

A
HISTORY
OF THE
MATERIA
MEDICA.

CONTAINING

Descriptions of all the Substances used in Medicine; their Origin, their Characters when in Perfection, the Signs of their Decay, their Chymical Analysis, and an Account of their Virtues, and of the several Preparations from them now used in the Shops.

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VITRIOLIC MINERALS.

BY the Term Vitriolic Minerals we would be understood to express compound fossile Substances, form'd of various stony and earthy Particles; but always containing among these, Particles of either Iron, or Copper separately, or of both conjunctly; and these always dissolved by the Action of the Acid of Sulphur and Water, and reduced to the State of Vitriols, though in such small Concretions, as not to be distinguishable by the Eye, but easily perceived by the Taste. According to this Definition, vitriolic Minerals are properly and truly Ores of Vitriol; but they have so long been received under their several peculiar Names that it will be expected of us here to treat of them as distinct and separate Fossils.

Of these vitriolic Minerals, we have four in the Catalogue of Simples, 1. The Chalcitis. 2. The Misy. 3. The Sory or Rufma, and 4. The Melanteria.
CHALCITIS.

It is much to the Scandal of the present Age, that this Mineral, though its Name is retained in all the Catalogues of the *Materia Medica*, and even stands among the List of Ingredients in some of the capital Compositions of the Shops, yet is known only by Name among us. No body has ever met with it in the *English* Shops, nor is indeed its very Nature understood there. Most People give it up as one of the lost Fossils of the Ancients; and the few who are of another Opinion, take it to be a pure native Vitriol of a red Colour.

It is properly a mixed Ore of the cupreous and ferrugineous Vitriols, and though so perfectly unknown among us, is now very frequent and in common Use in Parts of the World nearer the Places where the Ancients lived, who have left us so many Praises of it.

Chalcitis is an opaque Mineral, considerably heavy, of a soft and friable Texture, and of a very irregular and rude Structure. It is found usually among the Ores of Iron and Copper, but sometimes in Strata of mere Earth, and is usually met with in Masses of about half a Pound or a Pound Weight, though there are some of twenty times that Size. These are usually of a roundish or flatted Figure, and are marked on their Surfaces with several Series of Striæ rising a little above the Level of the other Parts, and forming a Kind of clouded or undulated Lines. It feels soft and fine between the Fingers, and when broken, is found to be composed of a Multitude of irregular Fasciæ or Bundles as it were of undulated Striæ, the same with those which shew themselves on the Surface. Sometimes however, these Striæ are obliterated and the whole appears an uniform Mass, and not unfrequently it has Veins of a fine gold Colour in it. These are formed of the Misy next to be described, and much resemble the Veins of Marcasite which run through several of our *Cornish* Ores. Not unfrequently also the Misy and Chalcitis are found in the same Mass, one half of which shall be perfect Misy, and the other perfect Chalcitis: the having met with
Masses.

Masses of this mixed Kind, is probably what gave the Ancients an Opinion of these two Minerals, gradually changing into one another. The Chalcitis is always of a dusky brownish red Colour, and much resembles in that respect unpolished Copper. Those who have described it as being yellow have confounded it with the Misy, or else have misunderstood the Term *Æri S. milis*, by which some of the *Latin* Writers have described its Colour, to signify of a brass Colour, whereas it was meant to express that of Copper.

The strongest Acids are not able to dissolve the Chalcitis, whether pure or mix'd with the Misy, but Water in either Case takes up a considerable Part of it. In the Fire it first calcines to a yellowish Colour, not unlike that of calcin'd green Vitriol or Copperas, and like that in a stronger Fire it becomes of a deep Purple.

It is very frequent in many Parts of the *Turkish* Dominions, where they have it in frequent Use in Medicine as an Astringent and Styptic; they burn it to a kind of *Colcothar*, and give it in Hæmorrhages with very great Success. They also use it externally to stop bleeding, sprinkling the fine Powder of it upon Wounds.

