Pharmaco-botanologia: or, An alphabetical and classical dissertation on all the British indigenous and garden plants of the New London dispensatory : In which their genera, species, characteristick and distinctive notes are methodically described; the botanical terms of art explained; their virtues, uses, and shop-preparations declared ... / By Patrick Blair.

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PHARMACO-BOTANOLOGIA:

OR,

An Alphabetical and Classical

DISSERTATION

ON ALL THE

British Indigenous and Garden Plants

OF THE

New London DISPENSATORY.

In which

Their GENERA, SPECIES, *Characteristick* and *Distinctive* NOTES are Methodically described; the *Botanical* TERMS of ART explained; their *Virtues*, *Uses*, and *Shop-Preparations* declared.

With many CURIOUS and USEFUL REMARKS from proper Observation.

By *PATRICK BLAIR*, M. D. of *Boston* in *Lincolnshire*, and Fellow of the ROYAL SOCIETY.

Miseri mortales qui Naturam ejusque artificium Abdunt, ubique diligentia patens, & Amplissimos solis radios Nubecula obfuscant. Barth. Epist. ad Lyserum.

LONDON:

Printed for G. STRAHAN at the *Golden Ball* over-against the *Royal Exchange* in *Cornhill*; W. and J. INNYS at the West End of St. *Paul's* Church-Yard; and W. MEARS at the *Lamb*, without *Temple Bar*. MDCCXXIII.

THE

PREFACE.

THAT *this* DISSERTATION *may prove answerable to the Title, I have treated of the* PLANTS *in this* Catalogue *in a* Botanical *as well as* Physical *Respect; that so he who will only study* Botany, *may attain to the Knowledge of* Plants, *without Regard to their Virtues; and the young Beginner in* Physick, *or* Pharmacy, *may be taught their Virtues, without prying into the Niceties of* Botany; *and that such as are desirous to know both, may receive suitable Instruction at an easy Rate, without much Pains in Reading, or Money in Purchasing the numerous Volumes of* Botanic *Books, among which the* Officinal Plants *are dispersed. I have neither so abridged their Description, as only to excerpt from another a few short* Notes *of their* Characters *and* Virtues, *as some (who collected them into one Body) nor separated such as ought to be united, in both Regards, by an* Alphabetical *Disposition, as others have done; but by abridging the* Catalogue, *and by making the* Alphabet *my Rule, and the* Classical Disposition *my* Method, *I have framed such a* Botanical Synopsis, *as may afford Examples of the several* Tribes *of* Europæan Plants, *and give an Inlet into the several* Methods *into which they have been reduced. I have shewn how*

far their Virtues *ſuit with their* Characters, *reconciled the ſeeming Diſcrepancy among the ſeveral* Methods, *and ordered Matters ſo, that by looking into the* Tribe *you may gueſs at the* Virtues: *You may know the* Tribe *by its* Characters, *and* diſtinguiſh *each individual* Plant *or* Species *by its peculiar* Notes; *by which an agreeable Harmony may appear in their* Claſſes, Sections, Genera, Species, Characteriſtick *and* Diſtinctive *Notes,* Virtues *and* Uſes.

This is what I promiſed in my Miſcellaneous Obſervations, p. 112. *It is what has undergone various Shapes, and what is now ſent Abroad into the World, as the Product of ſeveral Years proper Experience: The Occaſion of it was this; being obliged to give* Botanical Lectures *to ſome Students in* Phyſick *and* Pharmacy, *then under my Care, I firſt planted the* Diſpenſatory Plants alphabetically *in my* Garden, *I dictated an Hiſtory of them in* Latin, *which I afterwards deſigned for the* Preſs; *but that (taking in every minute Circumſtance) ſwelled to too large a Volume; and not having ſo great a Regard to* Method, *which then came much to be enquired after, I was fain to lay it aſide. Mr.* Dale *had prevented me in the Proſecution of Mr.* Ray's Method, *I looked upon* Tournefort's *to be more inſtructive, as teaching how to examine more narrowly by the* Flowers *and* Fruits *of* Plants. *I next made an Improvement upon* it, *by adding a* Compendious Deſcription *of the other Parts of the* Plants, *and a* ſummary Account *of their* Virtues *and* Uſes. *This Undertaking was ſo well approved of by Dr.* Charles Preſtone, *Profeſſor of* Botany *at* Edinburgh, *that I was encouraged to preſent it to the* Celebrated *Sir* Hans Sloane, *with whom I then was (without any perſonal Acquaintance) in frequent Correſpondence, who was pleaſed favourably to accept of it, and along with the late* ingenious *Mr.* Petiver *was at much Pains to have it publiſhed; but the Bookſellers Stomachs were ſo glutted with Mr.* Ray's Botanical Latin *Writings, that nothing on that* Subject *and in that* Language *would go down with them: This induced Sir* Hans *to think of having the* Manuſcript *publiſhed in* Holland, *while Mr.* Petiver *was rather*

of

of Opinion it ought to be rendered into Engliſh. *In Obedience to his Deſire, I framed* A Table of the Diſpenſatory Plants, *diſtributed according to their Virtues (which is ſince publiſhed in Copper Plate at the Deſire of the* Generous *Dr.* Mead) *as a* Specimen *of the* Method *in which I was to* claſs *them; but that being attended with the Inconvenience of a frequent diſ-joyning* Plants *of the ſame* Character, *by pointing out their more noted Virtues*, v. g. Abſynthium *is more known for a* Vermifuge, *and* Artemiſia *for an* Hyſterick, *though they be* Congeners; *I deſiſted from it, as not anſwering my Deſign, which was to ſhew how far the* Virtues *of* Plants *may be pointed out by their* Characters, *and what* Sympathy *there is between them. This mov'd me to ſend him a* Schedule *of this* Alphabetical *and* Claſſical *Diſpoſition, which he much approved of. Theſe frequent Diſappointments ſtopt my Pen for ſome Time, nor did I incline to dip it again, until I had given a previous* Specimen *of my Knowledge of the* Plants *themſelves, as well as of their* Virtues. *This made me enter into an Epiſtolary way of Converſing with my worthy Friend Mr.* Petiver, *before a Perſonal Acquaintance, as is to be ſeen,* Letter IV, V, *and* IX, *in my* Obſervations. *Some time after, when I had taken up my Reſidence in* London, *I bethought my ſelf of making ſome other* Botanical Improvements, *for the Entertainment of the* Royal Society, *which gave the riſe to thoſe* Eſſays *I publiſh'd about three Years ſince. And now at length being retired to a Country Place, I have propos'd to employ my leiſure Hours in diſcourſing on the* Practical, *as formerly I did on the* Theoretical *Part of the* Indigenous *and Home-bred* Vegetables: *Yet ſo, as not to ſurfeit the* Reader *by peruſal of too large a* Volume *at once, nor withdraw my ſelf from the Exerciſe of my* Profeſſion, *in too cloſe a Purſuit of a* prolix *Subject; but by parcelling out the* Deſcription *of a few* Plants *at a time, to give him Time to Ruminate upon one Part, while I am preparing another for his* Entertainment.

The Plants *herein contain'd, and in the ſubſequent* Decads *have been ſo often treated of, that a Performance of this Nature may ſeem ſuperfluous; but they have been ſo ſuperficially handled by ſome, prolixly by others, confuſedly by a third, and ſo variouſly interſpers'd by the Compoſers of whole* Botanick Syſtems *by the fourth; that the* Reader *will ſoon ſee no oſtentatious Affectation, no vain-glorious Itching to be an* Author, *has prompted me to publiſh a Work upon a Subject of this Nature; I plead not the Deſire and Solicitations of Friends; what I have moſt in my View, is, to manifeſt the* Glory *of* God, *and his* Omnipotence, *in endowing Man with a rational Faculty to diſcern theſe wonderful Productions of his* divine Wiſdom, *and his* providential *Care over* Man; *who, as he has ſince the* Fall *been liable to ſuch Infirmities as the Weakneſs of his Nature, the Miſmanagement of himſelf in this lapſed State, or perhaps vicious Inclinations, or his immoderate Debaucheries have brought upon him, and made him ſubject to divers Diſeaſes, and various Tortures, Torments and bodily Pains and Afflictions; ſo he has provided ſuch a vaſt Variety of* Remedies, *always, almoſt in his View, which apply'd in a regular Manner, by knowing and well skill'd Perſons, are capable, if not to Cure, at leaſt to lighten a burthenſome and heavy Load of Sickneſs, and aſſwage the Vehemency of his Pains. Nor is the* Providence *of* God *leſs obſervable, in providing to every* Climate *the fit* Antidotes *to remove the* Epidemical Infections, *the Inhabitants of ſuch a* Soil *or* Climate *are moſt obnoxious to: A pregnant Inſtance of which, is to be ſeen in this firſt* Decad, *where ſuch a potent* Febrifuge *as* Wormwood, *abounds ſo much in a Place where* Agues, *and* Fevers *are ſo* Epidemical. *My ſecond Motive was, a great Concern to ſee ſo uſeful and agreeable a Subject handled ſo ſuperficially; I was in Hopes, that if I did not manage it to a wiſh'd for Advantage, I might, at leaſt, afford much Satisfaction to a curious* Reader, *and hitherto communicated by none before theſe have ſeen the Light, as might*

might become both pleaſant and profitable. So much do I keep in Mind the Motto *of the* Royal Society, NULLIUS IN VERBA. *Which leads me to a third, and no leſs powerful Argument, for my publiſhing of theſe,* (viz.) *That I may in ſome Meaſure anſwer my Engagements to that* Illuſtrious Body, *by making ſuitable Improvements in* Natural Knowledge. *I was ſo readily accepted of to be one of their* Fellows, *when at a great Diſtance, and Perſonally unknown to any of them; they have ever, ſo favourably receiv'd the Diſcourſes I have preſented to them, I owe ſuch Obligations to ſeveral of the moſt Eminent amongſt them; and amongſt thoſe of the* Royal College *of* Phyſicians, *ſuch as Sir* Iſaac Newton, Preſident; *Sir* Hans Sloane, Vice-Preſident *of the* Royal Society, *and* Preſident *of the* College *of* Phyſicians, *Dr.* Mead, *Dr.* Sherard, *and ſeveral others, I need not name; that were there no other Engagements, I am bound by the higheſt Gratitude to make this thankful Acknowledgment, by exerting my utmoſt to do what I hope will prove Satisfactory to all.*

It is not without Reluctance, that I am forced to addreſs my ſelf to ſo many honourable and learned Perſons in a vernacular Phraſe; *and inſtead of obliging the unlearn'd, to acquire ſuch a Competency of the univerſal Languages, as to make them capable to underſtand theſe, I am forced to convert them into the* Mother Tongue, *by which the moſt impudent Pretender to* Phyſick, *as well as the moſt regularly educated in that delightful and uſeful Science, may become equally knowing.* Phyſick, *whoſe greateſt Ornament has been hitherto that of Learning, is now brought ſo low, that the* Apothecaries, *one of its greateſt Branches (ſince to them are committed thoſe precious Means for the Preſervation and Recovery of Man's Health) are for the moſt Part, as ignorant of the* Materia Medica, (*of which they ought to be the ſole* Diſpenſers) *as thoſe abominable Impoſtures the Quacks and Mountebanks, and thoſe pittiful ſilly Herb-women, whoſe Trade it is to cheat them, with impoſing upon them ſuch Herbs as they*

they pleaſe, without controul. Theſe are they who delude the Multitude, and make the World believe they can cure all Diſeaſes, to the Hazard of many thouſand Britiſh *Lives; while the* Apothecaries, *for want of a ſufficient ſtock of Learning, are in no Capacity to contradict, or withſtand them, or to mount one Step above them, either for Knowledge, or Converſe, by which they ought to be diſtinguiſh'd. On the Contrary, being ſtill on the Level with thoſe vile Wretches, they joyn Hand in Hand to ſuppreſs, diſcourage, and keep under, thoſe, who by a more liberal Education, and diligent Studies, and aſſiduous Labour, with great Pains, and vaſt Expences, have arriv'd at ſuch a pitch of Knowledge and Experience in their Profeſſion, as fits them to be Companions to thoſe of the beſt Character and Quality; and to whom, the Patient may, with the greateſt Confidence and Freedom, entruſt the Care of their Health and Life; ſince the Principles of Honour, as well as Duty and Conſcience, are uſually inherent in thoſe who have been thus train'd up by a civiliz'd and liberal Education.*

Theſe Conſiderations were a great Hindrance to my ſetting forward in this Work; I muſt adapt my Diſcourſe to thoſe of the meaneſt Capacity, and convert the Technical Words, *or* Botanical Terms *of* Art, *into ſuch* Engliſh *as my be eaſily underſtood, otherwiſe I could do no Service, becauſe I am ſenſible the expreſſing them in the Original* Greek *and* Latin, *is one of the Reaſons why* Botany *has hitherto lain ſo long neglected, by thoſe whoſe Buſineſs it is to know it; and I rather chuſe to render ſo delightful a Science ſo eaſy, that it may be univerſally known, than that it ſhould always remain as a hidden Treaſure, in the Hands of a very few. So that my principal Buſineſs muſt be, if I ſucceed, to fall upon ſuch an inſtructive Method as may allure the* Reader, *and ſtir him up into a deſire of diving more deeply into it.* Ignotis nulla Cupido, *is too frequent an Obſerve. The wholly Ignorant have no Taſte of any* Science, *until by eaſy and gentle Means they be, as it were,*

led

led to grope after what they may rest and lean upon, to feel what may be smooth and delightful to Taste, what may have a Relish and become Palatable, and to have a glimpse of what they may more clearly see through, and of what they may have a better Understanding in process of Time. Then it is that a desire after Knowledge enters the Mind. Then does an earnest Inclination to enquire farther possess the Soul, and then do they begin to have an Esteem for what before they had no Value.

In order to attain all these good Ends and Purposes, I have endeavour'd to omit nothing that's Curious or Instructive, and to advance nothing that is Superfluous; but to assert what I imagine may prove both Useful, and Necessary in the Botanical *and* Physical *way.*

First, *To ease the Reader of a tedious turning over of a great many Volumes, I have directed him to such as have best treated of such and such a Plant, I give the several Synonimous Names, and an Index of the Tome Book, Leaf, Page, Table where 'tis to be found, or its engraved Figure is to be observed.*

Secondly, *The Alphabetical Disposition introduces the first Plant by the Initial Letter, and the Classical joyns to it all those of the same Tribe or Family.*

Thirdly, *When any new Plant introduces a new Tribe, I take notice of the several marks and Characters requisite to Constitute it in the General, and when two or three, or more of them are joyned together, I give the Characteristick Notes in the General, wherein they Agree, and the distinctive Notes in particular, in which they Disagree.*

Fourthly, *After this I proceed to a particular Description of each Plant, not with that exactness Dr.* Tournefort *has done by giving the exact measure in the bigness of each Flower and*

Fruit, because I am Sensible that many often vary; but by giving such an Account of them chiefly from proper Observation, as I hope will be Sufficient to make them be easily known.

Fifthly, *I take care every where to Explain the Technical Words or Terms of Art, as they first fall in my way; and if any Tribe, or Family, or Term of Art occur afterwards: The Reader needs only to consult what has been said before on the Subject, to which he shall be directed by a proper Index.*

For the Medicinal Part.

THE Virtues are such as are handed down to us from the Ancients, or introduced into Practice by modern enquiries, or such as consist with my own, or Correspondents proper Experience. I give a General Idea of the Texture of the Parts, give Account of their Use, whether External or Internal; I enumerate the Shop Preparations, in which they are chiefly concern'd, or into which they enter according to the New London Dispensatory.

To accomplish such a design, as it ought to be, would be a Work of more Pains and Labour than my Business would admit, were I to Publish it all at once, and indeed a task too great for any one Person to perform, which made me rather resolve upon a Monthly Publication, which I hope will be an Encouragement to the Undertaker, and Buyer; for the Charge in Printing the first Decad, *will not be so great as of the whole Work, and if the Sale of that is Damn'd (as the Printers phrase it) I shall save my Labour in proceeding further, for if the Reader is not pleased with what he finds in the first, he shall not be put to the Charge of buying any more, and if these prove Satisfactory, the gradual laying out of a Shilling at a time will not be very hard upon the Pocket. But further, I can better bestow*

my

my idle Hours in examining and giving a more exact deſcription of a few Plants, than had I a great many upon my hands at once, to be hurry'd out to publick view: Alſo by 'tis this means I give an opportunity to my Correſpondents to Communicate what they ſhall more particularly obſerve, or know in the Subſequent Plants of this Catalogue, which is to known by my Table of Diſpenſatory Plants already mentioned to be had at Mr. Strahan, *Mr.* Innys *and Mr.* Mears *Bookſellers: And therefore for the Benefit of the Publick, and for the furtherance of ſo uſeful an Undertaking, I ſolemnly Invite, Deſire and earneſtly Entreat of all Eminent and and Expert* Botaniſts, *all* Phyſicians *and* Apothecaries, *all Curious and Expert* Gardiners, *or any other Ingenious Perſons who have, or ſhall Obſerve any thing relating to the* Botanical, Phyſical, Pharmaceutical *or* Chymical *Part of theſe Plants, or what may concern their Culture and Management, that they would be pleaſed to Communicate ſuch their Curious Remarks to me, and I ſhall take ſpecial care to have them publiſh'd in their Name, and after what manner they ſhall deſire, and if there be any thing yet wanting to Compleat the firſt* Decad, *upon Information it ſhall be either added or altered, as an Appendix to this, or annexed to the next* Decad.

I am to divide the whole into ſeveral Decads, *each* Decad *is to conſiſt of Forty Plants (more or leſs) as they ſhall require to be more fully or briefly treated of, to be continued Monthly, untill I have Compleated about Four Hundred Indigenous or Garden Britiſh Diſpenſatory Plants.*

To Conclude I commit theſe to the Serious Peruſal of the Judicious, if any Cenſorious Critick ſhall take the pains to Carp at them, he is welcome, but his better endeavour would be to out do them by a better Performance, than to offer to undo what perhaps himſelf cannot amend: I hope to demean my ſelf, as one who Conſults nothing ſo much as the Publick good. My great Deſign is to give further Inſtruction, and Information to thoſe of the ſeveral Branches of my Profeſſion, eſpecially the younger

ſort,

ſort, and I hope I may be allowed the Uſe of that Eminent Botaniſt, *Dr.* Morriſon's *Phraſe,* Doctis Scribo, Indoctos docebo. *In a word if theſe prove Uſeful to thoſe in the Shops; if diverting to ſuch as reſort to the Fields, and Gardens; and if Satisfactory to the* Royal Society, *as being one of the Parts of thoſe Improvements of Natural Knowledge, for the which they were ſo Solemnly Erected into an Honourable, as well as Learned Body, I have what I wiſh for, it's all that I deſire*

THE

THE PREFACE TO THIS DECAD.

THOUGH *the* Diſpenſatory Plants *in this, hardly exceed the Number of* Forty, *of which each* Decad *is to conſiſt; yet it's of a greater Length, than I at firſt propos'd: The* Alphabet *led me to ſome valuable* Phyſical Plants; *every* Plant, *almoſt, introduc'd a* New Tribe: *I had the* Marks, Notes, *and* Characters *of each to deſcribe; and the* Terms *of* Art *to explain; with a ſuitable Account to give of their* Virtues; *but if theſe Sheets are thus filled up, I hope hereby to render the following* Decads *more intelligible by them. Here you have an Example of the moſt noted* Juliferous Ever-greens, *in the* Abies; *the* Corymbiferous naked Flowers, *in the* Abrotanum; *with a large Diſſertation on the* Sea-Wormwoods *hitherto not obſerv'd. Here you have the other* Irides *join'd to the*

Acorus Adulterinus; *the other* leſſer Capillaries *to the* Adianta; *The* Apetalous Flowers *explained in the* Acetoſa; *and the* Malvaceous Tribe *deſcrib'd at large with the* Alcæa: *beſides other* Plantæ ſui generis; *ſuch as* Acorus verus, Acanthus, *&c. and all in ſo plain and Familiar a way as may not only render the knowledge of theſe* Decads *the more eaſy, but direct how to make uſe of the* Volumes *of the other* Botanical writings *quoted with the* Synonima *of their Names. So that if the* Reader *will narrowly pry into theſe, and Examine the* Plants *themſelves by the Rules and Directions herein laid down, I am perſuaded he may come to have a more intimate Knowledge of the* Plants *and their* Virtues, *with leſs trouble and ſmaller Charges than by any other Method hitherto made uſe of. I have endeavoured to avoid Superfluity, and to neglect dothing that's neceſſary; and if the Reader ſhall receive any Benefit thereby, I ſhall obtain what I deſire.*

ERRATA.

PAge 8. line 28. read *luteo.* p. 10. l. 34. r. *Stalk,* p. 14. l. 29. r. X. 1. p. 15. l. 10. r. 2. p. 17. l. 18. r. *grows in.* l. 31. r. *enters.* p. 32. l. 9. r. *Monocotyledones.* p. 38. l. 12. dele *only.* p. 44. l. 19. r. *as well as.* p. 48. l. 21. r. *Quercetan.*

THE

THE PLANTS of this DECAD.

BOOKS

BOOKS Printed for, and Sold by G. STRAHAN, *at the* Golden Ball, *over againſt the* Royal Exchange *in* Cornhill.

A New Table of Diſpenſatory Plants diſtributed according to their Virtues, Engrav'd on a broad Sheet in Copper, and Dedicated to Dr. *Mead*. By *P. Blair*, M. D.

Miſcellaneous Obſervations in the Practice of Phyſick, Anatomy and Surgery, with new and curious Remarks in Botany, with Copper Platers.

Botanick Eſſays with Cuts. Both by the ſame Author.

An Eſſay of the True Nature and due Method of Treating the Gout, together with an Account of the Nature and Quality of Bath-Waters, the Manner of uſing them, and the Diſeaſes in which they are proper: As alſo, of the Nature and Cure of moſt Chronical Diſtempers, not publiſh'd before. By *Geo. Cheyne*, M. D. & F. R. S.

A New Theory of Acute and ſlow continued Fevers: Wherein beſides the Appearances of ſuch, and the Manner of their Cure, occaſionally, the Structure of the Glands, and the Manner and Laws of Secretion, the Operation of Purgative, Vomative, and Mercurial Medicines are Mechanically explain'd. To which is prefix'd, an Eſſay concerning the Improvements of the Theory of Medicine.

Preſagium Medicum, or the prognoſtick Signs of acute Diſeaſes, Eſtabliſh'd by ancient Obſervation, and explain'd by the beſt Modern Diſcoveries.

The Art of Curing Veneral Diſeaſes, explain'd by Natural and Mechanical Principles.

Sea-Diſeaſes, or a Treatiſe of their Nature, Cauſes and Cure: Alſo an Eſſay of Bleeding in Fevers.

The Nature, Cauſes, Symptoms and Cure of a *Gonorrhœa*.

An Account of the Nature, Cauſes, Symptoms, and Cure of Looſeneſſes. Theſe Three by *William Cockburn*, M. D. F. R. S.

An Account of animal Secretion, the Quantity of Blood in the Humane Body, and the Muſcular Motion. By *James Keil*, M. D.

A Treatiſe of the Diſeaſes of Tradeſmen, ſhewing the various Influence of particular Trades upon the State of Health. With the beſt Methods to avoid and Correct it.

New Diſcoveries relating to the Cure of Cancers. Wherein a Method of Diſſolving the Cancerous Subſtance is recommended; with Inſtances of Succeſs in ſuch Practice, on Perſons reputed Incurable.

Chirurgical Remarks, occaſion'd by the Death of a Child, whoſe Caſe was lately Publiſh'd. To which is added an Account of a Wound of the Brain by a Bullet, with Reflections thereon.

Philoſophical Principles of Religion, Natural and Reveal'd: In Two Parts. The Firſt containing the Elements of Natural Philoſophy, and the Proofs of Natural Religion Second Edition: The Second Part containing the Nature of Infinites, together with the Philoſophick Principles of Reveal'd Religion. By *George Cheyne*, M. D. F. R. S.

A Comparative Deſcription of the Muſcles in a Man and Quadruped. Shewing their Diſcoverer, Origine, Progreſs, Uſe, and Differences. By *James Douglas*, M. D.

PHAR-

PHARMACO-BOTANOLOGIA:

OR, A

TREATISE

OF

DISPENSATORY PLANTS,

Alphabetically and Classically disposed.

DECAD I.

A

THE first *Plant* of this Catalogue in the Alphabet is *Abies*, the *Firr-Tree:* To which I have added *Pinus*, the *Pine-Tree*; which tho' at a great Distance by the initial Letter, yet is of the same *Tribe* or *Family*.

I. *ABIES.*

1. *Abies conis sursum spectantibus. C. B. P.* 505. *Fœmina S.* ελάτη θήλεια. *J. B. Tom.* 1. *l.* 9. *p.* 231. *Taxi fol. R. H.* 1394. *Tax. fol. Fructu sursum spectante, Tourn.* 585. *Tab.* 353, 354. *The Yew-leav'd Firr-Tree* or *Silver-Firr.*

2. *Abies Bauh. in Math.* 102. *Lob. icon,* 231. *Tab. lib.* 3. *p.* 640. *Picea Dod. pempt.* 863. *Abies mas Theophrasti, Picea Latinorum S.* ελάτη ἀρρὴν.

J. B. 238. *major prima. S. Abies rubra C. B. P.* 493. *Abies tenuiore folio fructu deorsum inflexo, Tourn. Conis deorsum spectantibus, R. H.* 1396. *The Pitch-Firr-Tree.*

II. *PINUS.*

1. *Pinus Sativa C. B. p.* 491. *Tourn. Officulis duris foliis Longioribus, J. B.* 1. 9. 248. *R. H.* 1398. *Manur'd Pine.*

2. *Pinus Silv. C. B. P* 491. *Sylv. sive Pinaster Dod. pempt.* 860. *Sylv. Mont. Tab.* 3. 638. *Pinaster Brum. T.* 3. *p.* 238. *Lob. Icon.* 226. *Gesner. Hort. f.* 272. *Thal. p.* 90. *Sylv.* vulg. *Genevens, J. B.* 253. *Raij Hist.* 1399, Mountain-Pine, *or* Pinaster.

3. *Pinus Sylv. foliis brevioribus glaucis, Conis parvis albentibus. Abies Scotica perperam dicta R. H.* 1401. *Synops. Stirp. Brit.* 288. Mountain-Pine, *falsely called the* Scots Firr.

Their *TRIBE.*

THE *Characteristick Notes* of these noted big *Trees*, are, that they are *Ever-Greens*, with an *Amentaceous*, or *Juliferous Flower*, called a *Katkin*, growing upon different Parts of the same *Tree*, from a *Cone*, or a *Conical scaly hard Fruit.*

I. The *Firr* is a tall strait Tree, with a superficial *Root*, sending forth five, six, or seven Branches, round the *Trunk*, at certain Distances, bending horizontally outward, (not downward, as some have asserted.) The lesser proceed indeterminately from the Center to the Circumference of the greater Branches, and these again, being irregularly subdivided, form so many agreeable Circles, ascending gradually, at certain Distances, along the *Trunk* of the *Tree*; so that by the Number of the Circles, or Knots, where the lower Rows have been lopp'd off, the Age of the *Tree* may be computed. In *July*, the *Leaf-Bud*, for the ensuing Year, begins to appear, at the Extremities and Sides of the Branches, where 'tis again to be branch'd forth, covered with a thin brown Pellicle, or Membrane, which falls off next Spring, and then the tender *Leaves*, single, not in Pairs, spread forth themselves. The *Katkins*, in the Month of *April* and *May*, appear here and there upon the Branches, long, small, cylindrical, and blunt, consisting of several yellow *Summits*, or *Tops*, thick set upon a *Midrib*, interspersed with several small-pointed Leaves. Towards the latter End of *May*, the Fruits, or *Firr-Apples*, begin to appear, (*i. e.* after the *Katkins* have ripened and shed their Dust) in the same irregular Manner, separately from the *Katkins*, consisting of several small, oval, thin, Scales, thick set, and spirally placed round a *Midrib*, tending towards

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the Extremity, closely united, while green, of a cylindrical Form, about three or four Inches long, and about three Quarters of an Inch Diameter, and obtuse at the End. At the Bosom of each of these *Scales*, *i. e.* at their Exit from the Axis or *Midrib*, are lodged two hard oval Seeds, each endowed with a Wing, whose lower Part involves the *Seed*, and upper Part spreads forth into a thin Membrane, by means of which, when the *Fruit* is ripe, and the *Scales* are open'd, which happens in the following Spring, (for then they usually fall off or shed the Seed) it is dispersed by the Wind.

1. The *Silver Firr* has narrow, obtuse, stiff *Leaves*, or rather *Setæ*, Bristles, dark green above, with a Depression, lengthwise, in the Middle, about one Inch long, (more or less) and white underneath, (from whence 'tis called the *Silver Firr*) elegantly and regularly disposed, and arising, single on each Side of an Axis or *Midrib*, three, four, or five Inches long, like the Feathers from the *Midrib* of the Quill, or like the Teeth of a Comb, or set like the Leaves of the *Yew-Tree*: its *Cones* proceed indeterminately from the upper Part of the Branch.

2. The *Pitch Firr* has its Leaves arising single also, of a lighter Green, smaller, thicker set, not so regularly disposed, but occupying both the Sides and upper Part of the *Midrib*, shorter than the former, and not unlike those of the *Juniper*. The *Apples*, separately from the *Katkins*, arise from the lower Part of the *Branches*, and are shorter. *Caspar Bauhinus* in his *Matthiolus* has the *Abies* with shorter *Bristles*, or *Leaves*, the *Fruit* arising from the lower Part of the *Branch*, and the *Picea* with the *Leaves* larger, the *Fruit* upon the upper Part of the Branch, and larger. The *Cones* in both turbinated, so that he makes the *Yew leav'd Firr* a *Pitch*; and the *Pitch* a *Yew leav'd Firr Tree*, and both of them to have the Fruit of a *Pine Tree*, contrary to what he has in his *Pinax*, where the *Abies alba* is made a *Species* of the *Abies Conis Sursum Spectantibus*, and of course the *Picea* must be *fructu deorsum reflexo*.

II. The *Pine* is a tall strait Tree, like the former; the *Branches* longer and much farther extended, tending upwards, the *Leaves* darker, or more bleuish Green. The *Germina*, or *Buds*, have the thin common Membrane with the former, which falls soon off in the Spring; but afterwards every two *Leaves* have a separate *Cover*, or Sheath; which in *April* or *May* is rent assunder, as the Leaves in Pairs stretch out, and are spread forth; a part of which is always to be seen at their Exit. They arise all round the *Midrib*, and not from its upper Part, as in the *Firr-Tree*; they are half round on the outside, and flat on the inside, where they regard each other; the Branches arise by Intervals, and in the Circles from the Trunk, as in the *Firr-Trees*; are irregularly Subdivided, but longer, and not so thick set. The *Katkins* are thick, turbinated, surrounding

rounding the Extremities of the Branches, in the Month of *May*, below the *Leaf-buds*, and not Laterally, as in the *Firrs*, each conſiſting of ſeveral ſmall Globules, at firſt like ſo many Grains of Pepper; when expanded or blown, there are ſeveral Cluſters of yellow Summits upon ſhort *Chives* or Threads, ſurrounded by ſmall round yellowiſh *Leaves*; when theſe are ripened, and the Duſt diſperſt, the *Embryons*, or *Fruit-buds* appear, laterally on the Branches, which in time become ſo many turbinated, or Conical *Apples*, big at the baſe, ſomewhat bulg'd in the middle, and terminating in an obtuſe extremity, conſiſting of thick woody Scales, ſpirally diſpos'd round a pretty groſs Axis or Midrib; in the Boſom, at the exit of the Scales are plac'd two winged *Nuts*, or *Husks*, each containing a ſingle *Kernel*. The *Scales* are of a ſhining Brown, each being obliquely croſs'd with protuberant Lines, interſecting each other, and forming with their Partners ſo many Rhombi or Lozenges, like the Panes of a Glaſs Window.

1. The *manur'd Pine* is a large Tree, with its Branches far ſpread forth, its Pairs of *Leaves* long and far ſpread forth from the exit, its *Cones* pretty Large, and its *Kernels*, or *Seeds* ſoft, near to the bigneſs of Almonds.

2. The *Mountain Pine* has its Leaves, *Katkins* and *Cones* proportionably leſs; but the *Tree* of the ſame bigneſs and *Branches* of the ſame length; neither the Scales of this, nor the former, open or ſeparate of themſelves, be they never ſo ripe.

3. I am much ſurpriz'd with Mr. *Ray*, that the *Mountain Pine*, commonly called the *Scotch Firr*, ſhould ſo far have eſcap'd the Botanical Enquiries, as not ſo much as to be mention'd by any before him; Tho' it be the Commoneſt of all the *Firr-kind* throughout the whole Iſland of *Britain*, and I have good Reaſon to believe in *Norway* alſo; ſince the White Deals which are Imported from thence, have the ſame Grain and Appearance in Wood, as the Deals made of the *Scotch Firr*; the *Pitch Tree* being diſtinguiſh'd from it by the Name of *Red-wood*. I have Reaſon to believe alſo, that it very much abounds near *Boſton* in *New England*, being lately inform'd by a Gentleman from thence, that it paſſes there by the Name of the *Spruce Firr*, and that one Dr. *Douglaſs*, Phyſician of *Boſton* there, and ſeveral other knowing Gentlemen from *Scotland*, Inhabitants of that Place, do affirm it to be the very ſame which paſſes under the Name of the *Scots Firr*: I have ſo much the more Reaſon to believe this, becauſe I underſtand their chief Trade conſiſts in the Building of Ships, and in the Exportation of *Maſts*, *Pitch* and *Tar*. Mr. *Ray* alſo obſerv'd it in the Mountains of *Stiria*, and once miſtook it for the *Pinaſtrum alterum Hiſpanicum Clus*: But the ſtraitneſs of its *Trunk* undeceiv'd him, for no Firr grows ſtraiter than this, provided it grow in a Thicket, as I

have

have ſaid. As to its particular uſe in the *Spruce-Beer*, I know not, but that I ſuppoſe may be common to all the other of the *Firr* and *Pine kind*, ſince all of them partake of the ſame taſte, and conſiſt of the ſame *Reſinous* Parts, and indeed I look upon this as one of the moſt frequent of either. It ariſes as tall and ſtrait as any of the *Firr* kind, but not ſo far ſpread forth, nor the *Branches* ſo long (tho' tending upward as the other *Pines*) the Pairs of *Leaves* of a bleuiſh green Colour, much ſhorter than the former. The *Katkins* and *Turbinated Cones* leaſt of all, not much exceeding the Egg of a Lapwing, and being Turbinated near of the ſame ſhape. The *Scales* are thick and protuberent. The *Seeds* wing'd, but naked, and not in *Shells* or Husks, as the other *Pines*, by which it only differs from the Firr. The *Cones* remain a whole Year upon the Tree, and then the *Scales* ſeparate, and they fall off or ſhed the *Seed*, to prevent which, the *Gardeners* when they ſave the Seed, pull them in the Spring, and ſpread them upon a Cloath before the Sun, when they open of their own accord.

I'm not yet fully convinc'd, that any of the Firrs are Indigenous Britiſh Plants, for upon the ſtricteſt Enquiry, I could never learn that either the Pitch, or Silver-Firr, were Indigenous in any part of *Scotland*. It's true Mr. *Sutherland* begins his Catalogue with the *Abies alba ſeu Femina*, and has marked it with an *S*, as an Indigenous Scotch Plant; but as he has not mentioned this *Scotch Firr* as a *Pine*, I ſuſpect he has miſtaken it for the other. For the *Silver Firr* it matters not much whether it be Indigenous as Dr. *Plot* would have it, or has been planted upon the Rock near *Worton* in *Staffordſhire*, as Mr. *Ray* is inclin'd to believe, ſince it has not been found Indigenous any where elſe in *Britain* as far as I can learn.

This *Scotch Firr* grows in *Glentannarwood*, a large Foreſt of a great many Miles in extent, belonging to the Duke of *Gordon*: The Wood of *Glengary*, within a few Miles of the Fortreſs of *Inverlochy*; whence Captain *Young* of that Garriſon having farm'd that *Wood*, told me he Sold a *Maſt* to a *Man of War*, which was *Seventy two Foot long*, only at two Miles diſtance from the Sea, where the *Man of War* then lay at an Anchor. There are alſo large *Firr Woods* in *Brae-Mar*, and in *Athol*, belonging to Mr. *Roberſon* of *Strowan*, and in ſeveral other Places in the *Highlands* of *Scotland*, where they have *Saw-Mills*, and whence there is a great abundance of Firr Deals Tranſported and Sold in the Markets, in the Neighbouring Low-Country.

Neither the *Firr* nor *Pine Tree* are much uſed in Phyſick, tho' it be recommended as a potent *Antiſcorbutick*, and very reaſonably; its reſinous which are its moſt active Parts, conſiſts of *tenuious*, and *Subtile Particles*, capable to reſerate Obſtructions, and to attenuate the groſs Par-

ticles of the *Blood*, ready to heſitate in the Extremities of the *Capillary Veſſels*, and to obtund or blunt by its *viſcid* and *oleaginous Particles*, the Spiculæ, or ſharp Points of thoſe Acrimonious Salts, which are the Cauſe of that itching, and thoſe *cutaneous Eruptions* to be obſerv'd in *Scorbutick Perſons*. A *Tea* of its *Cimæ* or *Tops* may be given to good Advantage, every Morning. An infuſion of itſelf, or along with other *Antiſcorbutical* Ingredients, may be made either in Ale or Wine, and drank every Morning, eſpecially in the Spring Seaſon. Its *Tops* may be boil'd in Wort, and fermented into Ale, and ſo uſed for the ordinary Drink in Scorbutical Caſes. Alſo in the *Gout*, *Gravel*, or any other Affection of the Body, where the attenuating of too groſs a Blood is required, tho' its high *reſinous* Taſte renders it diſagreeable to the Palate of moſt People.

The *Pine* is fit for the ſame purpoſes; its *Kernels* are much eſteemed in *Italy*, being look'd upon as more delicious than *Almonds*, and enter into ſeveral *Pectoral Compoſitions*, in the old *London Diſpenſatory*, ſuch as *Looch e Pino*, *Looch ſanans*, &c. But as they are rare in theſe Parts, and as there are ſeveral other as effectual *Pectorals*, they are reaſonably omitted, and not now brought into Practiſe.

The ſeveral Products of the *Firr* and *Pine* are of great Uſe both in *Phyſick* and *Mechanicks*, viz. The *Roſin*, *Pitch* and *Tar*. The *Roſin* is what flows naturally from the Tree; The *Tar*, or *Pix Liquida* is procured by *Combuſtion*: The *Pitch* by Evaporation. I leave the manner of obtainining them, and the Signs of their Goodneſs to thoſe that Treat of *Materia Medica*. The *Tar* is eſteemed a great *Pectoral*, and has been drank by ſome for Diſeaſes in the Breaſt; but as it is Nauſeous and Offenſive to the *Stomack*, being given in any quantity by itſelf, they mix *Pulv. Liquiritiæ*, *Ireos*, *flores Sulphuris*, and other *Pectoral Powders* with it, to bring it to a Conſiſtence, and ſo forming it into *Pills*, they ſwallow them. The *Pitch* enters ſome external Compoſitions, ſuch as *Ung. Baſilicon*.

The *Roſine* is procured from the *Firr*, the *Pine*, or the *Larch Tree*; its various Uſes in *Mechanicks* are ſo well known, thas I may ſpare my Travel in ennumerating of them; as to its *Medicinal* Uſes, wherever an *Emollient*, *diſcuſſing*, or *attenuating Liniment*, *Ointment*, or *Plaſter* is deſired, that may be an *Ingredient* in more or leſs quantity, according to the requiſite Conſiſtence for the Diſpenſatory Preſcriptions. It enters *Ung. e. Reſina. Detergens. Ceratum citrinum. Empl. ex Ammoniaco. de Betonica. Cæſaris. Cephalicum. Diachylon magnum. Flos Unguentorum. E. e Gummi Elemi. Melilot. ſimpl. Oxycroceum*, *Tonſoris*, &c.

For the Culture of the Firr or Pine-Trees, I hope the Reader will excuſe me, if I propoſe by way of Digreſſion, what conſiſts with my own Experience, and what may be practiſed, as affording as much profit as pleaſure.

The

The Firrs, Pines, Cypreſſes, Larches, and all the other reſinous Evergreens have been hitherto propagated from the Seed; ſince being once fell'd, the Root immediately decays, and never ſends forth any new Shoots, as moſt other Trees and even perennial Roots of Herbs do: It will not, I hope, be amiſs if I give ſome Directions about them.

The Practice hitherto has been to tranſplant the Seedlings (as they are called, *viz.*) ſuch as have naturally ſprung forth from the Seeds, accidentally diſpers'd, where the old Trees grew. Secondly, by ſowing of the *Seeds* in a bed, and by thinning them, and tranſplanting of them from year to year, according to the Gardner's Pleaſure, in Nurſeries, fitted for the purpoſe, until they were ſo high and ſo ſtrong as to be fit for the being planted out in open Fields, and reſiſting the injuries of the Air and Weather. I now propoſe a more ſure and certain Method by which the moſt barren Grounds may be improved, and a moſt conſiderable Advantage in twenty or thirty Years time may be made of the Product of what was formerly of no uſe whatſoever, *v. g.* Let two, three, four or more *Acres* of the barreneſt Ground can be thought of, whether on a Mountain, or in a Valley, (though the Valley is the moſt to be choſen) be parcelled out in what Form ſhall be moſt agreeable: *Ditch* or *Fence* it ſo that no Beaſts may get into the *Incloſure*. Let it remain thus for a year or two; if there be any *Heath*, *Ferns*, or *Whins*, let them be rooted out, that the tender Graſs may have room to grow, and by this means, the Earth, which was formerly rough and hard, will now become kindly and ſoft; if that will not do, let it be frequently plow'd up and fallow'd, as they call it. The Earth thus prepared, and a tender Coat of Graſs ariſing, dig ſeveral places at convenient diſtances, if you pleaſe, regularly, by applying the Line about a foot ſquare, work the *Mould* kindly, and ſtrew a few *Firr*, *Birch*, or *Aſh Seeds* in each of the Places. Suffer the ſurrounding Graſs to grow, and only remove ſo many of the Weeds, as would otherwiſe choak the tender *Plant*. The proper Seaſon is *September*; which will only require a thicker *Coat* of *Earth*, than if you *ſow* them in the Spring; for the *Seeds* of *Trees* are generally of ſo durable a Nature, that they will not readily be chilled with the Winter's Froſt. If you pleaſe you may plant *Aſhes* conveniently tall, from a Nurſery, round the Wall or Ditch of the Incloſure to guard the young Trees when they grow up. And if there be any moiſt places, you may ſtake down ſome *Oſier*, *Sallow*, or *White Poplar-Poles*, which will ſoon take Root, and become a Fence alſo to the young Trees. If the Plants ariſe thick in any of theſe diſtant Places, you may thin them by pulling and tranſplanting the tendereſt, ſuffering the ſtrongeſt to remain. There is another Method of taking up the *young Firrs*, after the firſt or ſecond Year, with the *Earth* round the *Root*, and ſo ſetting them down in holes made on purpoſe, without diſturbing the Fibres; but if it chance

chance to be dry Weather after they are thus planted, before the two *Earths* incorporate, the *young Plant* is in danger of being *choaked*: This is called planting with the *Clod*, either of these are better than planting them out from the Nursery, when they are two, three, or four feet high; for then their *Tops* are so heavy, that the Wind is ready to shake them, and to loosen their *Root*, by which they are much curb'd in their Growth: But I prefer the first, for though they may not perhaps advance so fast at first, as those in a Nursery, they afterward arise fast enough, and being so nigh as to shelter one another from the Wind, they will at length become strong, tall Trees, affording sufficient Profit for all the Pains bestowed upon them.

