ſeveral Colours. This Creature may be reckon'd amphibious, living upon Land, and in the Water; there are different Sizes of 'em, but thoſe in *America* are often met with of five Foot long, and four Foot broad; their Fleſh is good Food, and has the Taſte of Beef, and yields a yellow Oil, very proper for the Lamp. The *Europeans* uſe the *Tortoiſe* Fleſh in their Kitchens as good Meat; they abound with a great deal of volatile Salt and Oil, are proper for Diſeaſes of the Breaſt, and Conſumptions in the hectick Fever; and are very reſtorative being eaten in Subſtance, or elſe the Broth of the Fleſh. The Blood dry'd, is eſteem'd in epileptick Fits; the Doſe being from twelve Grains to a Dram.

Lemery.

The Way of Fiſhing for the Tortoiſe.

There are three Ways of *Tortoiſe* Fiſhing, *viz.* in Coupling, with the *Pomet.* Spear, and when they come a-Shore.

The *Tortoiſes* begin to couple in *March*, and continue to *May*. I ſhall not take Notice of all the Circumſtances that relate to this Action; it will ſuffice to ſay, that 'tis done on the Water, ſo that they are eaſily diſcover'd; and they are no ſooner perceived than two or three People throw themſelves preſently into a Canoe, make towards them, and come at them with Eaſe; they ſlip a Nooze a-round their Neck, or one of their Feet; or having no Line, they lay hold on them with their Hand, by the Neck, where 'tis uncover'd by the Shell; and ſometimes they take both of 'em together, but moſt commonly the Female eſcapes, 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 ſame Sort as that of the *Sea Cow*, only inſtead of the barbed Iron, a Piece of ſquare Iron of about halfe a Finger's Length, and very ſharp, is faſten'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 ſtruck half Way into the Shell, which being of a hard bony Subſtance, it ſticks as firm as if fix'd in a ſolid Oak. The *Tortoiſe* perceiving himſelf ſtruck, makes the ſame Struggle to get looſe as the *Sea Cow*, and the *Spearman* uſes the ſame Diligence to take him. Some ſay that the Force abates proportionably to the Blood that is loſt; but they are ignorant that the *Tortoiſe* does not loſe

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 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 dextrously, 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 straight to the Sea, without being shown the Way. Those that are taken by the Way, they fry whole, and so they are delicious Meat.

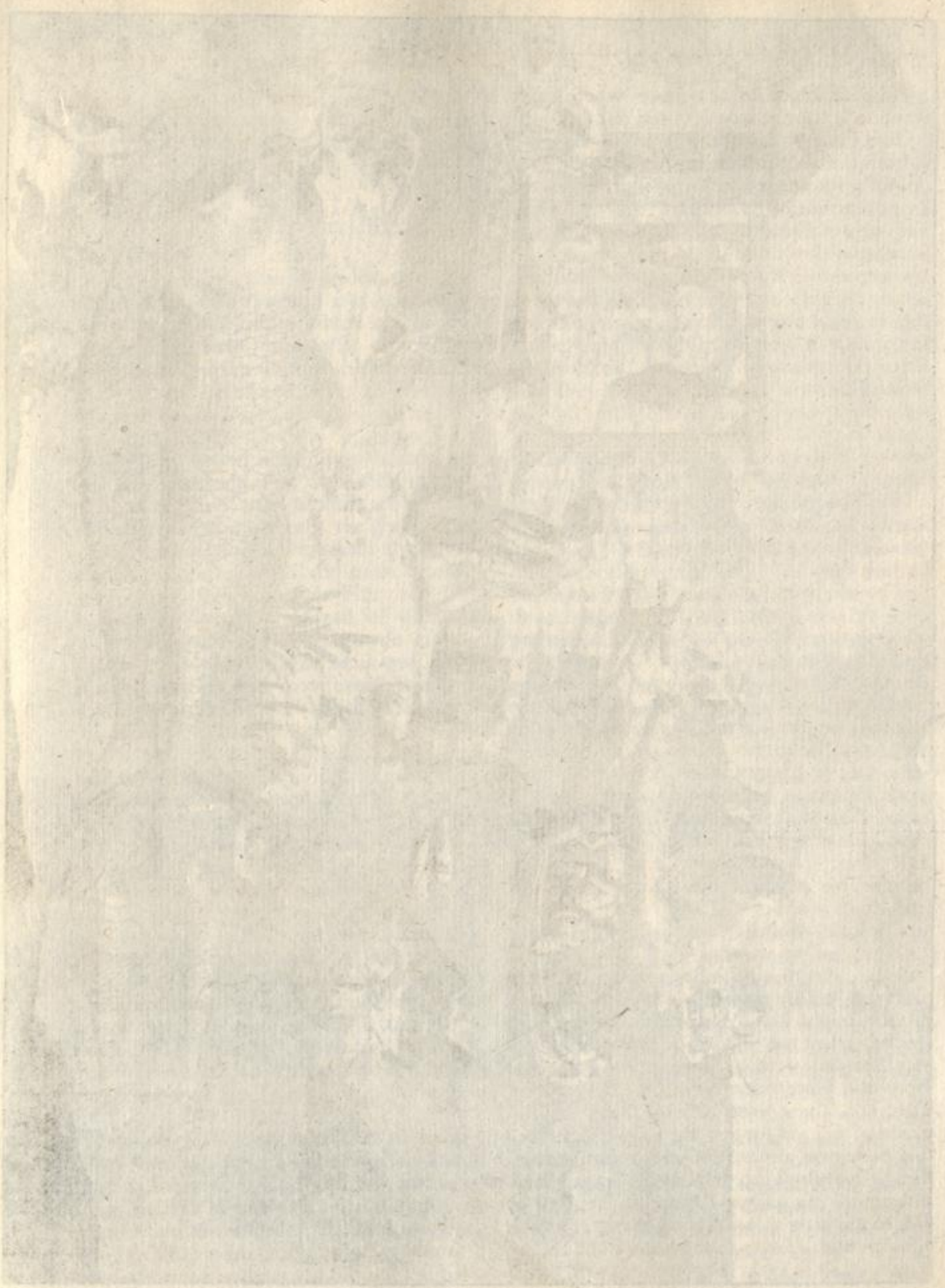
37. *Of the* Sea Dog.

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. *Pomet.*

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 *Rousette*, 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 *Rousette* very little so; and besides, the Dog-Skin is always brown, and the *Rousettes* 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, 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 resolutive and emollient. *Lemery.*

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 shou'd 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-bellied 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 ſhown 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 *Tunnys* entring 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 Grid-Irons, and fry them in Oil Olive, and after having ſeaſon'd them with Salt, Pepper and Cloves, and ſome Bay Leaves, they put 'em 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 Bone* taken 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 unbon'd 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 *Imperador*, or *Emperor*, and *Dolphins* are alſo there to be ſeen, which are always two and two together, ſince they are accuſtom'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 tyed together.

Thunnus, vel Thynnus, or the *Tunny*, is a large, heavy, big-bellied 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 called *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 apply'd outwardly. This Fiſh is call'd *Thunnus*, from the *Greek* Word θύειν, to be carried with Impetuoſity, becauſe this Fiſh moves ſo ſwiftly. *Lemery.*

39. *Of* Anchovies.

BEſides the *Tunny* we ſell *Anchovies* that come from the ſame 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. *Pomet.*

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 wou'd 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 Books 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 dry'd *Sardins* prepar'd 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 Aphya, or the *Anchovy*, 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 'em, and take out of the Head what is apt to putrifie, then salt 'em 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*. *Lemery.*

40. *Of the* Sea Hog.

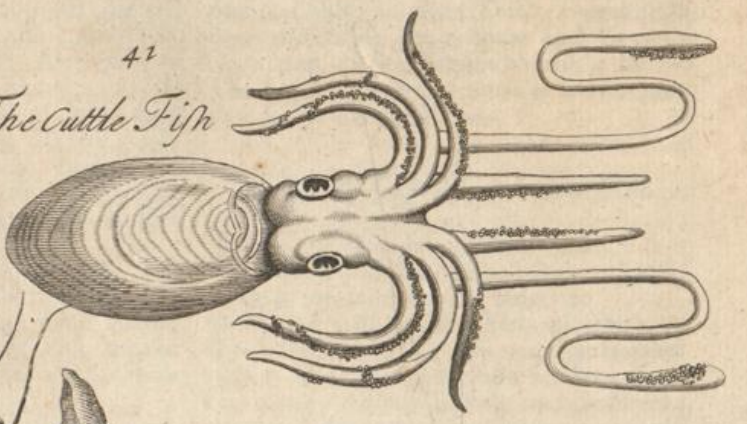
THE *Sea Hog* is a large Fish very well known, the Use of which is very considerable, because it is excellent Food, which is the Reason why some have rank'd this among the Royal Fish. Of all the Parts of this, we sell none but the Fat or Oil aromatiz'd, or plain, which is nothing but the Fat melted, and by the Addition of some Aromaticks, alter'd 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. *Pomet.*

Delphinus, sive Porcus Marinus, or the *Sea Hog*, is a large nimble 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 cover'd with a Skin, that 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 joyn'd 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 dry'd and powder'd is proper for Diseases of the Spleen, and the Liver for intermitting Fevers. The *Sea Hogs* are made *Lemery.*

almost

40
The Sea Hog.

41
The Cuttle Fish



The Crawfish

42
The Crevise

43
Homars

almoſt like the Dolphins, but they are not ſo little: The Fat of both are 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 ſurpriſing Nature; they eat them in ſeveral Towns in *France*; as *Lyons*, *Bourdeaux*, *Rochel*, *Nants*, &c. The Bone of this Fiſh is of different Sizes, tho' 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 it 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, ſpungy, dry Pulp or Subſtance underneath it, which being rub'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 *Gonorhea*, 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 watery Humours.

Lemery. *Sepia*, the *Cuttle Fiſh*, is a deform'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 ſpungy 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 deterſive, aperitive, deſiccative, 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.

Pomet. THE *Creviſe*, ſays Father *Du Tertre*, is a Kind of ſmall Crab, of three or four Inches long, or more; one half of the Body of which, is like a Sea *Locuſt*, or *Graſhopper*, but cloath'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 of 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 Graſhopper*; 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 Tryals 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 cloath 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 increaſing in Bulk, and the Shell becoming too ſtrait for them, by

by Reason of their Growth, they are oblig'd 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 immediatly quit the old one, and run themselves so swiftly backwards into the other, that one wou'd think they were either afraid of the Injury of the cold Air, or asham'd 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 stript, 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 cloath'd himself with it, takes three or four Turns upon the Shore; and if he find 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 Crawfish, 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 call'd 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.

Lemery.

In several of the *American Isles* they meet with a Kind of *Cancellus*, or *Crawfish*, 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 cloath'd and arm'd with a foreign Shell. Those who wou'd 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 'em, by hanging them in the Sun, so that the Substance that melts from them makes an Oil of a Consistence as thick as Butter, and of a very fetid 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.

Pomet.

THere are two Sorts of *Sea Crabs*, says Father *Du Tertre*, 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 retired.

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 prepar'd 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 *Alcali*; 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 diſcuſs, and are good againſt Colicks, ſalt 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 call'd *Crabs Eyes*, or *Oculi Cancrorum*, are never found but in *May* and *June*, which are the Times that the *Crawfiſh* leave their Shells. The *Crawfiſh*, or *Creviſe 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 aſſured 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*, *Hamburgh*, *Denmark*, *Norway*, and *Swedland*, and are found upon the Shoar, 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 prepar'd, they ought to be yellow; for if they are of a black Colour, they are too much burnt, and good for nothing.

44. *Of the* Boutargo *and* Caviere.

Boutargo, or *Potargo*, is the Spawn of a Fiſh, which the People of *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 *Marſeilles*, the reddeſt is moſt valued, they eat it on Faſt Days with Oil Olive and Lemon. *Pomet.*

The *Caviere*, or *Caviat*, 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 and River Fiſh, which has a great Head, from whence it is call'd *Cephalus*, which ſignifies a Head; the Muzzle is thick and ſhort, the Body oblong, cover'd with Scales. They find a Stone in its Head, which is call'd *Echinus*, or *Sphondylus*, becauſe it is ſet with Prickles. This Fiſh is common in the *Mediterranean*, it ſwims with an extraordinary Swiftneſs, and gives ſome Diſturbance to the Fiſhermen; it is good Meat, and yields Abundance of Oil and Flegm, 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 *Boutargo* of, which is uſually eat on Faſt Days. *Lemery.*

45. *Of the* Shark *or* Sea Dog.

THis Fiſh is call'd by the *Spaniards*, *Phiburon*, by the *Dutch*, *Haye*, and by the *French*, *Requiem*, becauſe it devours *Pomet.*

vours Men, and so is the Occasion that *Dirges* are sung over 'em; it is one of the most glutonous Animals in the World; nothing comes amiss to him, tho' it be a Log of Wood he'll swallow it, provided it be but greasy, for he swallows without chewing; he is furious and bold, and will throw himself upon the Shore, and remain on the Land, that he may have the Opportunity of catching the Passengers; sometimes he will bite at the very Oars with his sharp Teeth, for Rage and Madness 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 Discourse of this Animal, to which the Reader may have Recourse; some have given the Name of *Tiberon* to this Animal, and others that of the Fish with two hundred Teeth; and he is so furious, that with one Bite he will snap off the Thigh of a Man.

Besides these Animals, and the Parts whereof I have treated, we sell, tho' very rarely, the Bone of the Head of the *Tiberon*; those of the Crocodile, Carp, Perch, *&c.* with the Jaws of the Pike; and in short, the Druggists are permitted to sell all Sorts of salt Fish, either Wholesale or Retail.

Lemery. *Carcharias, Canis Marinus*, or the *Sea Dog*, is an *American* Fish that grows to a large Size, so as to be two Tun 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, furnish'd with Abundance of triangular Teeth that are hard and sharp; the Eyes are large and round, the Body cartilaginous, the Tail about a Foot and an half long, forked; the Fins are great, it swims in the deep Sea, but sometimes enters into the Mouths of the Rivers to pursue its Prey; it lives of Fish and Flesh, but is very eager after that of Man's Flesh. *Johnston* relates, that he found in one of these *Sea Dogs* a whole armed Man; they are of several Sizes; their Flesh is eat, but it is not good; the Skin is of great Use to several Artists; the Head contains in it two or three Ounces of Brain that is very white; the Teeth are us'd to rub Childrens Gums with, to make their Teeth cut.

46. *Of* Pearl.

Pomet. THE *Pearls* are little round Bodies, that are found both in the Eastern and Western Seas: There are several Sorts of 'em which are more or less 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 show from Mr. *Tavernier*, who in his Travels has made a curious Enquiry after them. These Pearls are found, says 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 shall relate all the Parts where the Pearl Fishings are, beginning with these of the *East*. First of all there is a Pearl Fishing about the Isle of *Babren* in the Gulph of *Persia*; this belongs to the King of *Persia*, and therein is a good Fortress that entertains a Garrison of three hundred Men. The Water which they drink in this Island, and that of the Coast of *Persia*, is like salt Water, and of an ill Taste, and what none but those of the Country are able to drink: As for Strangers, if they will have fresh Water they must pay for it; being only to be had a League or two off, by putting to Sea five or six Persons in a little Vessel, 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 sweet, and pleasant to drink. When they that dive to the Bottom of the Sea to draw up this Water have fill'd the Vessel, they give a Pull to a small Cord which is tied to one of those in the Boat, which is the Signal to his Comrades to pull him up.