The Virtues of the Chalcitis of the Ancients do not agree more perfectly with what this Substance is now found to possess, than the Characters they have given us of it in their Descriptions. *Dioscorides*, who is much the best Describer of the fossile Part of the *Materia Medica* of his Time, of all the *Greeks*, tells us that Chalcitis is of a copper Colour, and that it is friable, not stony; and that it is variegated with shining Streaks or Veins: every Part of this Description perfectly agrees with the Chalcitis now in Use among the *Turks*, and this on examining it by Solution in Water, appears very evidently to be an Ore containing both the Vitriols of Iron and of Copper. If a Dram of it be powdered and boil'd in four Ounces of Water and the Liquor be filtrated and evaporated to a proper Standard, Crystals of a blueish green Colour and of a rhomboidal Form will be found shot about the Sides of the Vessel: these if wetted and rubb'd on the Blade of a Knife, or on any other polish'd Surface of Iron, will precipitate a Crust of Copper over it, and mix'd with an Infusion of Galls they turn it into Ink, they are therefore truly of the Nature of the blue green native Vitriol of the *German* Mines. A Dram of the Chalcitis carefully treated will yield eighteen Grains of them.

At present we know nothing of its Virtues in *Europe*, it stands indeed among the Ingredients of the *Venice* Treacle and some other Compositions, but its Place is generally supply'd in these with common green Vitriol calcin'd to a redness. The ancient *Greeks* held it to be one of the more slightly corrosive Medicines, and used it in Hæmorrhages externally, and in small Quantities in Collyriums for the Eyes. They also have recommended it in Ointments for the Herpes and Erysipelas, but they never ventur'd to give it internally. Among the *Romans* it was however received as an internal Medicine, upon much the same Footing as it stands now among the *Turks*.

M I S Y.

This is a second of the vitriolic Minerals in Use among the *Greeks*, and which principally differs from the Chalcitis, in that it contains no cupreous Vitriol but only that of Iron. This is also generally given up at present as one of the lost Fossils of the Ancients, but if we will attend to their Descriptions of it,

it, and examine the Bodies sent us from the *German* and *Hungarian* Mines under the Name of Marcasites, we shall not fail to meet very frequently with it. It is a very beautiful Mineral, of a fine bright yellow Colour and of a loose and friable Structure; though in some Pieces considerably harder and firmer than in others. It very much resembles the golden Marcasites of our, and of the *German* Mines, but that is less heavy. It is found sometimes in detach'd Masses in the manner of our Marcasites. These are of a very irregular Structure and rough Surface, often rising into a Sort of Efflorescences, but never emulating the cubic Figures of those Bodies: more frequently however it offers itself in the Mines in Form of broad and thin Veins, filling up the horizontal Cavities between Strata of ferrugineous Stones. It easily breaks between the Fingers, and may be crumbled into a coarse Powder which consists of a Number of very irregularly angular Particles; and it is sometimes found loose and in Form of this Powder, hanging about other Minerals, particularly about some of the ferrugineous and antimonial Ores. It is not soluble in any Acid, nor makes the least Effervescence with any of them. If thrown into the Fire it does not emit any Flame, but calcines in a few Moments into a deep blood red Powder. Water is a Menstruum that very readily discovers what it contains. A Dram of pure Misy reduced to Powder and boil'd for some Time in a Quarter of a Pint of Water, if that Liquor be filtrated, evaporated to a Pellicle, and set to shoot, will afford more than one third of its Weight of pure green Vitriol, no Way different from our common Copperas, either in Appearance or in its Effects, the smallest Quantity of it turning a Decoction of Galls into Ink.

It is very frequent in the *Hungarian* Mines and in many of the *German*. We have it not in *England*: We have many Substances that resemble it and that yield green Vitriol, but they are all inflammable and of the pyritical or marcasitic Kind. The Ancients had it from the Island of *Cyprus*, and used it to the same Purposes with the Chalcitis, but they esteem'd it yet milder than that: at present it is no where put to any Use, nor indeed merits it, as it can have no other Virtues than those of green Vitriol, though we are not sure what pernicious Substances it may be mix'd with.