The *Silver* and *Pitch Firrs* were (not many years since) much esteemed for *Ornaments* and *Ever-greens* in *Gardens*: But they soon arising to too great a height, the *Leaves* soon falling off from the lower Branches and Top towards the *Trunk*, and the *Tree* being in several places *bald* as it were, they are not now so much in use. *Yews*, *Cypresses*, *strip'd Hollies* and *upright Swedish Juniper*, beside *Philarea's* and *Pyracantha's* are prefer'd.

The various Uses of the Firr-wood for the building of Houses, and for Shipping, also for furnishing of Materials for Artificers, and Mechanicks of all sorts, are so well known, that I need not name them.

III. *Abrotanum Fœmina.*

Abrotanum Fœmina foliis teretibus. C. B. P. 136. *Fœm. vulg.* R. H. 359. *Santolina fol. terret.* Tourn. 460. T. 260. Boerh. 123. *Chamæ Cyparissus* J. B. 3. 26. 133: *Polium Theophrasti & Dioscoridis & Arabum Vermiculato fol.* Column p. 154. Lavender-Cotton.

IV. *Tanacetum.*

Tanacetum vulg. Luteum C. B. P. 132. Turnef. 461. Hist. des Plants 366. *Vulg. fl. Luteo* J. B. 3. 26. 131. R. Hist. 365. Boerh. 1. 124. Common Tansy *Variat fol. Crispis* (*variegatis.*)

V. *Balsamita Mas.*

Tanacetum Hortense fol. & Odore Menthæ Tourn. Hort. Lugd. Bat. App. 697. *Balsamita Mas. Dod. pempt.* 295. *Mentha Hortens. Corimbif.* C. B. P. 226. *Corymbif. S. Costus hort.* J. B. 3. 26. 144. Raii Hist. 363. *Balsamita mas* Ger. Emac. 648. Costmary.

VI. *Stœchas*

VI. *Stæchas Citrina.*

Helichryſum S. Stæchas citrina Anguſtiſolia. C. B. P. 264. Tourn. Inſtit. 452. T. 259. Boerh. 1120. H. L. B. 226. *Helichryſum S. Chryſocome Anguſti. vulg.* Moris. *Hiſt.* 3. 87. *Stæchas citrina* Dod. pempt. 268. *Tenuiſol. Narbon.* J. B. 3. 26. 154. Raij. Hiſt. 281. Golden Caſſidony.

VII. *Gnaphalium Montanum.*

Gnaphalium montanum fl. rotundiore. C. B. P. 263. *Mont. ſive pes Cati Raij* Hiſt. 283. *purpureum et album* Adv. Lob. 202. *album et purpureum.* Tab. 2. 106, 107. *Elichrſyum Mont. fl. rotund.* Tournef. Inſtit. 453. Boerh. 120. Hiſt. des Plan. 436. *Chryſocome humilis mont. fl. rotund.* Moris Hiſt. 3. 89. *Piloſella quibuſdam aliis Gnaphalij genus.* J. B. 3. 26. 162. Mountain or Catsfoot Cudweed.

Their *TRIBE.*

I have joyn'd all the *Corymbiferous* Plants, of this Catalogue, with a *naked Flower*, and a *determinate Stalk*, together. What the Word CORYMBUS may mean, how it became a *Botanical Term* of *Art*, why theſe *Plants* are called *Corymbiferæ*, theſe are yet undecided Queſtions. *Scaliger* ſays, the firſt Notice taken τῆς κορυμβῆς was from an Hood the ancient *Atticks* wore, ſo called. *Pliny* ſays, the *Cluſters* of the *Ivy-Berries*, were ſaid to be diſpoſed in *Corymbum.* CORYMBUS is now called an *Orbicular* Form of the *Flower* and *Fruit*, whoſe Seeds have no *Pappo* or *Down.* Mr. *Ray* ſays, it is a *diſcoid* compound *Flower.* This *Disk* or *Diſcus* is compoſed of a great many ſmall *Flouriſhes* cloſely united ſo as to make one for the moſt part flat, but ſometimes protuberant Surface, and contain'd within one common *Calix* or *Empalement*: Each of theſe *Flowers* or *Flouriſhes* are ſmall hollow *Tubes*, placed upon the *Embryon*, or *Rudiment* of one *ſingle Seed*, with the *Piſtillum* or *Pointal* in the Middle, ariſing from the *Top* of the *Embryon*, and often *biſid* or *forked* at the *upper End*, and afterwards *reflexed*, *loaded* with a *ſmall fine Duſt.* This *Pointal* is ſurrounded by five *Capillamenta* or *Thrumbs* ariſing ſeparately from the *inner Surface* of the *Flouriſh*, and united at the *upper Part*, forming a *Vagina*, or *Sheath.* The *upper part* of the *Flouriſh* is ſpread forth and *divided into five equal, ſharp-pointed Segments*; all theſe together are *ſurrounded* with one *common* (and for the moſt part *ſcaly*) *Empalement*, and after the *Flower* is decayed, there ſucceeds one ſmall *ſolid Seed*, without a *Pappo* or *Down* to each *ſingle Flouriſh.* Theſe by Dr. *Tournefort* are called *floſculous Flowers*, well expreſ-

ſed in his Tab. 251. Theſe *Corymbiferous Flowers* are *naked*; i. e. when they have no *Half Flouriſhes* ſurrounding them, or *Radiate* when ſurrounded by *Half Flouriſhes*, whereof hereafter. *Tournefort* ſays the *Allium* and *Cepa* have their *Flowers* diſpoſed in *Corymbum*; but according to all other Authors they are not of the *Corymbiferous Tribe.*

The *Difference.*

Abrotanum Fœmina has a *ſolitary Flower*; i. e. one *ſingle Flower* upon the *Top* of a *determinate Stalk.*

Tanacetum and *Balſamita Mas* have the *Flowers* in *Umbells* or *Cluſters*, upon the *Top* of a *determinate Stalk.*

Stœchas citrina and *Guaphalium montanum*, or *pes cati* have *ſhining ſcaly Empalements*; the one indeed has the *Flowers* in *Cluſters*; and the other has them upon *ſolitary Foot-Stalks*; but ſince *Tournefort* and *Boerhave* make it an *Elichryſum*, I have joyn'd both together.

The *Deſcription.*

III. *Abrotanum Fœmina* has a hard, durable *Root*, divided into ſeveral *Fibrous Branches*, like the other *under Shrubs*, *buſhy* and ſending forth ſeveral ſmall, round, ſtreight, hoary, brittle *Stalks*, herby the firſt Year, but *woody* thereafter; adorned with ſmall, alternate, hoary *Midribs*, from a *ſhort Foot-Stalk* beſet with very ſhort, ſmall, round, hoary Leaves like the *Erica Brabantica Fol. quaterno.* The *flow'ring Stalks* ariſe *naked* from the Middle upward, each ſupporting one pretty large naked *yellow Flower*, with an *Hemiſpherical*, or half round *ſcaly Empalement*; to which ſucceed long ſmall *ſolid Seeds.* This *buſhy Plant* continues ſeveral Years; ſeldom ariſeth to above a Foot high; but ſometimes when of ſeveral Years ſtanding, it may ariſe to above two Foot; the *flowering Stalks* decay after perfecting the Seed, but new Sprigs are always puſh'd forth, and the Habit of the Plant is green all the Winter: It's propagated by the *Slip*, *Flowers* in *July* and *Auguſt*, is only cultivated in *Gardens*, where being train'd up, it makes an agreeable low Hedge on a Border. It has an agreeable, *bitteriſh*, *aromatick*, ſomewhat *ſtyptick Taſte*, and pleaſant, not very fragrant *Smell.*

IV. *Tanacetum* or *Tanſy*, has a fibrous, hard, running *Root*, tall, ſtreight *Salk*, about two or three Foot high, dark green, *pennate Leaves*, i. e. conſiſting of ſeveral Pairs of *Leaves* joyn'd to a *Midrib*, with an odd one at the Extremity; all of theſe Pairs are deeper, or more ſuperficially cut into their proper *Midrib*, ending obtuſe or blunt, ariſing alternately from the *flow'ring Stem*, which carries on the Top ſeveral pretty large

large, flat, *yellow Flowers*, each upon a ſmall *Foot Stalk*, and diſpos'd into *Tuffs* or *Umbells*, with an *Hemiſpherical ſcaly Empalement*, to which ſucceed ſeveral ſmall *ſolid Seeds*. It *flowers* in *July* and *Auguſt*, has a ſtrong Scent, and *Wormwood Smell*, with a peculiar *bitter Taſte*: That kind which has larger *Pinnæ* ariſing from the *Midrib*, and only *ſerrated*, or indented like the Teeth of a *Saw*, at the Edges, grows wild upon Road Sides and Borders of Fields; but the other *Species* called the *curled* or *criſped Tanſy*, where the Segments are finely divided and cut to the Center, and the *Silver* or *Variegated Tanſy* are *Garden Plants*.

V. *Balſamita Mas*, or *Coſtmary*, has a running *Root*, ſtreight Stalk of the ſame Height with the former, *alternate Leaves*, undivided, but *notch'd* or *indented* round the Edges, of a light green, the *Flowers* in *Tufts*, not ſo large; the Smell and Taſte not unlike to *Mint*, which made *Cordus*, and ſeveral others of the old Authors, with *Caſpar Bauhinus*, place it along with the Mints. *Herman*, in the *Appendix* to his *Catalogue*, ſeems to be the firſt who placed it among the *Tanaceta*, for he wrote before Dr. *Plukenet*, from whom *Volkhamer* quotes it by the Name of *Tanacetum hortens. Foliis ſerratis Ageratum intenſe redoleus.*

VI. *Stæchas Citrina*, or *Golden Caſſidony*, is in Appearance at firſt View not unlike the *Lavender Cotton*, with which it ſeems to agree in the *woody*, durable, fibrous Root; Stature, Colour, and *Buſhineſs* of the *Plant*, tho' more *bleuiſh*. The *Leaves* long and narrow, ſharp-pointed, and ſomewhat *hoary* underneath, the *flow'ring Stem* ariſes a Foot high, bearing on the Top a Cluſter of ſmall yellow *Flowers*, within an Oblong, *ſcaly*, *ſhining Empalement*. It's not *flow'ring Stalks* ariſe thick in the Spring, continue freſh and buſhy all the Winter; the *flow'ring Stalk* uſually decays when the *Flower* is gone, and the ſmall long Seeds have ripen'd. This *Plant* has an agreeable fragrant Smell, and pleaſant aromatick Taſte; it flowers in *July* and *Auguſt*, and is only cultivated in Gardens.

VII. *Mountain*, or *Catsfoot Cudweed*, is a low creeping *Plant*, growing in *Heaths* and barren Places, with ſmall hairy Leaves, ſome oval, others more pointed, white below, and dark green above. *Flow'ring Stalks*, or rather *Foot Stalks*, ariſing one, two, or three Inches high, round, hairy and white, each ſupporting one white, reddiſh or party-coloured *Flower*, about the Bigneſs of that of *Lavender Cotton*, with an *Hemiſpherical*, *ſilver*, *ſhining*, *ſcaly Empalement*, ſome of the *Flowers* are *radiate*, with ſeveral thin ſet, roundiſh *Half-Flouriſhes*, others more compact and naked. Dr. *Dillenius* believes, the radiate are male, and the naked female Flowers. I have often obſerv'd this Variety in the Texture of their *Flowers*, but ſuppoſe neither of them perfect the Seed, ſince it creeps very much along the Surface of the Ground, and few ſuch produce much *Seed*. It flowers moſt of the Summer, and is ſeldom cultivated in Gardens.

The *Virtues* and *Uſes.*

1. *Lavender Cotton* is but ſeldom uſed in Shop-Preparations; it's much commended for killing of *Worms.* The *dry'd Powder* of the *Flowers* may be given along with the *Sem. Santonicum* or the *Herb* may be boil'd in Milk, and given to Drink. Its *Taſte* and *Smell* renders it more agreeable for internal Uſe than the *Abrotanum Mas.* It conſiſts of *tenuious* and *ſubtile Particles*, tho' not very *volatile*, by which it may be effectually preſcrib'd in *diſcutient Fomentations*, and *Cataplaſms*, and in *Semicupiums* for the hot *Bathing.*

2. The *Powder* of *dry'd Tanſy Flowers* or *Seed* may be effectually given in *Worm-Powders:* The *Leaves* bruis'd in the Spring may be given in ſmall *Balls* with *Butter* to *Children* for *Worms.* An *Ointment* may be made with its *green Leaves*, contus'd with *Wormwood* and *Camomile*, and other *diſcutient* and *ſtrengthning Herbs*, and boil'd with *freſh Butter* for the weak *Joynts* of *Rickety Children.* A *Lotion* of the *dry'd Flowers* is recommended for *old* and *maggoty* Ulcers. It's eſteem'd a good *Hydropick* and *Diuretick.* A *Cataplaſme* may be apply'd to the *Navel* for Worms, of dry'd Tanſy Flowers, and Wormſeed, with Colycinth *Seeds* and an *Ox Gall.* They eat *Tanſy Cakes* in the Spring made of Milk Flower and Eggs, with the *tender Buds* of *Tanſy Leaves.*

3. *Coſtmary* is not much uſed in Phyſick, but it's eſteem'd in *Broaths*, as a Pot-Herb, to ſtrengthen the *Stomach*, and expel the *Wind*, being not of ſo high a Taſte as *Mint*, nor ſo bitter as *Tanſy.*

4. *Golden Caſſedony* is a good *Aromatick*, and fit for all the aforeſaid Uſes; it *attenuates* and *reſerates Obſtructions*, is good in *Nervine Affections*, externally it may be uſed in *diſcutient Fomentations.* It may be made uſe of promiſcuouſly with *Lavender Cotton*, but is ſeldom preſcribed in Phyſick.

Some mention the *Gnaphalium Herba impia dictum* for the *Diſpenſatory Plant*, but ſince ordinary Practice has introduced this *Mountain Cudweed*, as a noted *Pectoral*; and both *Rhenodius* and *Schroder* recommend the *ſingle* and *compound Syrup* of *Cats-foot Cudweed*, for Diſeaſes in the *Breaſt*; and ſince I have effectually uſed it along with the Pulv. *Muſci* pyxidati in the Chin-Cough to Children, I rather chuſe to mention it than the other; for it ſeems to have ſome of its Properties, (*viz.*) drying ſcabrous and abſorbent Particles mixed with a certain Aſtringency, by which it may reſtore the ruminating Faculty in Beaſts, by reſtricting the too much relaxed Pores, in their ſalivatory Veſſels, and thereby curbing too great an Efflux of ſerous Humours, which may hinder the chewing of their Cud, or Food a ſecond time: For as too much Drink on the one Hand may

ſpoil

ſpoil our hungry Appetite, ſo too much Want of Moiſture on the other may hinder a due Maſtication, render the Deglutition uneaſy, and ſtop the Digeſtion; for if the Moiſture is in too great a Quantity, the groſſer Parts are too far ſeparated, to be well grinded (as it were) by the Teeth; they are too ſoon conveyed off by the *Æſophagus* to be digeſted in the Stomach, the ſaline Parts there are too much divided to act vigorouſly in a further Comminution and Attrition of the maſticated Maſs, and the Return of the Food to be attenuated and divided by the Teeth a ſecond time: But if there is a due Separation of the Fluids from the ſalivatory Veſſels in the Mouth and Glands in the Æſophagus, then all theſe Functions are duly perform'd, (*viz.*) The Aliments are ſufficiently maſticated for the firſt time, and conveyed to the Stomach; and after being fully prepared there by the Help of the ſame Moiſture, they are maſticated a ſecond time, to give Way to the Percolation of the Chyle, in the Paſſage of the digeſted Maſs, from the Stomach to the Inteſtines. So that if the Want of Moiſture hinders the Digeſtion on the one hand, becauſe the Salts are not well diluted (for *Salia non ſaliunt niſi in Fluido*) ſo too much Moiſture weakens it on the other, and ſtops a ſecond Preparation of the Aliments, by its not returning to be ruminated and chew'd.

VIII. *Abrotanum Mas.*

Abrotanum Mas. Anguſtifol. Maj. C. B. P. 136. *vulgare* J. B. 3. 26. 192. Hiſt. Oxon. 3. 11. R. H. 371. Tournef. 459. Common Suthernwood.

IX. *Dracunculus.*

Abrotanum Lini fol. acriori & odorato Tournef. *Dracunculus hort.* C. B. P. 98. *Hort. ſive Tarchon.* J. B. 3. 26. 148. *Draco Herba.* Dod. pempt. 709. Hiſt. Oxon. 3. 3. Raij Hiſt. 378. Tarragon.

X. *Abſynthium Ponticum.*

1. *Abſynthium Ponticum. S. Romanum. officinarum S. Dioſcoridis.* C. B. P. 138. *vulg.* Dod. pempt. 23. *vulg. Maj.* J. B. 3. 26. 168. Tournef. 457. T. 260. R. H. 366. Hiſt. Oxon. 3. 7. *Common broad-leaved Wormwood.*

2. *Abſynthium Ponticum tenuifolium incanum.* C. B. Tourn. *Ponticum vulgare folio inferius albo.* J. B. 175. *Tenuifol. Ponticum* Galeni Ger. emaculat. 1096. *Ponticum ſive Romanum incanum vulg.* Park 98. R. H. Hiſt. Oxon. Narrow Leaved Roman Wormwood.

The *TRIBE.*

The *Corymbiferous Plants*, with an *indeterminate Stalk*, come next to be conſidered, (*viz.*) ſuch as have their *Flowers* diſpoſed in a long Row or *Spike* upon the upper Part of the *Stalk* and *Branches*, which may be divided in ſeveral Reſpects, (*viz.*) 1. According to the *Figure* of the *Flower*. 2. According to the *Diviſion* and *Faſhion* of the *Leaf*; and, 3dly, according to the *Taſte* and *Smell*. Thus I have joyn'd *Abrotanum Mas*, *Dracuncalus*, and the two *Abſynthium Ponticums* together, becauſe all of them have a *yellow* pendulous *Flower*, and an *Hemiſperical Empalement*.

The *Deſcription.*

VIII. *Common Suthernwood* has a *woody* fibrous *Root*, thick ſet, *dark green*, *ſtreight*, *woody Stalks* ariſing to two or three, and ſometimes to four or five Foot high, *branched* at the *Top*; alternate deeply divided compound *Leaves* (upon ſmall narrow *Foot Stalks*, one Inch broad at the baſe, and as much long tapering and ending blunt) thin ſet, ſmall, narrow *Segments*, ſmall, numerous, pendulous *Flowers*, with an Hemiſpherical Empalement, in a long Row upon the upper Part of the *Stalk* and *Branches*. This *ſhrubby Plant* endures ever green for ſeveral Winters, is ſpent ſo much in the Wood, that it ſeldom flowers, has an high diſagreeable *Smell*, and peculiar *bitter Taſte*; grows in Gardens; flowers in *Auguſt* and *September*, and the Seeds ſeldom ripening, it is propagated by the Slip or Root.

IX. *Taragon* or *Tarchon* is a woody *Plant* alſo, its Branches not ſo ſtreight, but more ſpread forth, ſeldom above one Foot high; alternate, dark green, ſtiff, oblong, ſimple *Leaves*, like Hyſop, but more pointed; numerous ſmall pendulous Flowers like the former. The Stalks and Leaves often fade in the Winter, but the Root is perennial, grows in Gardens, and is propagated by the Root.

X. *Common Wormwood* has a hard, fibrous durable Root; is frequently a buſhy, branched Plant, ariſing about two or three Foot high, its bottom Leaves upon long *Foot Stalks*, *Compound*, divided into four or five Pair of *Segments*, joyn'd to a *Midrib*, with an odd *one*, the *Segments* upon each Pair for the moſt part triply divided, ſtill with an Impair, broad, and ending blunt. The *Leaves* of all the Wormwoods are for the moſt part broad at the baſe, and tapering towards the Extremity, all the Segments ending blunt. The *Stalks* of this Plant are filled with a Pith, or Marrow, and not woody. The *Flowers* thick placed upon the Stalk and Branches, yellow, pendulous, and larger than

than any of the two former : It flowers in *Auguſt* and *September* ; the flowering Stems periſh yearly ; the Root is perennial and bottom Leaves green all Winter. It grows plentifully upon moſt of the low Sea Coaſts, eſpecially in *Holland* in *Lincolnſhire*, where 'tis almoſt every where to be ſeen along the Sides of the Ways. It grows alſo upon craggy, rocky, and ſtony Ground : I have ſeen it grow plentifully at the Foot of a Rock, on a pretty high Hill in *Scotland*, called the Crag of *Stenton*, within two Miles of *Dunkeld*, *Perthſhire*, at a great Diſtance from the Sea.

4. The true *Roman Wormwood* is a ſmall buſhy Plant, with a very running fibrous *Root*, a great many ſtreight *Stalks* not much branched, ſurrounded with ſeveral ſmall compound Leaves, grayiſh above, and whiter below, divided into thick, ſhort, ſmall Segments ; the *Flowers* grow thick upon the upper Part of the *Stalk*, ſmaller than the former, pendulous, of the ſame Shape and Colour. The whole Plant does not ariſe much above one Foot high, of a *Wormwood* Taſte and Smell, but more aromatick ; the Surface decays yearly, but the durable Root ſpreading ſuperficially under Ground, ſends forth its tender Buds next Spring. It flowers in *Auguſt* and *September*, and is cultivated in the Gardens.

Theſe two are the true *Pontick* or *Roman Wormwoods* in the Shops, but ſince Uſe has introduced the *Sea Wormwoods* to ſupply the Place of the latter, I am obliged to launch out into the Ocean of a vaſt Variety of them, which daily ſubject themſelves to my View, if I move but a Stone's Throw from any Part of the Town of *Boſton*, where I live, eſpecially by the Sides of the *River Witham*, which runs through this Town, and on the Sea-Banks.

To paſs by them in Silence, or comprehend them under the general Name of *Abſynthium Marinum Album* (*Seriphium Anglicum*, *Scoticum*, *Belgicum*, *Gallicum*, *Norbonenſe*, &c.) would be an Effect of the greateſt Ignorance or Neglect. Ignorance in not knowing how to diſtinguiſh one Species from another, and Neglect in concealing from the Publick a great Variety of Species of the ſame Genus, when they may be truly look'd upon as ſuch. I am far from the Thought, that the Species of Plants ought to be unneceſſarily multiply'd ; I am of the Opinion to do, ſo would be to bring *Botany* into Confuſion, and to render the Knowledge of Plants (ſo very diverting and delightful) toilſome and burdenſome to the Memory. The celebrated Dr. *Herman*, after he has enumerated a vaſt Variety of the *Aquilegia*, *Auricula*, *Urſi*, *Caryophyllj*, *Tulips*, *&c.* He concludes, *Ejuſdem plurimæ varietates*, *Variæ differentiæ*, *vario e ſatu educatæ*, *Cultorum induſtria.* Intimating that the vaſt Varieties of *Flowers*, to be obſerv'd in the *Gardens* of *Floriſts*, are not real Species, but what may be produced from one and the ſame Seed, by the *Culture*, *Art* and *Miſtery*

of the Gardiners, (tho' the *Reverend* Mr. *Lawrence*, who has writ as much in Gardening as became his Station and Character, in his *Calendarium Hortenſe*, would have us believe they have none) Theſe may juſtly be called *Sporters* or *Strollers*, ſo many *Luſus Naturæ* ſporting themſelves from more ſimple *Colours*, and a leſſer Number of the *Petals* or *Flower-Leaves* into a greater *Elegancy* and Variety of *Colours*, and *Stripes*, and a greater *Multiplicity* of *Flower-Leaves*; by which they become from *ſingle* to bear a *double* and *double double* (*Flore duplici & pleno*) *Flower*; and then by Neglect in *Culture* and Management they degenerate into their former *Simplicity*, in *Colour* and *Singleneſs* in Number of the *Petals*. Theſe are by no Means to be eſteemed Species, for a common *Tetrapetalous Poppy*, whether *Hortenſe* or *Erraticum*, theſe are only two Species in the *Botanick Way*; ſince all the other are only *Sportlings* from them, and daily Experience tells us, they do degenerate to them by Careleſneſs and Neglect in preſerving the Seed. But when two or three of the moſt immutable Parts agree together in one Plant, and theſe do neither vary nor change in their Nature, Soil, nor by Culture. Theſe undoubtedly may be eſteemed different Species of the ſame Genus. For the better underſtanding of this, it is fit I explain what is meant by Genus, Species, Characteriſtick and diſtinctive Note.

The *Genus* of a *Plant* conſiſts in the Concurrence of two or three of its moſt *conſtant* and *immutable* Parts; theſe are called its *Characters* or *Characteriſtick Notes*; and whereſoever theſe are obſerved to agree together, all the Plants ſo *Characteriſed* are of the ſame *Genus*.

A *Species* is, when notwithſtanding theſe *concurrent Characteriſticks*, there be ſeveral other *Circumſtances*, by which each *Species* of the ſame *Genus* is diſtinguiſhed, and theſe are called the *Diſtinctive Notes* for an Example.

The *Characteriſtick Notes* of *Wormwood* are, that it's a *Corymbiferous Plant*, with an *indeterminate Stalk*, and a *naked Flower*; and becauſe in this it agrees with an *Abrotanum* or an *Artemiſia*, which in this Caſe may be called its *Congeners*; the *ſpecial* Manner in the *Diviſion* of its *Compound Leaf*, its peculiar *Taſte* and *Smell*, diſtinguiſhes it from them.

The *Specifick* Difference betwixt the *Pontick* and the *Sea Wormwood*, is, that the one has *Hemiſpherical Empalements*, and the other *oblong* ones: And now it's Time we're come to enumerate the various *Species* of the *Sea-Wormwood* from proper Obſervations. Tho' to enumerate all I have examined, and which do not vary from one Seaſon to another, nor by being tranſplanted from their natural Soil to the *Gardens*; and to deſcribe them as they ought, would be to write a Volume; and to take the Figures according to their ſeveral Appearances, would amount

to

to more Charges than moſt would willingly beſtow. I ſhall begin with the *Scots Sea-Wormwood*, deſcribed by Mr. *Ray*, from what Dr. *Charles Preſton*, an *Eminent Scots Botaniſt*, communicated to him, and reſt contented with giving a general Idea of the Characters of all the reſt.

3 *Abſynthium Marinum.*

Abſynthium Maritimum noſtras D. Preſton. Raij Suppl. 231.

Abſythium Maritimum album Stoticum Supinum Saxatile nobis. Scots Sea-Wormwood.

It has a *creeping*, *fibrous*, *running Root*, *ſmall Stalks*, about one Foot long (*ſpread forth* and lying on the Ground.) *Compound Leaves*, divided into (*long*) *ſmall*, *fine*, *narrow Segments*. *Oblong* (*upright*, *thick-ſet*) *yellow Flowers*, upon the *Stalks* and *Branches* : *Scaly Impalements* like the *Elichryſum*, or *Artemiſia*.

It may be objected, that by theſe my Epithets, I have profer'd a Deſcription inſtead of the *Title* of the *Plant* : Its (*Maritimum*) becauſe its natural Soil is on the *Sea Coaſt* ; and here it will not be amiſs once for all to eſtabliſh the Diſtinction betwixt *Marinum* and *Maritimum*, as well as *Aquaticum* and *Aquatile*. *Marinum* is what actually grows on the Sea, as the *Alga*, *Fuci*, &c. *Maritimum* is what grows on the *Sea Coaſt*, and either delights in ſuch a Soil, as it may be refreſhed by the Sea Air, or the Ground on which it grows may ſomewhat partake of the Sea Salt : Or, 3dly, can live tho' ev'n waſh'd or drowned by a Tide, in the Sea Water. Juſt ſo *Aquaticum* is what grows in the *Rivers*, *Lakes*, *Ditches* and Drains, for which they are ſaid to be *Fluviatiles*, *Lacuſtres*, &c. Such as the *Potamogetons*, *Millefol. aquat.* &c. But thè *Aquatiles* are ſuch as can either grow in or without the Water, as the *Plantago aquat.* &c. (*album*) from the Appearance of the whole Plant, which is almoſt common to all the Engliſh *Sea-Wormwoods*. (*Scoticum*) in Contradiſtinction to the *Engliſh Wormwood*. (*Saxatile*) becauſe where both Dr. *Preſton* and my ſelf have ſeen it grow naturally, is betwixt the Clefts of a low *Sea Rock* at *Fifeneſs*, near to *Crail*, in the Eaſt Waſt of the County of *Fife* in *Scotland*. (*Supinum*) I have ſeen it often tranſplanted in Gardens where 'tis always low ſpread upon the Ground, tho' the Fibres of its Root does not run ſo much as the true *Roman Wormwood*. I may add Dr. *Preſton*'s *Epithet noſtras*, ſince by what I can find it neither grows on the *Sea Coaſts* in *Kent*, *Eſſex*, *Lincoln*, nor *Norfolk* about *Yarmouth*, where I have obſerved the other Sea-*Wormwoods*.

I deſign'd to have beſtow'd as much Time and Labour in enumerating and deſcribing, as I have done in examining of the many *Sea-Wormwoods*, which grow in and about this Place, aſcribing to each his *Name* and

Epithet: But I conſider to do that will be more curious, than inſtructive, and extrinſick from my Deſign, which is only to treat of ſuch *Plants*, as are uſeful in *Phyſick*: For tho' theſe be ſo many different Species in a *Botanical*, yet they are but one and the ſame in a Phyſical Way, ſince all partake of the ſame *Virtues*, and may be promiſcuouſly made uſe of. I ſhall therefore reſt contented with the giving of a general Liſt of their *Characters*, of which two or three or more concur in moſt of the ſeveral Species, by which they are eaſily diſtinguiſhable from each other. Leaving the connecting of them to ſome other *expert Botaniſt*, who thereby may ſoon determine the Species.

Sea-Wormwoods may be examined, 1*ſt*, in reſpect of their *Colour*. 2*dly*, Their *Segments*. 3*dly*, Their *Stature*. 4*thly*, Their *Situation* and *Diſpoſition* of their *Branches*; and, 5*thly*, the *Diſpoſition*, *Figure* and *Colour* of their *Empalements* and *Flowers*.

1. In Regard of their *Colour*, in ſo far as concerns the *Habit* of the *Plant*: They are *white*, *gray-white*, *Blewiſh-white*, *greeniſh-white*. 2. *Gray*, *Dark-Gray*, *Blew-Gray*, *Greeniſh-Gray*. 3. *Dark-Coloured*, *Blewiſh-Dark*, *Greeniſh-Dark*. 4. *Caſious* or *Blewiſh*; *Whitiſh-Blew* (N. B. *Blewiſh-White* is when the *White* predominates, and *Whitiſh-Blew* when the *Blew* excels) *Blewiſh-Green*. 5. *Green*, *Pale-Green*, *Dark-Green*, there may be added a Sixth (*viz. Green Bottom Leaves* with *Grayiſh-white* and *Blewiſh-white Tops*; for as we ſee in moſt of the *Garden Clarys*, no ſooner do they emit the flowering Stem, than it changes the Colour into that of its Flowers: So here the *Spike* and *Flowers* often vary from the Colour of the bottom Leaves.

2. Their *Segments* are firſt *thick ſet*, or more *compact*; Secondly, *thin ſet*, or more diſperſed: Thirdly, *thick*, *ſhort* and ſomewhat *broad*: Fourthly, *Long*, *narrow*, and *more ſtretcht forth*: Fifthly, *Erect* or *upright*: Sixthly, joyn'd to a *Midrib* upon the *Stalk*, as well as at the *Root*, or ariſing from the *Stalk* without *Midribs*. N. B. The *Bottom Leaves* generally conſiſt of five Pair of *Segments*, and an *impare*; and 'tis according to the Subdiviſions of theſe *Segments* that their Difference conſiſts, i. e. whether *thick* or *thin*, *broad* or *narrow*, *long* or *ſhort*. The *Bottom Leaves* alſo vary in their *Figure*, for ſome are *broad* at the *baſe*, and *taper* towards the other *End*, always ending *blunt*: Some are more *bulg'd* out about the *Middle*, and others *Cylindrical*, being ſomewhat *narrower* than the other two, but of an equal Breadth from the Baſe to the Extremity; and, as I have before obſerv'd, for the moſt part from one Inch to an Inch and a half long, and from an Inch, to half an Inch broad, that the principal Difference betwixt the *Wormwoods* and *Mugwort*, ſeems to conſiſt in the Segments of the *Wormwood*, ending *blunt*, and thoſe of the Mugworts *pointed*.

3. Their

3. Their *Stature*: Moſt of them do not exceed one *Foot*; but ſome of them are not half a *Foot*; and a third kind I may juſtly call *Dwarf*, or *Chama-Abſynthia*, ſince by what I have ſeen, its flow'ring Stem does not exceed three or four Inches; and tho' it grow higher in the *Gardens*, yet it is ſtill proportionably lower than the reſt.

4. The *Situation* and *Diſpoſition* of their *Stalks* and *Branches*, ſome ariſe *unbranch'd* from the *Root*; or the *Stalk* is divided into ſeveral *Branches* very near the Ground, the upper Part being *Thick ſet* with *ſhort flow'ring Spikes*: Secondly, *branch'd* from the *Middle* of the *Stalk upwards*, and very *buſhy* like the *Abrotanum Fœmina*, but of a low *Stature*: *Thirdly*, *branch'd*, *upright*, cloſely accompanying the *ſtreight Stalk*, except where the *flow'ring Spikes* ſpread them forth; theſe are generally ſpeaking *tall*, the *Segments* long and upright: Fourthly, *branch'd outwards*, or *ſpread forth*: Fifthly, *Thinner*, *ſpread forth*, and *bending downwards*; theſe are for the moſt part *long* and *ſmall*, have the *Flowers thin ſet* and *pendulous*: Sixthly, The *Stalks* are ſometimes *ſtriated* and *marrowy* like the *common Wormwoods*; but for the moſt part *woody*, tho' the Surface decays yearly, eſpecially the *flow'ring Stems*.

5. Their *Flowers* are of various *Figures* and *Colours*, tho' all of them manifeſtly differ from the *Abrotanum Mas* and *Abſynthium Ponticum*. They are, firſt, *turgid*; ſecondly, *conical*; thirdly, *more globular*; fourthly, *oblong*, with the *Empalements* for the moſt part ſo contracted, that but few of the *Flouriſhes* appear without; ſo that I have good Reaſon to believe that they ſeldom perfect the *Seed*; for they emit ſo many *Stalks* and *Branches*, and thoſe ſupport ſo great a Load of *Flowers*, that the Nouriſhment being chiefly ſpent in the *Flower-Buds* and *Flowers*, the Surface decays before the *Seed* is ripe: Fifthly, as to their Diſpoſition they are either ſeparately *thick ſet*, or *thick ſet* in *Cluſters*; they are *thin ſet* and *upright*, or either *thick* or *thin ſet*, and *pendulous*. The *Colour* of their *ſmall Flouriſhes* are of a *deeper*, or *paler yellow*, ſome *Limon* or *Orange colour'd*, ſome *purpliſh*, and *others rediſh*; but beſides that, they are ſeldom fully opened, they are ſo very ſmall as ſcarcely to be diſcerned by the naked Eye, and are rather apices or ſummits containing ſo much Duſt as is ſufficient to impregnate the ſubjacent *Embryons*, or *ova Eggs*, as *Malphighi*, and after him the *celebrated Boerhave* terms them, than regular *Flouriſhes*, as is obſerv'd by the accurate *Tournefort* in the *Artemiſia*. There are indeed ſome *Species* which produce the *Flouriſhes* in Abundance; but in ſuch I obſerve, that the *Plant* is ſtrong, and the *Stalk thick* and *marrowy*, fit to convey and diſtribute Nouriſhment ſufficient to perfect the *Flowers*, and even to ripen the *Seed*. The *Empalements* are for the moſt part of the ſame *Colour*, with the reſt of the Habit of the *Plant*, whether *white*, *gray* or *blewiſh*;

but in ſome they vary and imitate the *Elichryſums.* The *Green* will ſometimes produce *yellow* or *Gold*, *ſhining Empalements*, and the *Gray* will have ſilver *ſhining* ones.

There are ſeveral other inexpreſſible Circumſtances, which tho' they do not amount to material diſtinctive Notes, yet they are good Concomitants to conſtitute a Species, as a peculiar Smell; ſome having a vehement *Scent* as if it were *fœtid*, partaking ſometimes more or leſs of the *Wormwood*, or more or leſs of the *Suthernwood*; others wholly *Wormwood.* A peculiar Taſte, for the moſt part more *aromatick* than the *common Wormwood*, and rather like the true *Roman Wormwood*, accompanied ſometimes with a *Wormwood*, and ſometimes with a *Suthernwood Taſte*, and ſome are *Fatuous*, as it were inſipid, partaking of neither; nor are there wanting theſe which reſemble the *Mugwort* in *Taſte*, *Smell* and *Faſhion* of the *Flower*, and *Empalement*; ſeldom in the *Colour*, but never in the *Segments.*

In a Word, there is ſuch a Variety of them, they grow ſo promiſcuouſly, the fore-named *Notes* are ſo variouſly combin'd, that tho' as I again aſſert, each of theſe *Combinations* compoſe ſo many real immutable *Species*; that's to ſay, whoſe Notes will not in the leaſt vary as in *Flowers*, that to deſcribe them diſtinctly, would be the Effect of very great Pains and moſt exact Obſervation; and be attended with more Charges, than a private Purſe can beſtow upon ſuch a Work; this very Seaſon I have collected the Specimens of no leſs than Eighteen from the *Goals*, all along the Sea Banks towards *Wibberton*, fifteen different from the Weſt Side of the River *Witham*, over-againſt *Boſton* Church, and ſo Northward, and *ten* more different from theſe *Northward*, from the Church on the Eaſt Side of the ſame River; in all which ſome two or three or more of theſe Notes uſually concur, and which when green and new pull'd are plainly diſtinguiſhable, tho' the collapſing of the Flowers, the Crumbling of the Leaves, and the Fading of the Colour, makes the dried Specimens leſs diſcernable; and I am convinced to take the Draughts from fair freſh *Specimens*, would make their true Figures in Copper-Plates plainly appear to be ſo many different Species. So that I cannot eſcape the obſerving, that the various Combinations of theſe *Notes*, ſo as to make up the ſeveral Species, much reſembles the Conjunction of the *Letters* in the *Alphabet*, which ſerve to make up ſo many different Words, or the Changes in a Chime of Bells, where Eight or Ten Notes can make up ſuch an infinite Variety of Sounds in the ringing a Peel. I have only further to add, that the conſtant Obſervation of three following Seaſons, the tranſplanting of ſuch as I look'd upon to be moſt variable to my Garden, and the finding of them ſtill to have the ſame Appearance, beſide the

the natural Immutability of the Notes mentioned, which may be ſoon made out from their Unchangeableneſs in other Plants, are certain Convictions to me, that they are ſo many determinate Species, tho' the fixed Number has not yet been computed.

For what concerns the *Chama-Abſynthium* or *Dwarf Wormwood*, I was of Opinion it's low Stature might alter by Culture, or that it might proceed from ſome barren Spots of Ground, where I have ſeen it grow; but as I have obſerved it on the Sea-Banks between *Boſton* and *Wibberton*, and from the *South End* of *Boſton* by the River Side toward *Shirbeck Church*, on the Sea-Side towards *Frieſton*, and on the *Foſſedike-Waſh* Side toward *Holbeach*, all in *Holland* in *Lincolnſhire*, with the ſame Appearance; and that tho' in my *Garden* its Leaves were larger, the *Segments* more *diſpers'd*, and the Spike aroſe higher, yet it ſtill continued its dwarfiſh Stature in Proportion to the other *cultivated Abſynthia*. I take the Freedom to eſtabliſh it a particular Species.

It's a *low creeping* ſmall *Plant* with its *Leaves thick ſpread* along the Ground, very ſmall, with very ſhort, *thick-ſet Segments*, like the *Chamomile*, but of a different Colour, rarely puſhes forth any flowering Stems, which are thick, not above two or three Inches high, with ſhort *Spikes*, and proportionably large, *thick-ſet*, *upright*, *yellow Flowers*: There is one *Species Pale-green*, and another *Gray-white*, ſoon diſtinguiſhable by the Beholder, and from ſeperate Roots.

Tho' my proper Obſervation makes me mention theſe as from *Boſton*, yet I doubt not ſome or other of theſe Species may be obſerved throughout moſt of the Engliſh Sea Coaſts, where the *Sea Wormwoods* grow; I ſaw betwixt *Yarmouth* and *Golſtone* a tall *Blewiſh Sea Wormwood*, with upright Stalks, and Branches, and long *Segments*, *pretty large upright Flowers*, and another *Gray-white* one; Branches more ſpread forth, Stature lower, *thick ſet*, *large*, *upright*, *yellow Flowers*. I have ſeen ſeveral kinds of *Wormwoods* towards the Sea Coaſts near to *Burnham* in *Eſſex*, and have obſerved a great Variety of dry'd Specimens of *Sea Wormwoods* in *Stocks-Market* in *London*, but as I had not then ſo particularly apply'd my ſelf to examine them, I leave that now to the Curious, not doubting but the Hints I have given concerning that numerous Tribe will ſerve as ſuitable Directions to a further Enquiry in the examining of them. Upon which Account I have enlarged more upon theſe than is perhaps anſwerable to my Deſign, my chief Deſire being to ſtir up others to the like Improvement, in which I have firſt paved the Way.

I have alſo obſerved what may be called different *Species* of the *Abſynthium Latifolium*, ſuch as were *obtuſe* and more *pointed Segments*, *whiter*, more *gray*, more *blewiſh* and *darker green Stalks* and *Leaves*, with more or leſs numerous *Flowers*, Shape and Bigneſs. Theſe are only Varieties,

and do not amount to different Species, ſince the Diſpoſition and Faſhion of the Flower never alters.