During the Time the *Portuguese* were possess'd of *Ormus* and *Mascate*, every Vessel that went out to Fish, was oblig'd to take from 'em a Passport that cost five *Abassis*, and they kept always several Brigantines to sink such as refused to take any. But since that the *Arabs* have retaken *Mascate*, and that the *Portuguese* have no Forces upon the *Gulf*, every Man that fishes pays only to the King of *Persia*, five Abassis, whether he has Success

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 *Bahren* on the Coaſt of *Arabia Felix*, 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 looſing 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 *Gulf* of *Ormus*, I muſt beg Leave to give an Account of that admirable *Pearl*, which the Prince of the *Arabs* had, which took *Maſcatè* from the *Portugueſe*; he took then the Name of *Imeneẽt*, Prince of *Maſcatè*, but was call'd before that, *Aceph Ben Ali*, Prince of *Norenvaè*; it is no other than a petty Province, but the beſt of all the *Arabia Felix*: 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 weighed 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 *Gulf* 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 *Maſcatè* 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 ſhow'd it to the *Kan* and all the Company. The *Kan* wou'd have bought it for a Preſent to the King of *Perſia*, and offer'd him two thouſand Tomens, but it wou'd 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 wou'd 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 *Bahren* 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 *Gulf* 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 an 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 forc'd 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 eſteem'd the Chief, becauſe the Pearls which are found here excell 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 ſhou'd carry Pearls out of *Europe* into the *Eaſt-Indies*, where they have ſo many: But they ſhou'd 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 Neck-laces of 'em valued at a thouſand Crowns and upwards, yet they are not to be equallized with the Oriental or Occidental *Pearl*. Of latter Years there has been a Fiſhery diſcover'd 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 cou'd diſpoſe of them; but I brought them back again, and cou'd meet with no Body that wou'd 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 waſts and ſtinks, and the Pearl becomes yellow from the Infection; 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 ſhou'd open them by force, as we do ours here, they wou'd 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 *Gulf* of *Perſia*, becauſe the Heat is much greater there, which is in the tenth Degree of Northern Latitude, than in the Iſle of *Bahren*, 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 Perlæ, *Pearls* are little Stones almoſt round, 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 'em met with that are three or four times as big as the *Roüen Oyſters*. They fiſh for theſe Pearl Oyſters in the Eaſtern and Weſtern Ocean, as you *Lemery.*

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may see at Length in Mr. *Tavernier*'s Travels. [*from whence* Pomet *has given you a Relation.*] The Ancients 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 petrefied 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 the 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 ancient 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* Gulf, 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 into 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 is 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 tye a Cord under the Arms of those that dive, of which those that remain in the Boat take hold of the End. They tye 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 Signal that he wou'd come up, and those that are in the Boat draw him up as quick as possible. Those of *Manar* are more expert at Fishing, and stay longer in the Water than the Fishermen of *Bahren* and *Catifa*, for they put nothing in their Noses or Ears to keep out the Water, as they do in the Gulf 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 Eight 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 Eight 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, Glass 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 uneven 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 'em for prepar'd *Pearl*. *Pomet.*

The *Mater Perlarum*, or *Nacre de Perles*, in *English*, *Mother of Pearl*, is a Kind of Oyster, of which there are several Sorts that is within of the Colour and Beauty of the Oriental *Pearl*. I have preserv'd 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 polish'd Works, that are neat, smooth, and very agreeable to the Eye; and likewise grind it to Powder on a Porphyry, and it is us'd by the Women amongst their Pomatums for a *Fucus* to beautify the Face. *Lemery.*

49. *Of the* Shell *of the* Sea Snail, *call'd* Concha Venerea.

WHat we call the *Sea Snail Shell*, and the *Latins*, *Concha Venerea*, is the little white Shells 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 it *Pomet.*

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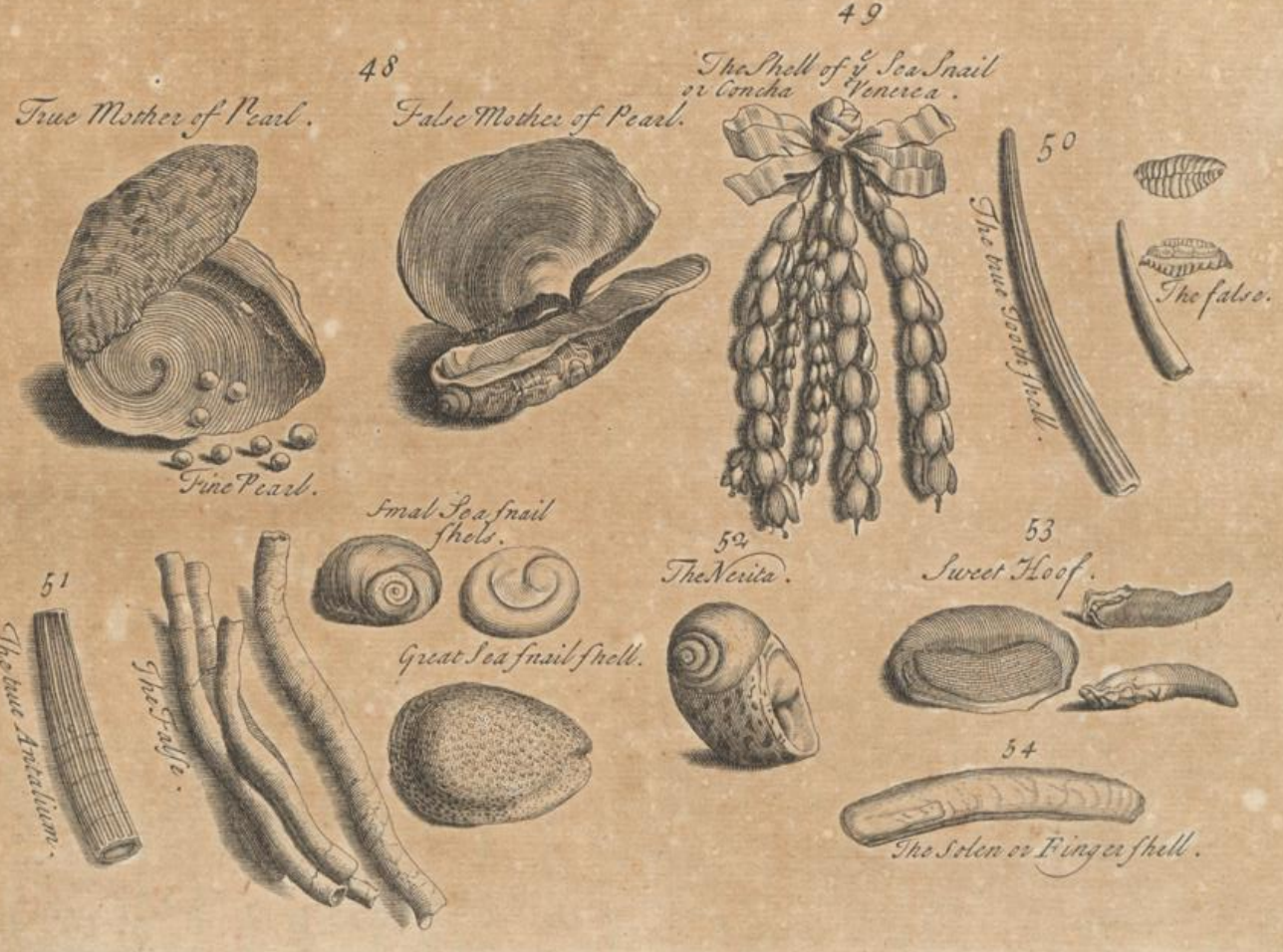
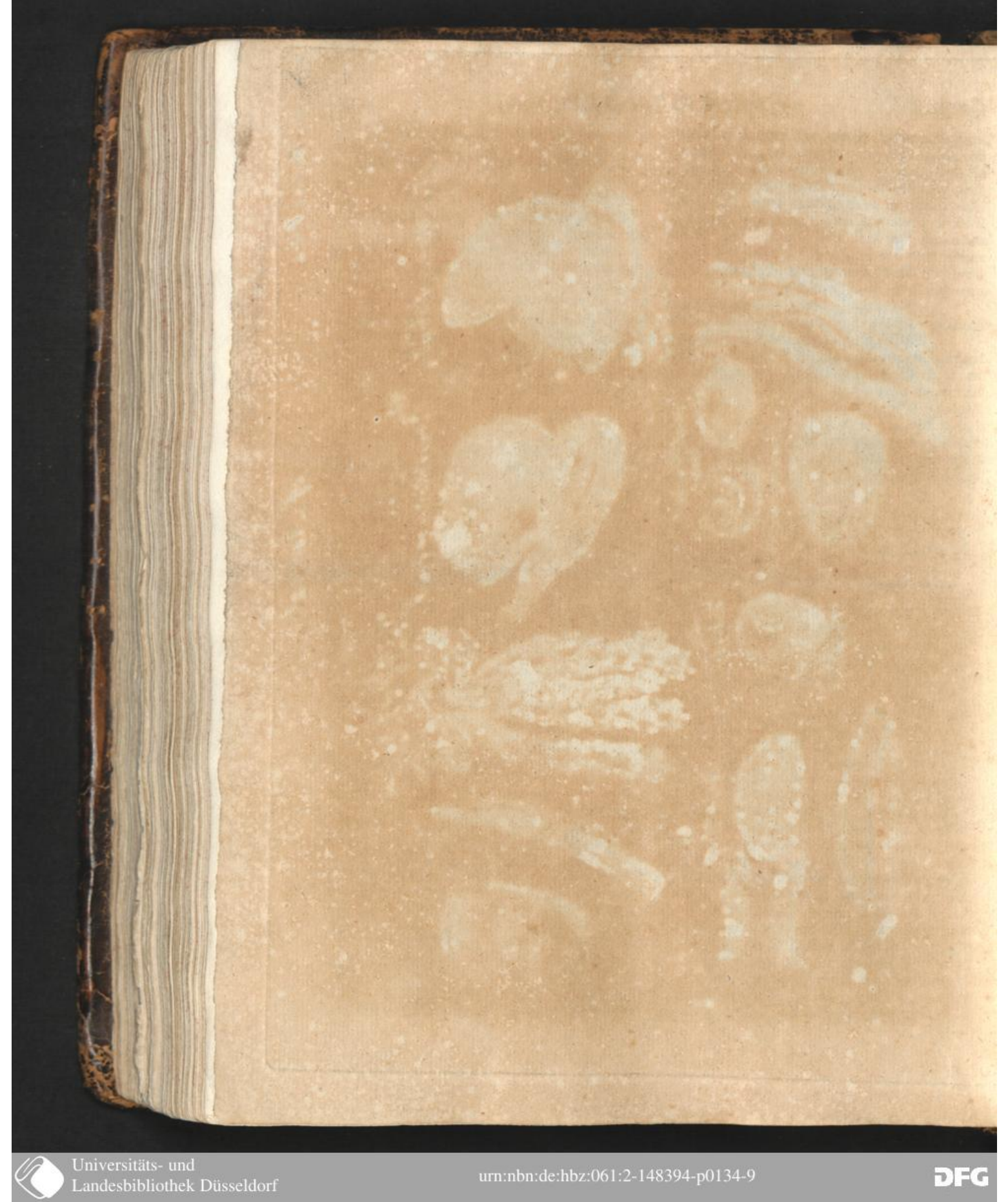

49
48
The Shell of y Sea Snail or Concha Veneria.
True Mother of Pearl.
False Mother of Pearl.
50
The true Scotts Shell.
The false.
Fine Pearl.
Smal Sea snail shels.
52
The Nerita.
53
Sweet Hoof.
51
The true Antalium.
The False.
Great Sea snail shell.
54
The Solen or Finger shell.



a Parcel where there are ſeveral of theſe Bunches, there are more than a Thouſand of theſe little Shells. The *Siamois*, *Arovargues*, 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 deſcrib'd 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 alcaline, and a good Sweetner of the Blood, but are not much us'd in Phyſick.

50. *Of the* Doglike-tooth-ſhell.

Pomet. THE true *Doglike-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 Ancients; but Mr. *Tournefort* gave me one which I have caus'd to be delineated amongſt the Pearl, which I am oblig'd 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 Galenical 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 Alcaly 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 Perſpicuity, 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 Alcalies and Dryers.

52. *Of the* Umbilicus Marinus.

WHat the *Latins* call *Umbilicus Marinus*, i. e. Sea Navel, is *Pomet.* the Covering of a Cockle or Sea Snail, that is very common in the *Mediterranean*, which *Rondelet* calls *Cochlea Celata*; 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 *Nerita*, of which Mr. *Tournefort* gives the following Account.

The History of the *Nerita* is very confus'd in both ancient and modern Authors; that which *Rondelet* takes for the *Dælian Nerita*, 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, smoother, 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 *Nerita* some Apothecaries confound a small Plant, whose Leaves are round and thick, which the Ancients 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, easie to burn, and of an unpleasant Smell, like that of Horn, which is quite contrary to its Name; and I cannot understand what Reason the Ancients cou'd 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 Onix:* This, says he, is like to that of the Purple Fish; that which is found in the Lakes of the *East-Indies*, amongst the Spicknard, is of a very pleasant Smell, because the Fish to which it belongs feed 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 shou'd 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, that are joyn'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 joyn'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 Sentement; and he calls the female *Solen*, that which has the white or russet 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 above an Inch broad. *Pomet.*

Together with these Shells aforemention'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 Bubo's, being apply'd upon them: He obſerves likewiſe, that they ſerve inſtead of Pearl. Beſides theſe Shells there are Abundance of others which I have not mention'd for three Reaſons; the *Firſt*, becauſe they are not uſed; *Secondly*, becauſe I have little or no Knowledge of 'em; 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 *Luſus 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 longer than one's Finger, and an Inch thick, made up of two Pieces like the Muſcle, but joyn'd together at the End, and hollow like a Pipe: This contains in it a little Fiſh of the ſame Shape, which when it wou'd feed, puts the Head out at the End of the Shell that is not joyn'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 *alcaline*, reſolutive, drying, opening, *&c.* being taken inwardly. The Doſe is from half a Scruple to two Scruples; they uſe it externally in ſome Cerats and Oyntments, in the Place of the *Dentalium* which is ſcarce. *Lemery.*

BOOK the Second, of the Second Volume.

Of METALS.

PREFACE.

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, Glass, *and* Founders Metal, *to pass for* Metals; *but as this Opinion is not well grounded, because* Glass *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* Fryday; *and lastly,* Lead *to* Saturn *and* Saturday. *Some Persons will have it, that* Mercury *is but a half Metal; but as I think it not proper to discuss that Matter here, I shall refer the* Reader *to the* Chapter *of* Mercury *or* Quicksilver, *and begin here with* Gold, *which is the Chief of all other 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 Uses 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 call'd *Virgin Gold*.