It is often found running in Veins in the true Chalcitis, and makes a very beautiful Variegation in that Fossil. In some of its laxer Masses it has greatly the Appearance of a coarse native Sulphur, and has a Place among the Sulphurs in the Cabinets of some People, who have not been at the Pains of trying whether it was inflammable or not.

SORY, quod RUSMA RECENTIORUM,

Sory, call'd Rusma by the Moderns.

Sory is like the other vitriolic Minerals, a compound Fossil form'd of a Mixture of metalline, sulphureous and terrestrial Matter, containing Copper reduced to the Form of a Salt by the Acid of its Sulphur, and in that State blended in imperceptible Particles with the rest of the Matter of the Mass: as the Misy is a pure Ore of green Vitriol, and the Chalcitis a mixt one of blue and green Vitriol, this Sory, or as the World has of late been taught to call it, Rusma, is truly an Ore of blue Vitriol, or of the Vitriol of Copper alone, there not appearing to be a Grain of any Thing approaching to the Nature of Iron in it.

It is found in loose and detached Masses of various Sizes, from that of an Egg,

Egg, to such as weigh six or eight Pounds. These are of a rude and irregular Figure, of a rough Surface often wrinkled, crack'd, and full of Prominences and Depressions, and of a blackish Colour; they are considerably heavy and so hard that when newly taken up out of the Earth there requires a very smart Blow to break them.

When broken they are found to be throughout of a spongy cavernous Structure, not black as on the Out-side, but of a deep dusky iron Colour, sometimes uniformly the same throughout the whole Mass, and sometimes variegated or streak'd with a reddish, a blueish, or a greenish Colour. They are generally moist on the Out-side, and not unfrequently have fine capillary Efflorescences arising from some Parts of their Surfaces, principally from the Cracks and Hollows. They are of a very disagreeable Smell, especially when fresh broken, and of an austere, acrid and nauseous Taste. If laid on the Fire they emit a greenish blue Flame with an insufferable Stench, and finally calcine to a dusky reddish Powder.

The Sulphur contain'd in Sory is evident from this Flame, the greenish Colour and peculiar Smell of which seem also to indicate that there are some Particles of Orpiment among the rest of its constituent Matter. The Vitriol, though too intimately blended with the rest to be distinguishable by the Eye, manifests itself very readily to the Taste if but the Tip of the Tongue be apply'd to any Part of it. This Salt may also be separated from its proper Form by a very easy Process. If a Piece of the Sory be beat to a coarse Powder and exposed to a moist Air for three or four Days, and after that boil'd in six times its Weight of Water, and the Liquor filtrated and evaporated in the usual Manner to a Pellicle, and then set by in a cool Place to shoot, there will be found Crystals of pure blue Vitriol adhering to the Sides and Bottom of the Vessel.

These are the Characters of the Substance now used among the *Turks* under the Name of *Rusma*, and these agree so perfectly with the Descriptions the Ancients have left us of what they call Sory, and with the Effects they have recorded of it, that there is not the least room to doubt their being the same Substance.

Dioscorides tells us that their Sory was Black, full of small Holes, moist on the Surface, and of a nauseous Taste and virose Smell; and the Description which *Bellonius* gives of the *Rusma*, which he saw in Use in the *Turkish* Dominions, agrees perfectly well with this, as do also the Specimens of the Body itself sent from thence, from some of which the preceding Characters have been form'd.

The Ancients found their Sory in *Ægypt* and all the Country thereabouts, as also in the Island of *Cyprus*, and in *Spain*. At present it is dug in several of the Islands of the *Archipelago*, and in many Parts of the *Turkish* Dominions. It is not however confin'd to that Quarter of the World, but is found also in great Abundance in many Parts of *Germany*. The *Turkish* *Rusma* is usually harder than the *German*, but both have the same nauseous Smell, both the same external and internal Appearance, and both answer alike to the Tests by Fire and by Solution. The *German* indeed usually contains some Quantity of Iron with the Copper, and precipitates an ochreous Earth to the Bottom of the Solution, which the *Turkish* does not, but if the Point of a Knife be dip'd in that of either, it is immediately cover'd with a thin Crust of Copper, and the *German* as well