Virtues and *Uſes* of the *Suthernwood* and *Wormwoods.*

All theſe conſiſt of *tenuious* and *ſubtle Particles*, are powerful *Attenuaters*, *diſcutient*, *Reſeraters* of *Obſtructions*, as well *internally* given, as *externally* apply'd.

Suthernwood by the Unpleaſantneſs of its Smell and diſagreeable Taſte is not much uſed. It's a potent Vermifuge, and may be inwardly given along with freſh *Rue-Leaves*, mixed with freſh Butter, form'd into ſmall Balls, to be ſwallowed by Children for the *Worms*; but for any other internal Uſe, as is obſerved, the *Lavender Cotton* is to be preferred. *Externally* it may be apply'd in *Fomentations* and *Cataplaſms*. It may alſo be mixed in the Cataplaſm made with an *Ox Gall*, *Tanſy*, &c. and apply'd to the *Navel* for Worms. They uſe it eſpecially in hot Weather to ſtrow in Rooms, where is a dead *Corpſe*, or lay it upon the *Coffin*, for its predominant ſtrong Smell.

Taragon, which I have joyn'd with the *Suthernwood*, has a pleaſant, hot, aromatick *Taſte*, and tho' but of ſmall Uſe in *Phyſick*, yet its *Leaves* may be very well eat with *freſh Butter*, in the Spring, as they do *Sage*, for a *Stomachick*; or in a Sallad, along with *Purſlin*, and other eſteemed *cold Sallads*, which is very much uſed in *Holland* and *Flanders*. It may be alſo apply'd externally in *diſcutient Fomentations*, &c.

Wormwood is a *Plant* of the greateſt Uſe of many in *Phyſick*; it's a potent *Vermifuge*, *febrifuge*, *ſtomachick*, *Antiſcorbutick*, *&c.* In a Word, there is no *Caſe* nor *Diſeaſe* which proceeds from too groſs a Blood, or from *Obſtructions* in any of the *Capillaries*, but as an *Attenuater* it may be effectual in *reſerating* of them. It's a moſt powerful *Stomachick*, by cutting and dividing that tough and viſcid *Phlegm*, which obduces the inner Surface of the *Stomach*; and obtunds the *ſubtle Particles* in the *Saliva*, ſeparated by the Glands in the *Stomach*; which acts upon its nervous Coat, and ſtirs up the *Appetite*. Its moſt active Principle is a great Quantity of *fix'd Salt*, by which it corrects too great an *Acidity* or Acrimony in the Blood, which may be one of the principal Cauſes of thoſe *intermittent Fevers*, and *Agues*, ſo very *epidemical* in low and maritime Places. It's likewiſe by the Activity of theſe *ſaline Parts* that it diſſolves the tender Texture of the ſmall Maggots, with which the Inteſtines of Children are ſo much afflicted, before their *Stomachs* are ſo ſtrong as to concoct and digeſt their Food, and the *Ova* of Inſects conveyed along with it. Tho' it may ſeem to have but few *volatile Parts*, becauſe ſcarce diſcernable by the Aſcent in Diſtillation, yet this Virtue may proceed

from

from a certain Combination of its more Earthy and Saline Parts together, from whence the exceſſive Bitterneſs is of great Uſe, becauſe it either remains longer in the *Stomach* and *Inteſtines*, and produces the Effect of *attenuating* the *viſcid Humours* there, or paſſes more ſlowly through the *minute Capillaries*, and *reſcrates* the *Obſtructions* in them; which the more *volatile* Subſtances could not ſo fitly perform. Its *Salts* are eaſily diſſolv'd in *Water*, therefore it ſoon conciliates its *Virtue*, being drank by way of *Tea*. It looſes nothing of its moſt uſeful Parts, by Boiling, and therefore ſuch as deſire it ſtronger may have it in *Decoction*; it may be infuſed in *Ale* or *Wine* to make that which is called *Purl*. Its *Tincture* may be extracted in *Brandy*; it may be taken alone in all the *three*, or mixed with other *Ingredients* for *Worms*, Want of *Appetite*, *intermitting Fevers* and *Agues*, the *Scurvy* and *Hyſterical* Caſes or *Obſtructions* of the *Menſes*. Take any of theſe Preparations in a Morning faſting, and eat nothing for ſome time after to excite the *Appetite*, or take a Quarter of a Pint of its Infuſion every two Hours, betwixt the *periodical* Returns of an *Ague*. The Preparations are its *ſimple* or *compound Water*. its *Extract*. *Tincture*. *Fixt Salt*. *Conſerve*. *Chymical Oyl*. its *ſimple* and *compound Syrup*. It enters the *Aq. Lactis*. *Chamemeli Comp.* Internally. Externally, in *diſcutient* and *vermifugous Fomentations* and *Cataplaſmes*. *ol. Abſynth. per inſolationem* with common Oil. *Exceſtrenſe*. *Ung. Amarum*. *Martiatum*. *Maſtichinum*. *Nervinum*. *Empl. Stomach. Magiſtral.* &c. The *Roman* Wormwood is fit for the ſame Purpoſes; but becauſe of its more agreeable, *aromatick Taſte*, it's more convenient for *Tea*, an *Infuſion* or *Decoction* in Water. Its Leaves are chiefly uſed in *Conſerve*. The *Sea Wormwoods* ſerve for the ſame Purpoſes, and are not unfitly preſcribed in the *Aq. Abſynth. Magis Compoſita*, conciliating more volatile Parts than either of the two former. They may be indifferently uſed, tho' there be a conſiderable Difference amongſt them, as has been obſerved.

XI. *Artemiſia.*

Artemiſia vulg. J. B. 3. 26. 84. *vulg. Maj. fl. purp. fol. inferius albo.* C. B. P. 137. Tournef. 460. R. H. 372. Bauh. in Math. 617. *Latif.* Dod. pempt. 33. *Mater herb.* Lob. Icon. 764. Mugwort.

The *Deſcription.*

From a durable, hard and fibrous *Root*, this *Plant* ſends forth ſeveral compound large *Leaves*, deeply divided, ſharp-pointed *Segments* (contrary to the Wormwoods, which are always blunt). The *flow'ring Stem* ariſes much

much higher, has its Branches proportional to the Length, ſmaller, longer, and farther ſpread. The Stalk is ſtriated, marrowy, and of a dark Colour: The *Alternate Leaves dark green* above, and white or *gray* below: The *Flowers* on the Top of the Stalk and Branches, upon a long *Spike*, are *thick* diſpoſed, *Erect*, *Cylindrical*, and *Oblong*, (contrary to the Pontick Wormwoods which are always hemiſpherical) the *Flouriſhes purpliſh*, and as *Tournefort* obſerves betwixt them *naked Ova* or *Embryons*, *Rudiments* of Seeds ending in a *Thread* or *Capillamentum* loaded with *Duſt*, which impregnates theſe *Embryons*, and which along with thoſe underneath the Regular Flouriſhes become ſmall Seeds like thoſe of Wormwood.

Virtues and *Uſes.*

It is the Opinion of all Authors, that it's a great Aperient; it has none of the Wormwood Bitterneſs, nor is it very aromatick in the Taſte; has a peculiar ſtrong Smell; it's recommended chiefly as a good *Hyſterick*: A *Tea* of the *Leaves* is given to *Women* that have the *Menſes obſtructed*. It is preſcribed along with other *Antihyſterical Ingredients* in *Infuſions*, either in *Ale* or *Wine*, and given to drink each Morning in the fore-named Caſes. I am ready to think it partakes of the ſame *Virtues* with its *Congeners* the *Wormwoods*; it's not being ſo bitter may have brought it firſt into more frequent Uſe among the *Females*, but it does not ſeem to have more active Principles than they for *expelling* the *Secundine*, and in other Diſeaſes of Women, as is pretended: Proper Experience teaches me, that it does not abound ſo much with the *fixt Salt* as the other, and its volatile Parts are not ſo very conſpicuous. The Syr. *de Artemiſia* is a *Laborious Receipt*. The new *London* Diſpenſatory has wiſely omitted ſeveral Ingredients; there ſtill remain enough to make it a potent Hyſterick, tho' the *Mugwort* were not there.

Mr. *Ray* denies the *white-flower'd* Mugwort to be more than a Variation: *Weckerus* of *Baſile*, in his *Antidotarium Speciale*, printed 1572. tells us, this *white Kind* has its Leaves lighter green, the Plant is more buſhy (*habitius*) the *Stalks* ſmaller, *Flowers* leſs and *white*. This I have alſo obſerved, and ſince it is named in moſt *Authors* as a real Species, I know not why it may not be looked upon as ſuch, unleſs we ſhall deny that Priviledge to all *white flowered Plants* growing naturally in the *Fields*, and no ways altered by *Art* or *Culture*. I have made it a conſtant Obſervation, that however ſuch Plants are originally of a *purple*, *blew* or *red*, and from thence have varied into *lighter Colours*, might *ſport* and *vary*, ſtill becoming lighter; when once they arrived at a pure *white*, they never did degenerate into the original dark Colours. I have known the *Vicia Dumetorum Multiflora flore albo* continue in the ſame Spot, at *Gleſ-*

clune

clune in *Perthſhire*, my Brother's Eſtate, a great many Years. I found this *Artemiſia flore albo* at *Lethindy* my Father's Eſtate near to the former, had it cultivated in a Garden, and it never altered. I found *Anagallis aquat. S. Becabunga off. with a white Flower* near *Perth*, had it cultivated in ſeveral *Gardens*, and it ſtill continued the ſame: I found only one *Stalk* of the *Campanula pratens. flore Conglomerato albo*, among a great many others, from a *dark purple* to this *pure white* growing at *Maidlengare* near *Dundee* in great abundance; propagated it in my own and ſeveral other Gardens, and it never vary'd. I have lately found *Lyſimachia ſiliquoſa hirſuta magno fl. albo* within ten Miles of this Place towards *Bollinbrook*, and ſhall not doubt of its Continuance with a white Flower, as well as others. So that I conclude whatever might have been in the *Seed*, which gave the firſt Riſe to theſe *white Flowers*, naturally of the *Fields*, they are always thereafter to be eſteem'd real Species, ſince by proper Experience I find they never degenerate nor vary, as the fineſt Flowers in Gardens do, for which I think theſe *Field white Flowers* ought to be more eſteemed than the other.

XII. *Acanthus.*

Acanthus Sativus ſive Mollis Virgilii C. B. P. 383. Tournef. inſtit. 176. T. 80. Hiſt. Oxon. 3. 604. Boer. 238. *Sativ.* R. H. 1326. *Carduus, Acanthus, ſive Branca Urſina.* J. B. 3. 25. 75. Brank Urſine or Bears Breech.

The *TRIBE.*

I rather chuſe to call this *Planta ſui Generis*, a *ſingular Plant*, to which no other has any Reſemblance, than to call it *Anomalous, Irregular*, &c. For as there are certain Rules laid down for every natural Production, and ſo long as ſuch keep by theſe, and never ſwerve from them, they are never to be eſteemed *irregular* nor *imperfect*. It has very much puzled Authors to what Claſs they ſhould reduce it. *Boerhave* places it among the *Diangiæ Polyſpermæ*, tho' it be truly *diſpermos*; i. e. A Plant whoſe Seed Veſſel is divided into two Pouches, each of which contains one ſingle Seed. Under that Title he joyns it with a great many others which he owns are *Valde diſſimiles inter ſe*, do very little reſemble each other, but adds agreeing in one Structure or Figure of Seed Veſſels.

The *Deſcription.*

It has a *parenchymatous* or *fleſhy* Root, divided into pretty large *Portions*, united in one large *Trunk*, if of any Continuance, *blackiſh* without, but

reddiſh within, which when cut tranſverſly, pours out a thick viſcid Juice. It's large *Leaves*, dark green, and ſmooth, are far ſpread forth upon the Ground, like a Thiſtle, about one Foot long, and three or four Inches broad, deeply cut after a neat Manner, and compar'd to the Foot of a Bear, from whence it receives its Name. It's called *Marmorica*, becauſe it's from the elegant Cuttings of this Leaf, in the Edges, which they bend downwards at the Extremity, that they carve the *Chapiters* of the *Pillars* of the *Corynthian* Order. *Callimachus*, ſirnamed *Catetechnus*, a famous *Corynthian* Stone-Cutter, is the firſt who invented it, according to *Vitruvius*, which Figure has ever ſince continued. In the Middle of theſe bottom Leaves, there firſt appears in the Spring, a large Tuft of Leaves not unlike that of the Roſe-Plantain, but very much larger, which ſtretching forth by Degrees is extended into a naked, unbranched, ſtreight *Stalk* two or three, and ſometimes four or five Foot high, *round* according to ſome: But I have often obſerved it *Quadrangular*, eſpecially from the Middle upwards, where it firſt begins to be loaded with the *Flowers*. Theſe are alternately placed without *Foot-Stalks*, and aſcend obliquely from their Exit. Its Lower-end or Fore-part is firſt ſpread forth into a three Leaved (*Calix*) *Empalement*, or rather (*Perianthium*) *Cover-Flower*: Two of which, one on each Side, are long, ſmall, narrow and prickly. The Middle is broad, large, hollow, and endowed with nine or eleven ſtrong Prickles; within this *Empalement* is another two-leav'd *Cover-flower*, two lip'd, whoſe *Helmet* is longer and cavous, but its *Beard* ſhorter like a Tongue. Its Flower is monopetalous, or one leav'd, ſpread forth at the upper and fore-part ito a long Petal or Flower Leaf, triply divided, at its lower and hind Part, ending in a ſtiff open Ring, not unlike the Mouth of a Piſtol, from whoſe inner Surface ariſe four thick ſtrong crooked *Stamina* or *Chives*, ſupporting ſo many *Quadrangular Apices* or *Summits*, like thoſe Brooms or Beſoms called *Rubbers*, with which they clean the Floor. It has a *bicapſular* or *two poucht Fruit*, like an Acorn, each containing a large, *gibbous Seed*, it flowers in *September*. The *Flow'ring Stem* with the *Fruit* withers, ſome of the Leaves remain green all the Winter in the *Gardens*. Its Root is ſaid to be tender, and not to endure the Sharpneſs of the Froſt in the Winter, but if it be any thing old, and if Care be but taken to cut down the *Flowering Stem* timely, that its Nouriſhment be not too far ſpent, in ripening the *Seed* in theſe cold Climates, it ſeems to be pretty durable: It's a Native of *Sicily* and *Italy*.

Virtues and *Uſes*.

This *Plant* ſhews what Care ought to be taken in examining the true *officinal* Species. We have *Dioſcorides*, *Weckerus* and *Renodius* aſſerting this

this to be it: We have *Fuchſius* and all the *Germans* making Uſe of the *Sphondylium* for it by the Name of *Acanthus Germanorum*, calling it alſo *Brancha Urſina*: We find *Alveſius Synapius*, a *Poliſh Phyſician*, ſpeaking of the *Brancha Urſina*, as common in *Poland*, and recommending its frequent Uſe in the *Plicapolonica*: And we have *Engliſh Writers* upon the *Officinal Plants*, recommending it as one of the *Emollient Herbs*, fit to be preſcribed in Decoctions for *Clyſters*; from all which it's evident the Virtues of this *Acanthus* muſt have been confounded with thoſe of the *Sphondylium*, tho' they do not ſeem to be the ſame; for I am of *Dodoneus* his Mind, it rather reſembles the *Conſolida major* than any; and its Efficacy in *Burnings* and *Diſlocations* would imply as much. *Dioſcorides*, according to *Weckerus*, ſays, that it provokes Urine, and yet binds the Belly, by which it is not fit for *Clyſters*. It's being good in Caſe of *Ruptures*, and for *Conſumptive* Perſons, would ſhew it to be ſuch an *Aſtringent*, as the *Comfrey*; however it has but little Uſe in Phyſick, tho' it be an elegant Plant in Gardens.

XIII. *Acetoſa.*

1. *Acetoſa arvenſis Lanceolata.* C. B. P. 114. Tournef. 503. Raij. Hiſt. 180. *Lapathum acetoſum Lanceolatum Repens* Synops. Stirp. Brit. 56. *Oxalis parva Auriculata repens.* J. B. 3. 23. 992. *Oxalis Ovina* Tab. Icon. 440. Sheep Sorrel.

2. *Acetoſa Pratens* C. B. p. 114. Tournef. Inſt. Mor. Hiſt. 2. 582. *Oxalis vulg. fol. oblong.* J. B. 2. 23. 989. Raij Hiſt. 178. *Lappathum Acetoſum vulg.* Raij. Synops. *Oxalis* Dod. pempt. 648 Common Sorrel.

3. *Acetoſa Rotundifolia hortenſis* C. B. P. Tournef. Hiſt. Oxon. 2. 583. Raij Hiſt. 180. *Oxalis fol. rotund. repens.* J. B. 2. 23. 992. *Sativa Franca ſive Romana Rotundif.* Rack. 712 *Romana Rotundif. Munting. Herb.* Brit. 224. French Sorrel.

4. *Acetoſa Brittanica.* Blair Miſcelan. obſerv. p. 97. *Rotundifol. Eboracenſis fol. in medio deliquium patiente.* Hiſt. Oxon. Raij. Synops Stirp. Brit. 57. *Cambro-britannica Park. an Acetoſa Scutata repens.* Raij. Hiſt. 180? Britiſh *Yorkſhire* or *Welſh* Sorrel.

5. Acetoſa Mexiocana Munting. Herb. Brit. 227. Bladder Sorrel.

The *TRIBE.*

This is the firſt Genus of Plants with an *Apetalous Flower*, which, as *Boerhave* juſtly obſerves, is deprived of *Flower-Leaves* or *Petals*, but rich in *Stamina* or *Chives*; the *Flowers* then of this *Claſs* are *thick ſet* upon the upper Part of the *Stalk* and *Branches*; for the moſt part in a long *Spike*,

each conſiſting of *ſix ſmall greeniſh Leaves*, which compoſe the *Perianthium* or *Empalement*, three whereof are *broader*, *obtuſe*, and three narrow and pointed, ſurrounding for the moſt part ſix *Chives* with *yellow*, and ſometimes *reddiſh* Summits; when theſe decay, the three broad Leaves of the Empalement encloſe one three ſquare Seed, and become a *Seed-Veſſel* or *Capſule* to it, while the other three ſupport the Baſe.

The *Deſcription.*

1. The firſt has a long *Root*, running deep in the Ground, from whence proceed ſeveral bottom oval Leaves, with two Inch *Foot Stalks*, one Inch or two long, and about half an Inch or more broad; the *Flow'ring Stem* ariſes in the Middle, cloath'd with a few, alternate, thin-ſet, ſharper Leaves, about one Foot high, *ſtreaked* and *knotted*; ſending forth ſmall, upright Branches, towards the Top thick loaded with *apetalous Flowers*, ſucceeded by three ſquare *Fruit*, conſiſting of a *triangular Seed Veſſel*, each including one three ſquare brown pointed *Seed*: The *Root* is perennial. The Taſte of the *Leaf* ſower, but of the *Root* a little bitteriſh.

2. The ſecond has a running, creeping *Root*, the *Flow'ring Stalks* low, lying on the Ground, very Branchy; the *Leaves* dark green, narrow and ſpear pointed, having (for the moſt part) two Ears as it ariſes from the *Foot Stalk*, the whole Plant very low and ſmall, the *Flowers* and *Fruit* very numerous, ſome with yellow, others with red Summits. My worthy Friend, the late ingenious Mr. *Petiver*, obſerved, that it had both *male* and *female Flowers*. It ſeems to be a perennial Plant, tho' by the ſmall fibrous Root it may be an Annual, and that the ſmall Plants we ſee in the Winter, may be only the *Seedlings*, which ariſe from the numerous *Seeds*, diſperſed in the *Autumn*; and living, notwithſtanding the Severity of the Cold. It *flowers* moſt of the Summer, and grows in *Lee* and *barren* Ground and mountainous Sheep Paſtures, whence it's called *Sheep Sorrel*.

3. The third is a *Garden Plant*, with a running joynted Root, from whence ariſe numerous oblique *Branches*, loaded with ſometimes more round, at other more pointed *Leaves*, of a light green, for the moſt part, with two Ears, and ſometimes of the Shape of an *Heart*; the whole Plant is more buſhy than any of the other *Sorrels*, of a light green, with numerous *apetalous Flowers*, *yellow Apices*, and three-ſquare Seed and *Seed Veſſels*.

4. The fourth ſeems to be a peculiar *Britiſh* Plant. Mr. *Parkinſon* found it firſt in *Wales*; Mr. *Ray* in *Weſtmoreland*; Dr. *Moriſon* in *Yorkſhire*; and I have ſeen it in ſeveral Places in *Perthſhire* in *Scotland*, at twenty

twenty Miles diſtant from each other, growing in dry Water-courſes, in ſtoney, channely, and gravely Places, where the Rivers have run in the *Winter*, from whence 'tis hard to find out the Place of it's Nativity, ſince it rather ſeems to be a Mountain, than watry Plant, carry'd down by the violent Torrents of Water, from thoſe high Parts in the *Winter* Time. Mr. *Ray* was inform'd, that being cultivated in a *Garden* two or three Years, it changed its Shape, and became a true *Roman Sorrel*; but I have ſhewn the Fallacy of that, in a particular Diſſertation, in my *Miſcellaneous Obſervations*. It has a pretty big Root, if of any Standing, divided into ſeveral ſmall Portions, at the Top of each cover'd with thin looſe Membranes; among whom, early in the *Spring*, are puſh'd forth five, ſix, or ſeven round, or almoſt quadrangular *Leaves*, about an Inch Diameter, with an half round Notch in the Middle, and fore Part, as if it were a Part of the *Leaf* cut or bit off, of a dark green Colour, upon two Inch Foot Stalks lying flat on the Ground, and diſpoſed in a Circle; amidſt theſe, ariſes a ſtraight, ſtriped, naked *flowering Stem*, knotted, and divided into three or four alternate *Branches*, ariſing from the *Knots*, and loaded at the upper Part with *apetalous* pendulous *Flowers*, conſiſting of a *tetraphillous* or four leav'd *Empalement*, red or whitiſh *Sumits*, to which ſucceed a flat *Fruit*, and ſmall triangular browniſh pointed *Seed*.

Having cultivated this, ſome Years in a *Garden*, I am convinced, it can never change its Shape, for the following Reaſons. The *Root* of this is not running, the other is; this has ſtreight naked *Stalks*, the other is joynted, bended, and crooked, with a Leaf at each Branch; this is for the moſt part *dark Green*; and in ſome Species of a *light yellowiſh Green*; the other, always of a *light* and ſomewhat *bleuiſh Green*; the Seed Veſſel of this *Plant* (which is moſt material) is flat, and the *Empalement* four leaved; the other, has a ſix leav'd *Empalement*, and *triangular Fruit*; and however the reſt of the Habit of a Plant may vary by Culture, that of the Faſhion of a *Flower*, *Seed*, and *Seed Veſſels*, will never do it. Notwithſtanding all this, Dr. *Moriſon* ſays, there's no Difference betwixt this and the *Acetoſa Romana*, but the Figure and Faſhion of the *Leaf*, for he ſays, *quoad cætera cum priori*, (i. e. *Acetoſa Romana*) *convenit*, to whom Mr. *Ray*, taking Notice of this, aſſents, and ſays, *nec multum abludit*, Dr. *Plukenet* is of the Thought, that its the ſame with the *Acetoſa Scutata repens*; but *Boccone*, in his Obſervations, ſhews the quite Contrary, giving an elegant Figure of that *Plant*, which he repreſents to be ſtreight, loaded with Heart like *pointed Leaves*.

5. The fifth is a neat elegant *Plant*, of which the late *Ingenious* and *expert Botaniſt*, Mr. *Jacob Bobart*, was pleaſed to make me a Preſent of the Seeds, ſeveral Years ago; which, ſince *Muntingius* has thought fit to give ſo fine a Figure of it in his *vera Herba Britanica*, I thought fit to inſert it

here, as partaking of the ſame Virtues with the reſt. I am in a great Doubt, whether, by *Hiſce Belgij oris*, that it growes wild there, or *cultivated* in *Gardens* in thoſe Parts. It's an annual *Plant*, about a Foot in Height, with ſmall, obtuſe, oval *Leaves* at the Bottom, the ſecond Courſe larger, Heart like and pointed, upon ſmall *Foot Stalks* from the Bottom, and *Branches*; being a ſtreight buſhy *Plant*; the *flowering Stems* ariſe here and there, partly from the *Root*, and partly divided into *Branches*, of a *light green Colour*; the ſmall *Flowers* thin ſet upon the Top of the upper Part of the *Stalk* and *Branches*, with partly *yellow*, partly *purpliſh Summits*, very ſoon ſpread over with *triangular* and ſometimes *quadrangular blue* thin *Bladders*, with pleaſantly interſpers'd *purpliſh* Lines, falling off with, and preſerving triangular Seeds. It flowers in *July* and *Auguſt*. It is a very juicy Plant, of an agreeable Taſte, but does not ſeem to be the ſame with either Mr. *Ray*'s *Americana*, or *Parkinſons*, becauſe Mr. *Ray*'s ſeems to be *Perennial*, and Mr. *Parkinſon*'s Figure ſuits not with this.

Virtues and *Uſes.*

Tho' the two latter are not in the Catalogue of the Diſpenſatory Plants, yet having the ſame Virtues, I have given them Place here; all of them are rather Pot Herbs, than of Uſe in the *Shop*, they are moderately Coolers, and quenchers of Thirſt, being eat in *cold Sallads*, and ſometimes in *boil'd Sallads*. The *Roots* of the Firſt, which is chiefly uſed and kept dry in the *Shops*, is uſed in *Ptiſaus*, in hot continu'd *Feavers*, alſo *Malignant* and *Hectick Feavers*. *Læſelius* adviſes to boil the Decoction of the Roots, which gives a Tincture of *Ale*; they are *Aperient*, *Attenuaters*, *Reſeraters* of *Obſtructions*, and have nothing ſower in them, but rather partake of the Virtues of the *Rad. Lappathi*. They are preſcrib'd in *Infuſions* in *Wine*, or *Ale*, or *Decoctions* along with a *little Cinnamon*, in *bilious Caſes*. The *Flowers* of the *Acetoſa Lanceolota* yield a red *Tincture*, like that of *Roſes*. The *Seeds* are aſtringent, and good in *Bloody-fluxes*, and *Looſneſſes*, and againſt Worms. The *Preparations* are, the *Simple diſtill'd Water*, and *Conſerve of the Leaves*. The *Juice* entars the *Aq. Scordij Comp.* The *Seeds* in the *Syr. de Meliſſophillo. Species diamargarit. Frig. Conf. de Hyacinth. Diaſcordium. Theriaca Londinenſis, &c.*

XIV. *Acetoſella.*

Acetoſella Offic. *Oxys Fl. alb.* Tournef. Inſtit. 88. *Trifol. acetos.* Raij Hiſt. 1098. *Sive Trifolium acidum Flore albo.* J. B. 2. 17. 387. *Sive Trifolium acetoſum vulg.* Moris Hiſt. 2. 383. *Trifolium acetoſum Flore Lacteo,* C. B. P. 330. *Wood Sorrel.*

The

The *Tribe* and *Diſcription.*

This is what we call, *Planta ſui Generis*, a Plant of a ſingular *Tribe* or *Family*, by the Leaf a *Trefoil*, by the Taſte a *Sorrel*, and by the *Flower* and *Fruit* neither. It has a ſmall knotty *Root*, with white Fibres. *Leaves* upon ſmall *Foot Stalks*, lying horiſontally, and divided into three round *Segments*, like the *Trefoils*, and joyning in the *Center*, with the *Foot Stalk*; a ſmall white *Flower* ariſing from the *Root*, upon a proper *Foot Stalk*, ſaid to be *Monopetalous*, or *One Leav'd*, deeply divided into five *Segments*, by Dr. *Tournefort*; tho' I am perſwaded it is *pentapetalous*, ſince I could never yet bring it off whole, to which ſucceeds a ſmall five Square *Fruit*, oblong, containing ſo many *Ranges* of *Seeds*, *rediſh* when ripe and flowing out with Violence by an *Elaſticity* from the *Longitudinal outward Opening*, with which each Pouch is endowed,

The *Leaves* of this Plant have the ſame Virtues and Uſe with the former, but are in greater requeſt. The *Conſerve* of the *Leaves*, and *Syrup* of the *Juice*, are preſcribed to quench Thirſt, in violent hot *Feavers*. The *Eſſential Salt* reſembles *Cremor Tartari*, *Nitre chriſtalis'd*. Its *Juice* is very refreſhing, neither the *Laaves* of this, nor the former, are of Uſe when dry'd

XV. *Acorus Adulterinus.*

Acorus Adulterinus, C. B. P. 34. *Sive iris paluſtris Lutea*, J. B. 2. 19. 732. Tournef. Inſtit. 360. T. 186, 187, 188. Hiſt. Oxon. 2. 353. Raij Hiſt. 1186. Common Flag Flower, or Yellow Water Flower-de-Luce. To this it will be convenient to joyn.

XVI.

Iris vulg. Germanica ſive Sylveſtris, C. B. P. 30. Tournef. Raij. Hiſt. *Vulg. Violacea ſive purpurea.* J. B. 2. 19. 709. Hiſt. Oxon. 2. 350. Boerh. 2. 123. German Flower-de-Luce.

XVII.

Iris Alba Florentina, C. B. P. 31. Tournef. Hiſt. Oxon, 2. 351. *Iris fl. albo*, J. B. 2. 19. 719. *Raij* Hiſt. 1180. Florentine Flower-de-Luce.

XVIII.

Iris Fœtidiſſima ſive Xyris, Tournef. *Gladiolus Fœtidus*, C. B. P. 30. *Xyris*, Raij Hiſt. 1190. *Xyris ſive Iris agria Fœtida*, Hiſt. Oxon, 2. 349. *Spatula Fœtida pleriſque Xyris*, J. B. 2. 19. 731.

The TRIBE.

Theſe *Plants* according to *Tournefort* are of the *Liliaceous* or *Lilly Kind*, by Mr. *Ray*, in his *Hiſtory Bulboſis affines* of a Kin to the *Bulbous Kind*; but in his *Methodus Emendata*, 116, of the *Graſs leav'd floriferous Tribe* whoſe *Flowers* are on the Top of the *Stalk*; by *Boerhave*, called *Monocotylidoves Bracteatæ*, i. e. which are endow'd with only one *Seed Leaf*.

Their *general Character* is a *tuberous*, joynted, *knotty Root*, for the moſt part *flat*, and *ſuperficial* in the *Ground*, and as it were firmly fix'd by ſeveral ſmall Fibres, proceeding from the lower Part of the *Knots*, and *Joynts*; from whence proceed long Sword like broad pointed *Leaves*, one ſpringing from the Sides of the other; amidſt theſe proceeds the *flowering Stem*, adorned with, ſome two, ſome three, ſome four, or more *Flowers*; whoſe firſt Appearance is within a two *leav'd Cover-Flower*, or *Perianthium*; the blown *Flower* is *monopetalous*, divided into ſix *Segments*, whereof three are call'd *uprights*, ſmall at the Bottom but dilated in the Aſcent, for the moſt Part excavated like a Spoon, and obtus'd or blunt at the End; three *Downfals*, narrow alſo at the Beginning, but afterwards enlarg'd as they are bended downwards, where they end in an obtuſe or blunt Extremity at their Exit; they are for the moſt Part of a different Colour from the reſt of the *Petal*, with ſeveral interſpers'd beautiful, oblique and ſtreight Lines; in the Middle is the *Piſtillum* or *Pointal*, ariſing from the Top of the Fruit and encloſed within a thick Sheath for about half an Inch as it proceeds, extended into three long, broad Petals like a Tongue, ridg'd above, and depreſs'd below, bending outwards in the Interſtice, between the *Uprights* and the *Downfalls* about half an Inch long, forked at the *Extremity*, not improperly called, the *Arches*, under each of the Depreſſions of the *Arches* is lodg'd a thick ſhort *Chive* with a long *apex* or *Sumit*, for the moſt part of a dark or purpliſh Colour; the *Flower* does not fall off, but decays and withers, and the *Fruit* is oblong, three ſquared, and pointed at each End, and joynted, (where joynted with a round thick *Pedicle*) filled with ſeveral large round *Seeds*, and opening Longitudinally outwards; the three Arches ſeperate from the other Petals, or deep divided Segments, made ſome believe the Flower was *Enneapetalous* or nine

Leav'd

Leav'd, without having examin'd them, which Miſtake is continued by ſome Writers of a later Date.

The *Deſcription.*

XV. The *Root* of the firſt or *Common Flag* is of a dark brown Colour outwardly, and rediſh within; the *Leaves* ſomewhat longer and narrower; Downfalls of the *Flower* purpliſh at the *Exit*, and the reſt yellow, little or no Uprights, Arches or dilated Pointal, yellow Seeds, or Berrys dark Brown.

XVI. *German Flower de Luce* has a dark brown *Root* without, white within; *Flowers* blue, Exit of the Downfalls yellow, withblack Striæ; *Seeds*, when ripe, large, round, and pale.

XVII. *Florentine Flower de Luce*, has its *Root* gray; white *Flower*; white fragrant and ſweet ſmell'd *Exit* of *Downfalls*, yellow purple Striæ, *Uprights* large and pure; *Seeds* large and white.

XVIII. *Stinking Gladwin* has its *Roots* dark Brown, rediſh within; *Leaves* ſhorter, dark Green, and ſomewhat broad, of an high Scent, commonly compar'd to that of a roaſt Shoulder of Mutton; *Flowers* ſmall, rediſh Purple; *Seeds* large, when ripe of a yellowiſh Red. The firſt grows naturally in the Ditches and Marſhes. The ſecond and third cultivated in the Gardens. The *Florentine* more rare, whoſe *Roots* kept dry in the Shops is yearly imported from *Leghorn*. The fourth is ſometimes ſeen wild, at the Sides of Hedges, Thickets, and Buſhes, particularly, at *Jack Straw's Caſtle* beyond *Iſlington*, and in the back Road or Lane which goes from the End of *Newington* to *South-gate*, near *London*; (Mr. *Miller.*) all of them flower in *June*.

Virtues and Uſes.

Authors, for the moſt Part, would have the *Roots* of the *Flag* and *German Flower de Luce*, to be *aſtringent*, when dry; and to be given in Powder for a *Looſneſs*, *Bloody-flux*, *ſpitting of Blood*, &c. whether it be ſo, Experience hath not taught me, but I am ſenſible the green *Juice* of either *Root* or *Leaves*, is a potent *Purgative* in *Hydropick Caſes*, for I have often preſcrib'd, with good Succeſs, *Succi Ireos vulg. Luteæ* ʒ iii, *Syr. de Rhamno* ʒ i, *fiat potio*, given ever Morning, when *Purging* is requiſite; I have alſo given three or four Ounces of the *Juice* alone, or made it into a Syrup, and given three or four Ounces of it to evacuate the Waters. It's probable, after the liquid Parts are evaporated, the *aſtringent* or more *terreſtial* Parts may ſtill remain.

The *Root* of the *Florentine Flower de Luce* is well known to be a great *Attenuater*, and *Abſorbent*, therefore 'tis preſcrib'd in Powder, in *Hectick* and *Pthiſical* Caſes, to *attenuate* the *groſs* and *viſcid* Matter in the *Lungs*, and to curb the Acrimony of the thin Matter, which cauſes the dry *tickling Cough*. It is preſcrib'd in *pectoral Decoctions* and *Ptiſanes*, in *Powders*, *Linctus's*, and *Electuaries*, and in a Word, where the *Lungs* and *Breaſt* ſeem to be affected. It enters in *Aq. Imperialis*, *Terebinthinata*, *Limacum magiſtralis*, *Syr. de Praſio*, *Looch e pino*, *Looch Sanans*, *Scilliticum*, *Oxymel Helleboratum*, *Species Diaireos*, *Elect. pectoral. Theriaca Andromach*; and externally in *Diachylon Ireatum*, &c. The *Powder* of the *Root*, is alſo much uſed among Scents and Perfumes, along with the Powder of Starch, *&c.*

The *ſtinking Gladwin* is chiefly uſed for *Horſes*, the *Roots* being beaten and the *Leaves* bruiſed, and given with *Oats* and *Fænugreek Seed*, for Diſeaſes in their *Breaſt*, and for *purging* of them. It ſeems it muſt have its evacuating Quality along with the *green Juice* of the other, and the *attenuating* Virtue with the *Florentine Flower de Luce*, when it is ſo recommended as a *Specifick* in *ſcrophulous Tumors*, externally apply'd, and inwardly given; and when it is recommended as a *Provoker of Urine*, and an *Hyſterick*.

XIX. *Acorus Verus.*

Acorus Verus ſive Calamus Aromaticus Officin. C. B. P. 34. *Calamus Aromat. vulg. multis Acorum.* J. B. 2. 19. 734. *Typha Aromatica Clava rugoſa*, Hiſt. Oxon. 3. 246. *Acorus Verus ſive Calamus Officinarum.* Raij Hiſt. 1313. ſweet ſmelling Flag.

The *TRIBE.*

This is a *Plant ſui Generis*, Claſs'd with the *Graſs leav'd* Tribe, by Mr. *Ray*; it flowers ſo ſeldom, that ſcarce any ſatisfactory Account has been given of its Fructification ſince *Cluſius*; from whom Dr. *Moriſon* and Mr. *Ray* have borrowed it, and look upon it as a *Typha*, and I have been ready to eſteem it a *Sparganium*; but I find Dr. *Boerhave* places it betwixt the Two.

The *Deſcription.*

It has a ſuperficial, very running, knotted, and joynted *Root*, ſomewhat flat, gray without, white within, lying ſuperficially, and almoſt naked, upon the Ground, in which it's fix'd with many ſmall Fibres, from the lower Part, ſending forth here and there ſeveral *Leaves*, narrower

rower than thoſe of the *Flag Flower de Luce*, and broader than thoſe of the *Sparganium*, among which it promiſcuouſly grows in the natural Soil, long and pointed, two or three proceeding together, after the manner of the former, of a pleaſant, ſweet, fragrant Smell; from the Side of ſome *Leaves* burſts out a moſt compact Spike, about one or two Inches long, and ſmall, like a Horn, of naked ſtamineous or apetalous male Flowers with yellow *Summits*, betwixt which appear ſmall round *Embrions* or *Rudiments* of *Seeds*,, ſurrounded by *four ſmall Leaves*, inſtead of an *Empalement*, which afterwards become *Seeds*, about the Bigneſs of a Grain of Pepper. Being cultivated in the *Gardens*, it ſeldom or never Flowers, and in the Ditches and Marſhes, where it naturally grows, it runs ſo by the *Root*, that it ſeldom produces the Spike. It grows plentifully in Ditches in *Cheſhire*, as I have been informed by that expert Phyſician Dr. *Maſſey* of *Wisbech*, Fellow the Royal Society.

Virtues and Uſes.

This is one of the moſt uſeful *Roots* in the *Shops*; there is no Preparation where *attenuating* of *groſs Humours* is requiſite, where gratifying of *Taſte* by *aromatizing* or ſpiceing of it is deſign'd, but this may be admitted of, there being ſcarce any *Palate*, but to which it is grateful. It's *aperient* and *diſcutient*, good in Diſeaſes of the *Breaſt* and *Uterus*, a great *Alexipharmick*, and good for the *French Pox*, in *Obſtructions* of the *Menſes*, *Spleen*, *Liver*, and *Urine*, in *Malignant Fevers*, removing of *Pains* of the *Hypocondries*, and effectual in *Hydropical Caſes*: Its preſcribed in *Stomach* and *digeſtive Powders*, *Diet Drinks*, *Tinctures*, *Apozemes*, *Decoctions*, and *Infuſions* internally; and externally in *diſcutient Fomentations*, *Carminative* and *Stomachick Plaſters*. It enters in *Aq. Imperialis*, *Celeſtis*, *Syr. de Artemeſia*, *Iva Arthritica*, *Elect. Diacorum*, *Antidotum Hæmagogum*, *Diacorcuma*, *Amarum minus*, *Tryphera Solutiva*, *Trochi de Caparibus*, *Cypheos*, *Hedichroi*, *&c.*

XX. *Adianthum.*

1. *Adianthum album ſive Ruta Muraria*, C. B. P. 356. *Ruta Muraria*, J. B. 3. 37. 745. *Adianthum album*, Raij Hiſt. 147. Tournefort, 541. *Filix petrea Rutæ Facie*, Hiſt. Oxon, 3. 584. Wall Rue,

2. *Adianthum nigrum Officinar*, J. B. 3. 37. 734. *Fol. longioribus pulverulentis pediculo nigro*, C. B. P. 355. Hiſt. Oxon. 3. 588. *Onopteris mas*, Raij Hiſt. 152. *Filicula quæ Adianthum nigrum Offic. pinnulis obtuſioribus*, Tournef, 542. Black Maiden Hair.

To theſe may be added, XXI.

Trychomanes ſive Polytrichum, C. B. P. 356. Tournef. Inſtit. 539. J. B. 3. 37, 747. Moriſ. 3. 590. *Trychomanes.* Dod. Pempt. 471. Raij Hiſt. 140. Engliſh Maiden Hair.

XXII.

Polypodium vulg. C. B. P. 359. Tournef. Inſtit. 540. Hiſt. des Plants, 519. Moriſ. Hiſt. 3. 563. *Polipodium,* J. B. 3. 37. 738. Raij Hiſt. 137. Common Polipody.

XXIII.

Aſplenium ſive Cæterach, J. B. 3. 37. 741. Tournef. Inſtit. 544. Hiſt. des Plants, 395. Moriſ. Hiſt. 3. 561. Raij Hiſt. 139. *Cæterach Offic.* C. B. P. 354. *Aſplenium,* Dod. Pempt. 468. Spleen-Wort.

XXIV.

Lingua Cervin Offic. C. B. P. 353. Tournefort, 544. Raij Hiſt. 134. *Lingua Cervin vulg.* Moriſ. Hiſt. 356. *Phillitis* Synopſ. Stirp. Brit. 44. S. *Lingua Cervina vulg.* J. B. 3. 37. 748. *Phillitis vulg.* Cluſ. Hiſt. C. C. xiii. Hart's-Tongue

The TRIBE.