The *Second* is in Grains, the *Third* in Oar, the *Fourth* in Sand. These three last Sorts are generally found after great Rains, in those Places through which the Torrents of Water have past; and even in the Bottom of Rivers, especially such as have run through some Mines of *Gold*; as those of *Datzin* and *Diguvira*, in *Africk*, 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 Counteries. 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 thy 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 *Coppel*; the *Third* by *Aqua Regia*; the *Fourth* by the *Cement*. They call *Gold* by the *Coppel*, that which is refin'd by Lead, and Ashes depriv'd 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 Armoniac, Sal Gem and Urine. There is a *Fifth* Refinement of *Gold* by

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 extreamly fine.

Leaf Gold.

We call *Leaf Gold* that which is refin'd by the Cupell, and then by the Help of a certain Kind of Skins, or Beasts Bladders (which the *French* Workmen call *Baudruche*) is by Hammering reduc'd to Leaves extreamly 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 Armorers to gild their Iron and Weapons. The *Third* is that which is us'd in Gilding of Books. The *Fourth* is us'd 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 Bractreole with Virgin Honey, and then put them into Muscle-Shells, and this they call Gold in Powder, or in the Shell; this Gold, so prepar'd, is us'd 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*, pour'd upon the Dissolution. This Powder dry'd 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 Armoniack, and this Calcination is call'd *Gold in Powder*, or amalgamated, and is us'd by the Gilders, because it spreads easily: There are some who omit Sal Armoniack 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 Sort of Conveniencies to him that is Master of it.

Gold, in *Latin*, *Aurum*, *Sol*, *Rex Metallorum*, is the most solid, 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 call'd *Virgins Gold*, sometimes in Grains, sometimes in Oar, sometimes in Dust or Spangles. *Lemery.*

The *First* is call'd *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 mixt with other Metals, and the Marcasite or mineral Stone,

which are form'd together as a Stone, call'd *Gold Oar*. The *Fourth* is a Gold in Duſt, or Spangles mixt with Sand.

The three laſt Sorts of Gold are genetally 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 Cupell, by Departure, by Cementation, and by Antimony.

The Refining of *Gold* by the Cupell and Departure, is done after the ſame Manner as that of Silver, of which hereafter.

Gold is refin'd by Cementation in the following Manner: They make a hard Paſte with Sal Gem, and Sal Armoniack, 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 joyn 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 Saltpeter 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 Cupell will cleanſe Gold very well from Marcaſites, and even from ſuch Metals as are call'd imperfect, but not from Silver; this Metal is ſo bound up and joyn'd 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 entring 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 call'd *Gold* of twenty-four *Carats*; becauſe if you put an Ounce of ſuch Gold to the Proof, it will not be diminiſh'd; but if an Ounce of Gold waſt a Scruple in the Proof, it is Gold of twenty-three Carats; if it waſt 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 call'd *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, ſtiring it with a ſmall Iron Rod, and when they find it incorporated, they caſt it into an Earthen Veſ-

ſel

ſel 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 uſeleſs.

The Amalgama of Gold is us'd by the Gilders, 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 that 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 Cupell.

I ſhould enlarge too much if I wou'd 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 entring the ſame

ſame Liſts, 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 Atheiſts, and they aſſume to themſelves, excluſive to 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 heightned Expreſſions, 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 Depoſitaries 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 thoſe, but I am afraid of growing tedious to the Reader.

That which the Chymiſts aſpire to by their great Labours, 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 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 this 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 ancient 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 ſhows 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

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Mixture is afterwards thrown out by the Stool or Urine. It is likewiſe good for Colick 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 Sort 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 Chimeras. 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, diſplays its Virtue over the Heart of the little World, which is that of Man: That the Quality of the Sun is to warm, revive, rejoyce, 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 enclos'd and concentred, 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 conjoyn'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 extreamly rarify'd, diſſolv'd, and diſguis'd by ſome armoniacal Salt; but this Gold is revived again by freeing it from this Salt, and making it paſs through the Fire.

But 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 perſwade 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 *Potable 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 ſuc-

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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 expell 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 entred 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 rendred 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 Oar, which is ſo much the better, by how much leſs Earth and Sulphur there is in it.

It is eaſie 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 come 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 diſ-

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fer only in Colour, grounding themſelves upon this that the Ancients 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 ſhow 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 deceiv'd, and loſe their Labour.

I have by me a white *Marcaſite* full of Veins of Gold, which was brought from the *Iſles*, and was affirm'd to me to be the true Gold Oar.

Lemery. The *Marcaſite*, *Magneſia*, *Biſmuth*, *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 call'd 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 criſtalline within, bright, ſparkling, and eaſie 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 reſolutive, and are applied outwardly: The pure white Magiſtery of Tin-glaſs, made with pure Spirit of Nitre, being mixt with Pomatum, is an excellent Coſmetick to whiten the Hands and Face, and is likewiſe good for Tetters, Ringworms, &c.

3. *Of* Silver.

Pomet. *Silver*, which the *Spaniards* of *Peru* call *Platta*, 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 'em, is call'd *Potoſi*, which is a Mountain ſituated in a flat Campain, 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 thouſand hundred Weight of *Silver*, pure and neat; and for the Refining it, have made uſe of ſix or ſeven thouſand hundred 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* Cupell.

Silver purified by the *Cupell*, 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 refin'd; 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 cupell'd Silver diſſolv'd in Spirit of Nitre, and when the Moiſture is almoſt evaporated

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 prepar'd with the cupell'd Siver: 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 Entring 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, weighty, hard, white, ſmooth and ſhining, very extenſible by the Hammer, and reſiſting the Cupell: 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 intermixt 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 Cupell and by Departure in the following Manner. *Lemery.*

They make the Cupell red hot in the Fire, and they put four or five Times as much Lead as Silver to cupell 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 Cupell. They caſt the Silver into the midſt of the Cupell, where it is not long before it melts; they blow the Fire 'till it is 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 Cupell. The Scoria of Silver mixt 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 Cupell ſo that one cannot be altogether aſſured, that this Silver of the Cupell 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 call'd *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 call'd 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 nothing 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-Peter, 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 Allay 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 Cupell, 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 Cupell 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 ſhows 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. IRon 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*, *Lorrain*, 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 Oar 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* Oar, *and making it into cast Iron, commonly call'd* Sow Metal.

After the *Oar* 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 scuming from it a Dross, which when cold becomes like Glass, 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 Masons 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 hardned, 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 forreign 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 reduc'd into thin Plates, and afterwards cover'd 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 eſteem'd 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 ſhown hereafter.

The beſt *Steel* is that which comes from *Germany*, and is call'd *Steel* of *Carma*, from a Village in *Germany*, call'd *Kernent*, where the beſt *Steel* is made. This Sort is call'd *Steel* of a *double Mark*, and is us'd in Making ſuch Inſtruments as are extreamly fine; as Lancets, Razors, Graving Tools, *&c.* The ſecond Sort is that they call *Roſe Steel*, becauſe when 'tis broken there appears ſomething in it like a little Roſe of the Colour of the Eye of a Partridge; and beſides, the Casks that they come in are mark'd 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 *Dauphine*, of *Clamecy* in *Auvergn*, of St. *Diſier* in *Champagne*, and it is made likewiſe at *Nevers*, and at *La Charite*, and this they call *Common Steel*.

But of all the Sorts of *Steel* in *Europe* there are none that comes near to that of *Kernent* for Goodneſs, becauſe amongſt the hundred and fifty Iron Mines that the *Germans* are poſſeſt of, there are no People but thoſe of *Kernent*, that know the juſt Quantity of Arſenick, Tar, Orpiment, Sublimate, Antimonie, 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 Goats-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 call'd aperitive, is a Preparation of Iron or Steel, which is

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 mixt 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 call'd *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. *Lemery* 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 forceable Calcination for five or six Hours, is reduc'd 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 shown 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 Chrystals *of* Mars.

They extract the *Chrystals* of *Mars* by putting the Filings of Steel into Water, and putting upon it a good Spirit of Vitriol, and by putting it in a Cellar, they draw thence *Chrystals* 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 *Chrystals*; but as this Spirit must be very weak, I should 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 reduc'd 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 'em must be taken; so the ordinary Dose may be from a Dram to half an Ounce.

Of

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* call'd *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 call'd by the *French*, *Gueuſe*, commonly Sow Metal. The Ruſt of Iron is Iron penetrated and ratified 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 quenched 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 render'd 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 open'd 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 Salts which theſe Hoofs do naturally contain, is introduc'd into the Pores of the Metal. Now this Salt being rendred an Alcali by the Calcination, it abſorbs and deſtroys the Points of the vitriolick Salt, and the Acid which remain'd in the Iron; ſo that the Motion of this Salt being relax'd, the Metal does no longer rariſy 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*, *Piemont* and *Hungary*, but the beſt is made in *Germany*, at a Town call'd *Kernene*. 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.

The

The Water in which red-hot Steel has been quench'd call'd chalibeate Water, is an Aſtringent, and is good againſt a Looſeneſs.

It is remarkable, that in Iron there ſhou'd 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 fixt.

The Salt of Iron is made in the following Manner. Take Oil of Vitriol, or of Sulphur *per Campanam*, 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, ſtiring 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, Gonorrheas, 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 Copperas, or Vitriol of Iron, is made in great Quantities by a Cementatory Calcination, then perfected by Diſſolution, Evaporation and Chriſtallization.

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; give Eaſe in the Gout, and other Pains of the Joynts, both by inward Taking, and outward Application.

The Ruſt or Vitriol of Iron mixt 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 mixt 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 compos'd as is believ'd 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 neither being 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 nam'd *Hydrargyrum*, that is to ſay watery 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 the Diverſity of Colours that may be given it, that 'tis nam'd Proteus, and from its Fluidity and Volatility, it is call'd the *Fugitive Salt*.

Quickſilver is found in the Mines after different Manners, ſometimes enclos'd 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 Quickſilver 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 joyn'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 Oar 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 Quickſilver, 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 obſerv'd before. The *Spaniſh* Quickſilver was common enough in *France*; but becauſe this Quickſilver, being put upon Silver a little heated, had the Property of Gilding the Superficies, and of giving the Silver a very fine Vermillion 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 expreſly 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 Quickſilver found in the *Indies*, *Poland*, *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 *Charentan*, 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 *Quickſilver* is uſually found at the Top of Mountains cover'd with white Stones, which are as brittle as Chalk; the Plants which grow upon theſe Mountains ſeem greener and larger than elſewhere, but the Trees which are near the Quickſilver 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 *Quickſilver*, 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 oppoſitely 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 Quickſilver 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 Ballance, 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 Quickſilver that is conſum'd, is made uſe of by Look-inglaſs-Makers, Goldſmiths, Burniſhers, Gilders, and others; and if by Miſchance, or Roguery, in ſuch a Parcel of Quickſilver as is us'd at one Boiling, there ſhould be one Pound of Lead, it would ſpoil their Works.

Beſides theſe Qualities before-mention'd, which ought to be in Quickſilver, 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 mixt with Lead or Tin. *Quickſilver* 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

of Quickſilver. As *Quickſilver* is ſo extreamly weighty, ſo it is no leſs ſtrong; ſince a fifty Pound Weight of Iron, being put upon a Bouillon of Quickſilver, 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 believ'd unleſs I myſelf had ſeen it. As to the Properties of Quickſilver they are ſo great that they exceed Imagination; and ſome Perſons pretend, that a Dram Weight of Quickſilver 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 diſintangle 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 Quickſilver, 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, engroſs'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 Quickſilver 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 Quickſilver 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 reduc'd 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 Quickſilver 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.

Quickſilver, call'd 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 diſcover'd about forty Years ſince in *Normandy*. *Lemery.*

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 forc'd to go very deep into 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 condemn'd to Puniſhment.

The *Quickſilver* is not always taken out of the Mine neat and running, but it is generally mixt 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 plac'd 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 diſtill into the Water. Iron Retorts are the moſt preferable upon this Occaſion, becauſe the Quickſilver endeavouring to get to this Metal, ſeparates itſelf the more willingly from the Earth, and is the more diſpos'd to be rarify'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, for

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'd 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 metalick 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 Joynts; encreaſe the Fire to the fourth Degree, you will find the Quickſilver diſtill and fall to the Bottom of the Recipient; keep 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 Linnen 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 mixt in the Mine with the Quickſilver, of which the Cinnabar was made, it would have remain'd 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 fill'd 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 Joyning 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 diſtill it a ſecond Time.

The Iron, upon this Occaſion, ſerves as an Alkaly to ſeparate the Acids of the Sulphur, which held the Mercury in the Cinnabar; and this Mercury being diſingag'd from its Bonds, comes into a Condition of being rarified 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 rendring them uncapable of hooking one into the other, they roul 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 Tye 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 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 Deſtemper; 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 Decoction 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 infeſt the Body; it cures the Itch, Tetters, 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 ſurprizing 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 Oyntments, or by the Mouth, being rarified, 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 Matraſs, 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 Oyntment commonly call'd, the Neapolitan Oyntment, *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 Hoggs-Lard, ſix Ounces; beat the Mercury and the Lard well together, until the Quickſilver diſappear, and make an Oyntment 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 leaſurely 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 Tonſils 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 Cloaths ſuitable to his Diſtemper; begin the Friction at firſt with half an Ounce of the *Neapolitan Oyntment*, 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 Oyntment, in Anointing him from the Calves of his Legs to his Knees: And upon the third Day let him reſt,

especially if you perceive the Signs of an approaching Salivation, that is, an extraordinary Heat and Drineſs 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 Oyntment, 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 Oyntment, 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; but 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 Oyntment, 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 Tonſils 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 Cloaths 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 viſcuous 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 Glaſs 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 a-Clock at Night, giving the next Night fifteen Grains, and the third Night twenty, 'till the Salivation be duly rais'd.

The

The *Panacæa* 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, Boluſſes or Opiats.

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 prepar'd: Take of Mercury well cleans'd and strain'd, four Ounces; dissolve it in a large Matrass, or Cucurbite, 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 Oyntment of Roses, an Ounce; mix and make an Oyntment.

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 sweetned by washing and burning upon it Spirit of Wine. This Powder is to be given fron 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 Quicksilver 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 sweetned 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 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. *Jerome*, and that it was there as common as Freestone 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 shows 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 them. *Pomet.*

That *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 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 have 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 Ancients, 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; but *Cinnabar* is ſeldom us'd inwardly but for Horſes, 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-four 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 *Aquavitæ*, 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 Oar, 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

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 Quicklime put into a Retort, a Quickſilver that is very pure, and proper for all Uſes where Quickſilver 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 extreamly white and lively.

Lemery. *Cinnabar* is a Mineral Matter, ſolid, hard, weighty, bright, Chryſtalline, of a very red Colour, diſtinguiſh'd with Streaks, ſhining, and ſparkling like Silver, compos'd of a Sulphur and Quickſilver, 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 Quickſilver 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 Quickſilver 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 Epilepſies, 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 obſerved, that *Native Cinnabar*, though it hath been us'd and try'd by a great many, will not raiſe a Salivation; whereas the other Kinds 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 reſtrains 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 in ſtead of it, rather than the Factitious 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 alway 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, expells 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 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 Quickſilver, 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 Glass Retort well luted, and distill 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 Physitians 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. THE *Corrosive Sublimate*, which we have from *Holland* and *Venice*, is made of common *Mercury*, or Quicksilver reviv'd 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 Deliquium*, 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 retail 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 order'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 Glass Matrasses.