as the *Turkish* affords Crystals of a pure cupreous Vitriol. It is less rich in Vitriol however than either the Chalcitis or the Misf. Two Drams of the *Turkish* Rufma I have found to yield eighteen Grains of Vitriol, and the same Quantity of the *German* about twenty. The *Turkish* Kind is used by the Ladies as a Depilatory. They mix two Parts of Rufma in fine Powder with one Part of Quick-Lime, and make the whole into a Paste with Water: they lay a Piece of this on any Part of the Skin from whence they would take the Hair, and after five or six Minutes, washing it away with warm Water the Hair falls off with it: Many hundred Weight of Rufma are annually used there in this manner. There are some also who venture to give it internally as an emetic: four Grains of it are a Dose: It operates very violently, beginning almost from the Moment in which it is swallowed, which is the Case also with all the cupreous Salts. The blackest Rufma, and that which is least hard, is esteem'd the best; and in this, as well as in its Virtues and Uses in general, the *Turks* perfectly agree with the ancient *Greeks*.

The Rufma found among the *Turks* is generally dug at four or five feet Depth, and lies among Strata of a loose blackish marly Earth, in the manner of our common Pyrites in the Clay-Pits about *London*. In *Germany* they meet with it at greater Depths, and always about Copper-Mines; though they have it however in great Abundance, they know nothing of its Name or Virtues. They work it for blue Vitriol, and sometimes send Specimens of it to their foreign Correspondents under the Name of a black vitriolic Marcasite.

MELANTERIA.

This is a fourth of the vitriolic Minerals, well known among the ancient *Greeks*, but to which the World in general are as much Strangers at present as to the rest. It is a very beautiful Fossile of a dense, compact, and regular Texture, and of an extremely bright and beautiful pale Yellow, resembling nothing so much as that of the purest Gold. It is remarkably heavy, and is usually found in little Masses of the bigness of Pigeons Eggs, very rarely much larger. These are of a perfectly irregular Figure, usually full of angular Prominences and Depressions, and of as bright and beautiful a Colour within as on the Surface of the Mass; these Masses are broken with a slight Blow, and usually exhibit somewhat of an irregularly tabulated Structure. This is the most perfect State of the Melanteria, but it is not the most frequent: We usually meet with it in Form of a fine gold colour'd Efflorescence on vitriolic and pyritical Bodies; or else in loose shattery and friable Masses, of a more dusky yellow Colour and friable Texture, in which latter State it so much resembles a native Sulphur that it is frequently mistaken for one. This is soon discovered to be an Error however on putting it into the Fire, for the Melanteria is not inflammable, but calcines to a greyish Powder, which on continuing it longer in the Fire changes to a deep and fine Purple.

It does not make the least Effervescence with Acids, nor is at all affected by them, but Water is as genuine a Menstruum for it as for the other Minerals of this Class: a Dram of it beat to Powder and boil'd in an Ounce and an Half of Water gives it a brackish Taste, and a Piece of polish'd Iron dipp'd into the Liquor is instantaneously cover'd with a thin Crust of Copper. If it be evaporated however and set to crystallize it will be found that Copper is not the only Metal contained in it in the State of Vitriol, nay that Copper is but in very small

small Proportion to the Iron it contains. The Crystals it Forms are of a greenish Colour with a Cast of Blue, and answer to all the Tests of the common green Copperas, except that they manifest some small Portion of the blue or cupreous Vitriol with the ferruginous on every occasion. It is frequently met with in the *German* and *Hungarian* Mines. The Antimony Ore of the latter is often covered in Part with it. It is also found in considerable Plenty in the *East-Indies* and in *America*.

The *Greeks* used this, as they did the Chalcitis, externally, as a gentle Escharotic and a Styptic: they made it an Ingredient in their Ointments for old Ulcers, and they used to sprinkle the Powder of it on fresh Wounds to stop the Hæmorrhage.