I have joyn'd all theſe leſſer *Capillary Plants* together, not only becauſe they agree in their *Characters,* but alſo in their *Virtues.* They are called *Capillaries,* out of a fond Conceit that they are effectual for all Diſeaſes of the *Hair,* becauſe the Diviſions of ſome of them are exceeding fine; for the Ancients had a great Conceit of relying upon the Signature of Plants, in order to find out their Virtues. They are called *Epiphylloſpermæ* and *Dorſiferæ,* becauſe their *Seed Veſſels* are adherent to the back Part of the *Leaf.* They are called *Acaules,* becauſe they have no *Stalk,* but only *Leaves* with the *Foot-ſtalk.* *Tournefort* ſays, they want *Flowers,* but have *Seeds*; *Semina minutiſſima nudis Oculis vix conſpicua* as Mr. *Ray* has it, fine *Seeds* not perceptable by the naked Eye. But tho' *Tournefort,* has, with the greateſt Exactneſs, obſerv'd the Structure of their *Seed Veſſels* by a Microſcope, as is to be ſeen elegantly repreſented from *Tab.* 312 to 320: It is much he did not obſerve their Fore-runers the *Flowers,* which

are

are ſo obvious in the *Polypody*, that they can eaſily be diſcry'd by the naked Eye; for there's ſo great a Neceſſity for the *Male Duſt* to impregnate the *Female Eggs* that though the *Flowers* are not ſo obvious as the *Seed Veſſels*; there is the greateſt Reaſon to believe each Plant has both; and ſince they are ſo diſcernable, in the *Polypody*; by Parity of Reaſon, they are to be had in all the other *Capillaries*, tho' not yet diſcover'd, which nothing but *Tourneforts* miſtaking the Uſe of the *Farina fœcundans*, as in my *Botanick Eſſays*, p. 257. has kept ſo long a Miſtery; and therefore *Boerhave* only ſays, *hactenus viſibili* they want *Flowers* hitherto obſerv'd; theſe *Seed Veſſels* are variouſly ſituated upon the back Part of the *Leaf*.

The *Deſcription.*

1. *Wall Rue* is a very ſmall Plant, with an hard fibrous *Root*; ſmall, hard, green *Foot-ſtalks*; with its *Leaves* dark Green, and variouſly divided, after the Manner of *Rue*; the *Seed Veſſels* cover the whole Surface of the Back of the *Leaf*.

2. *Black Maiden Hair* has ſhining, black, ſlender *Foot-ſtalks*, ariſing from a hard, woody *Root*, and ſupporting a *fern Leaf*, divided into *Segments* in a peculiar Manner, by which 'tis diſtinguiſhed from all others, it is of a lighter Green than the former, and is only called Black from the *Foot-ſtalk*.

XXI. *Engliſh Maiden Hair* is a *Plant* with a long, narrow, *pinnate Leaf*, conſiſting of ſeveral ſmall, round *Leaves*, joyn'd to a *Midrib* by Pairs.

XXII. *Polypody* has pretty long, broad *Leaves*, with long, and narrow, ſub-divided *Segments*, ſometimes joyn'd to a *Midrib* by Pairs, and other times joyn'd to another after they have proceeded from the *Midrib*, from a round, thick, bended, joynted, and knobbed *Root*, variouſly diſperſed and branched out ſuperficially in the Ground.

XXIII. *Spleen Wort* has ſhort, thick ſet *Leaves*, with ſhort and round *Segments*, not quite divided to the *Midrib*, but alternately diſſected; the Back of the *Leaves* covered with a *ſhining* kind of *ſilky* or *ſatiny Subſtance*, with the *Seed Veſſels* diſpers'd over all it's Surface.

XXIV. *Hart's* or *Hind's Tongue* is the only *Capillary Plant*, with an undivided *Leaf*, of near a Foot long, and about two Inches broad, pointed, ſhinning dark Green in the fore-part, with a ſtrong *Midrib*, and more light in the Back, with Lines of *Seed Veſſels*, running obliquely from each Side towards the Middle.

Virtues and Uſes.

All theſe are Natives of *Britain*, for the *Adianthum verum* I have omitted, ſince the *Trychomanes* is ſubſtituted in its Place. They are all preſcribed indifferently in the Shops, under the Name of *Herbæ Capillares*, except the *Polypodium*, whoſe *Root* is only in Uſe. They are very

temperate, and eſteem'd *good* for *ſweetening* the *Blood*, and correcting the *Acrimony*, and are eſteem'd aperitive. They are preſcrib'd in moſt *Compoſitions*, for Diſeaſes of the *Breaſt*, which proceed from thin *acrimonious Humours*, ſuch as *pectoral Syrups*, *Decoctions*, *Ptiſans*; *Adianthum album*, *nigrum*, and in their ſtead *Trichomanes* enter the Syr. *de Eryſimo*, *Cichorio cum Rhabarb. de Glichiriza. de Praſio. Looch Sanans. Elect. Pector. &c. Aſplenium* is more particularly recommended for *Obſtructions*, and other *Diſtempers* of the *Spleen*, it enters the Syr. *de Cichor. cum Rhæo*, *Ol. de Caparibus*, omitted in the new *Diſpenſatory's Empl. adherniam. Lingua Cervina* enters *Aq. Limacum*, ſome infuſe it among warm *ſweet Worts*, and work it up with *Yeſt*, and drink it in the *Spring* for *ſhortneſs* of *Breath*. *Polypody Roots*, were by the Ancients eſteemed *purgative*, it is now only obſerv'd to be only an *alterative*, *ſweetning* the *Blood*, *opening obſtructions* in the *Bowels*, Corrects the *Acrimony* in *dry Coughs*, and *ſaltiſh Spittings*; it is good in the *Aſthma*, *Scurvy*, and *Hypocondriac affections*. It's given in *Infuſions*, in *altering*, and *Scorbutick Diet Drinks*, in *Ale*, or *Wine*. It enters the *Decoctum Epithymi*. Syr. *de Praſio. Catholicum. Lenitivum. Conf. Hamech.* now omitted in this *Diſpenſatory*.

XXV. *Adiantum Aureum.*

Adianthum aureum, Tabern. Icon. 797. *Polytrichum aureum Maj.* C. B. P. 356. *Polytrichum apuleij Maj.* J. B. 3. 37. 752. *Muſcus Aureus Capillaris medius.* H. L. B. 431. *Muſcus Capillaceus Maj. pediculo & capitulo craſſioribus*, Tournef. 550. *Muſeus Capillaceus Maj. pediculo villoſo*, Moriſ. Hiſt. 3. 630. *Adiauthum aureum Maj.* Raij Hiſt. 123. Golden Maiden Hair.

This by all modern *Botaniſts* is claſs'd among the *Moſſes*, of which it hath the Advantage, that its Fruit is much more conſpicuous than any other, except its *Congeners*, it's an *annual Plant*, with a ſmall, ſtreight *Stalk*, about two, or three *Inches* high, ſeveral alternately thick ſet, green *Leaves*, round the *Stalk* about the middle Part, like a *Fir-tree*, when in the *Seed* Bed, but much leſs; the upper Part of the *Stalk* is naked, bearing upon the Top *a quadrangular Fruit* cover'd with an *hairy Cap*, *opening tranſverſly*, when Ripe, and pouring out *Seeds* as ſmall as Duſt.

This Species differs from the *Adianthum aureum medium*, and *minus*, not only in Bigneſs, but in Time of coming to Head; the Heads of the *majus* appear in the Middle of *Summer*; and thoſe of the *medium* and *minus* in *Winter*. It is thought by ſome to be *drying* and *diſcutient*, by others *ſudorifick*. Mr. *Rougeard*, a *Phyſician* in *Normandy*, according to *Tournefort*, relates wonderful Effects of it in the *Pluriſy*, either by *Decoction*, or, making of the *Spirit* thus, *clean* the Plant, bedew it with Water, *macerate* it three Days, diſtill it, cohobate more with this *diſtill'd Water*, reiterate the *Diſtillation*, and *Cohobation* ſix Times, till a potent *Sudorifick* is obtain'd. *Schroder* recommends it for *ſtrengthening* the *Hair*, *per ſignaturam*.

Ageratum,

Ageratum vide *Ptarmica.*

XXVI. *Agrimonia.*

Agrimonia Offic. Tournef. 301. T. 155. *Agrimonia S. Eupatorium.* J. B. 2. 17. 398. *Eupatorium veterum S. Agrimonia.* C. B. P. 321. Raij Hiſt. 400. *Græcorum odora vel minus odora.* Hiſt. Oxon. 2. 624. *Boerhave,* 78. Agrimony.

Dr. *Moriſon* calls this, a *pentapetalous Plant,* with very rough *Seed Veſſels,* each containing *two Seeds*; Mr. *Ray,* and Mr. *Dale* call it *hexapetalous,* but Mr. *Ray* retracts, and calls it afterwards, *pentapetalous*; *Tournefort* calls it, a *polypetalous roſaceous Flower*; *Volkhamer* alſo, calls it, *polypetalous*; but *Boerhave* is in the Right, when he calls it, *pentapetalous,* or *hexapetalous*; ſo uncertain it is to Claſs *Plants* by the Number of the *Petals,* eſpecially in the *roſaceous Flowers,* which if they exceed *four* or *five,* are never determinate. Mr. *Ray* formerly aſſerted it had *ſolitary, naked Seeds,* but in his *Methodus Emendata,* he owns that it has *two,* ſometimes *three,* or *four naked Seeds* contain'd in one *Seed Veſſel. Boerhave* ſtill, with *Herman* Claſſes it with the *Gymno-monoſperma,* though it has neither *one ſingle,* nor *naked Seed,* ſucceeding to a *Flower.* It has a *woody,* perennial and durable *Root*; ſtreight, ſometimes branched *Stalk*; alternate, compound, ſoft, dark green hairy, dented *Leaves, pinnate,* conſiſting of ſeveral Pairs joyn'd to a *Midrib,* with a ſingle one at the End; *Yellow polypetalous,* for the moſt part *pentapetalous, Roſaceous Flowers,* with ſeveral *Apices* or *Summits,* with a *monopetalous Empalement,* divided into ſomany *Segments,* as there are *Petals,* to which ſucceeds an *oblong furr'd Fruit,* or *Seed Veſſel,* furniſhed at the upper Part, with ſeveral *rough, ſharp Prickles.* The *Flowers* are *alternately* plac'd in a long *Spike*; the *Seed Veſſel,* when *ripe,* contains for the moſt part, *two,* ſometimes *three,* or *four Seeds* in one *Pouch.* It grows in the Sides of Hedges, and graſſy Banks, on Way Sides, and flowers in *June* and *July.*

It is of a *ſtiptick ſalt Taſte,* is *aſtringent, deterſive* and *vulnerary, reſerates Obſtructions* in the *Bowels,* and is much commended for *Diſeaſes* of the *Liver,* is good in *Chronic Diſtempers,* is therefore preſcribed in *hectick Fevers, ſpitting* of *Blood,* and *Dyſentery,* and in every Caſe where *ſharp* and *acrimonious Humours abound.* It's given in *Decoctions, Piſans,* and *vulnerary Potions,* among *ingredients* for *medicated Wine* or *Ale*; in *Fomentations* and *vulnerary Lotions* externally, for *Ruptures* and to curb *ſpongious Fleſh* in *Wounds*; it enters a few Shop Preparations, ſuch as, *Decoctum Traumaticum, Syr. de Piloſella, &c.*

XXVII. *Alcæa.*

Alcæa vulg. fl. ex rubro Roſeo, Tournefort, 97. *Vulg.* Raij Hiſt. 604. *Vulg. Maj.* C. B. P. 316. J. B. 2. 23, 953. Hiſt. Oxon. 2. 557. *Malva Verbenacea, Park.* Vervain Mallow.

XXVIII. *Althæa.*

Althæa Dioſcoridis & Plinij, C. B. P. 315. Tournef. *Sive Biſmalva*, J. B. Raij Hiſt. 602. *Malva Sylv. ſive paluſtris aut Ibiſcus*, Moriſ. Hiſt. 2. 552. Marſh Mallow.

XXIX. *Malva.*

Malva Sylv. fol. ſinuato, C. B. P. 314. Tournef. 95. Raij Hiſt. 599. *Sylv. procerior, S. Elatior rectave fl. Maj. ſubrubente aut purpureo venis ſaturate purpureis picto fol. ſinuato*, Hiſt. Oxon. 2. 52. Common Mallow.

XXX. *Malva Arborea.*

1. *Malva Arborea Offic. Malva Roſea fol. Subrotundo*, C. B. P. 315. Holyoaks.

2. *Malva Arborea maritima noſtras*, Park. Theatr. 301, *Marit. Britan.* Moriſ. Hiſt. 2. 523. Raij Hiſt. 601. Britiſh Tree Mallow.

The TRIBE.

Dr. *Moriſon* gives an *Epithet* to theſe of this *Tribe*, deduced from their Virtues, by calling them *Pentapetalæ Molientes*, though they be truely *Monopetalæ*, or *One flower-leav'd*; they are *claſs'd* together, by the unanimous Conſent of all Authors, under different Denominations; by their *Flower* they are called, by *Tournefort Monopetalous expanded Bell-flowers*, with a *Tube* in the *Center* receiving the *Pointal*; by Mr. *Ray*, *Semine nudo Polyſpermæ*, or having many naked *Seeds*, combin'd together, like a *Whorle*, in Form of a *Cheeſe*; by Dr. *Herman*, *Gymno polyſpermæ*, *i. e.* with many naked *Seeds*, &c. but by *Boerhave*, *Polangiæ polyſpermæ*, *i. e.* with many *Seeds* gathered together within as many *Seed Veſſels*; and thus *Volkhamer* concludes, that the *Fruit* conſiſts of ſeveral *Kidney Seeds*, cloſely united in a *Circle*, each being cover'd by it's proper *Pericarpium*, or *Seed Veſſel*.

The *general Characters* therefore of this *Tribe* are, that it has a *Monopetalous Flower*, ſome larger, ſome leſs, according to the different *Genera*, deeply cut into five *Segments*, all which unite in a *Center*, and form a *Pyramidal Tube*, thickly beſet at the upper Part with *Chives* and *Summits*. This *Tube* is inlarged in the lower Part, where it covers the *Rudiment* or *Embryon* of the *Fruit*, amidſt which, is placed a *Pointal* received by the *Tube*, which it pierces at the upper Part, and is then divided into ſeveral *Thrumbs*, without any *Summits* or *Tops*; at the lower Part this *Pointal* is dutailed as it were, in the *Center* of the *Fruit*, or inner Part of the ſeveral *Seed Veſſels*, of which it is compos'd, for the *Fruit* conſiſts of ſeveral *Seed Veſſels*, enlarged towards the *Circumference*, becoming narrow, like ſo many *Wedges*, in the *Center*; are indented into the *Pointal*, like the Form of a *Cheeſe*; when the *Pointal* is withered, then the *Fruit* contain'd within

within the *Common Perianthium*, or *Cover Flower* falls off, without the *Seed Veſſels* being ſeparated from each other; and therefore, Mr. *Ray* excuſes himſelf, for having once called theſe *naked Seeds*, becauſe, he thought, ſuch were ſo, which, when ripe, ſeparately fell off from the *Common Mother*. Indeed, theſe *Seeds* do ſtick very cloſe and firm to each other, but when ſeparated, they plainly have a diſtinct *Seed Veſſel* covering each *Seed*, and not as other *Capſular Plants*, are divided into ſomany Pouches within one *Common Membrane*.

XXVII. *Vervain Mallow* has a *Perennial* hard *Root*, ſending forth ſeveral deep divided *round Leaves*, upon *Foot-ſtalks*; thick, hairy, round, ſhort, *flowering Stems*, furniſhed with ſtill more divided *Leaves*, the *Flowers* in *Cluſters*, appear in the *Boſome* of the *Leaves* and *Branches*, towards the Top, large, open, of a *pale Red*, and in ſome Species of a pure *White*, with the *Tube* and *Pointal* always inclining to one Side, (as is juſtly obſerv'd by that accurate *Botaniſt*, Dr. *Dillenius*) the *Fruit* round, and ſmall, in Proportion to the *Flower*, within a Bladder-like *Common Cover*, which was before the *ſingle Calix*, or *Empalement* of the *Flower*.

XXVIII. *Marſh Mallow*, has a fleſhy, mucilaginous, round, yellowiſh *Root*, ſubdivided into leſſer Fibres, ſinking deep in the Ground; large *Leaves* upon *Foot-ſtalks*, round, ſoft, undivided, and pointed in the fore Part, of a ſoft Surface, like *Satin*, or *Velvet*; a round, ſtreight, woody, marrowy *Flowering-ſtalk*, ariſing two, three, or four Foot high, cloathed with *Leaves* more angled and pointed, from the Boſome of which, proceed at the upper Part, *Flowers* in *Cluſters*, from a double *Calix*, divided into three outer pointed *Segments*, and five inner, ſubrotund, much leſs than the former, the *Fruit* much larger and flatter, cloſely ſurrounded and wholly cover'd by the Common *double Husk* which was the *Calix* or *Empalement*; the *Seed Veſſels*, and the *Seeds* within, are of the Shape of a *Kidney*.

XXIX. *Common Mallows* have a *Root* more hard, and woody than the former; round *Leaves*, upon long *Foot-ſtalks*; the *flowering Stem* weak and flexible, ſpread forth upon the Ground, endow'd with *Leaves*, and very branchy; from their boſomes proceed ſingle *Flowers*, not in *Cluſters*, upon *Foot-ſtalks* leſs than the *Alcæa*, and larger than the *Althæa*; more *red*, with dark purpliſh Bottoms; a double *Empalement* divided into three outer narrow pointed *Segments*, and five inner broaded pointed ones, which after, becomes the *Common Husk*, which but half Way covers a thick, little, round *Fruit*, whoſe *Husks* contain ſmall, thick *Kidney Seeds*.

XXX. Since the *Diſpenſatory* is ſilent as to the Particular Species of the *Malva Arborea*, I have here inſerted two.

1. The *Malva Roſea*, or the *Holy Oak* is a large high *Plant*, it has two *Seed Leaves* of an Heart Shape, ſhining dark green Surface, peculiar to all the *Malvaceous Kind*; as the *Plant* encreaſes, the bottom *Leaves* are

upon long, round, rough, hairy *Foot-ſtalks*; the *Leaves* round, with the former *Mallows*, but very large, ſome four, five, ſix, or ſeven Inches diameter, not ſupported as the *Althæa*, which they reſemble moſt, but more pointed than the *Common Mallow*; the *Flow'ring-ſtem* unbranch'd, but well furniſh'd with alternate *Leaves*, upon *Foot-ſtalks*, riſes ſtreight, to five, ſix, or ſeven Foot high, with *Flowers* on the upper Part, not in Cluſters, but alternately from the Boſome of the *Leaves* firſt, but afterwards, in a long Spike, upon the upper Part of the *Stalk*, upon ſhort *Foot-Stalks*, very large, ſome two, three, or four Inches Diameter, ſome ſingle, ſome double, of a great variety of Colours, making one of the Moſt beautiful *autumnal Flowers* in a *Garden*. It has a double *Calix*, divided, for the moſt Part, into three outer pointed *Segments*, and five inner ſubrotund, which afterwards becomes the *Common Husk* to a large, round, flat *Fruit*, conſiſting of a great Quantity of thin, broad, large *Husks*, each containing thin, flat, *Kidney Seeds*. The *Root* of this *Plant* may be ſaid to be *biennial*, as dying after the *ſecond Year*, but it is ſo large and fleſhy, that though the *Root* which puſh'd forth the *Flow'ring-ſtem*, does decay, yet there are ſeveral collateral Buds that ſpring forth, which with due Care, by tranſplanting, and ſeparating the Quick from the Dead, may be brought to laſt for ſeveral Years. This I give as a Caution to ſuch as having a beautiful *Holly-Oak* in their *Garden*, would not have it loſt, and perhaps could not ſo well depend upon the *Seed* (which varies much as to the Colour and Doubleneſs of the *Flowers*) as upon the *Slip*. It's a *Garden Plant*, and *flowers* in the Month of *Auguſt*; and from thence, throughout the Seaſon. But that which I look upon as the true *Malva Arborea*, and as much Medicinal, as the other, is the

2. *Malva Arborea Maritima noſtras*, ſo called by *Parkinſon*, and juſtly, ſince it's Place of Nativity is chiefly on the *Britiſh Sea Coaſts*; nor has it been deſcribed or obſerv'd by any elſe where, but by that great Reſtorer of *Botany*, the great Improver, if not the firſt Inventer of *Method*, the expert Dr. *Moriſon* (of whom I have ſpoke in another Treatiſe *) who found it in a ſmall Iſland, called, *Pierrepierce*, overagainſt *Little Britain*, or *Brittany* in *France*: He alſo ſays, it is found in an Iſland called, *Deny*, three Miles from *Port Royal*, and five from *Briſtol*. It's alſo found near *Hurſt Caſtle*, (*e Regione vectis*); in *Portland* Iſland, near to *Weymouth*, in the County of *Dorcheſter*; in *Candy* Iſland, near to *Wales*; and in the *Baſs* Iſland, in the Mouth of the *Firth* of *Forth*, near *Edinborough*, in *Scotland*.

This fair *Britiſh Plant*, has *Seed Leaves* like the former; it's bottom *Leaves* not fully ſo large, more angled, and whereas, the other more reſembles

* *Botanick Eſſays.*

ſembles the *Althæa*, but much rougher, theſe have a greater Reſemblance to thoſe of the *Common Mallow*, but more ſilky and ſoft, like to thoſe of the *Althæa*. The *Flow'ring-ſtalk*, or rather Trunk full of alternate *Leaves*, upon long *Foot-ſtalks*, is very branchy, riſing two, three, or four Foot high the firſt Year, when it increaſes in Bigneſs, and becomes *woody* before next *Spring*, looſing moſt of it's bottom *Leaves*, but the upper remaining ſtill green. Next Year it ſpreads it's Branches every where, becoming a large beautiful Tree, about ſix, ſeven, eight, or ten Foot high, with a Trunk, as Dr. *Moriſon* juſtly obſerves, as big as a Man's Arm, hard, and woody the firſt Year, full of Pith, which now decays; about *July* it ſends forth the *Flowers*, thin ſet, upon *Foot-ſtalks*, from the Boſom of the *Stalks*, and *Branches*, large, light red, purple bottom'd, like thoſe of the *Common Mallow*, but larger, with a peculiar *Empalement*, (*viz.*) five inner pointed, and three outer, broad, oval, or obtuſe *Leaves*; the *Fruit* thicker than any of the former, larger than thoſe of the *Alcea* and *Malva*, and leſs than thoſe of the *Althæa* and *Malva Roſea*, conſiſting uſually of five, but not above ſeven, or eight *Seed-veſſels* in a Circle, but much larger than any other *Mallow Seed*, half cover'd with the *Common Husk*, which was the *Empalement*, and ſo looſe, that they fall off ſeparately, when ripe, whereas, the other never fall off, but in the whole *Fruit*, having ſpent all it's Nouriſhment in the *woody Trunk*, and ripening the *Seed*; it dies the ſecond Seaſon, but yields a plentiful Crop of *Seeds*, for its better Propagation.

Though I have, in my *Botanick Eſſays*, 198. endeavour'd to clear up the diſtinctive Characters of the *Malvaceous Tribe*, it will not be amiſs, that I inſiſt a little further upon the ſame Subject here: In the doing of which, I muſt eſtabliſh the *Calix* or *Perianthium*, as the chief *Characteriſtick*; which tho' but of ſmall moment in other Claſſes, yet it ſeems to be of great Uſe in this, upon which I can juſtly aſſert each of theſe to be a particular Genus. It's plain and obvious to me, that all the *genuine Mallow's* have a *double Calix* or *Perianthium*, divided into five inner, and three outer *Segments*, the inner much larger, the outer much leſs, both pointed, cloſe adherent to, and but half covering the *Fruit*, or *Whorlet*. The *Malva Arborea noſtras*, either makes up a particular *Genus*, and then it muſt ſtand alone, without any Congener, unleſs we admit of the *Malva Arborea Veneta dicta*, whoſe *Leaves* are much leſs, more *Althæa* like; it's not ſo branched, the *Flowers* more thick diſpoſed, and leſs in Bigneſs. I own, I have not examin'd the *Flower* nor *Calix*, in which the chief Diſtinction lies. As to the Diſtinction of our *Malva Arborea* from the *Common Malva*, it chiefly lies in the external *Leaves* of the *Perianthium* or Cover-flower, which are diſtinct even to the *Pedicle* or Foot-ſtalk, by which it may be call'd triphyllous, the internal *Perianthum*, is one Leaf

divided into five pointed *Segments*, and the *Fruit* chiefly *pentacapſular*, but half cover'd with the Cover-flower, which now becomes the *Common Husk*.

For the *Althæa* and *Malva Roſea*, I look upon both as *Althæa's*, the one *Paluſtris* or *Marſhy*, and *Indigenous*; the other, *Garden* and *cultivated*; the one *perennial*, the other *annual*; and tho' they differ in Bigneſs and Structure of the *Flower*, yet they agree in the *Perianthium*, *Seed*, and *Seed-veſſels*, as much as *Siſter* and *Brother* can do, but if any will ſeparate them, I am not averſe, for then each muſt ſtand upon his own Limbs, for tho' there be a vaſt Variety in the *Flowers* of the *Holly-Oak*, at that rate the *Althæa* muſt ſtand it's Chance alone.

The *Alcea* has a great deal to ſay, for it's being diſtinct from all the reſt, for it is a low *Plant*, has a proportionably big, ſtiff *Stalk*; it's *Flowers* large, and in Cluſters, and the *Leaf* chiefly much divided, and yet theſe do not ſo much Conſtitute the *Genus*, as the ſingle *Perianthium*, which afterwards becomes a *Bladder Common Husk*; for there are Species of it *annual* and *perennial*; of a whole Leaf, eſpecially at the Bottom; larger, and leſſer *Flower*; more diſpers'd, or in Cluſters or Tuffts, with, or without *Pedicles*; with a ſtreight as well as bended Stylus; with an oblong, as well flat *circular Fruit*; but none of theſe are ſo certain as the looſe *Perianthium* at firſt, and after the Bladder Common Husk or Cover-Fruit; an Example of which, I here preſent the Reader.

Alcea peregrina, Ger. Emac. 936. *Veſicaria*, C. B. P. 317. *Soliſequa multis veneta*, J. B. 2. App. 1068. *Althæa veſicaria veneta*, Moriſ. Hiſt. 533. *Ketmia veſicaria vulg.* Tournef. Inſtit. 101. Boreh. Ind. 272. Venice Mallow.

This Elegant *annual Plant*, has a very fine fibrous *Root*, undivided, broad, roundiſh, dark Green, ſomewhat hairy, pointed bottom *Leaves*, about one Inch broad, and one Inch and a half long, notched at the fore Part, a ſtreight, round, hairy, marrowy *Stalk*; alternate *Leaves* upon the *Stalk*, deeply divided, upon ſhort *Foot-ſtalks*, into three narrow, long pointed *Segments*, the Middle longer, the two Lateral ſhorter, each ſomewhat notch'd, at the Edges leſſer and ſmaller; *Branches* from the Boſom of the *Leaves*; the *Flowers* beſet with *Leaves*, thick ſet upon the upper Part of the *Stalk* and *Branches*, about the Bigneſs of thoſe of *Althæa*, with purpliſh Borders without, of a pale yellow Colour within, a fine dark purpliſh Bottom, ſhort thick *Tube*, loaded with *Summits* yellow as Gold; a dark, purpliſh *Pointal*, endow'd with five proportionably big, round, purpliſh Buttons. The *Cover-flower*, or *Perianthium*, is hairy, thin, tranſparent, with ſeveral longitudinal Nerves, divided into five pointed *Segments*, and ſurrounded by ten, or twelve ſmall, long, narrow pointed *Portions*, ariſing from the *Foot-ſtalk*. When the *Flower* is faded, the *Fruit* is very rough, and hairy, Conical, conſiſting of five double Rows of

Seed-

Seed-veſſels, adhering to ſo many double *Placenta*'s, or *Mother-beds*, ſurrounded by the *Cover-fruit*, which was formerly the *Cover-flower*, and is now inflated like a *Bladder*, each of the *Seed-veſſels* contain one ſingle, thick, *Kidney Seed*. I have alſo remarked what *Gerard* juſtly obſerves, that it's *Flower* opens in the Forenoon, from eight till towards Noon, and then it ſhuts, and opens in the Afternoon till towards four, when it ſhuts again, and therefore, is not unfitly called, *Soliſequa*, by *J. B.* or rather, it ought to be called, *Horaria*, with *Gerard*. I had the Preſent of the *Seeds* of this delightful *Plant*, from the expert and curious Mr. *Philip Miller*, laſt *Spring*, now deſervedly preferr'd to be *Gardiner* to the *Phyſick Garden* at *Chelſea*, belonging to the *Apothecaries* of *London*.

This *Plant* has been reaſonably look'd upon as an *Alcea*, by the *Ancients*, and altho' moſt of the Moderns claſs it with others of the *Malvaceous Tribes*, yet it's ſingle *Bladder Cover-fruit*, with the Diviſion of the *Leaves*, will vindicate it to be an *Alcea* ſtill; tho' to ſay the Truth, it has a ſtrange Medley of Characters; it's high ſtreight Stature might bring it in with the *Althæa*'s in Dr. *Moriſon*'s Opinion, it's dark green Habit, divided *Leaf* and *Bladders*, makes it an *Alcea*, by its ſtreight thick *Tube* and *Summits* of the *Flower* its a *Malva*; it's *conical Fruit* makes it a *Ketmia*, with *Tournefort* and *Boerhave*; but in this they differ, that the *Ketmia Fruit* is *enangio-polyſpermos* whoſe Seeds are contain'd within one *Seed-veſſel*, divided into four *Pouches*, whereas, this is *enangio-monoſpermos*, each *Seed-veſſel* containing one ſingle *Seed*, and ſeveral adhering to one common *Placenta*, or *Mother-bed*; but that which *undoubtedly* makes it a *Ketmia*, is the *Piſtillum* or *Pointal* divided into *four* or *five* Portions, each terminating in a round *Button*, which is peculiar to the *Ketmia*'s, as I had the Fortune firſt of all to obſerve. See *Botanical Eſſays*, *p.* 288. *Tab.* 1. *F.* 10. So that there is ſcarce any of the *Malvaceous Tribe*, but this *Plant* ſhares with it in one or other of it's *Characters*.

N. B. Upon a more ſtrict Examination of the *medly Flower*, and *Fruit* of this *Plant*; I find, to common View, the yellow golden *Apices*, diſpos'd into five double Rows, correſponding to the five double Rows of *Seed-veſſels*; the *Apices* themſelves by a Microſcope to be *unicapſular* and *globulous* (not *bicapſular* (ſo to ſpeak) as moſt other *Flowers* are). The unblown loaded with *Duſt opaque*, thoſe which had ſhed the *Duſt*, tranſparent, opening (when they ſhed the *Duſt*) at the Top; it ſeem'd to reſemble a *Roſaceous Ranuculus Flower* half blown. The five *Buttons* (which I look upon as an undoubted Note of a *Ketmia*) upon the Top of the *Piſtillum*, being blown, and of a darker Colour, I perceived upon a Microſcopical Obſervation, ſuch of them as were full, were as ſo

many *Veſiculæ* or Bladders, filled with a *limpid* and as it were *viſcid Juice*. This leads me into the Opinion, that even theſe *Buttons* upon the Top of the *Piſtilla* of *Plants*, may actually ſerve as the *Proſtatæ* in the *Males* to be a kind of Vehicle to the *materies ſeminalis maſculina*, to prevent it's too great Volatility, and convey it in greater Abundance to the *ovum femineum*. The Conſideration of a certain Viſcidity upon theſe *Buttons*, eſpecially in the *Liliaceous Plants*, it's Speciality in the Colour and Structure from the other Parts of the *Flower*, particularly the *Apices*, makes me look upon it as of ſpecial uſe (for *natura nihil fruſtra facit*) which it's probable may be this now mention'd; and altho', in the other *Malva's*, and in the *Labiate Flowers*, there be no ſuch *Button*, yet they may be hollow *Tubes*, and are uſually fimbriated; I know not but this viſcid Liquor may be ſpread upon the Duſt upon the *Apices*, ſituated round the *Tube*, as they uſe to ſprinkle water from a Bruſh or Spunge.

The laſt thing I ſhall take Notice of in the *Mallows*, is their *Veins* and *Nerves*, which in the *Common Mallow* and *Holly-Oak* are uſually five larger and two leſſer, all terminating in a *Center*, at the Extremity of the *Foot-ſtalk*, and running toward the *Circumference*, in the Middle of ſo many *Lobes*, rounder at the Edges in the Bottom, and more pointed in the *Stalk-leaves*. In the *Althæa* all the *Lobes* are pointed, the Middle farther ſtretch'd out, the two *Lateral* ſhorter, and the two outmoſt ſhorter ſtill; In the *Mallows* they are circular; in the *Althæa*, the *Leaf* is, as it were, ſubrotund, and broad at the Baſe, with a Midrib, ſending forth for the moſt Part, four Pair of lateral Veins, the Extremity of the Midrib, making up the Impair; the *Alcea* is divided into five or ſeven *Segments*, according to the Number of the Veins, and this laſt deſcribed into three, or five; for as the Veins vary from five to ſeven in all the other, in this they vary from three to five.

To conclude the *Botanical* Part of this *Decad*; upon a more ſtrict Examination, I do not find the *Leaves* to be ſo very variable, that they ought to be rejected as *Characteriſticks*, no more than other Parts of the *Plants*, tho' they be neglected by Modern *Botaniſts*; for if the *Pinnæ*, the *Wings*, or *Pennæ*, the *Feathers* be conſider'd, as to their Number, and Diſpoſition; if the *Coſta-media*, or Midrib, and its branching out into the *Wings* and *Feathers*; if the *Nerves* in the ſimple, and not compounded *Leaves*, and the Diviſions into *Lobes* and *Segments*, their Manner, Figure, and Number be ſtrictly conſider'd, we ſhould perhaps find a greater Certainty in, and a more fixed determinating of them, than moſt People imagine; and as to their Diſpoſition into *alternate* and in *Pairs*, that by no means is to be neglected. In a Word, as there are *Strollers* in *Flowers*, as to the Variety of their Colours, and indeterminate Numbers of their *Petals*, or *Flower Leaves*: ſo likewiſe are there, in the *Leaves* of

ſeveral

ſeveral *Plants*, particularly between the *Bottom*, and *Stalk Leaves*, for in ſome the *upper Leaves* are divided, and the *bottom ones* whole; and in another the *bottom Leaves* are divided, and the *upper ones* are whole. But on the other Hand, as there are certain Rules to be obſerved in the *Flowers* of other *Plants*, ſo are there alſo in the *Leaves*. I deſigned in this Place to have given my Thoughts about the Variegations and Stripes in *Leaves*, as well as in the *Flowers* which Mr. *Bradley* has ſeveral Times endeavoured to account for: But as I have already exceeded the Bounds I propoſed in theſe Sheets, I ſhall leave that to the next, or ſome other of the ſubſequent Decads, or other *Botanick Performance* I have in View, if ſuitable Encouragement is given.

The *Virtues* and *Uſes* of the *Malvaceous Tribe.*

Amongſt the many *Conferences* I have had with my *late ingenious Friend* Mr. *Pettiver*, he was always pleaſed with the Diſtinction I made betwixt the *Malvaceous* and the *Oleraceous Emolients*; nor will it be inconſiſtent with the *Scheme* I propoſe of finding out the *Virtues* by their *Characteriſtick Notes*, that I here, in the General, from good Experience aſſert, That all the *Malvaceous Species*, whether in the *Diſpenſatory Catalogue* or not, may be promiſcuouſly preſcribed for Phyſical Uſes. Tho' all of them have the ſame Virtues, yet the *Althæa*, or *Marſh Mallows*, are moſt in Uſe; for the *Alcea*, or *Vervain Mallow*, it is ſeldom uſed, unleſs it be a *Succedaneum*, when the others are not at Hand. *Tournefort* ſays, there is ſuch a Mixture of a great deal of *Phlegm*, a *conſiderable Part* of *Earth*, join'd with an *acid* and *ſulphur* in its *viſcid Juice*, which ſo entangles its *Salts* that they cannot be *diſengaged*, but by Fire; for by the *Chymical Analyſis* it both affords a *concrete*, *volatile*, and *lixivial Salt*. All agree, that it is one of the moſt *ſoftning ſweetning Medicines* yet known; for by its viſcid Parts it ſo blunts and ſheaths (as it were) the *ſharp* and *acrimonious ſaline Particles*, that they can no more cut and tear the *nervous Filaments* by which we have that Senſation of exceſſive *Pain*: A *Ptiſan* of its *Leaves* may be given to ſuch as are afflicted with a dry *Cough* (provided it be not rendered too *viſcid* and *glewiſh* by too much boiling) for it much corrects the Sharpneſs of thoſe Humours which poſſeſs the inner Surface of the *Lungs* and *Bronchia*: It has the ſame good Effect in exceſſive and tormenting *Gravel Pains*, and *ſtopping of Urine*, being *drank* in great Quantity, to *dilute* that *ſandy* and *rough* Matter, which frets the *nervous Coats* of the *Kidneys*, *Ureters*, and *Bladder*: It may alſo be given in a *Syrup* for the aforeſaid Uſes. Being apply'd either by Way of *Cataplaſm* or *Fomentation* to the Region of the *Kidneys*, or *Os Pubis*, it eaſes the Inflammation by relaxing the too much diſtended *muſcular* or *nervous Fibres*, cauſed by a

confirmed *Stone* preſſing upon theſe Parts, or by a *Stoppage* of *Urine*. In a Word, there is no Affection of the Body where the *Fibres* are too much diſtended, where the *Humours* are too *thin*, *ſharp*, and *ſerous*, or where violent *Pain* ought to be eaſed, but any of theſe Plants, eſpecially the *Marſh Mallow*, may be uſed; for though all of them be good Softeners, yet it has more Viſcidity, and is more capable to blunt the Sharpneſs and Acrimony of Humours than the reſt. The *Leaves* of *Mallows* and ſometimes the *Seeds* are moſt uſed. The *Leaves* with thoſe of *Althea* enter the Decoction for *Clyſters*; the *Seeds* enter the *Trochiſci Gordonii* and *Pulv. Hali*. The *Roots* of *Althæa* and *Leaves* of *Mallows* enter the *Syr. Dialthæa*, which is a good Opener, *Provoker* of *Urine*, and *Expeller* of the *Stone*; alſo in Diſeaſes of the *Breaſt*, which proceed from Sharpneſs of *Humours*. The *Root* enters the *Pulv. Dialthæa*, *& diaprunum lenitivum*. Its dry'd Powder may enter into *Pectoral Loochs*. A Mucilage alſo may be made of it, and, being mixt with *Sugar Candy*, it may be taken by Way of *Linctus* for a *dry Cough*. Its *external Preparations* are *Fomentations*, and *Cataplaſms* for *Inflammations*, to *ſuppurate hard* and *indurated Tumors*, and to correct the *Acrimony* of *ſharp* and *eating Ulcers*. A *Mucilage* of the *Root* is made and boil'd in *Oyl*, which enters the *Ung. Dialthæa*, and all the three *Dyachilon Plaiſters*. *Tournefort* mentions *Tablets* made with *Powder* of *Marſh Mallow Roots* with the *Pulv. Ireos.* and *Queretan* a *Looch* with the *Pulv. Althæa*, *fl. ſulph. Pulv. Diaireos*: But ſo many effectual Preparations may be made of it of all Kinds, for the aforeſaid Diſtempers, and its Uſe in theſe Caſes is ſo univerſally known, that to inſiſt longer upon it would be ſuperfluous; but its *internal Preparations*, becauſe of its great *Viſcidity*, are not ſo frequently uſed as the *external*. All theſe *Mallows* are *indigenous* in moſt Parts of *Britain*, except the *Malva Arborea*, and *Alcea Peregrina*. *Common* Mallows *grow* in fat Places, round Garden Walls, and moiſt Dunghills. *Vervain* Mallows grow upon the Sides of dry Banks. Marſh Mallows in *maritime marſh Places*, along the Sides of *Ditches* and *Drains*; 'tis in ſuch Plenty in moſt Parts of *Holland* in *Lincolnſhire*, eſpecially round *Boſton*, that whole Loads of the *Roots* may be dug up in a ſhort Time. Its *Flowers* afford an agreeable Spectacle along the Sides of the Ways in the Months of *Auguſt* and *September*, but it never varies in its Colour.

Thus I have finiſh'd what I deſign'd to acquaint the Publick with in this *Decad*, which, if acceptable, ſhall be follow'd by Plants in the ſeveral ſubſequent *Decads*, treated after the ſame Manner, as Time and Conveniency can allow.

F I N I S.

PHARMACO-BOTANOLOGIA:

OR,

An Alphabetical and Classical

DISSERTATION

ON ALL THE

British Indigenous and Garden Plants

OF THE

New *London* DISPENSATORY.

In which

Their GENERA, SPECIES, *Characteristick* and *Distinctive* NOTES are Methodically described; the *Botanical* TERMS of ART explained; their *Virtues*, *Uses*, and *Shop-Preparations* declared.

With many CURIOUS and USEFUL REMARKS from proper Observation.

DECAD II.

By *PATRICK BLAIR*, M. D. of *Boston* in *Lincolnshire*, and Fellow of the ROYAL SOCIETY.

Miseri mortales qui Naturam ejusque artificium Abdunt, ubique diligentia patens, & Amplissimos solis radios Nubecula obfuscant. Barth. Epist. ad Lyserum.

LONDON:

Printed for G. STRAHAN at the *Golden Ball* over-against the *Royal Exchange* in *Cornhill*; W. and J. INNYS at the West End of St. *Paul's* Church-Yard; and W. MEARS at the *Lamb* without *Temple-Bar*. MDCCXXIV.

The PLANTS of the second DECAD.

THE PREFACE TO THE Second DECAD.

THE *Advantages of the* Title *of* Diſſertation *given to this* Treatiſe, *and of the Manner of diſtributing the* Plants *in it, are evident in this* Second Decad. *For I am not confin'd to the bare Rules of a* Botanical *and* Pharmaceutical Hiſtory, *by only giving the* ſynonimous Names, *the Deſcription,* Time *of* flowering, *and* Place *of growing of the* Plants, *nor to a Recital of the ordinary* Virtues, Uſes, *and* Shop Preparations, *but have the Liberty of adding what elſe concerns them, ſuch as an Improvement of the* different Sexes, *their* Generation, Vegetation, Structure *and* Nouriſhment, *with the* Circulation *of the* Sap, *&c. And as to the Order of* ranging *them, I have choſen not to do it purely* alphabetically, *nor ſtrictly* methodically; *for I add the* Con-Geners, *Brethren of the ſame Family, to whatever the* Alphabet *introduces, which is the reaſon that thoſe two* Decads *have not yet quite exhauſted the* firſt Letter; *this perhaps may make the* unwary Reader *afraid of the Work's being drawn to too great a Length, as indeed it would, ſhould every* Letter *of the* Alphabet *take up as much room as the firſt; but if he conſiders how many* Plants *are already deſcribed, which, according to the Courſe of the* Alphabet, *muſt have been reſerved for ſome of the* ſubſequent Decads, *how many Claſſes are explained, and how many general Ideas of Virtues are given, he will eaſily conclude that the* Length *of the two or three firſt* Decads *will leave leſs to be ſaid upon each Particular hereafter, and conſequently every* Decad *muſt contain a greater Number of Plants than at preſent.*

I begin

The PREFACE.