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 to 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 Panacæa.

The *Mercurial Panacæa* 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 *Panacæa*, which is as much as to say, the Universal Medicine: They commonly make up this *Panacæa* 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 dissolv'd 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 the true *White Precipitate* of Mercury, to distinguish it from other Sorts of *White Precipitate*, of which one is made of Corrosive Sublimate, dissolv'd 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 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 mix'd with Oyntments or Pomatums to cure Tetters 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 shows 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 extreamly 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 dissolv'd 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 that 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 dissolv'd 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 Oar, which may easily be known by rubbing it upon a Piece of Gold, for if it makes it white, it is a Sign that it 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

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 ſweetned it, and taken away whatever might be dangerous in it.

Of Yellow Precipitate.

The *Yellow Precipitate*, or *Turbith Mineral*, is Mercury reviv'd from Cinnabar diſſolv'd in the Oil of Vitriol, and afterwards with lukewarm Water precipitated to a yellow Powder, which being waſh'd 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 waſh'd and dry'd, may paſs for *Yellow Precipitate*, or *Turbith Mineral*. Mr. *Lemery* ſays, this Diſſolution or yellow Water, is call'd 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 into 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 Acrity 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 reduc'd into a white Maſs by the Means of Fire, which being put in a Cellar will diſſolve and be reduc'd 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 Ancients call'd *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 form'd of two Matters, that is, Silver and Lead, becauſe in the *Tin* Mines there is ſometimes form'd both Lead and Silver, and ſometimes Diamonds, which are fix'd to the Rock from whence they take their *Tin*; theſe are naturally poliſh'd, 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 Tinglaſs, Copper, and a little Zink to purify it. Sounding *Tin* is *Engliſh Tin* mixt with the more Common *Tin*, and is alſo made with Tinglaſs 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*, make its Parts firm, and render the Metal more hard, ſolid, and compact, and ſo it becomes ſounding or ringing; for it is neceſſary that all ſounding 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 ſhown 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*, *Appeau*, is an hammer'd *Tin*, which the *Dutch* have painted on one Side by 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 roul'd as it can poſſibly. The *Dutch* ſend it in Boxes which hold commonly a Groſſe, 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 ſhown 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* extreamly 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 Chryſtals, which they uſe for Tetters 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 Peter refin'd. They can make of the *Flowers* of *Tin*, by Means of the volatile Spirit of Sal Armoniack, or Oil of *Tartar per Deliquium*, a Magiſtery of *Tin*, which being dulciſied, waſh'd in Water, and dried, is of a very fine White; ſo that being mixt with *Pomatum*, it is us'd for Paint: The

The *Flowers* of *Tin* are often put to the ſame Uſes as the Magiſtery.

Of the Diaphoretick *of* Tin.

The *Diaphoretick Tin*, which Mr. *Lemery* calls the *Jovial Diaphoretick*, or the *Antihectick* of *Poterius*, is made of fine *Engliſh Tin*, and the *Regulus* of *Antimony*, with Iron melted together, and afterwards, with Saltpeter 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 ſhow 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 Power, there appear in it ſeveral little Subſtances ſmooth as Glaſs. They call it alſo *Marcaſite*, by Way of Excellence, becauſe it ſurpaſſes all the 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 Saltpeter, 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 eaſie 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 ſhow it to thoſe who won't believe me.

Tin-glaſs ſhould be made Choice of, that is in fine Scales, white, and eaſie 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 Magiſtery, 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 Magiſtery of *Biſmuth* that I am going to ſpeak of.

Of the Magiſtery *of Common* Biſmuth.

The *Magiſtery* 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 dry'd. There are Peruke-Makers that uſe this *Magiſtery*, though 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 *Magiſtery* 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-stockt 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 Glass. 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 Saltpeter; 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, Saltpeter 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 Saltpeter and the Oil of Tartar by the Detonation; afterwards the fix'd Salts of the Saltpeter 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 Tyes between all the Parts of the Metal: It may likewise happen, that some small Portion of the Salts of Tartar and Saltpeter may penetrate this Regulus of Tin, and so contribute to the making of it brittle.

Bismuth is brought to us in round or orbicular 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 sounding.

It is resolutive and drying, being beat to Powder, and made up either into an Oyntment, or a Plaister.

Tin is a Metal soft, malleable, sulphureous, white, shining, a little harder than Lead, very easie to be melted; the Ancients 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 Allay of the Natural Tin of Lead and Brass. The *Third* is the sounding Tin or Pewter, which is a Mixture of Tin, Bismuth, and Copper, and a little Zink; they sometimes put in some Regulus of Antimony, and its sulphureous vomitive Salt is not to be fear'd upon this Occasion, because it is absorb'd and mortified by the great Quantity of other Metals with which it is incorporated.

Natural Tin is not sounding, because it is too soft and pliant; for to render any Matter sounding, 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 mention'd 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 *Goslar* in *Saxony*. That is best which is hard, difficult to break, white, with Shoots that are large and shining. It is us'd 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 resolutive and drying, being apply'd outwardly.

9. *Of* Enamels.

Pomet. *Enamels* are Vitrifications made of Tin, Sand and Pot-Ashes of *Alicant*, to which they give diverse Colours, with different Metals, as shall be shown 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 colour'd with Copper and Cyprus Vitriol.

The Fourth is of a Flesh Colour, which is white Enamel colour'd 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 Brass.

The Seventh is the Blue, which the Enamellers call the *Faux-lapis*, the false Stone; which is the Sky-colour'd Enamel, colour'd 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 call'd *Encaustum*, from a *Greek* Word, signifying Burning, because Enamel is made by a great Fire: But the *Encaustum*, 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 checquer'd or mosaick Work of it; and Goldsmiths now use it in Colouring and Enamelling of Gold. *Lemery.*

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 mixt, refin'd, and of a good Colour, be taken out of the Fire with a Pair of Goldsmiths 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 search 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 search them; boil this Calx a little in fair Water in an Earthen Vessel; take it off the Fire and decant off the

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 subtile 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, Chrystal Frit made of Tarso, which is a hard and most white Marble, ground and searsed fine, of each six Pounds four Ounces; of pure white Salt of Tartar, one Ounce; search 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 Deficcatives, but the others are Detersives and Deficcatives.

10. *Of* Copper.

Pomet. *Copper* 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, shining of a reddish Colour, easie 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 obsery'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. *Lemery.*

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*

11. *Of* Yellow Copper *or* Braſs.

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 extreamly thin, and afterwards put it into little Books of Paper and call it *German Gold*. They grind this *German Gold* to Powder to make Braſs for the Painters, which has more or leſs Colour, according to the ſeveral Times that it has paſs'd the Fire; they grind this Braſs 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 Braſs is likewiſe us'd by them to make their Figures of Plaiſter, have a Braſs 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*.

Auricalcum, *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 embarreſſes and extends the acrid Salts of the Metal to that Degree, that Braſs 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 Braſs is the *German Gold* ground to Powder, which is put into little Shells, and call'd *Shell Gold*: It is us'd to colour Figures made in Plaiſter, and by them who paint in Miniature.

The common Braſs, 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 that is mixt with the *Copper*; the Mixture is from twelve Pounds to five and twenty Pounds, to the hundred Weight of *Copper*.

They uſe Braſs 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*, call'd *White Calamine*, *Nil*, *Nihil*, *Nihili Album*, or Flowers of Braſs, and improperly Aſhes of Braſs, 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 Braſs, as the greateſt Part of the Authors have written. *Pomet.*

Although this *Pompholyx* be eaſie 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 *Pom-*

pholyx 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.

Lemery. The *Pompholyx*, call'd in *Latin*, *Nil*, *Nihili 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 Letton; 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 Druggists, and are therefore oblig'd to substitute Tutty in the Room of it.

The *Pompholyx* should be light, very white and crumbling; it is detersive, desiccative, proper for Wounds; it is not much us'd, but externally for Oyntments. 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-mentioned; and being rub'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 detersive; 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 of 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 eaſie; 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 Receit 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 Merchandiſe 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 Waſt 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 that 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 of dead Fleſh; the Apothecaries uſe it in ſome Oyntments 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-mentioned 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 penetrated and rarified 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 bluiſh green Duſt, which they ſeparate with Knives, and continue the Operation as before, 'till the Whole be turn'd 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. *Lemery.*

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 mixt with Oil and Wax, and applied; it likewiſe cleanſes them from their Filth and Putrifaction, although they were the moſt ſtubborn, and had reſiſted all other Remedies.

It is of good Uſe in the Gout, being diſſolv'd 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 Armoniac, half an Ounce; Alcool 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, six 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 Oyntment with Honey, Juices of Wound Herbs, Vinegar, and abstersive Sulphur of Vitriol is applicable to weeping Wounds, Ulcers in the Joynts, *&c.*

15. *Of* Verdigrise *Chrystalliz'd.*

Pomet. THE *Chrystalliz'd Verdigrise*, or *Chrystals* 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 chrystalliz'd in a Cellar: These Chrystals 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 Chrystals of Verdigrise that we sell in *Paris* come from *Holland* or *Lions*, and are not unlike Sugar Candy, except in Colour, especially to that which is on Sticks, and if good these Chrystals 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 Chrystals 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 Chrystals 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 Chrystals 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 christallize.

If you would reduce these Chrystals 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 Chrystals the Vitriol of Venus or Copper.

16. *Of the* Mountain *or* Sea Verdigrise.

Pomet. THE *Mountain* or *Hungarian Verdigrise* is a Sort of greenish Powder in Grains, like Sand, which is found in the Mountains of *Kernausen* 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 Spunge. 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 Dreggs 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 Braſs; 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 *Braſs*. The Scales of Braſs is what falls from the Braſs 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 Braſs, 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 Utenſils: 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 Ancients 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 Braſs, 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 Chimnies, 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 Plantin Water. *Tutty*, well prepar'd and incorporated with freſh Butter, is an excellent and ſure Remedy for the Piles: That is moſt eſteem'd which comes from *Orleans*, 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 *Egypt*, *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 Braſs, heavier, thicker, and fattiſh, which with Vinegar yields a Smell like Braſs. *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

It is deterſive, diſiccative, proper for Diſeaſes of the Eyes, for drying and cicatriſing of Wounds, and for the Piles; it is only us'd externally after being ground to a very fine Powder.

19. *Of* Chalcitis.

Pomet. *Chalcitis*, 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 Ancients 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*, Page 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 *Ægypt*, *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, though 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 prettty 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 Drugg 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 have 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 within 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, deterſive, 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 thinner Parts than *Sory*, but thicker than *Miſy*. In a *Collyrium* it cleanſes, dries, and heals the Eyes. The ſame *Collyrium*, if weakned 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 Tonſils, the Powder of it being laid upon the Part affected: Burnt and mixt with Honey, it helps callous and rough Eybrows, Fiſtulas, Leproſy, and other cutaneous Diſeaſes.

They

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 Brass: 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 *Egypt* is accounted the best, and is more corrosive than *Chalcitis* or *Sory*, being calcin'd and burn'd 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 *Matthiolus*, 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 *Egypt*: And as *Matthiolus* 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 a Chrystallization drawn by the Help of Water from a Sort of Marcasite, found in Copper Mines, to which the Ancients 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 Chrystals, such as we receive from *Italy*. In a Word, all the Vitriols, or Copperas's, are made as they make Allum in *England*, or Saltpeter 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 rub'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, that 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 of a greyish Colour, which is easie to be found out, because the true *Roman Vitriol* is in thick long Pieces, of a Grass Green, very difficult to melt, and being broke is

Pomet.

transs-

transparent as Glass, from whence, the *Latin* Word for Glass 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, Rectificando 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 extreamly 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 *Pisa*, 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, that have Occasion for a black Colour; and they pretend that That which makes the Copperas dye Black, is because it participates of the Iron; others 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 Ancients, and some Moderns, have pretended, that this *Vitriol* is a Chrystallization 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 Chrystalliz'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 *Companys 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 assur'd me, that so piercing a Spirit is drawn from the *Vitriol* of *Cyprus*, that it would break any Glass 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 chrystalliz'd at *Gosselar* in *Saxony*, whence it is that the *German Copperas* is call'd *Gosselar*, or *Saxon Vitriol*. The largest Pieces, cleerest, 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 shown 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

Of White Copperas.

The white Vitriol which we fetch from *Germany*, is the *Copperas* of *Goſſelar*, before-mention'd, 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 Chryſtals 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 Flegm, 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 rectified from its Phlegm; but it muſt not be expected in this as in others, that the *Oil* ſhold be fat and ſwim upon the Water, for the *Oil* of *Vitriol* is not ſuch, but eaſily intermixes with watry Liquors.

That which is call'd *Spirit* of *Vitriol* is the Liquor which comes immediately after the Flegm, 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 commonly in Phyſick for Cooling, and upon other Occaſions. The *Spirit* of *Vitriol*, well cleans'd of its Flegm, 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 ſtopt, becauſe they pretend that they don't evaporate, which is true; but this *Spirit* being throughly deveſted of its Flegm, if you leave it in a Bottle unſtop'd, the Air gets into it, increaſes its Bulk and Weight, and at laſt it 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 carefully beware.

As to the Water and Flegm of *Vitriol*, that I mention'd before, it is of no Uſe, becauſe it is inſipid, yet ſome People waſh their Eyes with it.

Monſieur *Lemery* ſays, that you muſt uſe *Engliſh Vitriol*, or *Copperas*, for the fore-mention'd 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 prepared;

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, forasmuch 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 Plaister 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 Stiptick 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*.

Lemery.

Vitriol is a Mineral Salt drawn as Saltpeter by Lotion, by Filtration, by Evaporation and Chrystallization, 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 Sorts 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 analiz'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 contain'd in Vitriol; for by pouring the Spirit or 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 turn'd 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 Flegm 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 Loosness and Bloody Flux, and frequently us'd for that Purpose in Camps and Hospitals. The other white Vitriol is thus purified: Take *White Vitriol*, what Quantity you please, dissolve it in Flegm of Vitriol, or in Rain Water, then filtrate, evaporate, and set it to chrystallize; this is that which is call'd *Gilla Vitrioli*, and *Gilla Theophrasti*.

It heats, desiccates, astringes, or constipates, yet excites Vomiting; it powerfully extricates tough Flegm 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 Gonorrhea, 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: Dose from twelve Grains to a Dram in Broth, or other Liquor: It cleanses the Stomach from all Impurites, eases the Headach, stops Fluxes, and is good against *Quotidian* and *Tertian* Agues.

There-

There are two Things obſervable, *Firſt*, That in making this *Gilla Vitrioli* all the Liquor may be evaporated away without any Chryſtallization, 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 Glaſs, by which it will be ſooner done than by any Furnace whatſoever, and the calcin'd Powder is to be kept in a Glaſs cloſe ſtopt for Uſe: It is us'd in the magnetick Cure of Wounds; diſſolv'd in Water, and us'd 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 ſtopt, 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 Gonorrhea 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 rub'd on a Knife colours it red; that which is ſubceruleous, pale, aquoſe, and moiſtens the Hands, is not ſo good.