The *Greeks* evidently meant by their Name Melanteria the very Substance which is here described, and which is common enough in the Collections of the Curious, though generally misunderstood and confounded, either with the Sulphurs or Marcasites.

Dioscorides plainly knew it in both its Forms, he tells us some of it was found concreted like a Salt about the Mouths or Adits of the Copper-Mines, and some farther in, which was more firm and solid. The Physicians of those Times esteem'd that the best which was of the Colour of Brimstone, and which was lightest and most friable. Some of the old Authors tell us, and some of the Moderns, who we presume never saw any Melanteria, or half the other Things they have wrote about, copy it from them, that Melanteria turns Black immediately on being touch'd in any Part by Water.

The Melanteria we have described has not this Quality, nor indeed is it easy to conceive how any Fossil that had it, should escape being turn'd Black within the Bowels of the Earth, where it is not easy for any Thing to be kept securely out of the Way of Contact with Water: Probably the Account is founded only on an Error in the Copy of some one of the Ancients, from whom the rest, faithful in preserving Blunders, whatever becomes of Knowledge, have all taken it.

P Y R I T E S,
The Fire - Stone.

This is a compound metallic Fossil, always composed of Vitriol, Sulphur, and an unmetallic Earth, but containing these several Ingredients in very different Proportions in the several Masses, and often having others mix'd with them. It appears in very different Forms in its several States, sometimes in larger sometimes in smaller Masses, and these sometimes of a granulated or simple uniform Structure; sometimes regularly striated. Some of them are found naked in the Earth, and others covered with a Crust of a ferruginous Matter; in some the Striæ terminate in a smooth Surface, and in others they run into Plates at their Ends, shewing themselves either on the Surface or in the Hollows of the Mass.

These are the principal Varieties of the Pyritæ of indeterminate Figures, but beside these we meet with Masses of them regularly figur'd and angular: Some of these are cubic, or composed of six Planes, others of an octohedral and others of a dodecahedral Figure: The octohedral ones very much resemble the Figure of the rough Diamond in its most perfect State, being composed of two short quadrilateral Pyramids apply'd Base to Base. All this Variety of Bodies

are much the same in their constituent Matter, and all come not improperly under the Name of Pyrites: What the Authors who have treated of the *Materia Medica* seem to have had their View in their Descriptions of the Pyrites, seems to have been the common greenish shapeless Kind found in our Clay-Pits, out of which the green Vitriol or Copperas is procur'd: This therefore is the true Pyrites of the Shops.

This is the most common of all the Pyritæ, and appears to us under the greatest Variety of Forms of any Fossil of this Kind. It is a dense, firm, hard Body, of an even and uniform Structure, neither striated nor granulated, and is of a very remarkable Weight. It is most usually found in flat Masses of uneven Surfaces, and from one Inch to ten or more in Length, of various Breadths and Thicknesses: Sometimes however it is found in roundish Masses like Pebbles, and sometimes in irregularly protuberant ones like our common Flints. The Surfaces of these Bodies are always smooth, and in this State it is never covered with any Coat or Crust. Its Colour is a dusky greenish with somewhat of a silvery Cast among it. It has its Name Pyrites or Fire-Stone from its giving Fire on being struck against a Steel: It does this much more freely than a Flint will do, and all the Sparks burn a longer Time and grow larger as they fall, the inflammable Matter struck from off the Stone burning itself out before the Spark becomes extinguished. It will not ferment with any Acid, nor is there any known Solvent for it in its natural State; but after it has been some Time exposed to the Air it begins to shoot, and at length becomes covered with Efflorescences of Vitriol, soon after which it falls to Pieces.