I begin this Decad *with* Alchymilla, *a particular Kind of* apetalous Flowers. Alkekengi *introduces the* Bacciferous Tribe: *as does* Alliaria *the* Croſs-like tetrapetalous Tribe. Allium *ſerves to explain the* Graſs-leav'd bulbous rooted *Plants, and* Aloe *gives a large Diſſertation on the* Structure *and* Manner *of* Nouriſhment *of the* ſucculent Plants. *The* Roſaceous Flowers *come in with* Alſine, *where the Manner of Operation of* moderate Aſtringents *is explained.* Amaranthus *ſhews a doubtful Plant, whether* polypetalous *or* apetalous, *and diſcourſes further on* Aſtringents. Ammi *and* Amomum *put me in mind of giving a general* Idea *of the* Umbelliferous Tribe, *which are numerous in* this *and the* next Decad, *and gives me an Opportunity of explaining ſome* Technical Words, *uſeful to be known.* Amoris Pomum *leads further into the Knowledge of the* Bacciferous Plants, *where the* Solanum Tribe *is diſcourſed upon, with their* Virtues, *ſome of which are more innocent, others more noxious; where is a memorable Inſtance of the* Solanum Lethale, *which had ſuch Effects as to produce a ſignal* Victory, *and ſave a whole* Kingdom *from being conquer'd. The* eſculent Fruit Trees *are brought in with* Amygdalus, *where the* Vegetation *of the* Stone Fruit Trees *in general is diſcourſed of. I conclude with explaining the Difference between the* Anagallis *and* Veronica, *and in the* Veronica aquat. ſive Becabunga, *is a Diſcourſe of the Operation of the* Antiſcorbuticks *in the Body.*

ERRATA *in the firſt Decad.*

PREFACE, Page xi. Line 5. read *to be known.* p. xiv. l. 14. r. *nothing.* Book, p 6. l. 32. r. *that.* ib. l. 36. make a Period after *Conſiſtence.* After Preſcriptions a Colon. p. 8. l. 23. r. *teret.* l. 31. r. *Mas.* p. 11. l. 18. r. *redolens.* p. 17. l. 18. r. *grows in.* l. 31. for *Waſt* r. *Coaſt.* p. 20. l. 26. r. *Goats.* p. 27. place the *Acetoſa prat.* before the *arv.* lanc. the firſt Deſcription belonging to the *Pratenſis.* p. 29. l. 16. for *ſtriped* r. *ſtriated.* p. 37. l. 25. r. *Fellow of the.* p. 37. l. 25. r. *undivided.*

ERRATA *in this Decad.*

PAGE 54. l. 30. r. *vulg.*

PHARMACO-BOTANOLOGIA:

OR, A

TREATISE

OF

DISPENSATORY PLANTS,

Alphabetically and Claſſically diſpoſed.

DECAD II.

I. *ALCHYMILLA.*

1. *Alchymilla vulg.* C. B. P. 319. Tournef. Inſtit. 508. *perennis viridis Maj. fol. ex Luteo vireſcentibus* Moriſ. Hiſt. 2. 195. *Alchymilla* Raij Hiſt. 208. *Pes Leonis ſive Alchymilla*, J. B. 2. 17. 398. 1. Boer. Ind. 202. Lady's Mantle or Lyons Paw.

2. *Alchymilla perennis incana argentea, ſeu ſericea ſatinum provocans*, Moriſ. Hiſt. *Alpina Quinquefolij folio ſubtus argenteo* Tournef. *Tormentilla Alpina folio ſericeo*, C. B. P. 326. *Alchymilla Pentaphylla* Raij Hiſt. 209. *Pentaphyllum ſeu potius Heptaphyllum argenteum flore muſcoſo*, J. B. 2. 398. f. Satin or Silver-leav'd Lady's Mantle.

3. *Alchymilla minima montana* Column. p. 1. 146. Tourn. *Annua minima hirſuta folijs inferne candicantibus* Moriſ. Hiſt. *Chærophyllo nonnihil ſimilis*, C. B. 152. *Percepier Anglorum quibuſdam*, J. B. 3. 27. 74. *Percepier Anglorum* Raij Hiſt. Parſleypiert.

The *TRIBE.*

This is the ſecond of the *apetalous* Claſs in this Catalogue, it ſwerves from *Tourneſort*'s general Rule, by containing more than one Seed in the Seed-veſſel, as himſelf owns, neither do's the *Perianthium* or Cover-Flower become the Seed-veſſel.

The *Deſcription.*

1. The firſt has a hard, black, fibrous *Root*, bottom *Leaves* at firſt appearance folded up like the Umbrella of Women, afterwards ſtretch'd forth upon long Pedicles, diſpos'd in a Circle round like thoſe of *Mallows*, of a yellow Green, more finely indented or notcht, with for the moſt part ſeven Veins ariſing from the Center, and ſo many ſuperficial Lobes, ſometimes half round, at other times more pointed, eſpecially thoſe on the *Flowering-ſtalk*, which being round, thick, hairy, not above one Foot long, weak and lying on the Ground, is thick beſet with gradually leſſer *Leaves*, upon ſhorter *Foot-ſtalks* not much branch'd. The *Leaves* are ſeldom wet, but are bedew'd with drops of Water, as if the Surface were Oily. The *Flowering-ſtalk* and *Leaves* are ſtill more yellowiſh as they aſcend, ſupporting ſmall herbaceous *Flowers* upon ſmall *Foot-ſtalks*, with an inverſe conical *Empalement*, enlarg'd into four larger and four leſſer pointed alternate Segments (ſo as the one would ſeem to be the Coverflower to the other) with a ſhort hollow Pointal, ſurrounded by four ſhort Chives, and yellow Summits. The Seed-veſſel which was never a part of the Flower, contains for the moſt part two Seeds.

2. The Second is in all Reſpects leſs than the other; its flowering Stem much ſmaller; its *Leaves* divided to the Center into five or ſeven blunt Segments, dark Green above, and of a Sattin or ſilky Silver colour below.

3. *Parſleypiert* is a ſmall, low, annual Plant, has finely notch't, triply divided, alternate Leaves, narrow towards the *Stalk*, and broad at the End, ſomewhat lighter Green below, apetalous *Flowers*, with an *Empalement* only enlarg'd into four Segments.

The firſt grows frequently in dry Meadows, and Paſtures; flowers early in the Spring, when its obvious by its yellow Green before the *Leaves* are at their full Bigneſs. The *Silver-leav'd* is more rare; it ſeems

to

to be a mountainous Plant, waſh'd down to the low Countries by the rapid Winter Streams; for its often found in dry Water-Courſes; it grows according to Mr. *Ray* in Rocks, not far from *Hurſtwater* near *Perreth* in *Weſtmorland*, alſo in *Yorkſhire*. I found it in a dry Water-courſe in the Wood of *Methuen* near *Perth*; alſo in the ſame Soil in *Athol* near the River *Tay* in *Scotland*, for the moſt part along with the *Britiſh Sorrel*. Being an agreeable, low, delicate Plant, its often tranſplanted and cultivated in Gardens.

Parſleypiert grows in dry Grounds, and paſture Fields, alſo among *Corn*.

Virtues and *Uſes*.

Lady's Mantle is by all eſteem'd a potent Aſtringent. Its therefore a great Vulnerary, by curbing the immoderate Efflux of the *Sanies*, and watriſh Humours in ſome Wounds, and cacoethes Ulcers, and diſpoſing them to a better Digeſtion, by incraſſating the purulent Matter in Fomentations; when it alſo prevents the riſing of proud Fleſh. The Juice or dry'd Leaves in a Decoction, curbs the Milk, and firms the too relax'd Fibers in the Breaſts of Women. *Simon Pauli* attributes other Virtues to it, as in the Margent, * from which as from the Figure of the Leaves its probably called the *Lady's Mantle*. Inwardly giv'n in Infuſions and Decoctions, it ſtops the immoderate Flux of the *Menſes* and *Fluor albus*; alſo its preſcrib'd in vulnerary Potions for inward Bruiſes, ſpitting of Blood, bloody and common Flux. The Leaves are only in Uſe, and the dry'd Powder may be inwardly giv'n in the aforeſaid Caſes, it ſcarce enters any Shop-Preparations. The *Silver-leav'd* has the ſame Virtues, as alſo the *Parſleypiert* from the Taſte, though it be generally eſteem'd a potent Diuretick, and is either giv'n in boil'd Sallads, or eat as a Pickle for provoking of Urine, and expelling of the Stone, from whence 'tis call'd *Parſley Breakſtone*; but I ſuppoſe this Conceit has proceeded from ſome Reſemblance it has to *Parſley*, which is noted for theſe Virtues.

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* *Nonnullæ defloratæ pudicitiæ virginum quæ ubi jugum paſſæ ſunt ſolerter norunt Decocto Alchymillæ στυφοχρειαν ac obſignata quaſi natura mentiri illabatam caſtimoniam & florem virginitatis. Aq. etiam Alchymillæ diſtillata flaccidas mammas imbuunt ut iis priſtinum virginale decus iterum reſtituant taleſve hac arte reddant*, S. Pauli Quadripartit. *Bot. p.* 17.

II. *Alke-*

II. *Alkekengi.*

Alkekengi Offic. Tournef. Inſtit. 151. *Solanum Veſicarium* Dod. pempt. 454. C. B. P. 166. *Solanum Halicacabum* vulgare, J. B. 3. 34. 609. Raij Hiſt. 681. *Solanum Veſicarium vulgatius repens fructu & veſica rubro,* Moriſ. Hiſt. 3. 526. Boer. Ind. 2. 66. Winter Cherry.

The *TRIBE.*

This is the firſt *Bacciferous* or *Berrybearing* Plant in this Catalogue, ſo claſs'd by all Authors, whether they more eſpecially have a regard to the *Flower* or *Fruit*; its near of kin to the *Nightſhades*, with a monopetalous quinquifid Flower, and monophyllous quinquifid Empalement.

The *Deſcription.*

It has a jointed very creeping *Root*, ſending forth ſmall *Fibers*; round, reddiſh, jointed, marrowy, upright *Stalks*, one or two Foot high; *Leaves* by Pairs, upon long Foot-ſtalks, from the Joints larger and darker, but of the ſame Figure with thoſe of the *common Nightſhade*, with even, not notch'd, Edges. The Flowers upon long, ſomewhat hairy, *Footſtalks*, white, large, monopetalous, and open, divided into five pointed Segments, with a ſmall, long Pointal, and a round Button; cloſely ſurrounded by five *Chives* with oblong yellow *Summits*. The looſe *Empalement* is divided into five Segments. As the Flower decays, it is extended and puff'd up like a Bladder ſtretch'd beyond, and encloſing the Fruit, which being firſt Green, becomes afterwards a round, pulpy, pale-red Berry, hanging downward, about the bigneſs of a ſmall Cherry, with many flat Seeds; it flowers in *July* and *Auguſt*, and ripens the Fruit in *September*. Its only cultivated in the *Britiſh* Gardens, but is a Native of *France*.

The *Virtues* and *Uſes.*

The *Berries* are chiefly us'd, and are kept dry in the Shops, they are eſteem'd potent Diureticks, and recommended for allaying the Acrimony of Urine, and making a plentiful Evacuation of it. They open the Pores, and reſerate Obſtructions, and therefore are good for the *Jaundice*, and other Diſeaſes of the *Liver* and *Gall-Bladder*, proceeding from the want of a due Percolation of groſs and viſcid Humours in the minute

Glans

Glands, there by its attenating Parts, it alſo cauſes a plentiful evacuation of Waters in the *Dropſy*. *Tournefort* tells us, the Leaves are acrid and bitter, though they do not render the blew Paper ſo red as the Berries. An Infuſion of the Leaves in Wine, may be drank in Hydropical Caſes, and by Perſons ſubject to the Gravel, an Emulſion may be made of the Seeds, or the green Juice may be drank in the forenam'd Caſes; but the Syrup is the more adviſable, becauſe of the Acrimony of the crude Juice: In a Word, it ſeems to partake of the Virtues of moſt of the *Nightſhades*, to which by its Characters its near of Kin, as may be ſeen when we come to treat of them. The Shop Preparations are *Trochiſc. Alkekengi*, it enters the *Syr. de Cichor. cum Rheo.*

III. *Alliaria.*

Alliaria C. B. P. 110. J. B. 2. 21. 883. Raij Hiſt. 792. *Heſperis Allium redolens* Moris Hiſt. 2. 252. Tournef. Inſtit. 222. Boer. Ind. 2. 17. Sauce alone, or *Jack* by the Hedge.

The *TRIBE.*

Jack by the Hedge being the firſt that introduces the *Tetrapetalous* Claſs, I ſhall inſiſt a little upon its conſtituent Characters. The *Tetrapetalous* Plants are of two kinds, each having *Siliculous* and *Siliquous* Fruits; the one with plain and ſimilar Petals, the other Diſſimilar, of different Shapes and Figures. The one called *Cruciformes* or *Croſs-like* by *Tournefort*, becauſe the Petals are plac'd two and two oppoſite to each other in form of a Croſs; the other called *Papilionaceous* by *Cordus* a *German*, about two hundred Years ago, becauſe of their reſemblance to a Butterfly, of which hereafter.

Theſe *Croſs-like Flowers* of which we now treat, are variouſly to be conſidered. I. They are for the moſt part Annuals in their Duration, ſome Biennials, but few Perennials, except ſome of the Waterkind. II. Their Texture is for the moſt part ſoft and tender, the *Stalks* herbaceous, ſeldom or never Woody, frequently hollow, ſometimes groſs and thick, very pithy and marrowy. III. The *Leaves* frequently much larger in proportion to the bulk of the Plant, or bigneſs of the *Flower*, always Alternate, or quite ſurrounding the Stalk, ſeldom or never ariſing by Pairs from jointed Stalks. IV. The *Flowers* ſmall in proportion to the Plant, chiefly indeterminately and irregularly plac'd in a long Spike upon the upper part of the Stalk and Branches, and but ſeldom in irregular Umbells or Tufts; the four Petals chiefly of a white, more rarely of a blewiſh or red, but frequently of a yellow Colour, falling off when the Fruit begins to en-

creaſe along with a four Leav'd, for the moſt part oblong Empalement. V. The Pointal ſurrounded by five or ſix Chives becomes afterwards 1. a Fruit, not a Pod, but bicapſular, containing one ſingle Seed; 2. a Siliculous Pod, ſhort, ſmall or round, and bicapſular. 3. A ſiliquous and bicapſular Pod; 4. A Pod ſiliquous and articulated or jointed; and 5. an unicapſular Pod. VI. Their Taſte is frequently wateriſh and inſipid, ſeldom bitteriſh, for the moſt part hot, eſpecially the Waterkind. Thoſe with carnous Roots are wateriſh taſted, mixed with a more or leſs penetrating hotneſs. VII. The Seeds are ſmall, round, hot, bitteriſh, and very Oily. VIII. They are generally good attenuaters, reſeraters of Obſtruction, Diuretick, Lithontriptick, Antiſcorbutick. The Oleraceous Kinds very Nutritive, very few conſiſting of groſs and aſtringent Particles.

The *Deſcription.*

Alliaria is an annual ſtreight Plant, ariſing one or two Foot high, with broad, light-green Leaves, notch'd in the Edges, larger and more round towards the Bottom; leſs and more Pointed, upon ſmall Foot-ſtalks in the Aſcent; ſmall white tetrapetalous Flowers, to which ſucceed upon the top of the Stalk and Branches, ſmall, oblong, bicapſular Pods with ſmall round Seeds. The whole Plant has a Garlick Taſte and Smell, from whence it has its Name. It flowers in *April* and *May*, and ripens the Seed in *June*, and grows at the ſides of Ditches and Hedges.

Virtues.

The tender Leaves makes a good Pickle, its a good attenuater and provoker of Urine; the dry'd Leaves are ſaid to be good againſt Poiſon: it cuts and incides groſs and viſcid Humours, its believ'd to have the ſame Virtues with *Scordium*, but more mild; its good in the Collick and Nephritick Pains. The Juice or Powder externally apply'd, cleanſes ſordid and putrid Ulcers. 'Tis ſeldom us'd in the Shops.

IV. *Allium.*

Allium Sativum, C. B. P. 73. Tournef. Inſtit. 383. *vulgu & Sativum*, J. B. 2. 19. 554. Raij Hiſt. 1125. *Sativum porraceis foliis*, Moris Hiſt. 2. 387. common Garlick.

V. *Cepe.*

V. *Cepa.*

Cæpa vulg. C. B. P. 71. Moris Hiſt. 2. 383. Tournef. Inſtit. 382. *Cæpe ſive Cepa rubra & alba rotunda*, J. B. 2. 19. 547. Raij Hiſt. 1115. Dod pempt. 687. The Onion.

VI. *Porrum.*

Porrum Commune capitatum, C. B. 72. Tournef. *Porrum* J. B. 2. 19. 551. Moris Hiſt. 2. 390. Dod. pempt. 688. Raij Hiſt. 1126. common Leek.

The *TRIBE.*

Here is introduc'd a new Genus in ſeveral Reſpects, 1. They are Monocotyledones in reſpect of their Seed-Leaf, which is ſingle. 2. They are Bulboſæ in regard to their Roots, and that Twofold; *Squamoſæ nucleatæ*, and *Squamoſæ non nucleatæ*, that is, the Garlick Root conſiſts of ſeveral ſmall Bulbs, each involv'd in a common Coat, and conſiſting of ſeveral proper Scales, each ſurrounding the other to the Center, whence the common Germen or Bud proceeds, and ſeveral Bulbs are incloas'd within one common Coat or Membrane. The Onion and Leek Roots are ſaid to be *Squamoſæ & Tunicatæ*, when one ſingle Bulb conſiſts of ſeveral ſphericalScales to the Center, and ſurrounded with one Membrane, without any other Bulbs along with it. 3. In reſpect of their *Leaves* they are *Graminifoliæ* Graſs-leav'd, ariſing broad from the Root, and ſtill tapering towards the Point, either broad or narrow, and flat, or hollow and Fiſtulous. 4. In reſpect of their Flower, they are called by *Moriſon Hexapetalæ Tricapſulares*, in which he is followed by *Herman* and *Volkhammer*: and by *Tournefort Flores Liliacei.* Theſe his *Lilly-flowers* he defines thus; that they are Flowers which are either Hexapetalous or Monopetalous, divided into ſix Segments, but whatever the Faſhion of the Flower be (for ſome are large, ſome leſs, ſome Monopetalous, others Hexapetalous, and ſome Tripetalous) its all one to him if the Fruit be Tricapſular. Thus far I thought fit to give an Account of the *Bulbous*, *Graſs-leav'd* and *Lilly-flower'd* Tribe, that I may refer to this Place, whatever may occur of theſe Tribes hereafter.

The *Deſcription.*

IV. *Garlick* has a compound *Root*, conſiſting of ſeveral ſmall Bulbs, included within one common Tunicle or Membrane, ſending forth ſeveral ſmall,

ſmall, round, white Threads from the lower Parts, by which it receives the Nouriſhment; theſe ſingle Bulbs being planted early in the Spring, ſend forth ſeveral ſmall, narrow, darkgreen, graſſy *Leaves*, Concave without, and Convex within, or longitudinally Convex, and hollow like a Sword-blade, and ſharp Pointed: Amidſt theſe in the Autum (or perhaps not till next Year upon the planting of the whole Root, without ſeparating of the Bulbs) ariſes a ſmall, round, ſmooth, ſtreight *flowering Stem*, one or two Foot high, bearing on the Top a compact Globe, or Tuft of Flowers; firſt involv'd in a common Tunicle, which burſting as the Tuft increaſes, ſends forth ſeveral little hexapetalous Flowers, upon very ſmall, ſhort Pedicles; the Petals whitiſh, or pale Blew pointed with ſix Chives, and a Pointal in the Middle, which afterwards becomes a three-ſquare and tricapſular Fruit full of Seeds. *Boerhave* rightly obſerves, that theſe are for the moſt part Male-flowers, without any ſucceeding Fruit; but that there are ſeveral carnous Bulbs in the Interſtices, betwixt the Pedicles of the Flowers, and cloſe adherent to the top of the Stalk, which being committed to the Ground, encreaſes as other bulbs of Roots do; he makes a doubt, whether theſe Bulbs are Impregnated by the Male-duſt, as the Seed in Seed-veſſels are; but I am of Opinion, theſe are truly Roots, and not Seeds, for its plain, that theſe Bulbs on the top of the Stalk do emit ſmall Pedicles, which ſupport the Male-flowers; and the reaſon why the Flowers are not Hermaphrodite, is, becauſe there is ſo much Nouriſhment beſtow'd upon the Bulbs, that the Pointal in the center of the Flower is ſtarv'd, and the Fruit cannot ſwell ſo as to perfect the Seed. This happens to other Monocotyledones, as well as bulbous Plants. I have ſeen in the boſom of the Leaf, betwixt it and the Stalk in the Orange-lilly, ſeveral of theſe Bulbs burſt forth, which when committed to the Ground, puſh'd forth ſmall Fibers alſo, and became Roots. I have alſo obſerv'd in a very rainy Harveſt, when they did not dare to cut down the Corns for fear of rotting on the Ground, that the ripe Wheat ſtill on the top of the grown Stalk, has ſprung forth after the ſame manner as Barley does in Malting; becauſe of too great a ſupply of Moiſture, we ſhall obſerve more of this when we come to *Arthanita*. *Garlick* Roots ſhould be taken up in the Autumn, and the ſmall Bulbs planted in the Spring, for if it remain in the Ground all the Winter, each of the Bulbs will ſpring forth, and ſo the Roots which are only in uſe, will be of no uſe at all.

V. The *Onion* grows like the former, its Root only conſiſts of one Bulb, which ſometimes encreaſes to a pretty bigneſs. The Leaves are Fiſtulous, which is peculiar to this Plant. It do's not flower the firſt Year, but in order to render the Root (which grows ſuperficially in the Ground) the bigger they trample down the Leaves, and in the Autumn take up the

Root,

Root, which being planted deeper, and near a Wall, in fat Ground next Spring, it then emits an hollow turbinated flowering Stem, ſupporting an umbel or tuft of Flowers like the former, but few or none of thoſe Bulbs upon the top of the Stalk. The tricapſular Seed-veſſel is perfected in *September*.

VI. The *Leek* grows like the former, the ſmall white *Fibers* from the lower part of the *Root* are ſtronger, and more numerous. The *Root* a little enlarg'd below, is rather Cylindrical than *Bulbous*; the *Leaves* are much broader than thoſe of *Garlick*, more blewiſh, flat, longitudinally Sulcated, or ridg'd, and pointed like thoſe called hollow Sword-blades. Its of a ſlower growth than any of the former, it do's not require to be taken up in the Autumn, but remaining in the Ground, is only fit for Kitchen uſes. The ſecond Summer it flowers, but has not Bulbs ſo frequently interſpers'd upon the top of the Stalk as the *Garlick*, its only manur'd in Kitchin Gardens.

Virtues and *Uſes.*

Manur'd *Garlick* has an high Scent, and ſtrong Taſte, conſiſting of penetrating, ſubtile Particles; upon which account 'tis a potent *Attenuater*, great provoker of *Urine*, *Lithontriptick*, *Stomachick*, *diſcutient* and *expeller of Wind*. In *Gravelly* caſes a Decoction of one or two *Garlick Heads* in a *Cliſter*, makes a plentiful evacuation of *Urine*, as does an Infuſion of it in white Wine, and made in a *Poſſet*, drank warm in good quantity, prove effectual in violent fits of the Gravel from a ſtoppage of Urine. Some ſwallow whole Cloves of it, (*i. e.* the little Bulbs) to avoid the nauſeous Taſte, in a Morning faſting to excite the Appetite, and expel the Wind. The *Ung. Soleare Phar. Bat.* being a Decoction of the *Rad. Allij* with Hogs Lard over a gentle Fire, ſtrain'd and ſpread forth when cold, being apply'd to the Soles of the Feet in Children, proves an effectual Remedy in the Chincough, its ſo penetrating, that even their Breath will ſmell ſtrongly of it; its a good *Pectoral*. Being given among Oats, its much commended for the Cold in Horſes. They eat it with Bread in the South of *France* and *Spain* for the ordinary Dyet, but being ungrateful to thoſe in theſe Northern Climates, ſome ſubſtitute *Onions*, and others eat *Ramſons* or *Allium latifolium paluſtre*.

Onions are both good for the Pot, and for phyſical Uſes; the tender Plant is a frequent Ingredient in cold Sallads. They are frequently boil'd in Broaths, but the *Noctambuli* and *Somniloquaces* had need to beware of them, for by Experience it has been found, that ſuch as are addicted to walking or ſpeaking in their Sleep, have been more giv'n to it upon the eating of Onions, and by boiling them (in a Rag for fear of Diſcovery) among

Broath ſome have diſcovered Secrets in their Sleep after the taking of th Broath, which they would not have told if awake; ℞ *Ceparum ſub cineribus toſtarum, ficuum pinguium, Ung. Baſilici, S. Althæa ana* ℥ij. M. f. *Cataplaſma* is a potent Emollient for ſuppurating of hard, indurated, glandulous and ſchirrous Tumours, and an effectual Diſcutient if timely apply'd. *Roaſted Onions* inwardly taken, when their Acrimony and hot Taſte is deſtroy'd, are good Pectorals in Colds and ſhortneſs of Breath.

Leeks partake of the ſame Vertues, but are rather us'd in the Kitchin, than the Shops, where the other two ſupply their Place.

Alnus nigra Baccifera vide *Frangula.*

VII. *Aloe.*

The Plant *Aloe* comes next in courſe of the Alphabet, which though of little or no uſe in *Phyſick* in theſe Northern Climates, yet ſince the Gardens of the Curious have of late Years been ſo well ſtock'd with a great variety of its *Species*, ſince its *inſpiſſated Juice* from the hotter Regions is ſo univerſally known in the *Druggiſts* and *Apothecaries Shops*; and ſince there are ſeveral Things in it worthy of Obſervation, I have thought fit, 1. To give a general Deſcription of the Plant it ſelf, without determining the officinal Species. 2. To give an Idea of its Texture and Nouriſhment, and 3. To give ſome probable Conjectures concerning the Parts which afford, and the manner of procuring the inſpiſſated Juice.

The *TRIBE.*

Its the firſt ſucculent Plant we meet with, and is juſtly ſaid to be of kin to the *Seda*, being *Planta Succulenta, Semperviva, Sempervirens & acaulis, flore tubuloſo, liliaceo, oblongo, in ſex partes Secto, ſtaminibus ſenis, cum ſuis apicibus, fructu triquetro in tria Loculamenta diviſo, ſeminibus planis.*

The *Deſcription.*

It has a proportionally thick, hard, ſhort *Root*, ſoon diſpers'd into a great variety of ſmall, numerous, hard *Fibers*; the *Leaves* ariſe from the Root, circularly diſpos'd, thin, membranous and flat at firſt, afterwards becoming more or leſs thick and juicy, or thin broad and fibrous, tapering ſooner or later according to the bigneſs of the Plant, or length of the Leaves, with or without Prickles, terminating in a point of various Figures and Colours; a proportional ſmall, round, naked, for the moſt part weakand infirm flowering Stem, one or more, as there are circles of Leaves from the ſame Root, ariſes from the Center, ſupporting upon ſmall,

weak,

weak, thin diſpos'd Pedicles, ſmall, oblong, monopetalous Flowers, narrow and tubulous, ſomewhat bulg'd at the bottom, more or leſs deeply divided, and more or leſs expanded into ſix pointed Segments, with ſix Chives ſupporting ſo many horiſontal, long Summits, and ſucceeded by a threeſquare Fruit, divided into three Pouches, large in proportion to the Flower, but both very little in reſpect of the bigneſs of the Plant, fill'd with a great many flat Seeds.

Structure and Manner of Nouriſhment.

The Structure, or rather Texture of the Leaves, is either more Vaſcular and Fibrous, more Veſicular and Cavernous, or equally both, tho' this third kind be leſs frequent.

The Vaſcular are thoſe whoſe Leaves conſiſt of a congeries of Paralel, Longitudinal Fibers paſſing from the Root to the Extremity. The Veſicular and Cavernous, when ſeveral large cavous *Tubuli* paſs longitudinally along the outer part of the Leaf within the common Membrane, which deſerves not the Name of Bark, and when all the inner Subſtance is filled up with a tranſparent Juice. The third kind is, when the outer Subſtance is compos'd of ſeveral rows of theſe paralel *Tubuli*, and this viſcid Juice poſſeſſes the middle part of the Leaf.

By the Vaſcular Subſtance I underſtand thoſe Leaves, which when wholy compos'd of theſe paralel, longitudinal Fibers, either bound up into *Faſciculi* or Bundles, or ſeparately diſpos'd along the ſides of each other, do receive the Nutritive Particles from the Root, and convey them to the Extremity, and carry back what is Superfluous towards the Root again; and by other Fibers of the ſame Situation, in order undergo a ſecond, or as many ſubſequent Circulations as are requiſite for encreaſing the bigneſs, or preſerving the Oeconomy of the Plant by attenuating the *groſſer*, preparing the more *Reſinous*, and ſeparating the more *viſcid* and *aqueous Particles*; and this is for the moſt part obſervable in the largeſt *ſpecies* of *Aloes*, whoſe Leaves are uſually broad, flat, long, pointed, more or leſs prickly, and either of a pale Green, or ſpeckled Colour.

The Veſicular and cavernous Kinds, receive the *nutritive Particles* from the *Root*, by the forementioned *Tubuli*, which are more cavous, and much larger than the former, not unfitly to be compar'd to the Pipes and Stops of an *Organ*; where the groſſer and more *reſinous Particles* ſtill remain, and whence is diſcharg'd by the Extremities, the ſuperfluous, *aqueous*, and *viſcid Particles*, which by degrees diſtend the Veſicles and Bladders containing this viſcid Subſtance, and render the *Leaves* of the leſſer and leaſt *Species* ſo very *thick*, *round*, *ſquare*, *triangular*, and many other different Figures, with a white, sky-blew, blewiſh, or plain Green, agreeable *tranſ-*

verſe

verſe variegation of Speckles, and plain, or with more or leſs numerous longer or ſhorter Prickles.

The Structure of the third kind, is when two, three or more rows of theſe cavous *Pipes* poſſeſs the external part of the ſide of the *Leaf* towards the Circumference, and its oppoſite ſide towards the *Center*; and when the middle Subſtance, which thickens the *Leaf*, is fill'd up with this viſcid and limpid *Juice*: From this Idea of the Structure of theſe *Leaves*, I proceed to explain the ſeveral *Phænomena* of this Plant, ſuch as 1. How it can live, being nouriſhed by ſo ſmall a quantity of Earth, that if of any Age it will even exceed the weight of the Earth, in which it grows. 2. How it comes to live in the Air without any ſupply of Earth at all. 3. Why of ſo ſlow a growth; and 4. How it comes to live to ſo great an Age.

For the firſt it is chiefly owing 1. To the ſtrictneſs of the Pores of the external Membrane, by which none of the Particles it receives from the Earth, whether Nutritive or otherwiſe, are Evaporated. 2. To the viſcidity of the Juice by which its incapable to perſpire or paſs through ſo very minute Pores; and 3. Its exceeding the weight of the Earth in which it grows, muſt needs proceed from certain extraneous Particles introduc'd into the Earth, when either the Earth or Plant is bedew'd with the Water; for let the Element of Water be never ſo Pure, there are always ſome active Particles fit for Vegetation convey'd along with it, which being once receiv'd into the Body of the Plant, and introduc'd into its Subſtance, and there being no Means to exhauſt it, both bulk and weight of the Plant muſt by degrees be augmented. And I am credibly inform'd where the Aloes is Indigenous, it never Rains, but a balſamick Dew diſtills upon it every Night, and furniſhes it with ſufficient moiſture for its Nouriſhment.

It may be juſtly called *Semper vivens, quia humanam ætatem ſuperat*, for if any of theſe Plants be older than any Man alive can remember, and if it can live till he is dead in reſpect of ſuch an one, it may be call'd Ever-living; and no doubt ſuch Plants as are us'd for extracting the *inſpiſſated Juice*, muſt have their *Leaves* very large to furniſh ſuch an abundance of it, and of a very old date before they can be ſo big, becauſe of the ſlowneſs of Increaſe. We are inform'd, moſt of the *Aloes* have their native Soil by the Sea, and on Sea-coaſts, a proper Climate for furniſhing of this viſcid Juice; for not to ſpeak of the *Algæ* and *Fuci*, which are all viſcid, *ſucculent*, *Sea-plants*, the very Rocks where the Sea-water do's not reach, has a moiſt, viſcid and lubricid Surface, proceeding from the viſcid Steams ariſing from the Sea, which as is obſerv'd, falling upon the circumjacent Earth, and being receiv'd by the Pores at the extremities of the Fibers of the Root, become proper Nouriſhment to this Plant, and being no wiſe

wiſe ſucceptible of Evaporation, do by degrees augment its Bigneſs, and even exceed the Weight of the circumambient Earth.

Semper virens, This is common to it, and a great many Trees and Shrubs, whoſe Surface is always Green, not to ſay, that their Leaves laſt perpetually, but that the old ones never decay, until they be ſuccceded by new ones ready to ſupply their Place; this alſo happens to the *Aloes* ſuſpended in the Air, for no ſooner do the Leaves in the Circumference begin to decay, than freſh Leaves in the Center are puſh'd forth according to the ſeaſon that the Leaves of the Ever-greens periſh, which is uſually in the Month of *April* and *May*, as I have obſerv'd upon tryal of the Experiment, of hanging of an *Aloes* Plant in the middle of a large, well-air'd Room, with an old Cloath wrapt round its Root to prevent the Juice from Evaporating, and the Fibers from being dry'd up.

Its being of ſo ſlow a Growth, muſt proceed from the foregoing Hypotheſes of the Viſcidity of the Particles, which when the Plant chances to live in an impoveriſh'd Earth, unable to furniſh any more nouriſhing Particles, or when being depriv'd of the nouriſhing Earth, by being ſuſpended in the Air, this Sap Circulates but very ſlowly, and with much ado is capable of keeping the Veſicles and Veſſels diſtended, without being able to ſtretch them farther by an additional ſupply of Nouriſhment, which affords a good proof for the Circulation of the Sap in Plants, as well as of the Blood and Humours in Animals; for nothing is more plain, than if the Particles in the *Sap-veſſels* in *Plants*, *ſanguinary Veſſels* in *Animals*; and *Tubuli*, which contain the *Humours* in the *Exanguis* kind once ceaſe to move, the Fluid ſtagnates, and the Subject dyes, becauſe there is a *Solutio continui*, a Diſſolution and Separation of the Particles of the Liquor: the more groſs and viſcid frame the *Coagulum* and *Craſſamentum*, and the more ſerous paſſing through the more narrow Channels, ſuffer the more groſs to remain. This ſhews what ſpecial care ought to be had in the culture of the *Aloes* in theſe cold Climates, *viz.* That it be ſeaſonably expos'd to the Heat, and Air in the Summer, timely taken into the Green-Houſe in the Autumn, conveniently bedew'd with Moiſture, neither expos'd to too much Cold to congeal its viſcid Juice, nor too much Heat to rarifie its more ſubtile Particles; neither muſt it have too much Earth to ſurfeit it, nor too rich and fat to afford more nutritive Particles than its *Tubuli* are able to receive, for then its in hazard of being kill'd by a *Plethora*.

I proceed to a more narrow Conſideration of the Conſiſtence of this *Sap*, which is twofold, *thick*, *whitiſh* or *yellowiſh*, and *bitteriſh*, or *thin*, *viſcid*, *limpid* and *wateriſh* taſted. The firſt is contain'd in the *paralel Tubuli*, and chiefly obſervable in the larger kinds with broad *Leaves*; the other is depoſited into the *Cellulſ*, ſituated in the middle of the leſſer *Species*. Theſe

Celluls are a Contexture of ſo many longitudinal and tranſverſe, thin, and delicate *Membranes*, which interſect each other, and ſeem to have an *Hiatus*, by which this *limpid Sap* is convey'd from the one to the other. And here I cannot but obſerve an Analogy betwixt the Plant *Aloes*, and the *Spleen* in *Animals*. The *Spleen* has but one thin, flaccid, looſe Membrane, with an *Artery*, which diſtributes more Blood into it than is requiſite for its Nouriſhment: This *Artery* paſſes no further than the outer Coat, but diſcharges the Blood into the inner Subſtance, which being compos'd of an infinite variety of *Celluls*, the Blood paſſes from the one to the other, until it return to near the place where the *Artery* enter'd, and is there receiv'd by the *Veins* according to the different ſpecies of *Animals*, whence its convey'd to make up a Root of the *Vena porta*, before it enter the Liver. The uſe of the *Spleen* is reaſonably ſuppos'd to be for Secretion of the *Lymph*, by the *Lymphaticks*, to be convey'd and mix'd with the *Chile* in the *receptaculum commune*, while the Blood is enliven'd by a large Nerve to quicken its Motion, and advance its Circulation when mix'd with the Blood from the other Roots of the *Vena porta*, the better to enable it to undergo the ſeparation of the *Bile in* the *Liver*. The *Leaf* of an *Aloes* Plant on the other hand, receives its Sap by theſe external, large *Tubuli* in its fore and back part, and conveys it to the Extremity, where its diſcharg'd into theſe Veſicles, from whence tis convey'd from one to the other, until it return towards the Origine of the Leaf, where it undergoes a ſecond lent Circulation, and ſoon. During which time the groſſer and thicker Particles are ſeparated, receive in, and adhere to the ſides of theſe large cavous *Tubuli*, being unable to proceed farther, while the thin tranſparent Juice remains always in the middle-part of the Leaf, and the thick keeps ſtill towards the Sides. The thick is the *reſinous* Part, of which the inſpiſſated Juice is compos'd; the thin is the *ſerous* Part which is evaporated by the Sun, while the Juice is a thickening; for the proof of what is aſſerted, I give the following Experiments.

1. A Plant of *Aloes* being three Years ſuſpended in a large well air'd Room ev'ry Spring, the outer Leaves wither'd and decay'd, by which the Sap being deny'd acceſs into the mortify'd Leaf, and being ſtraitned in its ordinary Bounds, exerted it ſelf more vigorouſly in the Center, and there puſh'd forth new Leaves, it had been ſuſpended two Years before I had it. I obſerved it to decreaſe it its Weight, by the falling off of the dry'd Leaves, and having no new ſupply of Nouriſhment. It at laſt dy'd of a *Maraſmus*, as it may be call'd.

2. A dark-green narrow-leav'd *Aloes* with long Prickles, in Dr. *Udal* of *Enfield*'s Garden ev'ry Spring, diſtill'd clear Water from the Prickles, which had it been contain'd within the capacity of the *Tubuli*, muſt have choak'd the Plant.

3. A

3. A Plant of an Hedge-hog *Aloes* in Mr. *Fairchild*'s Garden, was obſerv'd by his Wife, to be as wet as if dipt in a River, though in a dry Green-houſe, and complain'd of it to her Husband, ſuſpecting it to be ſick, which he found to be true, for before next Morning it was dead. That ingenious Gardiner is of Opinion, that had he cut off ſome of the Leaves, or made a ſmall Inciſion in each of them, he might have ſav'd the Plant, as we uſe to bleed in a *Plethora*. See Preface to my *Botanick Eſſays*.

4. Cut a Leaf of a Fibrous broad-Leav'd *Aloes* tranſverſly, you may obſerve the outer part ſweating a yellowiſh, the more inner a whitiſh, and the middle a limpid viſcid Juice.

5. Cut the Leaf of a ſmall, thick, ſucculent *Aloes* tranſverſly, and look through it from one end to the other, and you will obſerve it tranſparent like Oil of Turpentine through a Bladder, or Varniſh through a Phial.

6. Cut the ſame Leaf into a thin Slice, and by a Microſcope you may obſerve the Cavous *Tubuli* in the outpart, and the thin longitudinal *Septa* making up the inſide, in the appearance of ſo many dark Lines, *N. B.* the Juice in the outer *Tubuli* is yellowiſh, the inner Tranſparent.

7. If you cut the Leaf when growing, the Juice in the middle will be fluid, and ready to drop out, let it remain ſome time, it will be congeal'd like Blood in a Porringer.

8. Stretch the thin tranſverſe ſlice with Pins, to preſerve it from ſhrinking upon a white Paper, and you may obſerve when it is dry'd, theſe thin Septa like the Veins of a Leaf, while the intermediate Juice is Evapoporated, and the tranſverſe Septa tranſparent as the thinneſt Bladder.

Concerning the manner of procuring the inſpiſſated Juice.

I had made the foregoing Experiments ſome Years ago, before I had conſulted *Muntingius* his *Aloidarium*, * and am glad to find that theſe my Experiments ſeem to agree ſo exactly with what he has aſſerted from *Columna*, who flouriſhed in the latter end of the 16th and beginning of the 17th Centuries, and has the Character of one of the moſt curious Botaniſts of any former, and perhaps after Ages. Being deſirous at *Naples* to find out the true Method of procuring the Gum, and doubting whether this was the Plant from which ſo noted a Simple in the *Materia Medica* was procur'd; he cut into ſmall pieces a Leaf of the Plant, and ſome part of the Root he found nothing of that bitteriſh Juice, but a certain mucous Subſtance

* *Munting. Aloidarium*, p. 24. Amſtel. 1682.

of

of an inſipid Taſte. Therefore having cut off ſeveral of the Leaves for Experiments ſake, it came in his Mind, that this Juice might not proceed from the carnous Part, or *Parenchyma*, but from the Veins (which I call the *Tubuli*) upon the Obſervation of which, tearing ſome of the Leaves freſh from the Root, he found a little of a yellow Juice to flow from the Orifices of each of theſe Veins, and ſaw it diſtill by ſo many drops. upon repeating the Experiment, he became aſſur'd that this muſt only be the yellow venal Juice, which being afterwards inſpiſſated by the heat of the Sun, becomes what is called the *Gum Aloes*; wherefore having ſuſpended ſeveral of theſe Leaves above a glas'd earthen Pot, he obſerv'd this yellow Juice to diſtil naturally from the Veins, and even he could preſs and ſqueeze it out with his Hands. Having thus obtain'd a ſufficient quantity of Juice, and expos'd it three Days to the Sun, and ſtirring it ſo, as what thicker parts adher'd to the Sides, might be mix'd with the thinner part in the middle frequently in the Day time, and expoſing it to the cool of the Evening, he found ev'ry Morning a friable compleatly thickned Juice. The Colour declin'd from an Orange, to a more dark, a little reddiſh, and at laſt quite black like a Liver.