The Factitious is that which is made either of Water coming from vitriolick Springs evaporated and chryſtalliz'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 expos'd 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 chryſtalliz'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, leaſt 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 Flegm, eight Ounces; distill 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 Alcool, or tartariz'd Spirit of Wine, enough to cover it five Inches over, in a Matrass 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 stopt for Use, as an extraordinary Remedy against all Hemorrages, or violent Fluxes of Blood.

To conclude, The *German* or *Dantzick Vitriol* is in green Chrystals, inclining to a blue, of an astringent acrid Taste; it participates of Copper, and is that which is us'd to make *Aqua fortis*.

The *English* Copperas is in Chrystals 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 Flegm, 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 shown 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 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 obtain'd. This *Roman Vitriol* is also prepar'd 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 Chrystals of a very fine Sky-colour'd Blue. It is not certainly known after what Manner it is made; some think it is extracted by the Evaporation and Chrystallization of the blue Water that is found in the Copper Mines: Others say it is an artificial Operation, perform'd by a Dissolution of Copper, in a weak Spirit of Vitriol, evaporated and chrystalliz'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 Flegm 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, being 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 saphirine 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 Water you have extracted the whole saphirine 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 Pillicle arise, which being then put into a cold and moist Place for a Night, will shoot into Chrystals 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 chrystallize 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 Linning 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, Tetters, Ringworms, 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, Tetters, or any other curaneous 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 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 detersive 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 Salt and metallick Earth.

Vitriol is chymically analiz'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 Joynts, distill it with a Sand Heat, that the Ros or Flegm of the Vitriol being of a strong sharp Taste may be drawn off; then take of what remains in the Matrass, bruise or powder it, and throw it 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 Flegm 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, anodine, 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 ſweetned, 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 Looſneſs, Bloody Flux, Hemorrhages and Wounds.

The ſpirituous Parts of Vitriol may be eaſily again recovered, 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 Limbick, he puts it into a Retort, and diſtills 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 *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 Arſmart, White Lead, Bole Armoniack, Myrrh, Frankincenſe, Vinegar of Roſes; of all theſe in proper Doſes, as they are ſet down in *Crollius*, Page 442, by the Means of Fire, is made a red Stone, endu'd 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 Monſieur *Charas*, and Monſieur *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 ſhown hereafter. *Pomet.*

Of another Medicinal Stone.

Monſieur *Charas*, in the 1041 *Page* of his *Pharmacopœa*, deſcribes a *Medicinal Stone* compos'd of the Vitriol of *Cyprus*, Salt of Nitre, white Lead, Allum, 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. *Pomet.*

Of the Lapis Mirabilis.

The *Lapis Mirabilis* is ſo call'd becauſe of its great Properties, above all for the Cure of Webs and other Diſeaſes that happens to the Eyes of Horſes. *Pomet.*

This Stone is made by putting into an earthen Pot a Quantity of White Copperas, Alum, Bole Armoniack, Litharge, and common Water, as Monſieur *Solleyſel* has remark'd in his Book, *Page* 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 Mar-
Lemery. casite, 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 rarify 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 Chrystallizations as are necessary, and as they do in the making of Saltpeter.

The *Pyrites* is detersive, astringent, desiccative, digestive, resolutive, and to be applied outwardly.

22 *Of* Lead Oar.

Pomet. WE have three Sorts of *Lead Oar* 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 Oar*, and is made into Lumps call'd *Pigs*, by the *French*, *Salmons*.

This *Lead Oar* 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 mix'd with Stones, resembling a certain Sort of Marble.

This *Lead Oar* being broken, parts into shining Flakes, of a White, enclining to Black, very like the Shoots of Antimony.

The *English* melt this Lead, and afterwards cast it into Moulds of the Shape we see the Pigs in. The *Lead Oar* 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 showing it them Piece by Piece, and taking a Note under their Hand, that they are satisfied to avoid farther Trouble.

The *Lead Oar* 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 Oar* of the second Sort that I am going to speak of.

The *Lead Oar* of the second Sort is less weighty, and much harder than that beforemention'd, and being broke is of a Mouse Colour, of a coarser Grain, and smooth without, in some Measure resembling the black Lead; which shows that it has not receiv'd Heat enough to be converted into the black *Lead Oar*. 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 Oar* 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 Ancients 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.

Monsieur *Morin*, Physician and Mineralist, has assur'd 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 scuming 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 one 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 Oyntments, 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 Oyntments 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 Oar* 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 Oar 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 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 it is 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 Oyntments 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 afterward roul'd as you would do a Sheet of Paper, but ſo that this roul'd Lead does not touch one upon the other. This *Lead* ſo roul'd is put upon ſmall Sticks, which are laid in Pots, the Bottom of which is cover'd with Vinegar. Theſe Pots being fill'd muſt be ſtop'd, ſo as that no Air may get in, and afterwards left in a Dunghil 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 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. *Pomet.*

The true *Ceruſe* is that which we call the *Venetian*, becauſe the *Venetians* were the firſt that made it, but as it is extreamly 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 Danger 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 extreamly white, ſoft, and friable.

It is remark'd, 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 extreamly 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, rarified, and half diſſolv'd by the Vapour of Vinegar, and reduc'd into a very white Subſtance that is heavy and friable. When you wou'd 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 *Lemery.*

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 observ'd by* Pomet.]

Of Sandix, *or* Red Ceruse.

Pomet. The *Sandix* is nothing but *Ceruse* redden'd over a gentle Fire; but as this *Sandix*, 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* turn'd 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.

Lemery. *Minium*, or *Sandix*, is the Lead Oar 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 astringent and deficcative, being us'd in Plaisters and Oyntments: 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. Tho' the first Sort, which is that which has sustain'd 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 sustain'd more Fire than the former; and they might make a Fourth, by Calcining it 'till it becomes red, which would make it a true *Sandix*, 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 deficcative, and useful mix'd in Plaisters or Oyntments.

Of Natural *and* Artificial Litharge.

The *Natural Litharge*, which the Ancients call'd by the Name of *Molibdæna*, is a Kind of metallick or mineral Body, in Crusts or Flakes, of the Thickness and Figure of White Lead, of a reddish Colour, easie 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 purifie 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 shou'd 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 *Engliſh*, 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 imploy'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 Oyntments.

Lemery. *Lithargyrus, ſive Lithargyrium*, 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 *Lithargyrium Auri, ſeu Chryſitis*, or *Litharge* of *Gold*; the other *Lithargyrium 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 Cupell, but it is but in ſmall Quantities, tho' like the other. All the Sorts are deſiccative, cooling, deterſive, 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 filtred, evaporated, and reduc'd into a light Maſs, that is white and chryſtalliz'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 Chryſtals, and as light as may be, which when diſſolv'd in Plantain Water will look like Whey; which Tryal 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 Oyntment, call'd *Butter* of *Lead*.

Of Natural *or* Mineral Zink.

It is not with *Zink* as with Tin-glass; forasmuch as 'tis not only probable, but certain, that there is a a *Natural Zink* which the *Germans* call *Beauter*, and the *Flemings Speauter*, we *Spelter*. The *Mineral Zink* is found in great Quantities in the Mines of *Goslelar* 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 Oar, except that it is harder, whiter, and more brillant. Some People have assur'd me, that the *Zink* we sell in great square Cakes is cast Mineral *Zink*, 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 Saltpeter, as Mr. *Charas* has observ'd. The *Zink*, 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 *Zink* at this Time is much in Use, since the Tin-men have found it more proper to clean their Tin than Pin-Dust and Rosin. 'Tis wrong to believe that *Zink* is mix'd with Tin to encrease its Weight; for unto a Fount of five or six hundred Pounds of Tin, they put but one Pound of *Zink*, and which is wonderful, the *Zink* has the Quality of purifying and whitning the Tin, and acting upon it as Lead does upon Gold, Silver, or Copper. This *Zink* is us'd to give Copper the Colour of Gold, especially when mix'd with Turmerick; 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*.

End of the Second BOOK *of* METALS.

BOOK

BOOK the Third, of the Third Volume.

Of MINERALS.

The PREFACE.

BY 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 encreas'd by the external Addition of Senſible Particles, which oftentimes 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 ductil.*

1. *Of* Antimony.

MR. *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, ſooty, ill digeſted Mercury, partaking of the Nature of Lead; and ſomewhat of a terrene fix'd 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, *Baſilius 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 hundered 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 inserted 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 aforesaid *Valentin*, who, in his Search after the Philosophers-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 that 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-Oar, with this Difference, that it is both lighter and harder; and by Reason of this Similitude, some call it Black Lead, or Marcasite 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 *Poictou* 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 *Striæ*, like so many Needles; others also all over of an odd sooty 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, though 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, never yet having 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 Skimmer 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's 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's next to an Impoſſibility to find out any of it. Thoſe that 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 cou'd 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 *Anjou*, 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 *Scoriæ*, 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 diviſted of its fetid and malign Sulphur, which gives Abundance of Trouble and Difficulty to thoſe that 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*, whither we ſend a great Part to put in their Pewter to make it the harder, whiter, and more ſounding: 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 Ptiſan with *Salſaparilla*, *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 Linnen 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 Chryſtals, ſhooting like Needles, of a blackiſh Colour, which is found near the Mines of Metals in ſeveral Parts of *Europe*, as *Hungary*, *Tranſilvania*, *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 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. *Lemery.*

To purifie 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 Oar; but ſince this Mineral has been diſcover'd 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, brillant Shoots, eaſie 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, Saltpeter, 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* ſhou'd not prove good at the firſt Operation, it may be melted and purified again with a little Saltpeter; the oftner 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, Saltpeter, 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 Ancients 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, leaſt it ſhou'd produce ſome ill Accident.

Whereas moſt People that 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 'em 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 'em 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.

Chooſe

Chooſe 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 colour'd 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 Saltpeter, 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 pulveris'd, of a reddiſh Saffron Colour, which is the Reaſon of its being call'd the Crocus or Saffron of Metals; but in Pieces it ought to be Liver-colour'd, 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. *Soyleſel* 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 Saltpeter, or if it be fill'd with Salt, which but too frequently happens: Thoſe therefore that undertake this Operation muſt dry the Saltpeter 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 Saltpeter 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 Top 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 cheaper than others, which muſt be taken Notice of.

Thoſe that wou'd 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 Saltpeter, 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 Saltpeter, as to make it a little more emetick. The more emetick you'd have it, the more Saltpeter 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 Saltpeter 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 Saltpeter; 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 Horses as to draw from it a Salt or fix'd Saltpeter with Water, which is a very good Medicine for Horses, 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 *Poictou*, and finest Saltpeter 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 wou'd 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 extreamly 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 whereas, 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's to be obtain'd, 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 By, that a Man ought not to deal in chymical Medicines, without Advice of a faithful and experienc'd Physician; Empericks killing more than the Sword. How effectal soever a chymical Preparation may be, aptly and duly taken, it may be altogether as pernicious unseasonably prescrib'd.

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 'ris 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 ſudorifick, 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 Eſcharotick; 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 ſix 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 *Lemery*, have ſo amply done it already.

2. *Of the* Load-Stone.

Pomet. THE *Load-Stone*, according to ſome Authors, is a black Mineral Stone, and is endu'd with ſurpriſing 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 Emral'd Stone. *Matthiolus* tells you, 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 call'd in Latin *Magnes*, from a Shepherd nam'd *Magnes*, that happen'd to diſcover it upon Mount *Ida*, by hitting upon it with the Iron of his Sheep-crook, according to *Nicander*: It is alſo call'd *Lapis Lydius*, or *Heraclius*, becauſe found in *Heraclea* 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 *Syderos*.

Beſides the fore-mentioned 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 cou'd 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 'em of a ſurpriſing Excellency and Force, in attracting Iron of a great Weight. I wou'd 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 *Virtuoſos*: However, I refer the Curious to Mr. *Vallemont*'s aforeſaid Treatiſe, who has oblig'd the Publick with the Deſcription of this *Load-Stone*, and explain'd how it was form'd by Nature in the foreſaid Place. There is a third Sort, but very rare alſo, which is what we call *White Calamin*, 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 Ethiopick 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 *Ethiopia*, 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 cou'd we be able to sell 'em at the Price of genuine Stones, which some have exchang'd for their Weight in Gold; but tho' we find much Fault with what we sell 'em, 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 Filings of Iron move upon a Plate, by only passing the Stone along underneath, without Touching it, or has Force enough to make Steel-Dust stick to, when thrown upon it, may very well serve for any medicinal Use, and for the *Emplastrum Divinum*, which is its chief Use therein.

Magnes Lapis Heraclius, Lapis Syderitis, 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 *Ethiopia*; 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 wou'd attract and suspend a Bar of Iron that weigh'd twenty-two Pounds: This Stone was sold for a hundred Pistols. *Lemery.*

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* cou'd 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 shou'd remain, it wou'd not have Power to act, being confin'd by the Viscidity of the Gums and Rosins. 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* Calaminare Stone.

Cadmia, or *Calamine Stone*, or *Lapis Calaminaris*, is a Mineral, whereof there are two Sorts, grey and red. *Pomet.*

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, interlac'd 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*, *Cadmy*, is a Mineral Substance, whereof there are two general Kinds, one natural, and the other artificial; the Natural is metallick *Lemery.*

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* Hematitis, *or* Blood Stone.

Pomet. THE *Lapis Hematitis*, 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.

Choose 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 *Pharmacopœa 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 chalibeat 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 *England*, and are of two different Sorts; the one good, which is pretty tender, soft and easie to saw or cut into Crayons; but the other not worth any Thing, is hard and gravelly, and will not admit of cutting.

Hamatitis, *Lapis Sanguineus*, or the *Blood Stone*, is a hard, solid, heavy Stone, participating of Iron, disposed 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 Hematitis*; 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. *Lemery.*

5. *Of* Spanish Emery.

EMery of *Spain* is a Marcasite or stony Mineral, with small 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. *Demeuve* says it is of a corrosive and caustick Quality. *Pomet.*

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 *E-*

mery

mery 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 alſo is 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 Impreſſion upon Diamonds as it does upon other precious Stones. It is ſaid, if melted with Lead and Iron it encreaſes 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*.

Lemery. *Smyris Lapis*, or *Emery*, is a 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 the 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-Gloſſes, *&c.* You muſt chooſe 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*.

6. *Of the* Magneſia.

Pomet. *Magales*, *Magneſia*, *Magne*, or *Magnes*, is a Mineral pretty 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 purifie and whiten their Glaſs, by putting in a ſmall Quantity of it; whereas ſhou'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.

Monſieur *Furetier* 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*

7. *Of* Perigueur.

Pomet. PErigueur, 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 'twou'd spoil all, therefore they that sell it to the Workmen, must take the same Care as they do in Lead Oar.

The *Perigueur* which we sell at *Paris* is brought us from *Dauphiny* and *England*.

Lemery. *Lapis Petracorius*, *Perigord*, or *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 *Dauphiny*, 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 detersive and astringent.

8. *Of* Safre.

Pomet. SAfre, 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 ere 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 Delf Ware and Glass-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 Glass is produc'd, as is before observ'd, and of which is made the counterfeit *Saphirs*.