It is found in our Clay-Pits, and under the Cliffs of the Sea-Shore, where there are Strata of this Kind of Clay in very great Abundance, and that not only in its native Form as we have here described it, but in that of fossile Wood, of Syringoides, and Casts of Shells of various Kinds, particularly of the smaller Buccina. In any of these Forms it is the same Substance, and will serve for all the same Purposes. It is recommended by some Authors as an Emmenagogue, but it is very injudicious to give it in this Intention: What Virtues it has of this Kind can be only owing to the Salt of Iron or green Vitriol it contains, and it is much better to give that alone than in such Mixtures as it has in this Fossil. The common green Vitriol, or Copperas of the Shops, is made from this Fossil, and an Acid somewhat different from that of pure Vitriol may be drawn from it by the Retort, after it has been exposed to the Air till it moulders away; this is of great Use in Mineralogy, and is a Solvent for several Fossils that none of the other Acids will touch.

M A R C A S I T A,

Marcasite.

The Term Marcasite has been very improperly used by some for Bismuth, and by others for Zink. The more accurate Writers however always express a Substance different from either of these by it, a sulphureous and metallic Mineral in its native State. This Substance, properly and distinctly call'd Marcasite, is very nearly ally'd to the Pyrites in its Nature and Qualities, though it differs considerably from it in its external Figure. The Marcasite is a solid hard Fossil, of an obscurely and irregularly foliaceous Structure, of a bright glittering Appearance, and naturally found not in loose Nodules, as the Pyrites, but in continued Beds among the Veins of Ores, or in the Fissures of Stone. The

Variety

Variety of Forms this Mineral puts on is almost endless and innumerable: As it is generally found among the Ores of Metals it is frequently impregnated with Particles of them, and of other fossile Bodies, and thence assumes various Colours and Degrees of Hardness; there are however only three distinct Species of it, which are all easily distinguished by their Colour, the one being of a bright gold Colour, the other of a bright silver Colour, and the third of a dead white; of these the silvery one seems to be that peculiarly meant by the Writers on the *Materia Medica* in their Descriptions, and therefore is to be received as the Marcasite of the Shops.

This is a very beautiful Fossil, remarkably heavy and of a very compact though irregular Structure. It is sometimes found filling up whole Fissures in the Rocks in Mine Countries, and forming Veins from an Inch to a Foot or more in Thickness and running to a great Extent; but it is more frequently met with in large irregular Fragments among the Masses of Ore in the Veins. It is always bright and glossy on the Surface, and when broken appears yet more splendid and of an irregularly laminated Texture; the flakey Matter it is composed of is not regularly and evenly disposed as in most other Bodies of this Sort of Structure, but is oddly contorted and wav'd, and the several Flakes wrap'd round about one another in such a manner as to hold very firmly together. In some of the Masses this is more visible, in others less, and in some the whole constituent Matter is so intimately blended that the Plates are scarce at all distinguishable, and the whole Body of the Matter seems one solid uniform Substance. Its Colour is an extremely bright and glittering White, much resembling that of Silver, but with a Glare that this Metal never has when ever so highly polished. Struck against a Steel it very readily gives Fire, and the Sparks burn a long Time: It will not ferment with Aqua Fortis nor be dissolved by any known Menstruum. If put into the Fire it emits a pale blue Flame, attended with a thick white Smoak of an insufferable Stench of Sulphur, and often with something of the garlick-like Smell of Arsenic along with it; and in fine calcines to a deep purple Matter perfectly resembling Colcothar of Vitriol. This as well as the other Marcasites is frequently found debased from its pure State here described, by an Admixture of the Ores of Metals, as Lead, Tin: Sometimes Cubic, or other regularly figur'd Pyritæ are immers'd in it; and sometimes it is elegantly foliated at the Top.

It is very frequent in the Mines of *Cornwall*, where the Workmen call it Mundic. It is also found in *Darbyshire*, *Yorkshire*, and many other Parts of *England*, but much more frequently in *Germany*, where they extract Sulphur and Vitriol from it. It always contains these two Substances, and beside these it has usually a Quantity of Arsenic in it. It has been recommended by some after Calcination as an excellent Styptic, and doubtless it possesses the Virtues of a Colcothar of Vitriol, but it is full as judicious to use that Preparation of the pure Salt as this, in which, notwithstanding that the Arsenic is carried off, there may yet remain Particles that are very little agreeable to the Purposes it is given for.