This Experiment is ſo very anſwerable to my Opinion, that its the fibrous broad-leav'd *Aloes*, prickly or not prickly, that furniſhes moſt of the Gum; that though theſe Veins in the leſſer Species may contain a ſmaller quantity of this bitter purging Subſtance, yet their Thickneſs and Bulk is chiefly ſtuff'd with this lymph or gelly Subſtance fit for no Uſe; but that all the Species of *Aloes* according to the quantity of theſe Veins, afford more or leſs of this more uſeful concreted Subſtance.

VIII. *Alſine.*

Alſine Media, C. B. P. 250. Moriſ. Hiſt. 2. 550. *vulg. ſive Morſus Gallinæ*, J. B. 3. 29. 363. *Minor* Dod. pempt. 29. Tournef. 242. Boer. Ind. 1. 209. Raij Hiſt. 1030. Common Chickweed.

The *TRIBE.*

This is the firſt *Roſaceous*, or *Roſy Flower* the Alphabet affords, whoſe Definition according to *Tournefort* (the Author of that Name) is, that they conſiſt of ſeveral *Petals* diſpoſed in a Circle round the *Stamina* or *Chives*, as in a *Roſe*. Their Number is not neceſſary to be regarded, but their Diſpoſition, for this is certain, that uncertain; they ſeldom conſiſt of two *Petals* (of which there is only one, though not *Officinal*, viz. *Circæa*) or four, as in *Papaver*: commonly of five. Thoſe which exceed this Number, are called *Polypetalous*, with many *Petals*, as varying in the Number.

Alſine

Alsine is called, by *Morison pentapetalous*, and *unicapsular*: *enangiospermos*, and *vascular*, by *Ray*: and *monangiospermos*, by *Boerhave*; that is, whose *Seeds* are contained in a *Seed-vessel* with one *Pouch*; for according to the Number of the *Pouches* in the *Seed-vessels*, they are called *Monangiæ*, *Diangiæ*, *Triangiæ*, &c. According to the Number of the *Seeds*, they are called *Monospermæ*, *Dispermæ*, *Tetrasperma*, &c. and according as they are *naked Seeds*, or included in a *Seed-vessel*, they are called *Gymnospermæ*, or *Angiospermæ*.

The *Description.*

It's a small *Plant*, with low, creeping, infirm, brittle, jointed *Stalks*; dispersing numerous *Branches*, not ascending (from a small annual fibrous Root) above half a Foot high, having two small, roundish, or pointed *Leaves*, arising by Pairs from each Joint; and several small *Rosaceous pentapetalous white Flowers* (the *Petals* are bifid, which Note distinguishes this *Genus* from *Spergula*, the *Petals* of which are entire) on the Top surrounding three, four, or more, *Chives* with double *Summits*, and contained in a five-leav'd, deep divided *Empalement*, to which succeeds a small oval or conical *unicapsular Fruit* or *Seed-vessel* opening at the Top, and shedding many small, round, browniſh *Seeds*. It flowers all the Summer, and delights in moist Places, and fat Ground of well manur'd Gardens.

Virtues and *Uses.*

Chick-weed is probably so called, from the great delight Chickens have in it. It's so low, tender, and of so soft a taſt, that they pick at it greedily, even from their breaking the Egg shell. It's moderately astringent, and therefore may be boyl'd with good Success in Chicken-Broath to consumptive Persons; for such Plants as consist of temperate, astringent and absorbent Particles, correct the Acrimony, curb the Serum, and more compactly unite the few balsamick Parts which remain in so sharp a Blood as consumptive, hectick and phthysical Persons are for the most part corrupted with. Hence it is, that these moderate Astringents may be justly esteem'd good Vulneraries, for externally apply'd to Wounds, they blunt and sheath those sharp and cutting Salts which are the causes of those acute Pains felt at the first and second Dressing. They restrict the capillary Vessels, so that the thin, serous, and ichorous Matter ceases to flow out in such abundance, and the balsamick parts of the Blood being only discharg'd into the Wound, is soon converted into what is called *Laudable Pus*; and inwardly given, they correct the acrimonious Matter especially in the Lungs, whose tender Texture is soon vitiated, and made capa-

ble of Exulceration. Thus the diſtill'd Water of *Chick-weed*, or an Infuſion of it in Wine, is much commended in hectick Caſes; it's ſaid to be good for the convulſive Fits in Children, by giving a Dram of the Powder frequently. By its moderate Aſtringency, it's capable to reſtrain the immoderate Flux of the Hæmorrhoids, and eaſe the Pain; the Juice is vulnerary and deterſive, and recommended for cleanſing the Mouth in caſe of the *Apthæ*; apply'd to the Breaſts, it diſſolves grumous Milk, and curbs too great an abundance of it. In a Word, it performs the Office of moſt of the other temperate Aſtringents, but (whether becauſe of its being ſo common I know not) it is but ſeldom uſed in Phyſick.

Althæa vide *Alcea.*

IX. *Amaranthus.*

Amaranthus ſimplici panicula, C. B. P. 121. Tournef. 235. *purpureus* J. B. 2. 23. 968. Raij Hiſt. 202. *Maj. paniculis ſurrectis rubris* Moriſ. Hiſt. 2. 602. *ſpicatus*, Boer. Ind. 98. Floramour or Flower-gentle.

The *TRIBE.*

Dr. *Morriſon* ſeems to be the firſt who determin'd this a *pentapetalous Plant*, but look'd upon it as ſo near a kin to the *Apetalous*, that he places it the laſt among the *Pentapetalæ*; and the *Atriplex* the firſt among the *Apetalæ*. *Tournefort* makes it a *roſaceous Flower*; but neither *Ray* nor *Boerhave* have follow'd him in that. Indeed according to *Tournefort*'s Rule, that the *Apetalæ* are *gymnomonoſpermæ*, whoſe *Empalement* becomes the *Husk* to one naked *Seed*; this cannot be look'd upon as ſuch, for 'tis plainly *Angiopolyſpermos*, whoſe *Seed-veſſel* contains many *Seeds*; but if we conſider, that they are *petala non caduca*, ſince they do not fall off, its a Matter indifferent whether they ought to be called *Petals* or *Leaves* of the *Empalement*, eſpecially ſince they are not ſtrictly ſpeaking *colore inſignes*; for it is not the *Flower* alone, but the whole *Spike* or *Coma* that becomes conſpicuous, purple or red, or whatever other Colour. It's true, the like happens to the *Horminums*, but then they have regular *monopetalous Flowers*, and diſtinct *Empalements*, whereas here either the *Empalement* or *Petals* are wanting.

Deſcription.

It's an annual *Plant*, ariſing to two Foot and higher, according to the Soil, with a *ſtreight*, *ſtriated*, *branched Stalk*, large, alternate greeniſh, and ſometimes

times purpliſh *Leaves*, broad at the Baſe, and pointed at the Extremity; with equal Edges; the Stalk terminates in a pretty long Spike, in ſome Species erect, in others dependent, thick ſet with *roſaceous* or *apetalous Flowers*, conſiſting of five oblong, narrow, pointed *Petals* or *Leaves* of divers Colours along with the Spike. The *Chives* ariſe in the middle, united at the bottom of the Flower. The *Stylus* ſomewhat forked at the Top, becomes a round, inclining to an oval, *Seed-veſſel*; opening tranſverſly when ripe, and pouring out ſeveral rediſh or white ſhining *Seeds*. The *Spike* if early pull'd, will keep the Colour a long time without fading, neither do the *Petals* or *Leaves* of the *Empalement* ever decay when the *Seeds* are ripe. Its ſown in Gardens, and flowers in *July* and *Auguſt*.

Though I have only given the *Synonima* of the *Amaranthus purpureus*, there are ſeveral other Species to be had among the Florifts, all which ſerve for the ſame Purpoſes.

Virtues and *Uſes*.

Floramour is but of little or no uſe in Phyſick, it's generally eſteem'd a potent *Aſtringent*, and is capable of producing the Effects as ſuch, (*viz.*) diſcuſſing of Tumours, and abating of Swellings, being apply'd either in Juice or Fomentations externally, and in *Diarrheas*, *Dyſenterys*, ſpitting of *Blood*, *Hæmorhagies*, *Hæmorrhoids*, and *fluxus menſium nimius* being internally given in Powders; it ſeems to partake of the ſame Virtues with *Plantain*, is fit for the ſame Uſes, and may be look'd upon as near of kin to it by the *Spike*, by the texture of the *Flower*, (though the one be *monopetalous* and the other *polypetalous*) and by the *Fructification*; the Figure and Manner of opening of both *Seed-veſſels* being the ſame. This *aſtringent* quality is very diſcernable by the Taſt, and by the Tenacity of the Colour, which like thoſe artfully engrain'd by potent *Aſtringents*, is a long time before it fades, as we ſee in the *flores Balauſtiorum*, ſo well known for its Aſtringency, and for the Durableneſs of its deep red Colour.

X. *Ammi*

Both by the Alphabet and *Tournefort's* Example, comes next to be conſidered, being the firſt of that large and conſpicuous *Tribe* of *umbelliferous Plants*, early claſs'd together by Authors, eſpecially *Cæſalpinus*, and the two *Bauhini*; but firſt of all brought into a regular Diſtribution by the celebrated Dr. *Moriſon*, improv'd by Mr. *Bobart* his Succeſſor, alter'd by Mr. *Ray*, *Rivini*, *Tournefort*, and brought to great Perfection by the aſſiduous and diligent *Boerhave*; and there is hopes this knotty Claſs will yet be

be more unfolded, when the long look'd for *Pinax* of the celebrated Dr. *Sherard*, which I hear is in great forwardneſs, ſhall ſee the Light.

Umbelliferous Plants may be conſider'd either in a larger or ſtricter Senſe, *viz.* As to the *Diſpoſition* of the *Flower*, any Number of ſmall *Flowers* placed in a *Tuft* upon the Top of a *Stalk*, each having its proper *Foot-ſtalk* all ariſing at the ſame Place from the common *flow'ring Stem*, and diſpos'd in a *Circle*, may be call'd an *umbelliferous Plant*; but then *Tanacetum* a *corymbiferous Herb*, and *Sambucus* a *bacciferous Tree*, may be look'd upon as ſuch. The word *umbelliferous* has a threefold Origin; 1. From *Umbrella*, with which Women uſe to defend themſelves from the heat of the Sun, and from the Rain. This regards all *Tufts* with a plain, flat Surface. 2. From *Umbilicus* a Mans Navel, becauſe ſeveral *Tufts* are concave or hollow in the middle as the *Daucus* or *Carrot*. 3. From *Umbo*, the Protuberence in the Center of a Target. All the globular and convex *Tufts*, may be derived from this, as *Angelica*, &c.

The more ſtrict, genuine, and modern Notion of an *umbelliferous Plant* is, that it have a *pentapetalous*, ſmall, (which *Tournefort* is pleaſed to call) *roſaceous Flower*, frequently gathered in a *Tuft* above without an *Empalement*, the *Petals* ſurround five *Chives* with proper *Summits*, they ſoon fall off, and are ſucceeded by two *naked Seeds* cloſely united while green, but ſeparating by degrees as they ripen. The accurate *Boerhave* gives an agreeable account of the *flowering* and *Fructification* of this *Tribe*, which I deliver in his own Words; 'The Top of the flowering Foot-ſtalk, ſupports the 'Ovarium or *Seed-caſe*, conſiſting of the *Rudiments* of two Seeds ſtrictly 'united when green, by a ſmooth, flat Surface, ſeparating as they ripen, 'but ſtill tied to ſmall Threads, which ariſing from the Top of the *Foot-* 'ſtalk, lie hid betwixt the *Seeds*, and are inſerted in their upper part, 'where there is a fungous Balſamick, and ſomewhat groſs *Placenta* divi- 'ded as the *Seed-caſe*; whence ariſe the *Tube*, *Stylus* or *Pointal* with a 'round *Button*. The *Seeds* (where united) are *plain* and *ſmooth*: On the 'outſide *gibbous*, *convex*, *ſtriated* or *furrowed*, ſometimes *round* and *globu-* 'lar; ſome are *compreſs'd*, more *flat and ſmooth* on both ſides.

The *Petals* ariſe from the *Articulation* of the *Placenta* with the *Seed-caſe*, ſome *white*, others *yellow*, and a few *red* or *purpliſh*. 1. *Small*, *oblong* and *pointed*. 2. *Narrow*, *bifid* or *forked*. 3. *Broader* and *Heart-like*. 4. *Uniform* all of an equal Shape and Bigneſs. 5. *Difform* ſome larger, others leſs in the ſame Flower. 6. *Bended inwards*, or wrapt up like a Scroll, as in the *Fœniculum*. They have no *Empalement*, are endow'd with five *Chives* (with their proper *Summits*) ariſing betwixt the *Petals* and the aforeſaid *Articulation*; they are for the moſt part *Hermaphrodite*, but ſometimes *Male flowers* are intermixt in the ſame *Tuft*.

Before I proceed, I think fit, by way of Digreſſion, to explain ſome *Technical Words* in *Botany*, made uſe of by *Malpighi*, *Tournefort*, and eſpecially the accurate *Boerhave*; ſince the Doctrine of the *Sexes* in *Plants* came to be ſo far advanc'd, as is to be ſeen in the fourth of my *Botanick Eſſays*. The Words are *Embryo*, *Placenta*, *Ovarium*, and *Teſtes*.

Embryo in Animals is the firſt *Rudiments* or *Lineaments* of a *Fœtus*, before the parts are perfectly form'd, or if form'd, before they can be well diſcern'd; and in the *Seeds* of *Plants*, they are the bare empty *Husks* of the ſame Shape with the future *Seed*, placed below the ſeveral *flouriſhes* and *half-flouriſhes* in the *Corymbiferous*, *Floſculous*, *Semifloſculous* and *Radiate Plants*, and when theſe decay, and the Duſt is ſhed from the bifid Pointal (as has been obſerv'd when I diſcourſe of the *Corymbiferous Plants*, Decad. I. p. 9.) *theſe Embryons ſwell*: the *Radicle* and *Plume*, with the other *Lineaments* of the *Fœtus* of a new *Plant* are form'd, become hard and firm, and the *Seed* is ripen'd; or in the Pod of the *papilionaceous* and *tetrapetalous Flowers*, where as ſoon as you can open it, you may obſerve the *Embryons* plac'd in due order at the back part, or betwixt the two *Valves* or Sides of the *Pod* where the firſt *Lineaments*, as ſoon as the *Pod* will admit of opening, only appear in the diminutive Shape of the *Seed*, and are (as it were) an empty Shell, until after *Impregnation* of the *Maleduſt*, the inner Subſtance is compleated, and all the *Lineaments* of the future *Plant* are form'd in the *Seed-Leaf*.

Placenta is not unknown to *Anatomiſt*, and other *Natural Hiſtorians*, to be that part of the Secondine in Women, which being coherent and contiguous to, but not continuous with the *Uterus*, is a preternatural Dilatation of its Capillaries, which firſt forming an adventitious, carnous Subſtance, are again diſpers'd from ſo many Roots to other larger Trunks, at laſt united into one *Umbillical Artery*, by which after the *Blood* has been diffuſed into the ſeveral parts of the *Fœtus*, the remainder is carry'd back by the *Umbilical Vein* to the *Placenta*, and from thence to the *Uterus*, there to partake of the common Circulation throughout the Body of the Mother. The Parallel is the ſame in the *Seeds* of *Plants*. In the forementioned *Corymbiferous*, &c. Plants, the *Placenta* is placed in the bottom of the *Flower* within the *Empalement* v. g. in *Dens Leonis*, and others of the *pappous lacteſcent* kind, (when the *Seeds* like a Bird ready to fly, have got their Wings) the membranous bottom of the Flower is as it were a Neſt deſerted, having ſeveral Depreſſions where the *Seed* had been ſeated, and from whence they had receiv'd their Nouriſhment convey'd by the ſeveral *Tubuli* from the common *Foot-ſtalk*. The ſides of all the *Pouches*, *Cells*, or *Diviſions* in the *Capſular*, or ſuch Plants whoſe *Seeds* are contain'd in *Seed-veſſels*, are ſo many different *Placenta*'s, and no where are theſe *Placenta*'s with their proper *Navel-ſtrings* more obſervable than in the *Pods*

of *Peabloom Flowers*, where the *Umbilical Rope* conſiſting of ſeveral parallel Fibers running longitudinally from the *Pedicle* along the back part of the *Pod*, and at certain Diſtances ſending forth a *Placenta*, to which the future *Seed* is to be annex'd, with which it's conſtantly adherent, by which it receives its Nouriſhment, and from which it never ſeparates until needing no further Supply; it naturally falls off bearing an exact Analogy to the *Cotyledones* diſpers'd at ſeveral Diſtances along the *Chorion* in the *Uterus* of *Cows*, and other Quadrupeds.

Teſta is ſo called, from the *Teſta* in Animals, which elaborate the *Male-ſeed*; for this *Teſta* (one continued *Knob* frequently diſtinguiſhed by a *Septum*, a Partition-Wall as it were) is for the moſt part divided into two *Celluls*, and therefore may be called *Teſtes* as in Animals, is variouſly ſituated upon the top of the *ſtamen* or *Chive* (ſome being *Horizontal*, others *Perpendicular*) and of various Figures (ſome being *round*, others *oval*, more *oblong*, *quadrangular*, &c.) contains that which is called FARINA FOECUNDANS the *Male-duſt*, which as ſoon as the Flower is blown, is ſhed from theſe *Teſtæ*, which being then ſwell'd to their full bigneſs do burſt, and thereby this *ſubtile Powder*, *Pollen* or *Duſt*, is diſpers'd over the *Ovarium* or *Vaſculum Seminale*, where it emits its prolifick Virtue, and impregnates the *Ova*, which ſoon become *Embryones*, and which in a ſhort time do encreaſe to a perfect ripe *Seed*. This has hitherto been called *Apex*, is frequently of a different *Colour* from the *Petals* or *Stamina*. In the ſequel of this Diſcourſe, I deſign to call it ſometimes *Apex*, *Summit* or *Top*, and, as occaſion requires, the *Teſtes*.

Ovum and *Ovarium*, Words frequently uſed by *Malpighi*, and from him by *Boerhave*, when obliged to expreſs my ſelf ſo for the farther Illuſtration of the Subject in hand, I chuſe to call it *Seed-caſe*, which may ſeem improper here, when all the *Umbelliferous* are look'd upon as *naked Seeds*; but if we conſider there is ſcarce any ſuch as a *naked Seed*, for moſt of them have their *Rind*, *Bark* or *Coat* which is hard, and defends the inner Kernel from the Injuries of the Air, and therefore may be properly called the *Seed-caſe*, which is only an empty Huſk before Impregnation, ſoon becomes a Neſt for the *Embryon*, and ſtill continues a diſtinct Body from the *Seed* when ripe; and therefore *Tournefort* obſerves in *Angelica*, and ſeveral other *Umbelliferous* Plants, *quod involucrum facile deponunt*, their outer Coat can ſoon be remov'd; and this not only obtains in thoſe commonly called *naked Seeds*, but alſo in moſt *Capſular Seeds*; very obſervable in the larger kinds, as in *Peaſe*, *Beans*, and other *Leguminous Plants*: Indeed there are ſome of the *Cerealia* the *Corn kind*, where this outer Coat is more firmly adherent, as in *Wheat*, *Barley*, *Rye*, but theſe are ſo well guarded by the *Gluma* the Chaff, that to defend them more from the Air does not ſeem needful, but when

when they begin to bud, they quit this outer Coat, as a Chicken does an *Egg-ſhell.*

To conclude this Digreſſion: When I am to uſe the word *Embryo*, I ſhall rather chuſe to engroſs it into an *Engliſh* Phraſe *Embryon*, as ſome others have done, than to call them the *Rudiments* or *Lineaments* of the *Seed.* When *Placenta* comes in the way, I ſhall retain the Name rather than *Mother-Bed* or *Couch*, for it will not admit of being call'd *Secundine. Ovum* ſhall always be call'd the *Seed* in *Plants* by me, and for *Teſtes* and *Ovarium*, the one ſhall be *Apex* or *Summit*, and the other may be better underſtood by *Seed-caſe*, than *Ovarium.* There is another kind of *Apex* different from that upon the *Top* of the *Stamina*, (*viz.*) that which terminates the *Stylus* or *Pointal* in the *center* of the *Flower*, which I ſhall diſtinguiſh by the name of *Button*; but of this we ſhall diſcourſe more hereafter. *See the firſt of my Botanick Eſſays.*

There are ſeveral other *diſtinctive Notes*, by which the *Umbelliferous Plants* may be eaſily known, ſuch as their *Roots.* 1. *Annual*, and *fibrous*, 2. *Biennial*, more *parenchymatous* or *carnous*, (I call that a *parenchymatous* or *carnous Root*, which is either *ſimple*, or *divided* into large, thick, groſs *Portions* of a *ſoft*, and, as it were, *fleſhy Subſtance.*) 3. *Perennial* with large *Roots*, ſometimes hard and *knotted* as *Imperatoria*, but rarely; their *Leaves* are for the moſt part very large, and always *alternate* when they ariſe from the *Stalk*; few are, 1. Simple, moſt part *Compound.* 2. *Pinnata* having ſeveral pairs of *Leaves* joyn'd to a *mid-Rib*, always terminating in an odd one, which however divided and ſubdivided, ſtill happens to the *Leaves* of *Umbelliferous Plants.* 3. *Trifariam diviſa*, *triply divided*, and often ſubdivided. 4. *Lobata* variouſly divided into larger *Lobes* and *Portions.* 5. *Plurifariam & Multifariam diviſa*, variouſly divided into *leſſer*, *broader*, and *ſhorter Segments.* 6. *Fœniculacea tenuiſſime diviſa*, divided into long, narrow, ſmall, thick or thinſet *Segments*, like unto *Fennel.* Their Surface is for the moſt part *ſmooth*, ſometimes of a *lighter*, but more frequently of a *dark Green*; the *Stalk* is generally *erected*, *ſtriated*, *hollow* and *jointed.* The variety of their *Seeds* by which they are diſtinguiſhed into Method, according to the different Sentiments of *modern Authors* ſhall be declared, when I come to Diſcourſe of the ſeparate *Plants.*

The laſt general Conſideration is their *Virtue.* 1. They chiefly conſiſt of *tenuious* and *ſubtile Particles*, are great *inciders*, *diſcutient* and *carminitive*, eſpecially the *creſted Seeds*, according to Dr. *Herman*, *Omnia ſemina ſtriata ſunt carminitiva.*

I have inſiſted more largely on this general *Idea* of an *Umbelliferous Plant* here, becauſe the Alphabet leads me to treat of ſeveral of that Tribe in this Decad.

Ammi

Ammi is ſo ſeldom us'd in Shops, and ſo rarely to be ſeen in Gardens, that were it not reckoned among one of the *leſſer hot Seeds* in the *Diſpenſatory*, It might have been omitted here. *Dioſcorides*, and his Contemporaries, were ſo ſuperficial in their Deſcription of *Plants*, that they only left it to their Succeſſors to gueſs what they meant. Hence it is that the *Ammi veterum verum* is ſcarce, or not at all known at preſent, though *Mathiolus Epiſt. lib.* v. ſays it was found out in his Days, which we may ſuppoſe was about 1550 or 1560. for after having been *Phyſician* to *Ferdinand Archduke* of *Auſtria*, he dyed 1577. Now though *Tournefort* looks upon him as a very credulous Author, we are not to imagine he would have ſaid, p. 190. *Epiſt. Ammi verum nemo jam fere eſt qui non noverit, revixit enim noſtra ætate, ejus imaginem ad vivum delineatam ſpectare quis poterit in noſtris in Dioſcoridem comment.* 'Every one ſays, he now knows what the 'Ammi verum is, for it was revived in our Age, and its Figure taken 'from the Life, is to be ſeen in our Commentary on the third Book of 'DIOSCORIDES'; I ſay, none would look upon him to be ſo impudent as to aſſert this, without very good Reaſons. This has moved me to treat in this Place of the *Ammi vulgare*, as recommended by the *London Diſpenſatory*, and either the *Ammi odore origani* or *Ammi parvum folijs feniculi*, C. B. P. delineated, *Bauh. in Mat.* 558. for the *Ammi verum*: though the genuine *Seeds* of the two laſt are rarely to be had in Shops; *Weykerus* 'ſays, it's ſhewn by ſome with *Leaves* finer than thoſe of *Fennel*, and 'with very ſmall *Seeds* like *Cumin*; but it does not in every Circum-'ſtance anſwer the Deſcription of the Ancients'; *Renodeus* ſays, its *Seeds* ſmell much of *Origanum*, both which confirm what *Mathiolus* has ſaid concerning them.

1. *Ammi Majus*, C, B. P. 159. Tourneſ. 304 *vulg. maj. fol. latioribus ſem. minus odorato*, J. B. 3. 27. Moriſ. Hiſt. 3. 295. Dod. pempt. 301. Raij Hiſt. 455. *Annnum vulg.* Moriſ. Umb. 21. Boer. Ind. 57. Common Biſhops Weed.

2. *Ammi odore origani*, J. B. 3. 27. 25. Hiſt. Oxon. 3. 295. *alterum ſemine apij*, C. B. P. *Cret.* Raij Hiſt. 455. Biſhops Weed of Candy.

3. *Ammi parvum fol. fenic.* C. B. P. Bauhini in Math. 558. Hiſt. Oxon. 3. 295. *verum* Geſner. hort. *perpuſillum* Lob. Icon. 785. Ger. Emac. 1037. *Fœniculum annum Origani odore*, Tourneſ. 312. *Ammoides* Boer. Ind. 1. 49. True Biſhops Weed.

TRIBE.

Theſe are claſs'd among the umbelliferous Plants, with variouſly divided *Leaves*, and *ſmall ſtriated Seeds* by Dr. *Moriſon*, among the ſmalleſt, *ſtriated, ſhort, tumid Seeds* by Mr. *Ray*. *Tournefort* is inconſiſtent by his Diſtribution

ſtribution: for the *Ammi Maj.* is claſs'd with thoſe of a very ſmall creſted Seed, and the *Ammi fol. feniculi* among the *Fenicula*, as having a narrow, oblong, and pretty groſs *Seed*, which is juſtly corrected by *Boerhave*, who calls it *Ammoides*, as partaking of both the *Ammi* and *Feniculum*. For by what I can obſerve, an *Ammi Leaf* has a *mid Rib*, and the *Pinnæ* ariſing equally from it by Pairs, but a very ſmall *Flower*, and fine ſmall *Seeds*; whereas a *Feniculum* has its fine, narrow, deep divided, long, thinſet Segments, ariſing irregular from the *mid Rib*; nor can this laſt be a *Feniculum*, becauſe its *Petals* are *plain*, *white*, *unequal* in reſpect of each other with very ſmall Seeds; a *Feniculum* has *yellow*, *wrapped up*, *equal Petals*, with a long, *narrow*, *large*, *ſtriated Seed*. *Rivini* ſays, they have ſolid, very ſmall *Seeds*, ſomewhat hairy, the ſecond is either neglected, or forgot by *Tournefort*, whether he has look'd upon it as the ſame with the *Ammi parvum fol. feniculi*, I know not; but *Mathiolus* gives two quite diſtinct Figures of the Second and Third: *Rivini* gives a good Figure of the *Ammi maj.* and ſeems to delineate the *Ammi fol. feniculi* by the Title of *Ammi minus*.

The *Deſcription.*

Theſe Plants being hitherto unknown to me, I take their Deſcription from the moſt approved Authors.

The firſt has long, *ſerrated*, or *crenated*, compound Leaves, divided chiefly into three pair of Segments; thoſe at the bottom broader, and *encompaſſing* the *Stalk*, the upper *longer*, *narrower*, and more *deeply divided*. On the upper part of a *ſtrait*, *round*, *channel'd Stalk*, (two or three Foot high) and *Branches* are plac'd pretty *large*, *flat Umbells* with *white Flowers*, and unequal *Petals*, viz. two larger, three leſs, to which *ſucceed ſmall*, *creſted*, *bitteriſh Seeds*, about the bigneſs of thoſe of *Smallage*, but more tumid. Its an *annual Plant*, and cultivated in Gardens.

The ſecond has very much *branched*, *ſtriated*, *joynted Stalks*; the lower *Leaves broad*, the upper *longer*, *more narrow*, and much *more finely* divided; the *Umbells* very numerous, and *white Flowers* very ſmall; the *Leaves* when rub'd have an high ſcent of *Origanum*, and the *ſmall*, *ſtriated*, *tumid Seeds* extreamly Aromatick and hot taſted, the Seeds are imported from *Syria*, and the Iſland of *Candy*.

The third ariſes one or two Foot high, with a ſmall, brittle, *Fennel Stalk*, has variouſly divided *Leaves* like unto *Fennel* or *Dill*, but with deeper and finer Segments; the *ſmall Umbells* conſiſt of very ſmall *white Flowers* with unequal *Petals*; the Seeds are extreamly fragrant, leſs than thoſe of *Candy*, and of a ſomewhat weaker ſmell. The little Root is ſmall and woody.

Virtues and *Uſes.*

Ammi Seeds conſiſt of tenuious and ſubtile Particles, by which they are attenuating, Diſcutient, and inciding; good in Collicks and other flatulent Diſtempers: they provoke *Urine*, and the *Menſes*: formerly they were preſcribed in moſt of the *laborious Antidotes* and Opiates of the Ancients, ſuch as *Antidotus Matthioli*, *Aurea*, *Alexandria*, *Nicolai*, *Theriaca communis Auguſtana*, *Teyphera minor Meſues*, *Theriaca Andromachi*; but ſince they are all exploded except the laſt, its only upon that account they are kept in Shops, and we are allowed by Authors to ſubſtitute Aniſe or Cumine Seeds for them; but I would rather chuſe *Sem. Cardamom. min.* having a pleaſant, hot and not ſo high a Taſt and Smell.

XI. *Sium* & *Siſarum.*

The ſame uncertainty remains concerning the *Amomum*, as about the *Ammi verum*; and therefore ſince that of the Ancients is loſt, moſt of the *Diſpenſatories* now ſubſtitute the *Siſon Dioſcoridis* for the *Amomum Plinij*, to which I ſhall add *Sium Aquat.* ſive *Berula* and *Siſarum*, as being of the ſame Family.

1. *Sium Aromat. Siſon Offic.* Tournef. Inſtit. 308. *Siſon quod Amomum Officinis noſtris*, C. B. P. 154. *Siſon Dioſcoridis* Moriſ. Hiſt. 3. 283. *Siſon* Moriſ. Umb. 14. *Siſon ſive Officinarum Amomum*, J. B. 3. 27. 107. Raij Hiſt. 443. *Petroſelinum macedonicum Fuchſij*, Dod. pempt. 697. Baſtard ſtone Parſley.

2. *Sium ſive apium paluſtre foliis oblongis*, C. B. P. Tournef. *Aquat. maj. latif.* Moriſ. Hiſt. 3. 282. *Umbellif.* 15. Raij Hiſt. 443. 106. *Sium Umbellif.* J. B. 3. 2. 27. 172. *Sium.* Dod. pempt. 589. Common Water-Parſnip.

3. *Siſarum Germanorum*, C. B. P. 155. Tournef. Inſtit. 309. Dod. pempt. 681. Raij Hiſt. 442. Moriſ. Hiſt. 3. 283. Umb. 12. J. B. 3. 27. 153. Boer. Ind. 54. *Elaphoboſcum Dioſcoridis*, Col. Phyto-baſanos, 88, 89.

The *TRIBE.*

Theſe three *Umbelliferous Plants* are by *Moriſon* ſaid to be endowed with ſimple, lobed or pinnate *Leaves*, and oblong, ſtriated Seeds of a middle bigneſs.

The

The *Deſcription.*

The firſt is a *Water-plant*, with a *running*, *jointed*, *fibrous Root*, a *ſtreight*, *ſtriated*, *jointed*, *hollow Stalk*; *pinnated* or *winged Leaves*, conſiſting of ſeveral *pairs* of oblong, *blunt Pinnæ* or *Wings*, *ſlightly dented* in the *Edges* joined to a *Midrib*, with an *impair* or odd one at the Extremity; of a *light*, *ſhining*, *green*: *large*, *flat Umbells* of *white Flowers* on the Top of the *Stalk* and *Branches*, to which ſucceed oblong *ſtriated Seeds* of a *middle bigneſs*.

The ſecond has a *fibrous Root* with the former, its *lower Leaves* lying on the Ground in the Spring, conſiſting of ſeven or 9 Pair of *oblong*, *blunt* and *crenated Wings* with an odd one, concluding the *Midrib*; of a more *grayiſh*, and as it were hairy Colour; the *Stalk* one or two Foot high, is *ſtreight*, *ſtriated*, *hollow*, *jointed*, with a Leaf at each Joint, from whoſe *Boſom* the ſeveral *Branches* ariſe, eſpecially at the upper *part*; the *Umbells* are *ſmall*, *white*, and ſucceeded by ſeveral ſmall, *ſtriated*, very hot taſted *Seeds*.

Skirrets have Roots conſiſting of ſeveral *fleſhy parenchymatous knobs adherent* to one *Head*, from whence ariſe in the Spring the *Leaves*, conſiſting of ſeveral Pairs of *oblong*, *narrow-pointed*, *crenated*, *light-green Pinnæ*, adherent to a Midrib with an odd one (ſometimes interſpers'd with a few ſmall ones irregularly plac'd) amidſt of theſe ariſes the flowering Stem *ſtreight*, *ſtriated* and *branched*; with *white Umbells* on the *Top*, to which ſucceed *oblong*, *ſmall*, *ſtriated Seeds*.

The difference among theſe three is ſo inconſiderable, that they can ſcarce be diſtinguiſh'd by any Deſcription, though by the View they are very diſcernable: *Water-parſnip* grows in the bottom of the *Ditches* and *Drains*, with a jointed running Root, ſo that it is ſoon known by its Soil, alſo by its *Parſnip-Smell* and *Taſte*, to which it is ſo like, that when placed together, only the hotter taſt and figure of the *Seed* can determine it. The *Stone-parſley* may be ſoon known by the *Colour*, by the *Soil*, which is on ſandy and chalky *Banks*, and by the hot taſte of the *Seed*, which more reſembles that of Parſley, than a Parſnip. The Skirrets by the delicious taſte of the *knobby Root*; and the *Smell*, more reſembling that of a *Parſnip* than *Parſley*.

The *Virtues* and *Uſes.*

The *Water-Parſnip* is ſeldom us'd in Phyſick, its eſteem'd a potent *Antiſcorbutick*, *Diuretick*, good in *chronical Caſes* for removing *Obſtructions* in the *Viſcera*, and rectifying of the Maſs of Blood, and may be uſed in *Ptiſans*, *Apozemes* and *aperient Dyet-drinks* to provoke the *Urine*. Its *Leaves* are

are chiefly us'd, and here it may be enquir'd, why Plants that delight in a watry Soil, are of an hotter *Taſte*, have more active *Principles*, and conſiſt of a more *penetrating volatile Salt*, than the *Plants* of the ſame kind, which affect a dry Soil? If we conſider that ſtagnating *Ditches* and *Drains*, alſo the Currents from *Well-ſprings*, which are chiefly the Soil of theſe *hot, water antiſcorbutick Plants*, are either the Drains to a Level, or ſituated in the Declivity, or at the bottom of a riſing Ground, ſo that the *Waters* of the *Winter-floods*, or *rainy Seaſons* are empty'd in them; by which they waſh off from the ſurface of the Earth, all the fat looſe Subſtance which is uſually inherent in manurable Ground, or *fat Paſtures*; which being thus convey'd by the impetuoſity of the *Waters*, ſoon ſubſides and fattens the bottom of theſe *Rivulets* and *Drains*: We may eaſily ſuppoſe, the active Principles contain'd in this fat Sediment is moſt ſuſceptible of aſcending, eſpecially if they can be convey'd upwards by proper *Inſtruments* or *Veſſels* fit for their Reception, ſuch as we may believe the *Fibres* of the *Roots*, and the proper *Tubuli* of the Sap-veſſels of *Water-plants* are, and the rather, becauſe *aqueous Particles capable* of entring the Pores of the Fibers of the Roots of theſe *Water-plants*, are the moſt convenient Vehicle for ſuſpending of theſe *penetrating, volatile* and *ſaline Particles*; for the manner of the Operation of theſe hot, juicy, *antiſcorbutick* Plants in the Body, I delay till I come to Diſcourſe of the *Anagallis, ſive Veronica Aquat. vel Becabunga*, a noted Antiſcorbutick.

That this is not the *Amomum Plinij* is agreed on by all, nor do I believe it to be that of *Dioſcorides*, but I am ready to think it has been firſt introduc'd into the Shops by the *Germans*, as *Fuchſius*, &c. and from thence come to be univerſally ſubſtituted for the true *Amomum*, however, by its hot taſte it may be admitted into the *Theriaca* along with *Ammi*, and I know no other Uſe for which its required in Phyſick; *Authors* are generally ſilent as to any other Medicinal Virtue it may have.

The *Siſarum* is oftner cultivated in Kitchin, than Phyſick-Gardens; its Root has a delicious Taſte, and is frequently brought to the Table in the Spring among the other *eſculent Pot-roots* of that Seaſon, and I doubt not but is very *Nouriſhing*.

XII. *Amoris Pomum.*

1. *Aurea mala*, Dod pempt. 458. *Solanum pomiferum fructu rotundo, ſtriato, molli*, C. B. P. 167. *Mala Aurea odore fatido quibuſdam Lycoperſicon*, J. B. 3. 34. 620. *Lycoperſicon Galeni*, Ang. 217. Tourneſ. 140. Moriſ. Hiſt. 3. 520. Raij Hiſt. 675. Apples of Love.

2. *So-*

2. *Solanum Offic. acinis nigricantibus*, C. B. P. 166. Tournef. 148. *Hiſt. des Plants* 38. *hort. ſ. vulg. acinis nigris*, J. B. 3. 34. 608. *vulg.* Park. Moriſ. Hiſt. Raij Hiſt. 672. *Hort. Baccis nigricantibus* Dod. pempt. 453. *niger vulg.* Cord. Hiſt. 758. common Nightſhade.

3. *Solanum ſcandens ſeu Dulcamara*, C. B. P. 167. Tournef. 149. *Dulcamara*, Dod. pempt. 402. *Solamum lignoſum ſiue Dulcamara*, Park. Raij Hiſt. 672. Synopſ. Stirp. Brit. 199. Tourn. *Hiſt. des Plants* 42. *Glycypicros ſive Amara dulcis*, J. B. 2. 15. 109. Woody Nightſhade or Bitter-ſweet.

4. *Solanum Lethale* Raij Synopſ. Stirp. Brit. 150. Hiſt. 679. *μελανοκέρασος* C. B. P. 166. *maniacum multis ſive Bella dona*, J. B. 3. 34. 611. Tournef. 77. *Solano congener flore campanulato vulgatius fol. latioribus*, Moriſ. Hiſt. 3. 532. deadly Nightſhade.

The *TRIBE.*

Dr. *Morriſon*, and all his Followers, who chiefly diſtribute the *Plants* according to their *Fruit*, give theſe the general *Title* of *Bacciferæ*, *Berry-bearing Plants*. *Morriſon* adds *Polyſpermæ*, whoſe *Fruit* contains many *Seeds*. Mr. *Ray* ſays, they are *fructu magis ſparſo*, I ſhould rather think they were *fructu aggregato* (if this Diſtinction were neceſſary) for the *Solanum vulgare* and *ſcandens* have their Flowers diſpos'd in Cluſters, upon the Top of ſhort Stalks; which are ſoon diſpers'd into ſeparate *Foot-ſtalks* for each *Flower*. The ſeveral *Species* here united together (becauſe they partake of the ſame Virtues) are diſtinguiſhable both by the *Flower* and *Fruit*. The firſt three have *Monopetalous*, *Star* or *Wheel-flowers*, according to *Tournefort* divided almoſt to the Center, into five pointed, largely ſpread forth *Segments*. The *Flower* of the firſt is twice as big as thoſe of the two following, which are Pendulous, or hanging downwards from the ſeveral *Foot-ſtalks*, and whoſe *Segments* are bended backwards about Midday, and hang down, and are flat towards the Evening. They are plac'd upon a ſmall *Empalement*, divided into five ſmall, green, pointed *Segments*. They have a ſmall round hole in the Middle, penetrated by the *Embryon* of the *Fruit*, fitted with a ſmall *Pointal* and *Button*, lying hid amidſt five very ſhort Chives, and oblong, flat, erect, yellow *Summits*, full of the *farina fœcundans*, ariſing from the Center of the *Flower* (which when it decays, falls off whole) around this Hole. The Embryon ſoon becomes a round, ſoft, pulpous *Berry*, full of flat *Seeds*. The *fourth* is diſtinguiſhed by its large, long, tubulous *Flowers* (ſuperficially divided into five pointed *Segments*) and by its *bicapſular Berry*, ſo that *Tournefort* is excuſable when he places it among the *Bell flowers* in the firſt, and the reſt among the Wheel-flowers in the ſecond Claſs.

The *Description.*

1. *Apples of Love* ariſes from the Seed, and ſoon runs out into large, infirm, very much branched, round, hollow, and ſomewhat hairy Stalks, ſpread on the Ground with alternate, compound *Leaves*; each conſiſting of three Pair of *Pinnæ* dented in the Margent with an odd one cloſeing the Midrib, having ſeveral ſmall *Leaves* interſpers'd like the *Agrimonia*, or *Argentina*, but more narrow and pointed, not hairy, but ſmooth, of a light Green. The *Flowers* ariſe near to, but not from the boſom of the *Leaves*, and frequently from the Intervals at a middle Diſtance betwixt them upon a ſmall *Stalk*, ſoon divided into ſeparate *Foot-ſtalks*. They are of a pale yellow, much larger than the following, have deeper yellow *Summits* in the *umbo* or middle of the *Flower*. The *Embryon* becomes a round *Berry*, twice as big as a *Cherry*; of an agreeable, pale, yellow colour when ripen'd, diſtinguiſh'd longitudinally by ſix Lines, which mark out ſo many *Celluls* or double *Placenta*'s, to which the many flat *Seeds* adhere, being lodg'd in a ſoft pulpy Juice; its rarely cultivated in Gardens. The Fruit ripens in the Autumn, and the Plant decays with the firſt Froſt.