Lemery. *Saphre*, *Safre*, *Zafre*, or *Saphire*, is a Mineral whereof there are two Kinds; one call'd *Fine Saphire*, and the other common: The fine Saphire is a pretty soft Stone, of a bluish Colour; the common Saphire is a greyish, heavy Powder; both Sorts come from *India*. The fine Saphire is us'd to give a blue Colour to Enamel, to Earthen Ware, and Glass; to make an Azure; they likewise colour counterfeit Saphires with it, whence it takes its Name.

9. *Of* Rusma.

Pomet. RUsma is a Sort of Mineral, in Colour and Figure resembling 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 of 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 'twou'd be preferr'd to Lime and Orpiment upon that Occasion, it being stronger and more efficacious, if there be no Danger in it.

Lemery. *Rusma* is a Mineral that is like the Dross of Iron, both in Colour and Figure; there is Abundance of it in *Galatia*; it is a Depilatory very much us'd by the *Turks*.

10. *Of* Orpiment.

Pomet. ORpine, or *Orpiment*, is a Mineral commonly found amongst Copper Mines in Stones of different Bigness, Colour and Figure; some being of a golden, others 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 Laminæ or Scales, gliſtering 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 *Roüen*, to dye their Wood Yellow, of which they make Combs and ſell 'em 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 Sallet 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, 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 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 colour'd as poſſible.

Red Orpine is but little made uſe of, except when ground into a fillamot Colour by Painters.

11. *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 reſplendent, 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 us'd. *Pomet.*

Of the White Factitious Arſenick.

Though 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 my ſelf, ſo that I am forc'd, to reſt my ſelf 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* cou'd poſibly 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 wou'd 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 Ancients to call it *Cryſtalline Arſenick*, which is in mighty Requeſt at this Day with ſome, but by others undervalued and rejected.

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*, Potashes, 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, Saltpetre 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 sufficiently burnt and grown cold, the Mass is to be pulveriz'd, and put anew into a Crucible to be calcin'd. If you wou'd 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 pernitious Quality, they are to be us'd 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 *Poitou* 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 Monsieur *Charas*.

Arsenicum, sive Arrenicum, or *Arsenick*, is a Mineral that is weighty, shining, brittle, sulphureous and caustick, of which there are three Kinds; one Yellow, one Red, and one White: The First is call'd, 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 dinstinguish'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 us'd by the Painters, after being finely ground on a Porphyry. *Lemery.*

The second Sort of *Arsenick* is call'd *Sandaracha Græcorum*, *Realgal*, *Reisgar*, *Risigallum*, 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 sub-

lim'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, Reſtleſneſs, 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 my ſelf 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 *Wiliſca*, near *Cracow*, had a Mind to go down into them, which he did on a Herſe, as they call it, made for that Purpoſe, attended by divers of his Servants with Flambeauxs in their Hands; being come to the Bottom, which was very deep, he was receiv'd by the *Subterranean* Inhabitants which live there with their whole Families, but look extreamly 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 Gemmæ*: 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 Kitchins, 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 Foſſil 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 Foſſil 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 Chryſtal. 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 Saltpetre. *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 adorn'd 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; but on the other Hand 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 *Foſſil Salt*, is brought us from many Places, but in greateſt Quanties from *Poland*. Mr. *Furtiere* and other Authors ſay it comes from the *Eaſt-Indies*, and that there is a Kingdom call'd *Danzal*, which ſignifies with them a Country of Salt, and which affords yearly, a Loading for ſix Hundred Camels, which in *Ethiopia* is ready Money. I do not think it worth While to waſte Time in controverting what *Pliny* and others have obſerv'd concerning this Salt, when they tell us that in *Carrhos*, 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, inſomuch that Mr. *Tournefort* has a Vegetation of Foſſil Salt as white as Sugar, almoſt two Foot high, like a Shrub, growing out of a Root of the *Seſeli* (Hartwort) of *Marſeilles*, which without all Peradventure is one of the greateſt Curioſities in all *Europe*.

Sal Gemmeum, *Sal Foſſile*, or *Sal 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 Chryſtal. They ſay that certain People of the *Indies*, which inhabit in the Countries where it is not 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 County* 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 Colick, and to open Obſtructions: They ſubſtitute in the Compoſitions *Sal Gem*, or *Indian* Salt, call'd *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 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 Origine, ſome will have it to proceed from the above-mentioned 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. *Pomet.*

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 drain'd off; then the Sluices or Dams are to be open'd to let in what Quantity of ſalt Water you pleaſe, which muſt be contriv'd 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 ſhou'd chance to rain during this Proceſs, only two Hours, there wou'd 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 in its Place; ſo that if it rains but once in all the fifteen Days there's 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 the Swimming of an Egg in it, (for every Body knows that Water can be charg'd but with a determinate 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 *Lorrain*, which is made with ſalt Water caſt upon hot Plates of Iron; that of *Franche Comté*, and many more; which I forbear to ſpeak of, not having any Commerce in them.

Of the Purification *of* Sea Salt.

To purifie *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 Ambre-colur'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 Flegm, 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, Scurvy of the Teeth, Gums, *&c.* The Way of taking it, may be a few Drops by its ſelf, or in Water, or any other Vehicle almoſt, *ad gratum acorem*, for cleanſing the Teeth, mix it with clarified Honey of Roſes. Thoſe that wou'd 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 of them together in a Sand Heat for three Days.

Sal Marinum, *Sal Commune*, or *Sea Salt*, is a Salt they make from the Sea Water by Evaporation and Cryſtallization: I believe that the Origine 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 *Lorrain*, 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 *Egypt* 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.

Lemery.

The

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, cou'd never be evaporated, or perfected in the Sea Water; it wants the Earth to imbody the acid Liquor, otherwise it wou'd 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 Saltness 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, shou'd receive all its Saltness 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 Saltness, 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 Saltness; 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 breath 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 increases in Age.

There is a Salt prepar'd by Crystallization at *Broüage* 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 salter 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, deficcative, aperitive, resolutive; it is us'd in Apoplexies and Convulsions; they mix it in Baths and Suppositories, and being apply'd hot behind the Neck; it rarifies and dissipates Catarrhs.

14. *Of* Nitre *or* Saltpetre.

Saltpetre, which the Chymists call *Dragon*, *Cerberus*, or the *Infernal Salt*, is an artificial or factitious Salt, drawn from several Sorts of Materials, as *Pomet.*

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 *Saltpetre*, ſeeing they are largely deſcrib'd in the Tranſactions of the Royal Society at *London*; and alſo becauſe 'tis eaſie 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 a 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 *Saltpetre* may be kept almoſt in any Place without Loſs or Decay, but is not at all expos'd to Sale.

Beſides the *Saltpetre* 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 Saltpetre*, ſuch as is found ſticking to Rocks and old Walls, in ſmall white Cryſtals, and is what the Ancients call'd *Aphronitrum*. *Saltpetre* is made alſo in *Egypt*, with *Nile* Water, after the ſame Manner as common Salt is made with us at *Brouage* or *Rochelle*; and this ſame *Saltpetre*, 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 Whitſters, to blanch or whiten Linnen, under the Name of *White Pot-aſhes*, *Alkali*, *Natrum*, or *Anatrum*.

There is nothing almoſt has more perplex'd the Ancients, 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 'twas 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 Vitrification, 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, extreamly 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 too in Medicine, being an Ingredient of the *Lap. Crollii*. As for *Natural Saltpetre* 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 whiter, dryer and more beautiful, long and large Cryſtals 'tis in, the better, and more valuable.

The Uſe of *Saltpetre* 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 diverſe 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. *Lemery* aſſures us.

Nitrum, *Sal Nitrum*, *Sal Petræ*, *Saltpetre* or *Nitre* is a Mineral Salt, partly volatile, and partly fix'd, which they make from Stones and Earth upon *Lemery*.

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 rarified the Stones or Earth, is thus fix'd and imbodied.

Salpetre is separated by Dissolution, Filtration, and Coagulation; they powder grosly 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 *Saltpetre* that contains a great deal of lixiviate Salt, and which is almost like Sea Salt, only that the lixiviate Salt being Alcali, it changes its Nature because the Pores are fill'd by the Acid of the Saltpetre. The Saltpetre, made by this first Purification, is call'd *Common Saltpeter*; 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 purifie Common Saltpetre by dissolving it in Water, filtring the Dissolution, and evaporating the Water over a 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 Saltpetre 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 Saltpetre, sticking against Walls and Rocks in little Crystals, which is preferable to Common Saltpetre, and which the Ancients call'd *Aphro-Nitrum*.

The ordinary *Saltpetre* 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, resolutive, 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 Saltpetre, *or* Salt *of* Nitre.

Sal Nitri is a purified or refin'd *Saltpetre* melted by the Fire, and put into a Skillet, and so reduc'd into Cakes of three or four Fingers Thickness. *Pomet.*

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 aforemention'd melted *Saltpetre*.

Sal Nitri, or *Saltpetre*, 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 *Saltpetre*, by Means of a little dry'd Potters Clay, a Retort and Fire, is drawn a *Spirit* extreamly 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 unstop'd. 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 Pound, 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 chuse 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 softned, 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 Ebullition 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 Colicks. *Sal Armoniack* dissolv'd in this Spirit makes the *Aqua Regia*, or *Royal Water*, so call'd from its Capacity of dissolving Gold, the King of Metals.

Of Aqua fortis.

Aqua fortis is a Spirit drawn from Saltpetre, 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 Coyners, 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 defiegmated with us, and consequently not above half so strong as it shou'd 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's no Fear of counterfeiting *Aqua fortis*, or selling any other Spirit for it, there being none can be afforded at a lower Price. 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 Anodinum* or *mineralis Lapis* or *Sal Prunellæ*, is a refin'd *Saltpetre* melted in a clean Iron Pot, throwing a small Matter of Flowers of Sulphur into it: When it is thus in Fusion, the Saltpetre being throughly melted, and the Sulphur consum'd, let it stand a While, then take off the Scum with an Iron Spoon, and pour out the Saltpetre into an Iron Skillet, or Poringer, 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 Saltpetre is to be prefer'd to that which is made with the common or ordinary Saltpetre, 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 Saltpetre unite, the Alum becoming immediately a Scum when 'tis thrown into the Saltpetre, 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 Saltpetre; 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 Strowlers. 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 your self.

Crystal Mineral is very much in use in Physick; it has acquir'd the Name of *Sal*

Prunellæ, 'tis said, from its specifick 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 Plum.

Of Sal Polychrestum.

The *Sal Polychrestum*, so call'd from its many and great Virtues, is made of the finest Saltpetre, and *Holland*'s 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 that 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 Selling it when 'tis heavy, and of diverse 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 Saltpetre, 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 Saltpetre and Sulphur; and when the Detonation is over, and the Sulphur and Saltpetre 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 wou'd be still more curious, and wou'd 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 it to a Pellicle, it must be put in a Cellar, or some other cool Place, to shoot into Crystals; which when dry'd, ought to be in small Plates moderately thick and brillant, 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* crystallized, 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 Selling of this Salt there are great Cheats and Abuses commited, instead of which those who trade in it expose to Sale only the Saltpetre 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 Saltpetre 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 Fashon, (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 *Penotus* 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 Antifebrilio*, or Salt against Fevers, is made of the finest Saltpetre, Flowers of Sulphur, and distill'd Urine, all mix'd together, proceeding after the same Manner as is directed in Treatises of Chymistry, whether 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, *p.* 853.

15. *Of* Natural Borace.

THE *Natural Borace*, to which the Ancients have given the Name of *Chryſocolla*, or *Tincal*, 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 imploy 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 dryer, 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 of one Sort or 'tother 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 Ancients 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 Oyntment; which is far from Truth, ſince the *Borace* he means is only the fat *Borace* refin'd and ſhot into Cryſtals.

Borax, Chryſocolla; Capiſtrum Auri, Auricolla, or *Gold Flux Powder*, is 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 hinders 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. *Lemery.*

The *Venetians* and *Dutch* purifie or refine their *Borace* as they do other Salts, by diſſolving in Water, filtrating the Diſſolution, leaving it afterwards to evaporate, and ſettling 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 Excreſcencies of Fleſh. They may draw a Spirit from *Borace* like that of Alum, by a very

ſtrong Fire; it is aperitive, and very like Spirit of Salt: It is call'd *Chryſo-colla*, *Gluten Auri*, *Capiſtrum Auri*, and *Auri-colla*, becauſe the Goldſmiths uſe it to flux Gold withal.

Of Refin'd Borace.

Pomet. As *Natural Borace* is found of different Colours, ſometimes greeniſh, and other While yellowiſh, the *Venetians*, who were the firſt that brought *Borace* into Vogue, finding it cou'd 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 Verdigriſe 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* has 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 ſolder 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 ſolder, 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 Saltpetre. 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 *Diaſcorides*, has written of it, who having been an Eye Witneſs of the Fact, has given us an ample Deſcription of it in his Book, *p.* 733, to which my Reader may have Recourſe.

We commonly ſell ſix 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 *Saltpetre*; there are ſeveral Sorts of it, as *Roman Alum*, *Roch Alum*, and *Sugar'd 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 ſtiptick Taſte; they uſe it outwardly for ſtopping of Blood, and inwardly in Gargariſms for Inflammations of the Throat, and to clean the Teeth: They dry it or calcine it upon the Fire to free it from its Flegm, then it is call'd *Burnt Alum*; this is an Eſcharotick, and ſerves to eat away proud Fleſh, diſſolve Excreſcencies, and open Ulcers and Chancres.

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 Succarinum*, 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 Paſte, 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 *Alcali 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 Mineral found in the *Negropont*, which ſome will have to be the Stone which the Ancients call'd *Lapis Amiantus*; but as I am not ſure of the Thing, I will content my ſelf to ſay, that the *Plumous Alum* which we ſell, is a Sort of thready Stone of diverſe Colours, but moſt commonly of a greeniſh White, in Figure pretty much reſembling *Venice Talck*, 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 wou'd come out thence as white as Snow; and with this Sort of Cloth did the ancient *Romans* preſerve the Aſhes of their Emperours, 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 Eſcarotick; for what Part ſoever of the Body it touches it cauſes Whelks and Bliſters, and a moſt intollerable 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 *Albeſtes*.

This Stone Mineral is found in many Places in *France*, more eſpecially in the County of *Foye* in *Gaſcoign*, where there are Quarries out of which Stones of a ſurpriſing Magnitude are taken, and from which Cotton Threads may be drawn fit to make Cloth, and to endure whitning or cleanſing in the Fire, like that of Feather Alum already ſpoken of. And beſides this *Albeſtes*, is found in *France* (particularly about the *Pirenees* 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 in the Fire it immediately grows red, but black if apply'd 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 that has collected it is ſtill in Being, and a Man of Reputation and Fidelity, I thought it might not be amiſs to adverti ſe the Publick, that *Plumous Alum*, and what we call the *Albeſtes*, 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 Plumeum, *ſive Alumen Sciſſile*, or *Feather'd Alum*, is a 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 pro- *Lemery.*

duced

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 *Sciſſile*, becauſe 'tis eaſie 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 as on the Outſide, becauſe there are ſome who colour the *Engliſh* and *Liege Alum* of a dark Red, but the Cheat is eaſily diſcover'd; 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 retail 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 'em.

Of Engliſh Alum.

Engliſh Alum, to which the Ancients 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 Coyners, and Dyers; as alſo for many Preparations in Phyſick, 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 *Liege* or *Meziere Alum*, which is greaſier 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 Saltpetre, 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, wich 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 reduc'd 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, extreamly white, more like Paint or Plaiſter than any Thing elſe, and of a ſtiptick Taſte.

True *Burnt Alum* is eſteem'd a very good Eſcarotick to eat away proud luxuriant Fleſh; Perſons of Condition commonly wear it in little Bags under their Armpits, and their Feet to prevent Sweating, but then it ought to be extreamly 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 re-

reduc'd into a Paſte, 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 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 Glaſs*, which is found in the Quarries of *Paſſy*, 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 was found in the Clayey Earth of *Paſſy*. There are others that make uſe of another Sort of *Muſcovy Glaſs*, which we call *Gip* or *Plaiſter*; Potaſhes 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 died Colours, and that without it there wou'd be no dying or colouring to any Purpoſe.

End of the Third BOOK *of* MINERALS.

BOOK

BOOK the Fourth, of the Second Volume.

Of BITUMENS *or Sulphureous* MINERALS.

The PREFACE.

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, Cannal Coal, *or* Black Stone, *and* Sulphur: *The soft Sorts are* Naphtha, *the* Bitumen *of* Colao, *of* Syrnam *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. YEllow *Amber*, to which the Ancients 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 it's 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 many 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 20000 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 100000 Livers.

What I say may perhaps seem strange to those that 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 Vogue and Fashion thereabout, there being few People in *Lombardy*, or all along the *Po*, but wear *Amber* Necklaces, believing they keep 'em from Quinzies, 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, but at present it's become so vulgar and common, none but Servants make Use of it. Beside the great Use of *Yellow Amber* for Trinckets, *&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 Arabick, 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 has been noted, will attract Straw, which Copal will not do. Some have assur'd me that *Yellow Amber* is counterfeited with Turpentine and Cotton, or with Yelks of Eggs and Gum Arabick: 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 Dysenteries and other Lasks. 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 epileptick Fits, and paralytick Cases, taken from ten Drops to a Dram in any agreeable Liquor: Some dissolve pure fine Camphir in this Tincture to make what Monsieur *Soleysel* 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, *p.* 274.

Karabe, *Succinum*, *Electrum*, *Ambra Citrina*, or *Yellow Amber*, is a 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. *Lemery.*

Opinions are divided upon the Nature and Origin of *Amber*; the Ancients believ'd that it was a Mixture of Gum and Rosin that flow'd from Poplars, Pines, or Firs, which being confusedly 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 a Shore about the *Ducal Prussia* where it is form'd, and hardens after the Manner we see it in. I my self 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 Ancients, 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 Rosin, 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 Rosins 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 Gums.

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 rub'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 Cabiners, 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 enclos'd in the *Amber*; and it appears to me that the Difficulty is easie 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 sometime liquid or soft before it harden'd; that during that Time these small Bodies adhered to it, as to Glue, and were wrap'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 hardned, 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, Hemorrhages, Gonorrhea, 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 rub'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 Sides 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 Center, 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 rub'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* grosly powder'd, put into a Glass or Earthen Retort, may be drawn a reddish Spirit, and greenish fetid Oil. *Pomet.*

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, and the 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 stopt; for this is a tickliih 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 *Judea*, or *Jews Pitch*.

2. *Of* Black Amber, *or* Jet.

Pomet. JET, 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 glistering 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 proceeds *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 bespeaks it.

Gagates, in *French Geest*, *Jays* or *Jayet*, and in *English*, *Jet*, is 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 among the Rocks; it yields a good deal of Oil, and a little volatile penetrating Salt. *Lemery.*

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 near, hard, and of a fine shining Black; it discusses, is emollient, expells 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.

3. *Of* Jews Pitch.

THE *Jews Pitch*, or *Asphaltum*, is a Bitumen found swimming upon the Waters of the Lake, where heretofore stood the Cities of *Sodom* and *Gomorrha*, and the Name *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 extream 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 a Shore, 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. *Pomet.*

The *Bitumen* of *Judea*, or *Asphaltum*, so much resembles the best Black *Stockholm*

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 alſo is 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 *Factitious 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 *Furetiere*, that we have no Bitumen of *Judea* 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 'Pothecaries 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.

Lemery. *Bitumen Judaicum*, *Bitumen 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 *Gomorrha*. 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 conſtrain'd to take it from thence and carry it a Shore, 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-croſs 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 *Judea* to pitch their Ships as we do common Pitch, and there was a great deal of it imploy'd in the Embalming of the Ancients.

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 cicatrizes Wounds, and is us'd externally and internally.

It is ſuppos'd that the Word *Bitumen* comes from the *Greek* Word πίτυς, 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 Opinion of the Ancients, that the *Bitumen* of *Judea* 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 *Eſdras* ſpeaking of *Sodom* and *Gomorrha*, 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 Sort 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 altogether like the Oil of *Petre*.

Lemery. It is call'd in *Greek*, *Lithanthrax*; in *Latin*, *Carbo Petræ*, 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 this are in a lower Degree subservient to those of Amber, as well internally as externally apply'd.

5. *Of* Terra Ampelites, *or* Cannal Coal.

Pomet. *Terra Ampelites*, or *Cannal Coal*, is a dry Bitumen impregnated with Sulphur, that easily splits into Scales, and is reduc'd 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 *Alenson*, in the Provence of *Maine*; the Propriety of the Quarry whence 'tis taken, belongs to a Curate of a Parish, who makes seven or eight hundred Livers *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 Saltpetre; 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 away the Worms from the Leaves of Vines; also it is call'd *Pharmacitis*, because 'tis us'd in Medicine.

Lemery. *Ampelitis, sive Pharmacitis*, the Black Stone, or Medicinal Earth, 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 *Alenson* 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 Vermine, apply'd to the Vine Roots.

6. *Of* Sulphur Vivum, *or* Native Sulphur.

Pomet. *Sulphur Vive* is an Earth or Clay easily inflammable, that in burning emits a bituminous Smell, brought us from *Cicily* and other Places. As to the Choice of Live Sulphur, so call'd, 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 galenical 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 *Prepar'd 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 fetid sulphureous Smell, easie 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

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, easie 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 cou'd 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 suffer'd 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 no hing 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 wou'd 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 wou'd not be thought to discourage Authors, few Books being so ill written, but may contribute, in some Measure, to the Advancemen 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 that was found, some Years since, in that Bank of Earth which was levell'd by St. *Martin*'s Gate.

A third Sort is of *Swifferland*, resembling that of *Quitto*; and many more there are which I shall forbear to mention, there being no Demand for 'em.

The Use of *Sulphur* in *Rolls*, or *Common Brimstone*, is well known to all, and that it is one of the chief Ingredients of Gun-Powder; 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 Gawzes, 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 us'd in the Exhibition of it, for it now and then produces very ill Symptoms, nay even Death itself sometimes.

Lemery. *Sulphur*, or *Brimstone*, is brought 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 Rosin 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 wou'd 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 Rosin, 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 Swear, and is given in Coughs, Colds, Phthisicks, Wheesings, Shortness of Breath, *&c.* Outwardly apply'd, it resolves all hard Tumours, cures corroding Tetters, Scabs, Itch, Scurf, Morphew, *&c.* drys up old Sores and Ulcers. Tho' 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.

Pomet. *Flowers* of *Sulphur* are prepar'd of *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* rais'd 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 Dross 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 a Natural Balsam for the Lungs, and endow'd with so many good Qualities, that 'twou'd be endless to pretend to recount 'em all.

Flowers of *Sulphur* are also made after another Manner, to wit, by adding to it fixt Salt-petre, 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-mention'd.

Lemery. To make *Flowers* of *Sulphur*: Take *Sulphur* grosly powder'd, 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, Tetters, 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, whether the Reader may have Recourse. This *Salt* is compos'd of Saltpetre 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. *Pomet.*

Salt of *Sulphur* is much in Use to temper and allay the Heat of Fevers: The Dose is not adjusted, 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 esteem'd very good for the Lungs, and for Asthmaticks. *Pomet.*

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 being edulcorated 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 aforenam'd, 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 serous and watry Superfluities. *Lemery.*

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. *Pomet.*

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 endur'd 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 Vertues 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* anniſated, and has great Qualities given to it, as will be ſeen hereafter.

Monſieur *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, Pleuriſies, and Ulcers of the Lungs: It is good alſo againſt Weakneſſes and Indigeſtions of the Stomach, reſtores the Appetite, expells Wind, eaſes all Sorts of Colicks: 'Tis ſaid to be good alſo againſt the Plague, and all epidemical Diſeaſes, venereal Affects, continual or intermitting Fevers, and the Epilepſie; it may be taken internally in any agreeable Liquor, from three to ten or twelve Drops; the Stomach or Navel may be annointed therewith in any Illneſs of the former, or in Colicks, *&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 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 Unction; 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* 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 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 a 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. *Lemery.*

8. *Of* Naphtha.

Naphtha is a Bitumen or Slime found in many Places of *Europe*, 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 Names 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 extinguiſht 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 'em in *France*, I ſhall content myſelf to ſpeak of that of *Auvergne* only. *Pomet.*

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

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 Appothecaries and others, instead of the true Bitumen of *Judea*, tho' it be easily distinguishable from it by its strong Smell, whereas the true *Judea Bitumen* is almost without any Smell at all; 'tis from its fætid Smell, some, as to *Asa fætida*, 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, as having none of 'em, I shall not trouble my self 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 *Brianson*, in the *Upper Dauphine*, 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, whether it is convey'd by Subterranean Veins, and it is gather'd into Oil of different Colours, by Means of certain Canals and Copper Cauldrons which separate it; or to speak more intilligibly, the Duke of *Sara* and *Darco*, and the Marquess of *Arpia* in *Modena*, to whom the aforesaid Rock belongs, have caus'd Trenches, and Copper Canals, or Pipes to be made, which are purposely plac'd to receive the Oil as it distills from the Rock, by Means of which it falls into the Cauldrons or Coppers, from whence it is taken or gather'd 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 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 extreamly volatile, it is easy to catch Fire, which may serve as a Precaution to those that sell it, to be as careful of it as of Gun-Pouder.

The great Virtues of this Oil is the Reason why I will not say any Thing of it here, but rather refer my Reader to what the afore-nam'd *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 'em 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 ancient *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 *Mount Festin*, 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, detersive, digestive, vulnerary, and strengthening, and so are prevalent against Palsies, Weakness, and Relaxation. *Lemery.*

laxation of the Nerves; outwardly apply'd, they relieve the Tooth-ach, and diſſolved in a Turpentine or vinous Clyſter, prevail againſt Dyſentery and Diarrhea: *Petroleum* is by many us'd inſtead thereof.

10. *Of the* Black Oil *of* Petre, *or* Oil *of* Gabian.

Pomet. THE *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 only are 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'nt Oil of Turpentine thicken'd and colour'd 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 under Price.

The *Black Oil* of *Petre* of *Italy*, or of *Gabian*, is ſomewhat of Uſe in 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 'em, nor any Trade or Dealing in 'em, I'll not pretend to ſay any Thing concerning them.

Petroleum, ſive Oleum Petræ, or *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*, call'd *Gabian*, and from thence *Oil* of *Gabian*, is of a very unpleaſant Smell. All the Kinds of *Petroleum* are inciſive, penetrating, reſolutive, attenuating, reſiſt Poiſon, deſtroy Worms, expel Wind, ſtrengthen the Nerves; ſome Drops may be taken inwardly and outwardly; the Joynts, Emunctories and Navel, may be rub'd with it. *Lemery.*

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 Joynts; it is prevalent againſt Gout, Palſies, Cramps, Convulſions, Apoplexy, Megrim, 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, diſcuſſes 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* aforegoing.

11. *Of* China, *or* Indian Ink.

China Ink is a hard ſolid Paſte, which, according to ſome Authors, 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 produc'd from the Smoak or Fume of Oil of Olives burnt; but as it is impoſſible I ſhou'd 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 ſooty muſty Black. *Pomet.*

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. GUN-*Powder* is a Compoſition of Saltpetre, 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 throughly acquainted with the Manner of making it beſt; and by the Bye, I wou'd not adviſe any Merchant to deal in this Commodity, whoſe profeſs'd Buſineſs 'tis not, it being too hazardous.

Lemery. *Sal Pyrium*, *Sal Bombardicum*, and *Pulvis Pyrius* and *Bombardicus*, or *Gun-Powder*, was a Thing wholly unknown to the ancient *Greeks* and *Arabians*, 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 *Saltpetre*, *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 purifie 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 ſmoak 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 priſtin Form, whereby its Greaſineſs 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 Intermiſſion, '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 reſident 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, if 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 Coles 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 Linnen 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 it's 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 Haſle, 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 reduced into burning Coals, ſtop up every Vent-Hole for the Fire, cloſe, with moiſtened Earth, ſo that there be not the leaſt breathing Place, the Fire being thus extinguiſhed, 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 as 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 upon the Fire 'till all is evaporated, and the Matter becomes thick like Paſte, and taking it from the Fire they make it yet dryer 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-powder, it is fit that you ſhould firſt know the Kinds thereof, and then the different Strength of each: The Kinds are threefold, 1. Canon Powder, 2. Muſquet Powder, 3. 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℔. of Saltpetre, there is Sulphur 25℔. Charcole 25℔ 2. *The Weaker*. To every 100℔. of Saltpetre, Sulphur 20℔. Charcoal 24℔. II. *Muſquet Powder*. 1. *Stronger*. To Saltpetre 100℔. Sulphur 18℔. Charcoal 20℔. 2. *The Weaker*. To Saltpetre 100℔ Sulphur 15℔. Charcole 18℔. III. *Piſtol Powder*. 1. *The Stronger*. To Saltpeter 100℔. Sulphur 12℔. Coal 15℔. 2. *The Weaker*. To Saltpeter 100℔. Sulphur 10℔. Charcoal 18℔. as in the Table annexed, which are the Numbers, and in the ſame Proportion, but in leſſer Quantities or Dicimals.

The Way of making it. All theſe Ingredients are to be finely powdered, and they are to be moiſtened 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 before hand be moiſtened with the following Liquor. ℞ *Spirit of Wine* ℥xx. *Spirit of Wine Vinegar*, ℥xij. *Spirit of Nitre*, ℥iiij. *Spirit of Sal Armoniack*, ℥ij. *Camphir*, ℥j. *diſſolved in Spirit of Wine, mix together for the Purpoſe aforeſaid.* Or in ſtead thereof, if all theſe Things cannot be had with this. ℞. *Brandy* ℥xl. *Champhir* ℥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 Seve, that it may break the Balls of Powder, and make it paſs through 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 ſupream 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 Charcole is; but for real Service, whether for *War* or *Hunting*, &c. the *black Powder* is much to be prefer'd; yet for Satisfaction's ſake, we will give you the Directions for making *white Powder*.