2. The *common* and *woody Nightſhade* are very like to one another, the firſt is annual, ariſing late in the Spring, but making quick advances both to *Flower* and *Fruit* after *Midſummer*. Its very much ſpread forth with round narrow *Stalks* and *Branches*, each diſtinguiſh'd by four or five protuberant longitudinal *Lines*. The *Leaves* ariſe alternately, thoſe below larger upon one Inch *Foot-ſtalks*, broad at the Baſe, ſinuated and pointed, rough, dark Green, lighter below than above, with five Pair of protuberant *Veins* proceeding obliquely from the middle one; all which terminate in a Point. The ſmall white *Flowers* (with yellow *Umbones*) ariſe irregularly from the *Stalk* and *Branches* like the former, being frequently ſurrounded with very ſmall Leaves, eſpecially towards the upper part of the *Plant*. The *Berries* round, unicapſular, purple, red, or yellow, in the ſeveral ſpecies. The flat *Seeds* adhere to the *Placenta* or *axis medius*. It grows in Dunghills and fat manur'd Ground, in Gardens its eaſily propagated by the Seed.

3. The *bitter Sweet* has a perennial, fibrous, woody *Root*, infirm, ſmall, round *Stalks* lying on the Ground, or ariſing to two or three Yards high; when it graſps and climbs up any *Tree* or *Shrub*: the Leaves are oblong, ſmooth in the edges and pointed, having uſually two Ears at the Baſe. The *Flowers* ariſe irregularly in Cluſters, from five to eight, together with the former; of a purpliſh blew; yellow *Umbones*; an oval *Fruit* of the ſame bigneſs with the former; pale Red, and beautiful when ripe

full

full of flat Seeds. The *Root* endures all the Winter, and ſometimes the woody *Stalks* in mild Weather. It grows on Ditch ſides, and in moiſt ſhady Places.

4. *Deadly Nightſhade*, is a tall, ſtrong, buſhy *Plant*, has ſeveral groſs, ſtreight *Stalks*, ariſing from a groſs thick *Root*, and aſcending ſometimes to two or three Yards high, dividing into *Branches:* Alternate *Leaves* like the former, but thrice as large, not ſinuated, but broad at the Baſe, and pointed; dark Green above, lighter below. The deep purple *Bell-flowers* indefinitely and alternately plac'd, are large, hollow and Tubulous, ſuperficially divided into five pointed Segments, yellowiſh, and hairy towards the bottom, with five *Chives* ſomewhat hairy alſo, and white *Summits*, with the Pointal hanging without the Flower fitted with a green *Button*. The Flower is ſuſtain'd by a five pointed *Empalement*, which afterwards contains a round, purpliſh, black, ſhining *Berry*, of the bigneſs of an ordinary black *Cherry*, but more round, with a longitudinal Depreſſion, marking out its Diviſion into two Celluls; full of a black, nauſeous, fetid, ſweet *Pulp*, in which are lodg'd ſeveral ſmall *Seeds*.

It do's not grow wild very frequently, neither in *England* nor *Scotland*, and when it is found ſo, its uſually ſo near to *Gardens*, or places where *Gardens* have been cultivated, that it looks rather like an *Ejectamentum*, than an *indigneous Plant*. Its ſaid to grow wild in a *Church Yard*, and Lanes about *Fulborn* in *Cambridgeſhire*, alſo at *Sutton Cowfield* in *Warwickſhire*. In a Ditch at the end of *Goſwel-ſtreet* in the Road to *Iſlington* from *London*, in *Cuckſtone* near *Rocheſter*, in *Kent*, where all the Roads and Yards are over-run with it; alſo it was obſerv'd by one of my Correſpondents, betwixt *Culroſs* and *Toryburn* in *Scotland*. It ſeems to have been more frequent in that *Kingdom* 700 Years ago, than it is now, though it be ſtill frequent in the *Gardens* there. I ſhall give a memorable Inſtance of its *Vires*, when I come to ſpeak of its diſmal Effects.

Virtues and *Uſes.*

The firſt three *Solana*, as they agree much in their Characters, ſo in their Virtues, only in a more and leſs intenſe Degree. The *Apples of Love*, though pleaſant to the Eye, yet they are not ſo to the Taſte, for if you but put your Tongue or Lips to the Fruit, it will burn them ſo as to be ready to bliſter, by which it may be look'd upon as not fit for internal Uſe, nor indeed for External; though they are ſaid to make a Pickle of it, or to eat it with Oil and Vineger in the hot Countries, as we do Cucumbers; but *Caveat Emptor*, there is a good variety of *phyſical Plants*, though we do not meddle with ſuch edg'd *Tools*.

The

The *common* and *woody Nightſhades* conſiſt of very acrimonious, tenuious and ſubtile Particles, which its probable may be curb'd in boiling, as we ſee an hot *Onion* by roaſting or boiling, come to have a ſmooth, oily and fatuous Taſte. There is nothing more recommended in this Country for a ſore Throat, than a *Tea* of the dry'd *Leaves* of the *Solanum vulgare*, which they call *murrain Graſs*, and I have known it very ſucceſsfully us'd. I have alſo preſcrib'd a *Decoction* of the *Leaves* of *Dulcamara* to a good Advantage, in which a proportional quantity of *Theriaca* has been diſſolv'd, as a potent Sudorifick in violent rheumatick and pleuritick Pains, when there has been an indication for Sweating; though the raw Berries of both, are much to be ſuſpected for producing the ſame Effects with the *Solanum Lethale*, when Children are allur'd by the pleaſant colour of the Berries, eſpecially the *Dulcamara*, to taſte and eat them; from which Parents uſe to frighten them by calling them *Dog*, and ſometimes *mad Berries*. Their Juice is apply'd externally for Burnings, cancrous and cacoethes Ulcers, alſo to the *Eriſipelas* or St. *Anthony's Fire*, though *Simon Pauli* diſſuades from the uſe of it, and ſays, that even the *Aqua Solani* with *Litharge*, has produced bad Effects. Its Leaves and Juice enter the *Unguentum populneum* and *Diapompholigos*, but in ſuch a quantity, as no great harm need be ſuſpected. The *folia Dulcamaræ* are chiefly us'd for the *Populneum*, becauſe the Leaves of the other do not ſuit with the Seaſon of the *Poplar Buds*.

The *Solanum Lethale* ſeems to have a quite different Operation; for inſtead of an hot Acrid, it has a ſweet, luſcious and diſagreeable Taſte, ſo that it ſeems to produce the ſame effects with the *Hyoſcyamus*, *Cynogloſſum*, and other intenſe *Narcoticks*, which uſually before they affect the Perſon with Sleep, produce *delirious* and *maniacal* Symptoms; however, its an *Herb* of ſo pernicious a Nature, that ſcarce any Author who treats of it fails from proper Obſervation, or good Information to give diſmal Inſtances of its bad Effects. *Simon Pauli* refers us to *Lobelius* his *Adverſaria*, and *Bodeus a Stapel*. Mr. *Rays* account of what happen'd to a *mendicant Friar*, upon the taking a glaſs of the Infuſion of it in *Mallow Wine*, gives a good account of the various Symptoms it produces. In a ſhort time he became *delirious* after a little (*Cachinne*) a grinning Laughter like the *Riſus Sardonicus* ſucceeded; after that ſeveral irregular Motions, and at laſt a real *Madneſs*, and ſuch a Stupidity as thoſe that are ſottiſhly drunk have, which after all was cur'd by a draught of Vinegar. Mr. *Miller* mentions ſeveral Children at *Croyden*, who were not long ſince poiſon'd by the *Berries*. There is another Inſtance of its bad Effects in my *miſcellaneous Obſervations* from my proper knowledge. It's worthy of the Recital what Mr. *Ray* tells us happen'd to a *Lady* of *Quality* of his Acquaintance, who having a ſmall Ulcer a little below her Eye, which ſhe ſuſpected to be

cancrous, ſhe applied a bit of the Leaf of this *Solanum*, which ſo relaxed the *Tunica Uvea* in one Night, that ſhe could not contract the *Pupilla* the next Day, ſo that the *Pupilla* of the one *Eye* was four times as big as the other; and upon the removal of the Leaf the Fibres recover'd their *muſcular* Tone by degrees; and leſt this ſhould ſeem to be meerly accidental, ſhe repeated the Experiment three times, at which Mr. *Ray* himſelf was preſent.

But the moſt memorable Inſtance of the direful Effects of this *Plant*, is to be ſeen recorded by the celebrated *Buchanan* in his Hiſtory of *Scotland*, by which we may obſerve how the Almighty God can convert the moſt deadly Poiſons into the fitteſt Antidotes, for thoſe whom he has a mind to preſerve. This obliges me to make a Digreſſion, not altogether unſuitable, ſince it gives the *Botanical* Deſcription of a *Plant*, writ about 150 Years ago by one who himſelf was no profeſſed *Botaniſt*; the Uſe made of it, and the wonderful Effects it produc'd.

In the Reign of *Duncan* I. *King* of *Scotland* (who was afterwards mur-der'd by *Mackbeth* the *Tyrant*) *Harold* the *Dane* invaded *England*, not long before the Days of *King William* the *Conqueror*. *Sweno* his Brother at the ſame time invaded *Scotland*. Upon his landing in *Fife* he obtain'd a ſignal Victory, which obliged the *King* of *Scotland*, with the Remainder of his routed Forces, to retire to *Bertha* (an ancient Town of great Note ſituated on the River *Tay*, which was not long after deſtroyed by an Inundation) and out of whoſe Ruin the Town of *Perth* was built, and now ſtands upon the ſame River, two Miles nearer the Sea, and purſued them ſo

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Miſſa magna vis panis & vini tum e vite, tum ex hordeo confecti, ac ſucco infecti herbæ cujuſdam venificæ, cujus magna copia paſſim in Scotia naſcitur. Vulgo Solanum ſomniferum vocant. *CAULIS ei major bipedali in ramos ſuperne diffunditur: FOLIA latiuſcula, acuminata exteriore parte, ac languide virentia: acini prægrandes, ac nigri (cum maturuerunt) coloris, qui e caule ſub axilla foliorum exeunt: ſapor eis dulcis, & propemodum fatuus. SEMEN habent perexiguum, velut fici grana: vis fructui, radici, ac maximo ſemini, ſomnifera, & quæ in amentiam ſi largius ſumantur agat.* Hac Herba cum omnia infecta eſſent, qui commeatus in caſtra vehebant, ne qua doli ſubeſſet ſuſpicio, prægustabant, Danoſque magnis poculis invitabant ad bibendum.

Duncanus, qui futurum ſciret, ut vis potionis una cum ſomno & viſceribus conciperetur, jam *Macbethum* cum ſuis per averſam ab hoſte portam ſummo ſilentio in urbem receperat; compertoque per exploratores, ſomno & vino graves jacere hoſtes; *Banchonem* itinerum adituſque in caſtra gnarum cæteris in inſidiis collocatis, cum parte majore exercitus miſſit. Is ingreſſus caſtra, ſublato clamore magno, opinione ſua omnia negligentiora invenit. Pauci tumultu excitati cum velut amentes, temere diſcurrerent, ab obviis cæduntur. Reliquis fere mors cum ſomno continuata eſt: Rex, per Temulentiam velut mortuus, a paucis qui minus vinolenti erant, correptus, cum non modo viribus, ſed etiam ſenſu careret inſtar oneris in jumentum forte oblatum injectus ad naves eſt delatus.

cloſely, that he laid ſiege to the Town both by Land and Water. The *Scots* were put to great Straits, not for want of Proviſions, but for want of *Men*, to repel the Beſiegers. King *Duncan* was a peaceable, unactive Man; he had ſometime before committed the *Government* to the Management of *Bancho*, of a cunning and ſubtile Wit, and to *Mackbeth*, of a fierce, bold, aſpiring Spirit. *Mackbeth* went to the Country to raiſe a Reinforcement, while *Bancho* treated with the Enemy, and firſt obtained a Ceſſation of Arms, and then ſpun out Time by framing of Articles of Peace. The *Danes* wanted Proviſions, but abounded with Men; the *Scots* abounded in Proviſions, but wanted Men. The Truce was equally acceptable to both, eſpecially to the *Danes*, who for the preſent expected Plenty of all Things, and for the future the Conqueſt of a whole Kingdom. Care was immediately taken by the *Scots* to afford them all manner of Liquors, both Wine and Ale, and they contrived to mix with them a good Quantity of the deadly Nightſhade (this *Solanum Lethale*, or *Somniferum*) of which we now treat. The Bait took, the *Danes* drank plentifully, and were all intoxicated, mad with this poiſonous Juice, and aſleep through Drunkenneſs. The *Scots* fell upon them, kill'd the moſt part, and with much ado a few remaining, got to their Veſſels, while their beſotted *King* was carried like a Sack-load upon a Beaſt down to the River, where there were ſcarce Sailors enough ſaved from the Slaughter to man the Veſſels. This put an End to the *Daniſh* Attempts upon *Scotland*; for before they departed they ſwore they would never make a Deſcent upon that *Kingdom* any more. For farther Illuſtration of this noted Piece of Hiſtory, I have thought fit to inſert it in the Margin in the *Author's* own elegant way of Expreſſion. *Rerum Scoticarum*, lib. vii. p. 112. fol. Edit. Edinb. 1715.

As for the external Uſe of this *deadly Nightſhade*, it's much commended for diſcuſſing of *ſchirrous* and *cancrous Tumours*, for diſſolving of *curdled Milk* in the *Breaſt*, and for cleanſing of *cancrous Ulcers*; but as being given inwardly it's of very malignant Qualities, I dare not recommend it for any outward Application, leſt perhaps this *Virus*, or ſome poiſonous Particles, be introduc'd into the Blood. We are ſenſible that *Opium* being externally applied proves a great *Anodyne*, by eaſing of Pain, and a *Narcotick* or *Soporifick*, when perhaps its inward Uſe was not ſo ſafe, either upon account of the Weakneſs of the *Patient*, or when the Patient upon the taking of *Laudanum* and other *Opiates* has been rendred too watchful (a quite contrary Effect) and even delirious, both which Symptoms I have ſometimes ſeen removed by external Applications when internal would not do; and nothing is more frequent with ſome of the Profeſſion than to uſe *Unction* with *Mercurials*, in order to raiſe a *Salivation* (tho' Dr. *Quincy* in his *Prælect. Pharmaceut.* p. 58. ſeems to be a Stranger to that way of doing.) I ſay, ſince 'tis evident that Medicines externally applied do produce conſiderable

Effects

Effects on the Blood, I dare not adviſe the external Application of a *Plant*, which being inwardly adminiſtred, proves that which they call a rank *Poiſon*. Before I leave theſe *Solana*, I have thought fit to add other two of that Family, the one not rarely cultivated in our Gardens, the other planted in the open Fields, both of more frequent Uſe in the Kitchens than in the Shops.

5. *Solanum Capſicum dictum.*

Capſicum ſiliquis propendentibus, Tournef. 152. *Capſicum Actuarii Caninum Zinziber Avicennæ calecuticum ſive piper Indicum majoribus ſiliquis*, Lob. Icon. 316. *Solanum uvens Capſicum dictum*, Moriſ. Hiſt. 3. 528. *Solanum Capſicum Indicum vulgatiſſimum*, Hort. Lugd. Bat. 574. *Piper Indicum vulgatiſſimum*, C. B. P. 102. *Sive Calecuticum ſiliquoſum* J. B. 2. 15. 180. Raii Hiſt. 676. Indian or Guinea Pepper.

The *TRIBE.*

This by its acrimonious hot Taſte and Structure of the *Flower* is undoubtedly a *Solanum*, but its *Fruit* being rather a *Pod* than a *Berry*, and being divided into two or three *Pouches*, plainly diſtinguiſhes it from its *Congeners*.

The *Deſcription.*

From an *annual* fibrous *Root* it ariſes with a rough, ſolid, jointed, branched, angular *Stalk*, about two or three Foot high; the *Leaves* from the Joints are ſmooth, long, narrow, dark green, and pointed, with equal Edges, upon long *Footſtalks*; the *Flowers* ſometimes from the Boſom of the *Leaves*, ſometimes from the *Divarications* of the *Branches*, are placed upon long, channell'd, deep red *Footſtalks*, white, like thoſe of the *common Nightſhade* (but much larger) with yellow *Umbones*, to which ſucceeds an oblong *Fruit*, about the bigneſs of a Man's Finger, of a deep red when ripe, juicy when firſt pull'd, divided into three Pouches, but ſoon, upon drying, becoming membranous, full of flat, extreamly hot taſted *Seeds*. It's ſown in Gardens, ſometimes produces the Pod, but ſeldom ripening the Seeds; it periſhes with the firſt autumnal Froſt.

Virtues and *Uſes.*

The whole Plant is extreamly hot with the other *Solana*, but has no kind of Malignity, being rather of the Nature of the other Kinds of

Pepper,

Pepper, to which it may be a *Succedaneum*, if they were not cheaper and more frequent. In *Italy*, *Sicily*, and other hot Regions, alſo in *England*, they pickle the *green Pods*, but they are ſo extreamly hot, that they are ſcarce eatable alone, tho' they may be mixed with *pickled Cucumbers*, *Purſlane*, or other ſuch as they call cold Pickles.

6. The *Solanum tuberoſum eſculentum*, or *Potato*, tho' no Diſpenſatory Plant, may be named here for its extraordinary nouriſhing Quality, by which it's ſo famous a Pot *Root*, and ſo frequent in the Kitchens. Tho' it agree with the other *Solana* in all the other Characters of *Flower* and *Fruit*, yet it has none of their acrimonious and malignant Quality. It ſeems to have been ſo rare in *Caſpar Bauhinus*'s Days, that he has taken the Pains to give a full Deſcription and an exact Figure of it. † He juſtly obſerves that its compound dark green *Leaves* commonly conſiſt of three, ſometimes four Pair of *Pinnæ*, and an odd one, and contrary to moſt of the *conjugated* or *pinnated Leaves*; the firſt Pair is leaſt, the other two gradually larger, and the odd one largeſt of all, being broad, roundiſh, and ſomewhat pointed. The Flowers are larger than thoſe of any other *Solana*, of a bluſh red, and ſometimes white. The *Empalement* is proportionally large, and Berry larger than the biggeſt Kind of Cherry. The *tuberous Root* is ſo well known that I need ſay nothing of it, only that it's ſo productive by its ſmall *Bulbs* or *Childlings*, which ſoon increaſe to a great Bigneſs, that it is very eaſily propagated wherever 'tis planted, and it's but ſeldom raiſed from the Seed.

Caſpar Bauhinus ſays this Root was firſt brought into *England* from *Virginia*, which muſt have been in Queen *Elizabeth*'s Reign, from thence it was conveyed to *France*, and other Countries, and now it abounds ſo much both in *Britain* and *Ireland*, the latter eſpecially, that it ſerves for the Bread and daily Food to many a poor Perſon there. *Bauhinus* ſays they made Bread of it in the *Indies*, which they call *Chunno*. They dry the *Roots* at the Sun, by cutting them in ſlices; being thus dry, they break, pouder, and make Bread of them, which will laſt a very long time (*ex quibus eduluum Chunno Nuncupatum admodum diu durans conficiunt*) ſo that if Bisket were bak'd of it to be kept for long Voyages at Sea, ſince 'tis now ſo common, or may be propagated in ſo great an abundance, it might turn to a very good Account, and be had at as cheap and a cheaper Rate than either *Wheat*, *Rye*, or *Barley*. Who want to be farther ſatisfied about it may conſult the forecited Author; I ſhall only add, that this is a ſingular Inſtance where the *Virtues* of *Plants* may diſagree when they agree in their *Characteriſticks*.

N. B. Upon writing of this I have been inform'd by an expert *Phyſician* that the *Leaf* of the *Solanum Lethale* being applied to the *Anus*, is an im-

† *C. B. Prodr.* p. 85.

mediate

mediate Cure for the *Teneſmus*, by aſſwaging the ſharp, uneaſy, fretting Pain, having tried the Experiment upon himſelf; and that he knows it to be an effectual Diſcutient of *ſchirrous Tumours*; however, it may happen, when the *Articula* on the one ſide, and the thin *Teguments* of the *Leaf* on the other, may prevent the more immediate Admiſſion of its *poiſonous* Particles into the Blood, yet I can by no means adviſe the Application of its Juice to *cancrous Ulcers*, leſt its *Malignity* be too ſoon introduc'd into the Blood by the open Orifices of the Cappillaries, and then the Cure may prove worſe than the Diſeaſe.

XIII. *Amygdalus.*

Is the firſt *Fruit Tree* (in common Acceptation) I meet with; for tho' all *Plants* bear a *Fruit* after their Kind, yet *Trees* more eſpecially are diſtinguiſhed into the *Barren* and *Fruit Trees*, that is, whoſe *Fruit* is *eſculent*, or *eatable*, or *not*. The *Almond Tree* is only eatable by its *Kernel*, but there are others I ſhall join with it, whoſe *Fruit* is otherwiſe *eatable*, *viz.* by the *Pulp*: which leads me into the general Conſideration of *Eſculent Fruit*, and that in different Reſpects, according to their *Kinds*. 1. As to their *Bigneſs*; they are *Bacciferæ* Berry bearing; *Pruniferæ*, bearing *Plumbs*; and *Pomiferæ*, affording *Apples* or *Pears*, according to their Kinds. 2. As to their Subſtance, they are *Oſſiferous* or *pulpous*; the *Oſſiferous* are divided into the *Nuciferous*, the *Nut* Kind; and *Teſtaceous*, the *Stone-Fruit* Kind.

The *pulpous* Kind are divided into the *ſucculent Fruit*, ſuch as moſt *Berries*, *Plumbs* and *Cherries*. The *Parenchymatous* are the *Apples* and *Pears*. Some of the *Teſtaceous*, or *Stone Fruits*, are *ſucculent*, as the *Cherries* and *Plumbs*; and ſome *parenchymatous*, as *Apricocks* and *Peaches*. Some approaching to the *Nuciferous*, as this *Almond* (of which we treat): and ſome of the *Pomiferous* are of the *ſucculent Kind*, as *Oranges* and *Lemons*, &c. of all which hereafter.

Amygdalus amara & dulcis.

Amygdalus ſativa, C. B. P. 441. Raij Hiſt. 1519. *dulcis & amara* J. B. 1. 2. 174. Tournef. 627. Boer. Ind. 245. *Agric.* de Agricultura, P. 3. The ſweet and bitter Almond.

XIV. *Malus Perſica.*

Malus Perſica, J. B. 1. 2. 157. Raij Hiſt. 1515. *Perſica Molli carne & vulgaris, viridis & alba*, C. B. P. 440. Tournef. 626. Boer. Ind. 2. 243. The Peach Tree.

XV. *Malus Armeniaca.*

Armeniaca Malus fructu majore ex luteo rubescente, Hort. Lugd. Bat. 59. *Mala Armeniaca majora*, C. B. P. 442. *Armeniaca Mala majora*, J. B. 1. 2. 167. Raij Hist. 1514. *Armeniaca fructu majori, Nucleo amaro*, Tournef. 623. Boer. Ind. 242. The Apricot Tree.

Vegetation of an Almond, and other Stone Fruit Trees.

Tho' the sweet and bitter *Almonds* differ in their Taste, and grow on different *Trees*, yet are they no more to be esteemed different *Species* than that vast Variety of *Apples*, *Pears*, *Plumbs*, which, tho' they are distinct in *Bigness*, *Colour*, *Taste*, yet as to the *Wood*, *Bark*, *Flower* and *Leaf*, they are still the same. The *Almond* and *Peach*-Kind are so like to each other in *Leaf* and *Flower*, that they are only distinguishable by the different Substance of their *Fruit*. The *Apricot* is so like to the *Wall Plumb*, in *Leaf* especially, that it can be only distinguish'd by the Substance of the *Fruit*, to be nearer to the *Peach* Kind.

General Character.

All of them have a pale red Flower, with a monophyllous Empalement, deeply divided into 5 or 6 Segments, surrounding a rosaceous Flower, consisting of 5 or 6 Petals, so united in the bottom of the Empalement, as to make up an hollow Basin, endow'd with a great many Stamina or Chives, with round Summits, about 30 in Number.

The *TRIBE*

That I may trace these *Stone Fruit-Trees* (as it were) from the *Cradle* to the *Grave*, from the planting of the *Stone* in the Ground to the eating of the *Fruit* on the *Table*, I have thought fit to repeat what I have advanc'd elsewhere concerning the *Vegetation* and *Nourishment* of *Trees*, and to add some other Improvements made from the proper Observation of Dr. *Agricola* in his Treatise *de Agricultura*.

In my *Botanick Essays* quoted in a Letter from *Boccone* to *Tournefort* (*Essay* v. p. 334.) is asserted, 'That the little *Plant* generated in those call-
'led *Seeds*, is either begot in that Part to which the *Pedicle* adheres, or
'in the opposite Part, or somewhere else. 2. That the Part to which
'the Pedicle adheres is stretch'd forth, in order to compose the *Pedicle*
'or *Fibre* of the *Root*, from whose upper Part or Top do proceed the
'*Leaves*.

'*Leaves.* 3. If it is generated towards the *Top*, the *Leaves* are ſtretch'd 'forth towards the *Pedicle*, and the Root towards the *Top*." Dr. *Grew* ſeems to be the firſt who diſcover'd the *Hole*, by which the Extremity of the Pedicle is ſtill continued with the Point of the *Radicle*, until the *Seed* be fully ripe, and the *Radicle* and Seed-*Leaf* is fully formed in the Seed. This *Hole*, and the Point of the *Radicle* oppoſite to it, is very obſervable at the *Eye* of a large *Bean*, eſpecially if it has been ſome time ſoak'd in Water, and in the *Seed* or *Key* of the *Aſh Tree*. Dr. *Agricola* makes a farther Improvement on this *Doctrine*. He compares an *Almond* to an *Egg*, with its *hard Shell*, and two *inner Membranes*. The *hard Shell* is indented near the *Top*, whence it makes an *Oval* along the *Sides* to the middle, where it begins to take the Roundneſs of the *Egg*, and terminates in a Point. The outſide of the Shell is full of Depreſſions and little *Holes*, where the *Nerves*, *Glands* and *Tubes* communicate with the green Covering. The *Shell* is hard and unequal, being *thick* on the one ſide and *thin* on the other; and on the *thick* ſide, towards the *Top*, is lodg'd a *ſmall Orifice*, which will admit of an *Hogs Briſtle*, which reaches from the Extremity of the *Radicle* to the incloſed little *Bud*.

If this Conduit is carefully trac'd, the Canal may be obſerv'd interſperſed with Veins, Nerves, and little *Tubes*, by which the *nutritious Juice* is convey'd to the interior and lower Part of the Radicle, where there is a *Receptaculum*, a Repoſitory for ſuch *Juice* or *Sap* as is fit for its Nouriſhment, whence it is abſorbed, and drawn to it by the *Navel-ſtring*, lodg'd in the firſt Skin, and thence to the *Placenta*, very remarkable on the *Top*. This *Juice* is return'd by the *Veins*, plainly obſervable throughout the Skin; and thus is the *Embryon* nouriſhed.

The firſt Skin, of a brown Colour (which may be properly called the *Chorion*, or external Cover of the *Fœtus*) being removed, beneath it is a fine tender *Skin*, anſwerable to the *Amnios* or *inner Skin* of the *Egg*, which immediately incloſes the *Fœtus*. It's extreamly thin and ſmooth towards the *Stalk* of the *Fruit*, and is always moiſt, by which the incloſed *Almond* is ſomewhat viſcous in its Surface.

Next to this *ſecond Skin* appears the white Subſtance of the *Nut* or *Kernel* (not unlike the Colour of that called Almond-Milk) which when drawn from its laſt Skin, the *Bottom* or *Tail* of the Nut or Kernel, the *Baſon* or *Place* where part of the *Radicle* is incloſed, is plainly remarkable, where the *nutritious Juice* is abſorbed, after having paſſed thro' the *Navel-ſtring*.

You next ſeparate the *Lobes* of the *Almond*, and lay them open as the *Leaves* of a Book, and there you diſcover the *Plume* at the pointed End, which contains the whole Form of the *Tree*, and in the other *End*, towards the *bottom*, is to be remark'd a ſmall *Slit*, where the two Parts

are

are united near the Radicle. They alter their white Subſtance by little into a green Colour, and produce what may be called the *minor Seed* of the *Plant*, from whence both *Root* and *Trunk* receive their *Nouriſhment*, until the *Juice* of the *larger Seeds Leaves* is quite ſpent, and then they decay and dwindle away.

When the *little Bud* is not *pregnant* it never opens, but no ſooner does the *Principle* of *Vegetation* begin to act than it opens at the *top*, and another *little Spark* or *Flame* comes out afreſh, and another Part, much ſhorter and thicker, of an oblong Figure, puts forth at the bottom, as a Body in Figure like half of an Egg, which terminates in a Point. In the firſt Part, or in the Plume, are contained the *Branches*, *Twigs*, *Leaves*, *Flowers* and *Fruit*, in ſome meaſure obſervable by a *Microſcope*; and it is to be ſeen with the *naked Eye* how Nature has grafted the Stem with the *Root*, for it would ſeem as if the *Stem* and *Root* were not one continued *Body* at firſt, but two diſtinct Parts, until the *Vegetation* begin at the Center, and then both *Root* and *Stem* are united together. See *Philoſophical Treatiſe of Agriculture*, *Page* 7. *Plate* 1. *Page* 14. I might have added other Obſervations ſuitable to this Purpoſe, and ſome other Experiments made in the Vegetation of Peaches by the foreſaid ingenious and curious *Author*, but this (which to ſome may ſeem extrinſick from my Deſign) I hope will ſuffice.

The *Deſcription.*

XIII. The *Almond* and *Peach Trees* are ſo like to each other as to their *Leaf*, *Flower* (as has been obſerved) and external Shape, that they are ſcarce diſtinguiſhable; both have oblong, narrow, ſharp pointed, crenated, light green, ſhining *Leaves*, like thoſe of the *Salix*; the *Leaves* of the *Almond* leſs proportionally than the *Peach*; the Almond *Flowers* are of a whitiſh, thoſe of the Peach of a much deeper Red, proceeding before the Leaves, and ſpringing forth without Footſtalks from the larger and leſſer *Branches*, roſaceous, with a great many *Chives* and *Summits* ſurrounding a ſtrait *Stylus* and round *Button*. The *Fruit* of the *Almond* is flat, ſomewhat bended, with a thin outer green Coat, ſurrounding a rough *Shell* of the ſame Figure, and containing a large eatable *Fruit*, of a white Subſtance, and either ſweet or bitter oily Taſte.

XIV. The Fruit of the *Peach* is round, *parenchymatous* and *fleſhy*, eats hard, unleſs well *ripe*, rough without, of a yellow Green, and of a pleaſant Taſte; the *Stone* is very rough, thick and hard, containing a Kernel like that of an Almond, but leſs, of a pleaſant bitteriſh Taſte.

XV. The *Apricock* or *Apricot Tree* is much like the *Peach*, its *Branches* are not ſo ſmall the firſt Year (for thoſe of the Almond are ſmall, flexible, and

and Twig-like): Thoſe of the *Apricot* groſſer and ſtiffer; its *Leaves* are *broad*, *large*, more like a *Plumb-Tree* or *Black Poplar*; the *Fruit* with a Longitudinal Depreſſion, like the other, not ſo rough; of a Taſte like unto it, but a ſofter and more juicy or pulpy Subſtance. The Stone and Kernel do not differ much, ſave only in the Bigneſs proportional to the Fruit.

They are uſually planted on *Garden-Walls*, and, if well manur'd, produce very plentifully here in *England*; but for their Culture, Management, different Kinds of Fruit, I leave that to the Care, the Art, and Myſtery of the expert and curious Gardiners in and about *London*; and who from thence are ſent forth as from a Nurſery, to the Noblemens and Gentlemens Gardens all over the Country in ſuch an Abundance, and endow'd with ſo much Experience in their Profeſſion, that no Country in the Univerſe can produce ſo many knowing Gardiners as *England* can afford at this Time.

The *Almond-Tree* comes to a great Perfection with us, as to the Wood; but ſeldom perfects the Fruit here, as in the hotter Regions of *Upper Germany*, *France* and *Italy*: But one Reaſon may be, the Fruit it ſelf not being eatable, and the *Almonds* are imported in ſo great Quantities from Abroad, and at ſo cheap a Rate, that it's not worth while to beſtow ſo much Pains in pruning, cultivating, and manuring of them, as of the Peaches and Apricots; for I am perſuaded, they who have come ſo great a length in rendering of *Peaches* fertile, could not fail to render the *Almond-Tree*, his Brother, as fertile as the other.

Virtues and *Uſes.*

The Almond both ſweet and bitter, conſiſts of *Farinaceous*, *Nutritive*, and *oleaginous Particles:* They are much in uſe among the *Confectioners* for their *Sweet-Meat Entertainments*. They are of uſe in the *Kitchen* for nouriſhing Diſhes; and in the *Apothecary's Shops* for *Emulſions* and *pectorale Compoſitions*, ſuch as *Looch e pino*; *de Papavere*; *ſanans*; *ſpec. diapenidion*, *Elect. pectorale*, *Diaperſicon*, &c. The *Amygd.* is frequently us'd in moſt Diſtempers of the *Breaſt* and *Lungs*; it is either drank up alone with Sugar and White Wine, or it enters into *pectoral Linctus*'s and *Electuaries*, &c. It's apply'd externally for beautifying of the Face; it is alſo preſcribed in *emollient Liniments*. The *Oil* of *Bitter Almonds* is chiefly us'd, a little Cotton being dipp'd amongſt it, or by being ſyring'd into the Ears of thoſe who are deaf by the indurated Wax.

Peaches are not now much uſed in Medicine. The Old Diſpenſatory preſcribes the *Syr. Fl. Perſicorum* among the purging Syrrups, made of a ſtrong Infuſion, or rather the Juice of the *Peach-Flowers*; but it's not in uſe. It likewiſe enters the green Apricots among the *condita*; but theſe Preparations, however they may pleaſe the Palate, are not of much *medicinal*

Uſe: They frequently uſe the *Apricot* and *Peach-Stones* and *Kernels* bruiſed and infuſed in *Brandy*, to make that they call *Ratiſia*.

N. B. During the Time of making my Obſervations, in order to publiſh my *Botanick Eſſays*, I had frequent Conferences with that ingenious and expert Gardner Mr. *Fairchild*, in whoſe Garden I firſt obſerved the Male and *Female-Flowers* on the *Orange* and *Lemon-Trees*. Mr. *Fairchild* told me, that above 20 Years he had obſerv'd thoſe he call'd *barren* and *fertile Flowers* on the *Peach*; for until my Acquaintance with him, he had no Notion of the *Sexes* of *Plants*: We then obſerv'd the *Male-Flowers* more frequent on the *Almond-Tree* than the *Female*; and ſince that Time, I have obſerv'd the ſame *Male-Flowers* in moſt eſculent *Fruit-Trees*, with a *Roſaceous Flower*, ſuch as *Apples*, *Plumbs*, *Cherries*, &c. and that the *Male-Flowers* were the firſt both bloſſom'd and blown. The Way to diſcern is, by a groſſer *Stylus* or *Pointal* on the one than in the other; alſo by a more tumid *Calix*. Now whether the Frequency of theſe *Male-Flowers* may proceed from a certain Weakneſs, or want of a ſufficient Supply of *Nouriſhment*, to puſh forth and ripen the Fruit, or whether a more than ordinary Quantity of the *farina fecundans* be required for *Impregnation* of thoſe which are after to become ſuch *large*, *groſs*, or ſuch *hard*, *ſtony Fruits*, may be a Queſtion. It thus far conſiſts with my conſtant Obſervation, that the *Male-Flowers* are firſt blown, and that they are more frequent in dry, than moderately wet Seaſons, when the Fruit, generally ſpeaking, does not ſo much abound. See more of this, *Botanick Eſſays* 4. p. 291. &c.

XVI. *Anagallis Terreſtris.*

1. *Anagallis Cæruleo Flore.* C. B. P. 252. Tournef. 142. Moriſ. Hiſt. 2. 569. Boer Ind. 1. 103. *Cærulea Fœm.* J. B. 3. 29. 369. Raij. Hiſt. 1024. *Fœmina* Dod. pempt. 32. Female Pimpernel.

2. *Anagallis Phœniceo Flore.* C. B. P. Tournef. Boer. Moriſ. *Phœnicea Mas.* I. B. *Mas.* Dod. Raij. Hiſt. Male Pimpernel.

XVII. *Anagallis aquat. ſ. Becabunga & Veronica Mas, ſ. Betonica Pauli.*

1. *Anagall. min. aquat. fol. ſubrotundo.* C. B. P. 252. *Aquat. fl. purpuras cente fol. oblongo minor.* J. B. 3. 38. 780. *Veronica aquat. maj. fol. ſubrotundo.* Moriſ. Hiſt. 2. 323. Hort. Lugd. Bat. 622. Tournef. 145. Boerh. Ind. 225. *Anagallis rectius Veronica minor fol. ſubrotundo.* Raij. Hiſt. 852. *Berula*

ſive

ſive Anagallis aq. Tabern. Icon. 719. *vulg. Becabunga* Park. *Aq. ſive Becabunga* Ger. common Brooklime.

2. *Veronica Mas ſupina & vulgatiſſima.* C. B. P. 246. *Supina vulg. fol. ſerratis.* Moriſ. 2. 318. Tournef. Boer. Raij. *Veronica vulg. fol. Rotundiore.* J. B. 3. 38. 282. *Mas Serpens.* Dod. pempt. 42. Male Speedwell, or Paul's Betony.

The *TRIBE.*

Dr. *Moriſon*, Mr. *Ray*, and the other *Botanick Authors*, who preceded *Tournefort*, ſeldom conſider'd whether a *Flower* were *monopetalous*, deeply divided into 4 or 5 *Segments*, or *tetrapetalous* and *pentapetalous*, conſiſting of ſo many *Petals*; chuſing rather to claſs the *Plants* by the *Fruit*; but even in that there was a general Error concerning the *Anagallis*, until Dr. *Moriſon* diſcover'd that the *Anagallis aquat.* of the Ancients is a *Veronica*, whom Mr. *Ray* follows; and *Tacito Authoris Nomine* makes uſe of the Diſcovery as his own, as has been obſerv'd elſewhere. Though Dr. *Moriſon* himſelf *fails* in that he would have the *Anagallis* to be *pentapetalous* and *capſular*; and the *Veronica*, *tetrapetalous* and *ſiliculous*, which Mr. *Ray*, in his *Method. Emend.* has corrected, by calling them *Enangioſpermæ.* As to their *Flower*, he ſays, they are *Tetrapetaloid* and *Pentapetaloid*; and only ſays, *Anagallis* is *vaſcular*, but gives no Title to the *Fruit* of the *Veronica.* *Tournefort* gives but a general Account of both, when he ſays, *cujus piſtillum abit in fructum ſiccum.* Nor is the accurate *Boerhave* very particular here, when he only ſays, the *Anagallis* is *Monangioſpermos*; whereas he might have call'd it, *Monangiopolyſpermos*, as the *Veronica* is *Diangiopolyſpermos.*

XVI. The general Character then of the *Anagallis* is, that it has a *monopetalous Flower*, divided into 5 *Segments*, with a round *unicapſular Fruit*, opening tranſverſly, and ſhedding ſeveral *Seeds.*

XVII. *Veronica* has a *monopetalous Flower*, divided into 4 *Segments*, with flat, heart-like Fruit, divided into 2 Pouches, having its *Septum*, or Mid-wall, placed perpendicularly acroſs the Center, from which the Pouches on each ſide, upon ripening, ſhoot, and ſhed ſeveral ſmall *Seeds.*

The Deſcription of the Anagallis Terreſtris.

Upon what the Ancients divided the *Anagallis* into Male and Female, I cannot gueſs. Mr. *Ray* ſays, they do not differ in the Leaf, but I have obſerv'd

obſerv'd the contrary; for before they begin to flower, that with the blue *Flower* has a *Cæſious* or blueiſh green Leaf, larger and more pointed than the other. The *blue Flower* is alſo larger, and the *Fruit* more oval: They are ſmall, low Plants, with a ſmall, fibrous, annual *Root*, ſending forth a few infirm, triangular, or rather quadrangular jointed *Stalks*, with 2 or 3 ſmall, oval, oblong, or pointed *Leves*, without *foot Stalks* from each Joint. The *Flowers* are upon long, ſmall *Pedicles*, ariſing ſingly from each Joint, *monopetalous*, divided into five *Segments*, deep *Red*, and leſs in the one; *Blue*, with a purpliſh Bottom, in the other; with five *Chives* and Summits, to which ſucceeds a *ſpherical*, *unicapſular Fruit*, about the Bigneſs of *Coriander*, opening tranſverſly, and ſhedding ſeveral corner'd duskiſh *Seeds*, adhering to a *Placenta* or middle *Axis*: It flowers in *June* or *July*. The *Red* grows on the Way-ſides in Arable Ground, and in Corn-Fields among the Corn, as does the *Blue*, but the *Red* is more frequent.

There is another Species belonging to this Family, which, though not *officinal*, having treated of it twice before, I have thought fit to name it here, *viz.* That which formerly was known by the Name of *Pyrola Alſines flore Europæa*, that it may be diſtinguiſh'd *according* to C. B. from the *Americana*. Mr. *Ray*, in his *Synop. Stirp. Britt.* places it among the *vaſculiſera pentapetaloidæ*; but in his *Meth. Emend.* he makes it *incertæ ſedis*, being unacquainted with its *Fructification*. This made me, upon Obſervation of its *Fruit*, as well as of the *Flower*, to refer it to this *Genus*: In my *Miſcellaneous Obſervations*, I call it *Pyrola Unicapſularis*, ſince it had enjoy'd the Name of *Pyrola* ſo long; but in my *Botanick Eſſays*, I have deſign'd it *Anagallis Unicaulis erecta*; for it's only by its *unbranch'd Stalk*, and *erect* Poſition with a darker green Colour of the *Leaf*, and white Colour of the *Flower*, that it differs from its Brethren the *Anagallides*: It's very much like the *Pyrola Alſines flore maj.* C. B. prodr. p. 100. See its Deſcription, *Botanick Eſſays*, p. 160.

The Deſcription of the Veronica.

1. *Common Brooklime* has a round, ſmooth, juicy *Stalk*, creeping on the Ground, ſending forth ſeveral ſmall *Fibers* from the lower Part, by which it takes Root, and a Pair of oblong, light green, blunt, ſmooth *Leaves*, from the ſides of each Joint; from whoſe Boſom ariſes a ſmall *Spike*, loaded with thin-ſet, ſmall, blue *Flowers*, upon ſhort *foot Stalks*, *monopetalous*, ſpread forth into four deep divided, blunt *Segments*; one, for the moſt part larger, upon a *tetraphyllous Empalement*, with two obliquely aſcending *Chives*, and proper *Summits*, to which ſucceeds a *flat Heart-like Fruit*, with ſmall flat *Seeds*. It grows on the ſides of *Ditches*, and marſhy and watry Places, *flowers* moſt part of the Summer. There are ſeveral

other

other Species of theſe Water *Veronica*'s, which partake of the ſame Virtues; but this middle Species, as being more frequent, is moſt in uſe. I once found this *Species*, with the Variation of a *white Flower*, at the *Mill* of *Craigy*, near *Perth* in *Scotland*. I cultivated and improved it for ſeveral Years in my *Garden*. Its *Leaves* were leſs in Proportion, of a lighter Green, and more crenated. It could ſcarce endure the Winter Froſt, and was chiefly propagated by ſome of its youngeſt and moſt tender *Joints*, which emitted radical Fibres, and overcame the Severity of the Cold, remaining until the Spring Seaſon, as we ſee happens frequently to *Pulegium*, *Scordium*, &c.