White Powder. *Take Saltpeter*, 10℔. *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: ℞ *Nitre* 10℔. *Sulphur*, ℔jß. *dried and finely powdered, Saw-duſt* ℔ij. *mix and make Powder.* Or Thus: ℞ *Nitre* 10℔ *Sulphur*, ℔ij. *Rotten Wood dried and powdered*, ℔ij. *Salt of Tartar* ℥iij. *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

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 Canon 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 imperceptible, 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*.

End of the Fourth BOOK *of* BITUMENS.

BOOK

BOOK the Fifth, of the Second Volume.

Of STONES.

The PREFACE.

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 that 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.*

1. *Of the* Hyacinth, *or* Jacinth.

Pomet. THE *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 plyable, 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*, *Bohemia*, *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 but 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 *false 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 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 Hartshorn and Ivory, Sorrel and Purslain Seed, of each ten Drams and two Scruples; of Saphire, Emerald Topaz, Fine Pearl, Raw Silk, Gold and Silver Leaf, of each five Drams and a Scruple; Musk and Ambergrise, 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 who prepare this Medicine ought not to put in Musk and Ambergrise, 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 Sophisticaters of it, who do it so grosly and scandalously, 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 Stone, of which there a great many Sorts that differ in Size and Colour; for some are 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 *Bohemia*, 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 Brillant 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 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. *Lemery.*

2. *Of the* Topaz Stone.

THE *Topazes* that are us'd in Physick are Stones of different 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*, *Bohemia*, 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. *Pomet.*

The true *Topaz* of the Ancients, 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 likewise

wise 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, Chrysopatius, 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, Æthiopia,* and about the *Red Sea*; it's said they grow among the Alabaster, and some pretend 'em 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. *Lemery.*

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 *Bactryan, Ægyptian, 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 has been of great Esteem, not only for its Glory, but the Use it was apply'd to, being set in the Breast-Plate of Judgment.

The *Smaragdo-Prasinus, Smaragdites,* or *Bastard Emerald,* is a transparent green Gem of a mixt 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 Kidnies and the Gout.

Smaragdus, Prasinus, or the *Emerald,* is a fine, green, precious 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 powder'd and taken inwardly: The Dose from six Grains to half a Dram. *Lemery.*

4. *Of* Saphirs.

WE sell two Sorts of *Saphirs,* to wit, the reddish and the blackish; the *Saphirs* are little Stones of the *Pomet.*

Size of a Pin's Head, extreamly hard, and therefore difficult to bruise or pound. The reddish, which are usually of the Colour of Wine, ought to be imploy'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 *Vermeil*, or small *Granats*, which beware of, tho' it is not difficult to distinguish 'em, 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.

Lemery. *Saphirus vel Sapphirus*, or the *Saphir*, 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 enquired 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*, *Bisnager* and *Zeilan*; they are found likewise in several Parts of the *Western* World, as on the Borders of *Bohemia* 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 prefer'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 Poyson; 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 little 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 subjoyn'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 mention'd before, are the *Diamonds* of *Alenson*, the *Amethysts* of *Auvergne* and *Cartagena*, the *Girasole*, the *Peridot*, the *Agats*, the *Berils*, the *Sardius*, the *Coralines*, 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 that wou'd 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.

Lemery. *Rubinus*, *Carbunculus*, *Pyropus*, *Anthrax*, the *Ruby* or *Carbuncle* is 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 *Bisnaga*, but these are not so fine.

There is assign'd to the *Ruby* the Virtue of resisting Poyson, strengthening the Vitals, driving away Melancholy, restoring of lost Strength; but we know by Experience it has no other Quality than that of an Alcali 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 Reflexion, looking like a red-hot Coal of Fire.

6. *Of*

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 Stellatus*, is a heavy Stone of a Sky Blue, sometimes full of Rock Stone, and most frequently streak'd with Veins of Copper, which the Ancients, 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 *Marchasite* of that Metal: However it is certain that this Stone is got out if 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 rub'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 extreamly, having a sulphureous Smell, which shows 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.

Lemery. *Lapis Lazuli*, *Lapis Cyaneus*, *Lapis Cæruleus*, or the *Azure Stone*, is of different Sizes and Figures, being opaque, heavy, and of a blue Colour, intermix'd with 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 leasurely, 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 imploy'd for common Uses.

Of Ultra-marine.

Pomet. *Ultra-marine* is, properly speaking, a *Precipitate* made from *Lapis Lazuli*; [as you have it describ'd by *Lemery* above] and some say it took its Name of *Ultra-marine*, from being made be-

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 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 *Verditers* which have no other Difference but according to the Preparation 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 desiccative or drying, being outwardly apply'd, and inwardly purges melancholy Humours; it is good for the Epilepsie, *&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 *Roüen*, whither it is brought by the *Swedes*, *Hamburghers* 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 *Roüen*. 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 *Roüen*; 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*

9. *Of the* Jasper.

Pomet. THere being various Sorts of *Jaspers*, such as the Green, the Purple, Cérulean, 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 shou'd not have spoke of it. Being a very precious Commodity, it is very liable to be counterfeited in Glass: 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.

Lemery. *Jaspis*, the *Jasper*, is a fine, hard, smooth, resplendent, 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 Kidnies, *&c.*

10. *Of the* Jade Stone.

Pomet. THE *Jade* is a greenish Stone, inclinable to grey, extreamly 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*.

Lemery. *Jade* is a very hard Stone, of a greenish grey Colour; the finest 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 apply'd to the Region of the Kidnies, they are proper to bring away Stone and Gravel, but I can give no credit to such Remedies.

11. *Of the* Nephritick Stone.

Pomet. THE *Nephritick Stone* is a greyish Stone, with a little Mixture 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 Kidnies, from whence it is call'd 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, surnam'd *Malaquitte*, and cut and carve it like a Bird's Head, because the Ancients believ'd 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 wou'd know further of it may read Mr. *Worms*, who has writ a large Description of it, too long to be inserted here.

Lemery. *Lapis Nephriticus*, or the *Nephritick Stone*, is of different Sizes, 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, of an aſh-colour'd Green: They are likewiſe gather'd 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 Colick, to break the Stone in the Reins, and expell 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 Kidnies, and forces it away by Urine; they tye it in their Cloaths about the Back.

12. *Of* Venetian Talck.

Pomet. THE *Venetian Talck* is a Kind of greeniſh Stone in Scales or Flakes, which tho' 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 Glaſs-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 ſhow 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 Addition of ſome piercing Salt, is an unpardonable Vanity; but by the Help of ſome Salts, and acid 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 Vertues 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 Vertues uſually aſcrib'd

to

to it, proceed upon Suppoſition it cou'd 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 ſears'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 ſuckt it all up; then having bruiſed them with all their Shells, put the Mixture into a Glaſs Cucurbit, cover'd with its Head; diſtill 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 eaſie to be divided into Leaves as thin as you pleaſe. This Red or Leaf *Talck* is only uſed, 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, imploy 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 approv'd 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.

Lemery. *Talcum*, or *Talck*, is a Kind of 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 wou'd 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, yelloviſh, 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, that are found in the *Quarries* or *Pits* near *Brianſon*; they ſerve to take Greaſe-Spots out of Cloths, and for Taylors to mark or ſcore with; chuſe the neateſt, ſmootheſt, green and ſoft.

14. *Of*

14. *Of* Spalt.

Pomet. *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 shou'd 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 us'd by several Sorts 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.

Lemery. *Spalt* is a scaly Stone that is 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 deterstive and drying, outwardly apply'd.

15. *Of the* Lapis Judaicus, *or* Jews-Stone.

Pomet. THE *Jews-Stone* is of different Sizes and Figures; but the most common Size is that of an Olive, adorn'd 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 *Judea*, 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 easie 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 821 *Page*, says, that this Stone being calcin'd with Sulphur, 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.

Lemery. *Lapis Judaicus*, *Lapis Syriacus*, *Phœnicites*, *Tecolithus*, or the *Jews-Stone*, is of various Forms and Bigness, but most usually is shap'd 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 Kidnies and Bladder.

16. *Of the* Lapis Lyncis, *or* Thunder-Stone.

THE *Belemnites*, falsely call'd the *Lynx Stone*, is a Kind of 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 believ'd 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

Pomet.

Lemery.

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.

Lemery. *Belemnites, ſive Lapis Lyncis, ſive Dactylus Ideus*, the *Thunder-ſtone*, or *Thunder-bolt*, 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 Ancients call'd *Lyncurius*, 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 expell 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, whither thoſe who deſire to make it may have Recourſe: The *Bolognian Stone* is not yet well known amongſt us, which is the Cauſe we ſell ſo little of it. Some call this Stone calcin'd, the *Sun* or *Moon Spunge*, the *illuminated Stone*; Lucifer, *Caſſiolanus* his *Stone*, or *Kercher's Phoſphorus*.

Lemery. *Lapis Bolonienſis, Chryſolapis*, or the *Bolognian Stone*, is a Stone whereof 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 *Talck* 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 theſe 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 cannot 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 Raſp, or a 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;

which when done, let the Fire go out of itself; 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 impalpable 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 reſtored 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 ſtopt, 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 boild 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 ſubtle and delicate as to take 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 *Chryſolapis*, from caſting a Light of a golden Colour.

18. *Of the* Pumice Stone.

THE *Pumice Stones*, which the *Latins* call *Pumex*, are Stones 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 Dentrifice for the Cleaning of the Teeth. *Pomet.*

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.

Lemery. *Pumex*, or the *Pumice Stone*, is a Stone or Earth that has been calcin'd by ſubterranean Fires, thrown out by Eruptions of the Vulcano'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, ſpungy, of a ſalt, ſenny, 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, deterſive, drying, us'd for old Ulcers, ſore Eyes, and to clean Teeth.

19. *Of the* Ætites, *or* Eagle Stone.

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 Ætites*, 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 *Marchaſite*. 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 ruſſet 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.

Lemery. *Ætites 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 *Ætites*, 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.

Pomet. THE *Toad-Stone*, call'd in Latin, *Bufonites*, and *Batrachites* in *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 *Boetius*, 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 in Circumference, hol-

low below, convex above, and very ſmooth, about half an Inch broad at the Bottom; ſome of them 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 that 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' *Boetius* 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.

Lemery. *Buſonites*, *Chelonites*, *Batrachites*, 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 venemous Beaſts, they draw out the Poiſon. Some hang them about their Neck for *Quartan Fevers*; but all theſe Virtues are imaginary, for the *Toad-Stone* has nothing in it but an alcaline Quality proper to abſorbe Acids, and to ſtop Looſeneſs, taken from a Scruple to half a Dram; but it is not in Uſe.

21. *Of the* Lapis Aminantus.

THE *Lapis Amiantus* is a Stone of a greeniſh Black without and 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 incombuſtible, and the Ancients 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 riſes in long Threads; and this, in ſhort: 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. *Pomet.*

Lemery. *Amiantus*, *ſive Albeſton*, *ſive Albeſtes Lapis*, 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 Ancients ſpun *Amiantus* and made incombuſtible Linnen 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 Linnen remain'd entire. This Stone is found in the Quarries near the *Pyrenées*. *Amiantus* is us'd in ſome Remedies; they believe it reſiſts Poiſon, cures the Itch, and is deterſive.

22. *Of* Cobalt.

Pomet. *Cobaltum*, or *Kobaltum*, is a reddiſh hard Stone, that is heavy, and in Grains of the Size of our Peas, that ſtick

ſtick ſeveral of them together upon a Kind of Spar or Marchaſite, 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 Calaminaris*; but they are groſly miſtaken, ſince 'tis eaſie 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 of *Marchaſite*, 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 Eſchar upon the Fleſh, and eats off Excreſcencies. *Lemery.*

23. *Of* Oſteocolla, *or the* Bone-Binder.

Pomet. THE *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 *Aſſo*, 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, Oſtiocolla, Oſteites, Stelechites, Morochtus, Holoſteus, Oſteolithus, Lapis Sabuloſus, Lapis Oſſifragus, 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*. *Lemery.*

End of the Fifth BOOK.

BOOK

BOOK the Sixth, of the Second Volume.

Of EARTHS.

The PREFACE.

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* Catechu, *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.*

1. *Of* Cachou, Cashew, *or* Japan Earth.

Pomet. CACHOU, 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 it is call'd *Masquiqui*, 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 Oyntment 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.

As *Cachou* is a very bitter Drugg, and of an unpleaſant 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 Mouſe's Dung, and the ſmaller theſe Troches 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 unpleaſant 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 *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*, 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 ſtampt ſeveral Characters: The Variety of Figures, Colours, and different Seals, that are found upon the *Terra Sigillata*, makes me think that every one makes 'em to his Fancy; and that it is nothing but a fat aſtringent 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 Ancients 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 aſtringent that you can get. *Pomet.*

It is much uſed in Medicine becauſe of its aſtringent 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 Kind of Bole, or fatty clayey Earth, that is dry, ſoft, and friable; ſometimes yellowiſh, whitiſh, or reddiſh, inſipid, and aſtringent to the Taſte; they bring it ſometimes into the Iſle of *Lemnos*, but *Lemery.*

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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 Ancients was yellow, and made into Cakes much smaller than these at present are, and had engrav'd upon 'em 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 Turmerick, or some other Drugg, to make it come up to the Colour of the Ancients, 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 'em 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, Gonorrhea, 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 Joynts.

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 readyest for *Bole* of the *Levant*, and because it fits the Gilders best.

As these Boles are the deareſt, because of the Charge in transporting 'em to *Paris* from *Blois* or *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 Gleets; it thickens thin Humours, resists Putrefaction, and expells poysonous 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 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 deficcative, 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 *Marle*, but not so efficacious as the *Red Bole*. *Lemery.*

4. *Of* Oker.

Pomet. THE yellow and red *Oker* is one 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 dryer, 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 beſides 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 imploy it in poliſhing of Glaſs.

Lemery. *Ochra*, in *Engliſh Oker*, is a Maſs of Earth that is dry, fat, will crumble, and is ſoft to the Touch, of a yellow or gold Colour, that is taken form 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 reſolutive, 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 is brought to us out of the *Mediterranean*, being a *Species* or Kind of *Oker*.

5. *Of* Green Earth.

WE ſell 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. *Pomet.*

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.

Lemery. *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.

Pomet. *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, eaſie 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 *Egypt*, 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 *Menta* 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 ſhip'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 'tis dry. It is only us'd for ſcouring Houſhold 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 whitning, poliſhing, and brightning 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 other 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 deterſive 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 *Pomet.* 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 Shoemakers, 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 Neüilli*, *Champaigne Chalk*, and others; of which we ſell none, becauſe we can eaſily come at them, as the *Smectim* or *Fullers Earth*, which is a fat, ſmooth, ſticking Earth that is heavy, ſometimes yelloviſh, and ſometimes blackiſh. This is much us'd by the Cloathiers 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

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, Sapphirs, 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 Lytharge, Ceruſe, and Minium. The firſt, after they have been levigated, are made into Troches with Roſe Water, and the next into Tablets with common Water.

Lemery.

Terra Perſica, or *Indian Red*, is 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 Smectin*, or *Fullers 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 aſtringent and reſolutive, 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 aſtringent, 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 Agarick*, *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 deterſive, aſtringent, 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.

FINIS.

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