Male Speedwell, or *Paul's Betony*, is a ſmall, low, frequently branched Plant, ſpread on the Ground, having, *Germander* like, ſomewhat *notch'd Leaves*, but leſs and lighter, a little hoary; the ſpiked *Flowers* on the upper part of the *Stalk* are ſmall, dark Blue, upon ſhort *Footſtalks*, and ſucceeded by *flat*, *furrowed*, *Heart-like* and pouched *Seed Veſſels*, containing ſmall *Seeds*. The *Root* is ſmall, fibrous, and *perennial*. It *flowers* and perfects the *Seed* all the Summer, growing in dry Meadows, Paſtures, and not very fat mooriſh Ground, on Banks, and at the ſides of Foot-Paths.

Virtues and *Uſes of* Anagallis Terreſtris.

Anagallis is ſo like to *Alſine media* in the Largeneſs of the *Plant*, Manner of growing (tho' it be not often ſo luxuriant) Figure, and Diſpoſition of the *Leaves*, that I'm under no difficulty to pronounce their *Virtues* to be much alike. I have already, in Diſcourſing of *Alſine*, given an Account of the Operation of theſe moderate Aſtringents, (of which this *Anagallis* is, by all Authors, declared to be one) but more intenſe than the *Alſine*. It's therefore ſaid to be *vulnerary*, *Alexipharmick*, good in the *Plague*, *peſtilential Fevers*, againſt the *Bite* of a *Viper* and *mad Dog*, alſo in *Maniacal* Caſes, for the *Epilepſy*, and griping of the *Guts* in new born Children. It is alſo recommended in *hectical* phthiſical Caſes, and other Diſeaſes of the *Lungs*; all this may be tolerably well accounted for by its *Subaſtringency*, in compreſſing the Motion of the *Blood*, conſtricting of the *Pores* of the *Cappillaries*, by rendring more firm and compact the *Craſſamentum*, and by blunting and abſorbing the *acrimonious Particles* of the *Serum* of the *Blood*. It's alſo ſaid to be good in *hydropical* Caſes, and they even attribute to it the Virtue of *reſerating* the *Obſtructions* of the *Liver* and *Spleen*, and *diſſolving* of the *Stone*. Several Authors recommend it for *Phrenſies* and *Deliriums* in continued Fevers, being given in *Decoction*, in *Tincture*, with *Spirit* of *Wine*, or in *Extract*. The laſt of which fully ſhews its *Aſtringency* and *Fixedneſs* of its Parts; for no Extract ought to be made of a *volatile* or *aromatick Plant*, for then the moſt uſeful Parts

will be evaporated, and only the more unactive or *Caput Mortuum* will remain. *Simon Pauli*, after his tedious and prolix way of Expreſſion, enters upon its being more eſpecially made uſe of in that Country for aſſwaging of *goutiſh Pains*, being boiled into a *Cataplaſm* with *Urine*. *Leſeleus* goes yet farther with its *Aſtringency*, and ſays it's ſo powerful a *Binder*, that if the *Plant* is kept in the Hand it will ſtop the Motion of the *Blood*. And from *Lonicerus*, Fol. 204. ſays, that at the opening of a Vein no Blood will flow out ſo long as the Herb is kept in the Hand. He recommends it for *ſtopping* of the *Fluxus menſium nimius*, by hanging it round the Neck, or by applying of it to the Heart-pit. He treats only of the *Anagallis Mas*, for it ſeems that with the *blue Flower* is not indigenous in *Pruſſia*, and it's probable the *Red* may be more intenſely *aſtringent* than it, for in diſcourſing of the *Amaranthus*, I made a Conjecture that *red Flowers* are more durable, and have more *Aſtringency* than any *Flower* of a different *Colour* of the ſame *Species* of *Plant*. I doubt not but the *Amaranthus* with a deep *red Spike* is the moſt *aſtringent*. I ſhould not look upon the *Flores Balauſtiorum*, if there were any ſuch of a white Colour, as ſo *aſtringent* as the common *red Flowers* in the Shops; and it's plain the *Scarlet Roſe* is the moſt *aſtringent*, the *pale Roſe* on the contrary is *laxative*, and the *white Roſe* the more fragrant. Every one knows the *Fructus Prun. Sylv.* the common *Sloe*, is moſt aſtringent, eſpecially if not fully ripe, and yet the *white* Sloe frequently ſold in the Market here is ſo far from being *aſtringent*, that it's *laxative*, with the other Garden *Plums*. But notwithſtanding what is ſaid, the *Anagallis* is ſeldom uſed in Phyſick, for the *Plant* is ſo ſmall, that it would take ſome time to *gather* any Quantity for common Uſe; ſo that there being others of the ſame Virtues, it's let alone.

Virtues and *Uſes of the* Brooklime.

I have given the Reaſon (ſpeaking of the *Water Parſnip*) why Water *Plants*, generally ſpeaking, are of a hotter Taſte, have more volatile active Principles than thoſe of the ſame *Family* in a dry Soil; now I come to ſhew why ſuch are for the moſt part *potent Antiſcorbuticks*. When the Ancients came to give the *Rationale* upon the Operation of Medicines, they had recourſe to the *Quality*, and their ſeveral *Degrees*, ſuch as *hot* and *dry*, *cold* and *moiſt* in the firſt, ſecond, third and fourth *Degree*; and they ſuppoſed that a cold Diſeaſe muſt be cured by an *hot Medicine*, like *Ovid*'s Account of the *Chaos*; *Frigida pugnabant callidis*, &c. But how far they failed in this, their Syſtem may be ſoon conſidered in the *Scurvy* and its *Antidotes*; for if any Diſeaſe can be called hot, the *Scurvy* may, conſidering thoſe *inflamed* and *red Spots*, thoſe *cutaneous Eruptions*, thoſe *Scabings*, *Tettars*, *Scurfs*, that *Hardneſs* and *Drineſs* in the *Skin*, even tending

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ing to a *Leproſy*, and all attended with inſufferable *Heat*, vehement Itchings, and acute Pains, and accompanied with *Bleedings*, *Eroſions* of the *Gums*, looſening, ſometimes dropping of the Teeth, with a Laſſitude and Wearineſs over the whole Body. It cannot be reputed a cold Diſeaſe, and yet thoſe deem'd the moſt potent *Antiſcorbuticks*, may be juſtly called *potentially* and even actually hot. If we again conſider the Conſiſtence of the *Blood* in *ſcorbutick Perſons*, and the *Texture* of the *Parts* in moſt *Antiſcorbuticks*, eſpecially thoſe belonging to the *Vegetable Kingdom*, we ſhall not perceive ſuch a Contrariety as the Operation would imply. The *Blood* in thoſe tainted with the *Scurvy* conſiſts in a groſs, thick, and viſcid *Coagulum* or *Craſſamentum*, and a thin, ſharp, acid, and even corroſive *Serum*. When the groſſer Parts of this *Blood* arrive at the Capillaries, it's with much ado they can paſs ſo narrow Channels, but being at laſt retarded, the more ſerous are ſeparated, and being as it were unſheath'd, theſe acrimonious Particles make Havock upon the extream Parts of the Body, cut and tear wherever they go, being the cauſe of *itching*, and ſometimes *cutting Pains*, thoſe *Inflamations* and *cutaneous* Eruptions. The *antiſcorbutick* Remedies again conſiſt of a very *fix'd Salt*, intimately mix'd with groſs and earthly Parts, and a very ſubtile, penetrating, *volatile Salt*, more diſengag'd among the liquid and juicy Part of the *Plant*. This their Texture is very evident from the *Taſte*, and other Experiments may be made upon ſuch Remedies, for wherever there is an inteníe *Bitterneſs*, ſuch *Plants* abound with a *fix'd Salt*, as in *Wormwood*, ſo united with the *Earth*, that nothing but *Calcination*, reducing the whole Maſs to *Aſhes*, will ſeparate them; and if you affuſe Water upon them, and thereby diſunite the *ſaline Particles* (*Salia non ſaliunt niſi in fluido*) the remaining Earth will be quite inſipid; ſo that this bitter *Taſte* muſt only proceed from an intimate Combination of the *fix'd Salt* with this Earth, which when *ſeparated*, becomes the *Caput Mortuum*. The *hot* and more active *Taſte* in the *Antiſcorbuticks* proceeds from the penetrating and keen *ſaline Particles* not being ſo much clog'd with the earthy Parts, but ſwimming as it were freely among the ſerous and more fluid Parts of the Plant, do exert themſelves with greater Activity wherever they go. Hence it is that theſe hot *Antiſcorbuticks*, upon being dried, do loſe their Taſte, becauſe the *volatile Salts* evaporate and fly away along with the *Serum*, and do ſoon communicate their hot *Taſte* in Diſtillation, which the bitter *Plants* will not do. Upon this Reaſoning it's eaſy to account why both theſe fix'd, bitter, and more volatile, hot taſted *Plants* are potent *Antiſcorbuticks*; for the fix'd *Salts*, tho' ſlower in their Motion than the other, yet when they arrive at the obſtructed Part they act more vigorouſly, attenuate and divide theſe more viſcid Parts of the Blood, by which it's rendred more capable of Circulation, and theſe more penetrating *Salts*

of

of the Plants thus extricated, ſoon arrive at the ſerous Part of the *Blood*, which being ſtill much groſſer than the acrimonious *Salts* of the Blood, as not ſo much attenuated by frequent Circulations, more powerful, and of different Texture, they deſtroy their too keen and ſharp *Spiculæ*, by which they cannot produce ſuch Effects upon the *Skin* as before, being dulcified, as we find the *corroſive Spirits* of *Nitre*, *Vitriol* and *Salt* are by the Affuſion of *Spirit* of *Wine*, performing the Office of what the Chymiſts call the mixing of an Acid and Alkali, ſo that the groſs Parts of the *Blood* attenuated by the fix'd, and acrimonious by their more volatile *Salts*, a regular Circulation is thus obtained, the *Blood* as it were is ſweetned, and the bad Effects of its extraordinary Sharpneſs ceaſes.

The Herb of *Brooklime* is only us'd green; being eat as a cold Sallad along with Water-Creſſes in the Spring Seaſon every Morning, it's an effectual Remedy againſt the *Scurvy*. The *clarified Juice* may be drank in Glaſs-fulls every Morning in the ſame Caſe. The manner of clarifying it, and all other hot *antiſcorbutick* and *Water Plants*, is, to heat the Juice over a gentle Fire till 'tis quick hot, then skim or ſtrain out the groſſer Parts, which ſwim a top, and the remaining Liquor will be as clear as when clarified with the White of Eggs. Take of the Juice of *Brooklime*, *Water-Creſſes* and *Scurvy-graſs*, of each an equal Quantity, mix them with *Sweet-worts*, let it be work'd up with *Yeſt* or *Bawm*, and after tunn'd up and ſettled, drink half a Pint each Morning in the Spring Seaſon for the *Scurvy*. Its Juice enters the *Aq. Raphani comp.* and may enter the Compoſitions of ſeveral other *diſtilled antiſcorbutick compound Waters*, fit for thoſe affected with the *Scurvy*. Four Spoonfuls of the Juice of *Brooklime*, *Water-Creſſes* and *Scurvygraſs*, in equal Quantities, mix'd with two Spoonfuls of *Orange* Juice, and drank for ten Mornings together, is frequently preſcribed in ſcorbutick Caſes with great Succeſs.

Male Speedwell is not much in modern Practice in *Britain*. It's recommended by *Tournefort* as *ſudorifick*, *vulnerary*, *deterſive*, *diuretick*, and good for *attenuating* the *tough* and *viſcid Matter* in the *Lungs*. The *Spirit* of *Veronica Mas* diſtilled with *Theriaca* is eſteem'd a potent *Sudorifick*. Its *ſimple diſtilled Water* is recommended for *Diſeaſes* of the *Lungs*, the *Stone*, and *Vapours*. The *Syrup* and *Extract* is preſcribed to ſweeten the *Blood*, and for *cutaneous Eruptions*. The Skin may be waſh'd with the *diſtilled Water*, mix'd with a little *Vitriol*. A *Decoction* of the *Herb* with *Sugar* is eſteem'd good in a *Collick*, and a *Sack-Poſſet* with it and *Chamomil Flowers* drank hot for the ſame Diſeaſe; a *Tea* of the *Herb* is recommended. In a word, it ſeems to be a *moderate Aſtringent*, and as ſuch it ſeems to be *vulnerary*, *deterſive*, and good in all the foreſaid Caſes.

Anchuſa, vide *Borrago*.

Androſæmum, vide *Hypericum*.

F I N I S.

PHARMACO-BOTANOLOGIA:

OR,

An Alphabetical and Classical

DISSERTATION

ON ALL THE

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OF THE

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DECAD III.

By *PATRICK BLAIR*, M. D. of *Boston* in *Lincolnshire*, and Fellow of the ROYAL SOCIETY.

Miseri mortales qui Naturam ejusque artificium Abdunt, ubique diligentia patens, & Amplissimos solis radios Nubecula obfuscant. Barth. Epist. ad Lyserum.

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The PLANTS of the third DECAD.

THE PREFACE TO THE Third DECAD.

AS *I was going on in the Proſecution of this third Decad, the* Alphabet *led me to* Aquilegia, *a ſingular Plant, in which I obſerved ſo many* Phænomena, *that, inſtead of making up a Part of this* Decad, *it has ſwell'd to a ſeparate Volume; in which are contained an Improvement of the Doctrine of the* Sexes *of* Plants; *with my thoughts concerning the* Variations *of the* Colours *of* Flowers, *and* Multiplicity *of* Petals; *enrich'd with ſeveral curious and uſeful Remarks and Obſervations. I deſigned to have entertained the Reader with that, before this* Decad *ſhould be publiſhed: But ſome of my worthy Friends, and Correſpondents, adviſed to delay the Publiſhing of it for ſome Time, in order to enlarge it with what farther may be obſerved, to render it more Uſeful and Entertaining.*

That is the Reaſon, why this Decad *has been ſo long in ſeeing the World; ſo that, as the other is ſhortly to follow, I have been adviſed to publiſh this for the preſent.*

In

The PREFACE.

In this Decad, Anethum, *&c. farther explain the* umbelliferous *Plants.* Anonis *introduces the* papilionaceous *Flowers.* Anthora, Aquilegia, Ariſtolochia, Artanita, Aſclepias, Aſparagus, *are of Tribes, wherein there are but few of a Family.* Aparine *brings in the* Stellatæ; After *the* Corymbiferæ radiatæ; Atriplex *the* apetalous *and* emollient Pot-herbs; *and* Avena the Culmiferous *and* Corn *Kind: To which is added, the* Arundo, *the largeſt of the* Graſs *Tribe*; *with its Brethren,* Milium *and* Panicum.

Under the Head of Avena, *I have taken Occaſion to ſpeak, not only of the different Sorts of* Oats, *but alſo of the* Culture, Improvement *of Arable Ground (whether Fertile or Barren) the different Methods of preparing it for Food, and its uſefulneſs in Encloſures, for bringing up of* Timber-Trees, Broom, *&c. I have been the more particular on this Head, becauſe, it having been neglected by the ingenious Writers of this Age, who only treat of Improving more fertile Grounds, I hope this will not be unuſeful to thoſe, who being poſſeſſed of ſuch Lands, are unacquainted with the Uſe they make of* Oats *elſewhere.*

Being in good Hopes this Third Decad *will find the ſame favourable Reception which the other two have met with; I ſhall endeavour to have the* Fourth *in Readineſs, when it ſhall be call'd for by the Publiſher.*

ERRATA *in the ſecond Decad.*

PAGE 69. Line 23. read *Anatomiſts.* p. 72. l. 29. r. *Annuum.* p. 86. l. 6. for *Vegetation,* &c. r. *The* TRIBE. ibid. l. 22. for *The* TRIBE, r. *Vegetation of an Almond, and other Stone Fruit-Trees,* p. 93. l. 12. after *having,* dele the *Comma.*

ERRATA *in this Decad.*

PAGE 102. Line 16. r. *Spec.* l. 27. r. *Ung.* p. 104. l. penult. r. *corniculatæ.* p. 115. l. ult. r. *Pomegranate.* p. 116. l. antepenult. r. *five.* p. 121. l. 12. r. *of an.* p. 122. l. 4. r. *for it is.* p. 130. l. 26. r. *aromatis'd.* p. 137. l. 6. r. *falls.* p. 118. l. ult. r. *phraſti.* p. 120. l. 23. r. *conſiſts.*

PHARMACO-BOTANOLOGIA:

OR, A

TREATISE

OF

DISPENSATORY PLANTS,

Alphabetically and Claſſically diſpoſed.

DECAD III.

I. *ANETHUM.*

ANETHUM Hortenſe, C. B. P. 147. Tournef. 318. *Anethum*, I. B. 3. p. 2. 27. 6. Raii. Hiſt. 415. Moriſ. Umbellif. 36. Hiſt. 3. 311. Dod. pempt. 298. Dill.

Deſcription.

This *Umbelliferous Plant* has an annual fibrous *Root*, ſtreight, dark green, hollow *Stalk*, about one or two Foot high, deep divided, compound, fennel-like *Leaves*, dark, bluiſh green, with thinner, narrow *Segments*, *flat Umbels*, and yellow *Flowers*; to each of which, ſucceed two *flat Seeds*, a little *gibbous*, and creſted on the outſide. The whole *Plant* has a peculiar high Scent. Its moſt frequent Uſe is among pickled

 Cucumbers,

Cucumbers, and *pickled Kali Geniculatum*, frequently eat as a Sallad, and Pickle, in *Holland* in *Lincolnſhire*, inſtead of *Crithmum*, and upon that Account call'd *Samphire*. The *Seeds* are *carminative*, as moſt of the *Umbelliferous ſtriated Seeds* are. It's commended as a Specifick, given in *Poſſets*, for *raiſing* of Wind, and for the *Singultus* or *Hiccough*, and Cholick Pains; but becauſe of its unpleaſant Taſte, *Fennel-Seeds* are juſtly preferr'd. The Shop Preparation is *Oleum Anethinum*, (made of the Juice or contus'd Herb) which is preſcrib'd in *Ointments* for Goutiſh and *Sciatick Pains*; alſo for a *Tumefaction* in the *Left Side*, commonly call'd the *Spleen*. The *Seeds* are alſo commended for provoking of Urine, and *expelling* the *Stone*.

II. *Angelica.*

Angelica Sativa, C. B. P. 155. I. B. 3. 27. 140. Raii. Hiſt. 434. Moriſ. Hiſt. 3. 280. Umb. 9. *Maj.* Dod. Pempt. 318. *Imperatoria Sativa*, Tournef. 317. Garden Angelica.

III. *Imperatoria.*

Imperatoria Major, C. B. P. 156. Tournef. *Imperatoria*, I. B. 3. 2. 27. 137. Raii. Hiſt. 436. Moriſ. Umb. 10. Hiſt. 3. 278. *Aſtrantia* Dod. pempt. 720. Maſter-wort, *falſly* Pelitory.

The TRIBE.

Mr. *Ray* rightly obſerves, that *Angelica* is ſo noted a *Plant*, that it deſerves the *Honour* of being the *Head* of a *Family*, and not a Branch of another; as *Tournefort* would have it to be the *younger Brother* of *Imperatoria*; for if we conſider its lofty *Stature*, its large variouſly divided Leaves, its conſpicuous *Spherical Umbels*; the groſs *ſtriated Seeds*; it will be found far different from the *Imperatoria*, whoſe *Stature* is mean and low; its Leaves very much leſs, and not divided altogether after the ſame Manner, by the Flatneſs of its *Umbels*; and its *Seeds* being more *compreſs'd* and *flattiſh*, they may be well look'd upon as two different *Genera*.

The Deſcription.

II. *Angelica* is a tall *Plant*, ariſing ſometimes to five or ſix Foot high, with a thick, groſs, carnous *Root*, ſtriking deep in the Ground. A tall, ſtreight, hollow, jointed, branched (towards the Top) creſted or ſtriated juicy

juicy *Stalk*; large, compound *Leaves*, *alata* winged, and *Lobata* lobed; being for the moſt Part divided into three Branches, two lateral and ſhorter, the third ſtreight in the Middle, and longer; each of which are ſubdivided for the moſt Part into two Pair of *Pinnæ* or Wings, ſometimes plain, and at other Places doubly, or triply *lobed*, with a triply *lobed* one always at the Extremity; the *Lobes* oblong, blunt, and crenated, of a light Green and ſmooth. The Pedicles of the *Leaves*, from whoſe Boſom the upper *Branches* proceed, are broad, thin, membranous, ſurrounding the *Stalk* at the Joints; making a Concavity or *Baſon*, ready to receive the *Rain*. The *Umbels* are large and *Globular*, or *Spherical*. The ſmall *Flowers* white. The *Fruit* is large and oval, conſiſting of two turgid (on one Side) or gibbous ſtriated *Seeds*. It's a biennial *Plant*, ſeldom perfecting the *Seed* the firſt Year; its Root is *carnous*, ſoft and *parenchymatous* the firſt Year; the ſecond it becomes harder, and after the *Seed* is ripen'd, it decays; it's cultivated in Gardens, and propagated by the *Seed*.

III. *Imperatoria* or *Maſter-wort* has a ſmall, long, round, jointed, running *Root*, about the Bigneſs of one's Finger, ſpreading ſuperficially on the Ground, endow'd with many ſmall Fibres from the Joints; the *Leaves Lobed*, triply divided, and ſubdivided, broad, roundiſh, crenated, and light Green; the *Stalk* hollow, ſmall, ſtriated, jointed, where it ſends forth Leaves about one Foot high, with large flat *Umbels* of white ſmall *Flowers* on the *Top*, with large *Fruit*, lightly ſtriated, and much more compreſs'd than the former. It is propagated by the running *Root*. It is cultivated in *Gardens*. I have ſeen it ſometimes in the Fields; but for the moſt Part near to ſome Place, where Houſes or Gardens have been formerly, ſo that I only look'd upon it as an *Ejectamentum*.

Virtues and *Uſes*.

II. *Angelica* is a noted *Plant* for its Virtues; of a hot, agreeable, aromatick, peculiar *Taſte* and *Smell*: It conſiſts of tenacious and ſubtile Particles; is eſteemed a potent *Cephalick*, *Stomachick*, *Alexipharmick*, good in *peſtilential* Diſtempers, ſuch as *malignant Fevers*, the *Plague*, and in other *contagious Diſeaſes*. It is alſo a good *Hyſterick* and *Hypochondriack*: It provokes the *Menſes*, and expels the *Secundine*. All its Parts are uſed. There is frequently a dry *Candy* made of the *Roots*, and often of the *Stalks*. There may be a *Tea* made of the *Leaves*, or it may be uſed in *Ptiſans*, in *malignant* and *peſtilential Fevers*. The *Seeds* may enter *carminative* Decoctions for *Clyſters*. The *Shop Preparations* are, *Aq. diſtill. ſimpl. comp. Epidemica*; *Theriacalis*. The Leaves enter *Aq. Lactis*. The *Root* powdered in the *Pulv. Cardiacus Magiſtralis*. *Spec. Diambræ*,

Diambræ; *Conf. Raleighana*; *Elect. Amar.* Some pretend to *Candy* the *Plant* when growing, by putting powdered *fine Sugar* into the Concavity framed betwixt the *exit* of the *Pedicle* of the *Leaf* and Joint of the *Stalk*, which is diſſolved by the *Rain* or *Dew*, and, as it were, forc'd into the *Fibres* by the Heat of the *Sun*. I have ſeen the Experiment try'd, and taſted ſome of the *Stalk* and *Root*. After ſome Time, it did conciliate ſome of the ſweet Taſte, but not very perceptable. Its peculiar Taſte is not very agreeable to ſome, but generally ſpeaking it gives a pleaſant Flavour to thoſe call'd *Angelica Waters*.

III. *Imperatoria*, or *Maſter-wort*, is a potent *Hyſterick*: It is good in Obſtructions of the *Menſes*; it is *attenuating*, *diſcutient*, and *carminative*; a *Decoction* of the *Root*, and given in a *Clyſter*, is an excellent *partum provocans*, and *ſecundinum expellens*. It is good in all Kind of flatulent Diſtempers, ſuch as *Cholicks*. Itis a good *Diuretick*, and expels the *Stone*. It is preſcribed among *Ingredients*, to be infus'd in *Wine* or *Ale*, and drank every Morning for the obſtructed *Menſes*, and other *Hyſterical* Caſes. It enters the *Aq. Theriacalis*, and *Confectio Raleighana* of the new *Diſpenſatory*: Both the *Roots* of *Angelica* and *Imperatoria* ſhould be kept dry in the *Apothecaries Shops* for the aforeſaid Uſes.

IV. *Aniſum.*

Aniſum J. B. 3. 2. 27. 92. Raii Hiſt. 450. *Herbariis ſemine majore* C. B. P. 159. *vulg. minus annuum.* Moriſ. Hiſt. 3. 297. Umb. 25. *Apium Aniſum dictum, ſemine ſuaveolente, majori.* Tournef. 305. *vulg. Cluſ.* Hiſt. 202. common Aniſe.

V. *Apium.*

Apium paluſtre & Apium officin. C. B. P. 154. Tournef. 305. Hiſt. des Plantes 391. Raii Hiſt. 447. *Synopſ.* 109. Moriſ. 3. 293. *vulg. ingratius* J. B. 3. 2. 27. 100. *paluſtre Paludapium dictum.* Moriſ. Umb. 22. *Eleoſelinum* Dod pempt. 695. Smallage.

VI. *Petroſelinum.*

1. *Apium hortenſe, ſeu Petroſelinum vulgo*, C. B. P. 153. Raii Hiſt. 448. Tournef. Moriſ. *Apium hortenſe multis quod vulgo Petroſelinum palato gratum planum* J. B. 3. 2. 27. 97. *Apium hort.* Dod. pempt. 694. common Parſley.

2. *Apium, ſive Petroſelinum Macedonicum multis*, J. B. 3. 2. 27. 102. *Apium Macedonicum*, C. B. P. 154. Tournef. Moriſ. Hiſt. 3. 293. *Semine villoſo Macedonicum* Moriſ. Umb. 23. Macedonian Parſley.

The

The *TRIBE.*

Though theſe be near of Kin, and joined together by moſt Authors eſpecially *Tournefort*, who often delights to change ancient Names; it is my Opinion they may be ſtill kept ſeparate: For though *Aniſum* have ſome Reſemblance to *Apium* in the Leaf, yet by the Taſte, Smell, Umbel, and Seed, it is quite different: Though *Apium* and *Petroſelinum* agree in *Taſte* and *Smell*; yet in the Diviſion of the *Leaf*, the *Umbel* and Bigneſs of the *Seed*, they differ: As for the *Macedonian Parſley*; by the *Leaf*, it may be eſteem'd a *Smallage*, but otherwiſe a *Parſley*.

The *Deſcription.*

IV. *Aniſe* is an *annual Plant*, with a ſmall, ſtreight, not much branch'd *Stalk*, about two Foot high; the Lower alternate *Leaves* whole, roundiſh and notcht; ſmooth, of a light green: The Upper thin ſet upon the *Stalk*, winged, conſiſting for the moſt Part of two Pair of oblong *Segments*, the narrower, and often more divided, as they aſcend the *Stalk*; with an odd one, broad, firſt rounder, and afterwards more pointed and notcht in the Aſcent. The *Umbels* protuberant, *Flowers* white, *Fruit* ſhort, ſtriated, bulg'd towards the Bottom; the two *Seeds*, flat on the Inſide and convex on the Outſide, of a greeniſh Colour, a pleaſant *Smell*, and ſweet aromatick *Taſte*. It is ſown in *Gardens*, and *Flowers* in *June* and *July*.

V. *Smallage* has a carnous, perennial, or rather biennial *Root*; for it often decays the ſecond Year, after perfecting the *Seed*, endow'd with an hard woody Pith, when the Stem aſcends to puſh forth the *Flower*. The *Leaves* are of a ſhining light green, variouſly divided, and ſub-divided into larger *Segments*. The *Umbels* of white *Flowers* are ſmall, globulous, upon ſhort *Stalks*, ſeveral compactly growing together upon the *Top* of the *Stalk*; ſome plac'd at the *Joints*, where it is *branched* out, and others aſcending higher, ſeparate from the main Body of the *Umbels*, as it were ſo many Childlings: The *Seeds* ſtriated and very ſmall, of an high Scent, and peculiar hot *Taſte*. It *Flowers* in *June* and *July*; grows in the Sides of Ditches and Drains almoſt every where in *Holland* in *Lincolnſhire*, and ſeveral other moiſt and marſhy Places, eſpecially if near to the Sea.

VI. 1. *Common Parſley* has a white, carnous, perennial *Root*, like the former; ſtriated *Stalk*, ſmooth, compound variouſly divided into ſmall narrow *Segments*. The *Umbels* of *white Flowers* large, and gibbous, ſtriated brown *Fruit*, conſiſting of two *Seeds*, much bigger than the former. It is ſown in *Gardens*.

2. *Macedonian Parſley* is rare in the *Gardens* of theſe cold Climates; its *Leaves* are like thoſe of *Smallage*, but more divided and crenated, covered over with a white hairy Down. Its *Stalks* and ſmall ſtriated *Seeds* are likewiſe hairy, by which 'tis diſtinguiſh'd from the former.

Virtues and *Uſes.*

IV. The *Aniſe* produces one of the moſt *carminative* and *uſeful Seeds* in the Shops: It is reckon'd among one of the four hot *Seeds* in the *Diſpenſatory*: It is preſcribed as a good Corrective for ſuch *Purgatives* as *Senna*, &c. to aſſwage the Gripings and diſcuſs the Flatulencies that attend them in their Operation: It is ſo well known in the *Paſtry-Cooks* and *Confectioner's Shops*, that I need not Name it. Nor is it a Stranger to the *Diſtillers*, who know how to Uſe it, to palliate the burnt and Empyreumatick Taſte of their *diſtill'd Waters* and *Spirits*, which if they cannot be otherwiſe ſold, muſt have the ſpecious Title of *Aniſe Waters*. The *Diſpenſatory Compoſitions* are, *Aq. Abſynth. minus comp. Doctoris Stephani. Fl. Chamemeli comp. Elix. Salutis. Syr. de Praſio. Looch ſanans. Speci diatrion piperion. pulv. Sennæ mag. comp. Theriaca Androm. Elect. Diacath. Troch de Rabarb.* Its chief Preparation is the *Chymical Oyl.* It is of a ſweet pleaſant aromatick *Taſte* to ſome, but others diſlike it.

V. & VI. *Apium* and *Petroſelinum* partake of the ſame *Virtues*, and have much of the ſame *Taſte.* Their *Roots* are two of the five opening *Roots* in the *Shops*: They are very *Aperient* and *Diuretick*, uſed in *Ptiſans*, and *Broth* in *Hectical* Caſes; *Stopage* of *Urine*, the *Stone* and *Gravel*, and in the obſtructed *Menſes.* They enter the *Syr. de Artemiſ. de 5 Rad. Apium Roots* enter the *Syr. de Cichor. cum Rabarb.* Its *Seed* is in the *pulv. Diacalaminth. Phylon. Roman. Troch. Alkekeng. Troch de Rabarb.* Its *Juice* and *Leaves* in the *Mundificativ. ex Apio Uing. Nervin. Parſley Roots* enter the *Syr. de 5 Rad. Oxymel comp.* Its Seeds in *Pulv. Dialthææ. Elect. de Baccis Lauri. Elect. Diacolocynth. Sem. Petroſelini Macedon.* enters *Mithrid.* and *Phylon. Roman.* The dry *Roots* of *Apium* and *Petroſelinum* ſhould be kept in *Apothecaries Shops* for *Pectoral Ptiſans*, *Infuſions* or *Ingredients* for *medicate Ale* or *Wine* in the *obſtructed Menſes*, *Gravelly Caſes*, &c.

VII. *Anonis.*

Anonis ſpinoſa flore purpureo, C. B. P. 389. Tournef. 408. Hiſt. des Plantes 53. *ſive Reſta bovis vulgaris purpurea & alba ſpinoſa*, J. B. 2. 17. 391. Tabern. Icon. 529. Raii Hiſt. 957. Synopſ. Stirp. Brit. 196. *Anonis* Dod. pempt. 743. *Reſt Harrow, Stay Plough.*

The

The *TRIBE.*

I have already obſerv'd, that *tetrapetalous Plants* have their *petals plain*, and *uniform:* Or *diſſimilar* and *difform.* This *Anonis* introduces the ſecond; they are call'd *papilionaceous Flowers*, from the Reſemblance they have to a *Butter-Fly*, with the ſpread out Wings, or to a Bird flying in the Air. They are call'd *Leguminous Plants*, from *Lego* to *gather* or *Legumen Fodder.* Their *Flower* conſiſts of four *diſſimilar Petals.* The *Vexillum* or large *Standard*, *ſpread forth* for the moſt, making the upper Part. The *Alæ* or two Wings *ſimilar*, making the two Sides, and like to each other. The *Carina* or *Keel*, making the lower Part, and like to the *Body* of a *Butter-Fly* or *Bird*; it is ſo call'd from the *Reſemblance* to the *Keel* of a Boat. It is folded, and contains eight *Stamina* or *Chives*, which cloſely united, make up a *Vagina* or Sheath terminating like a *Fringe* in eight *Summits*; all theſe encloſe the *Embryon*, tender *Pod*, and defend it from the Injuries of the Air, until it be ſo ſtrong, as the *Petals* decaying, it be capable to endure the Severity of the Weather, and the *Seeds* being *impregnated* by the *Farina* from the *Summits*, both they and the *Pod*, or Veſſel which contains them, acquire a convenient Bigneſs. This *Flower* is enclos'd in a tubulous, green *Empalement*, ſuperficially divided for the moſt Part into five *Segments*; ſome have the *Vexillum* or *Standard* large, and ſome leſs, and other ſmall *Flowers* ſeem to want it intirely; they are ſucceeded by *ſiliquæ* large, and *ſiliculæ*, ſmall *Pods* as has been obſerv'd. A great many of them have infirm flexible *Stalks*, ſome are endow'd with *claviculæ Climbers*, by which they graſp at, and climb up, whatever is near them; many have two ſimple *Leaves* ariſing from the Joints, but moſt have three Leaves or *are trifoliate*; they have a peculiar agreeable ſweet *Taſte*, which from this Kind of Plants is call'd *a Pea Bloom Taſte.* Many of the *Seeds* are good Nouriſhment for *Men*, and moſt of the Herbs, whether green or dry, are good *Fodder* for *Beaſts.*

This *Anonis* or *Reſt-Harrow*, ſo call'd from the *Toughneſs* of its *Root*, is *claſſed* with the *trifoliated Leguminous Plants.*

The *Deſcription.*

VII. It has a long *woody* running *Root*, ſo tough, that it is juſtly call'd *Reſt-Harrow* or *Stay-Plough*; for I have known it reſiſt the Force of a Plough, drawn by eight Oxen, and two Horſes, ſpreading far in lee Ground, that has not been till'd up, nor fallow'd for ſome Time; from whence ariſe ſeveral *Twigs*, ſomewhat tender at firſt, but afterwards

wards *tough*, hard and *woody*, ſtreight, jointed and branched; with Leaves, from the Joints, three for the moſt Part from the ſame Exit, upon a ſhort *Footſtalk*, like the *Trefoils*, ſmall, about half an Inch long, and *crenated* in the Edges with ſtrong ſharp Thorns; upon the upper Part of the *Stalk* and *Branches* are plac'd the *papilionaceous Flowers*, *purpliſh*, and ſometimes more *white*, of a moderate Bigneſs, from a hairy, *five pointed Empalement*, to which ſucceed ſmall, flat, ſhort, *Pods*; each containing two or three *Kidney-Seeds*. It is a perennial *Plant*, its Root laſts for ſeveral Years, and in a ſhort Time will over ſpread the Ground. Its Soil is a ſtrong black Earth, or dry Clay, and ſometimes gravelly Ground. It flowers in *June* and *July*.

Virtues and *Uſes*.

VII. It is reckon'd among the five opening *Roots*, it is eſteem'd a good *diuretick*, and is preſcrib'd in *Ptiſans*, *Diet-Drinks*, and ſuch Compoſitions, for the *Gravel*, *Stone*, and Stoppage of *Urine*; the *Root* being woody the *cortical Part* is us'd, which ſhould be kept dry in the *Shops*. It is eſteem'd good for the *Jaundice* and *Obſtruction* of the *Menſes*, ſome preſcrib'd the diſtill'd Water. It is recommended for diſſolving of the *Sarcocele*, and ſaid to be *deterſive* and *vulnerary*: All theſe good Effects may proceed from its penetrating fix'd Salt; for I have procur'd more from its *Aſhes*, than from the *Aſhes* of any one Plant, except that of *Wormwood*, and it is probable, the *Saline Particles* may be more penetrating in the Plant itſelf, than in *Wormwood*; which as I have obſerv'd, is too firmly united, and too much clogg'd with the *Terrene* Parts, to produce ſuch viſible Effects of an *Aperient*, or *Deobſtruent* as this does, whoſe *Saline* Parts are more diſengag'd.

VIII. *Anthora*.

Antithora fl. Luteo Aconiti, I. B. 3. 34. 660. Raii. Hiſt. 705. *Aconitum Salutiferum ſeu Anthora*, C. B. P. 184. Tournef. 425. Hort. Lugd. Bat. 8. *Aconitum Salutiferum Luteum tenuifolium ſive Anthora*, Moriſ. Hiſt. 3. 463. *Zedoaria*, *Anthora*, *Aconitum Salutiferum*, Tabern. Icon. 112. *Anthora*, Dod. pempt. 442. Wholeſome Helmet Flower.

The *TRIBE*.

This Plant is claſs'd with the *polypetalous Anomalous Flowers* by *Tournfort*, among the *Multiſiliquæ polyſpermæ* or *coniculatæ* by *Moriſon*, and all his Followers.

The

The *Deſcription.*

VIII. Its *Root* conſiſts of ſeveral ſmall round tuberous *Globules*, ſending ſmall Fibres into the Ground. It has a ſtreight *Stalk*, about one Foot high, ſurrounded by ſeveral dark green, deep cut, and variouſly divided Leaves, tending to a Roundneſs. The *Flowers* on a *Spike*, on the upper Part of the *Stalk* are of a pale yellow, *tetrapetalous*, conſiſting of four *diſſimilar Petals*; the firſt of which is erect and hollow, like an *Helmet*, the two ſide ones, or as it where Cheeks to the *Helmet*, are almoſt round, and concave on the Inſide; the fourth is alſo *concave*, hanging downward from the upper Part of the *Placenta*. Near to the *Embryon* or *Rudiment* of the Fruit, ariſe two long crooked *Tubes*, hid within the *Helmet*. In the Center are plac'd a great many *Chives*, with their *Summits*. The *Embryon* becomes afterwards three ſmall *Pods*, bending outwards or terminating in ſmall crooked *Points*, full of ſmall Seeds. It is a *perennial Garden Plant*, flowering in *July*.

Virtues and *Uſes.*

VIII. This *Plant* is ſo like to its Brethren the *Aconites*, and we have ſuch diſmal Accounts of their *poiſonous* Quality, that it is much to be doubted whether it has the good Effects of being a gentle *Purgative*, good againſt *Worms*, *&c.* and that it proves ſuch an *Antidote*, as to remove the *poiſonous* Quality of the *Aconite*, is juſtly doubted; and however it may be call'd *Antithora*, becauſe the *Aconite* is called *Thora*, and becauſe it is an Enemy to its deſtructive Operation; they are too nearly related to be much truſted upon that Account.

IX. *Aparine.*

Aparine Vulg. C. B. P. 334. Tournef. 114. I. B. 3. 36. 713. Raii Hiſt. 484. Synopſ. 118. Moriſ. Hiſt. 3. 331. Gooſe-Graſs, or Clivers.

X. *Aſperula.*

Aſperula odorata fl. Albo, Dod. pempt. 355. Mor. Hiſt. *Aſperula ſive Rubeola montana odora*, C. B. P. *Rubia montana odora*, Hort. Lugd. Bat. 529. *Rubiis accedens Aſperula quibuſdam ſive hepatica Stellaris*, I. B. 3. 36. 718. Raii Hiſt. 483. Synopſ. Stirp. Britt. 117. *Aparine Latif. humilior mont.* Tournef. Hiſt. des Plants 389, Wood-Roof.

XI. *Rubia Tinctorum.*

Rubia Tinctorum Sativa, C. B. P. 3. 333. Tournef. *Sativa*, I. B. 3. 36. 314. *Rubia* Dod. pempt. 152. Raii Hiſt. 480. Moriſ. Hiſt. 3. 326. Madder.

XII. *Gallium.*

Gallium Luteum, C. B. P. 335. Tournef. 115. Hiſt. des Plants 197. Raii Hiſt. 482. Synopſ. Stirp. Brit. 117. Moriſ. Hiſt. 3. 327. *Gallium verum* I. B. 3. 36. 718. *Gallium* Dod. pempt. 355. yellow Ladies Bed-ſtraw.

XIII. *Cruciata.*

Cruciata Hirſuta, C. B. P. 335. Tournef. Moriſ. Hiſt. 3. 328. Raii Hiſt. 479. Synopſ. Stirp. Brit. 116. *Gallium Latif. Cruciata quibuſdam fl. Luteo*, I. B. 3. 36. 717. *Rubia cruciata Hirſuta dicta*, Hort. Lugd. Bat. 529. Croſs-Wort.

The *TRIBE.*

This is a very conſpicuous, but ſhort Claſs. Their general *Title* is *Plantæ Stellatæ*, becauſe their Leaves are at certain Diſtances, from the Joints of a *quadrangular Stalk*, like a *Star*. *Moriſon* places them next the *Umbelliferæ improprie dictæ*, becauſe two *Seeds* always ſucceed to one *Flower*. *Boerhave* calls them *Stellatæ Gymnodiſpermæ*, *Tournefort* joins them to his firſt Claſs, with the *monopetalous Bell Flowers*.

Their general *Character* is, that their *Leaves* are plac'd by Intervals at the *Joints*. Their *Flowers* are *monopetalous*, divided into four *Segments*, almoſt into the *Center* without an *Empalement*, but a little *tubulous* in the *Middle*, with four *Chives* correſpondent to the ſharp *Segments*; to which ſucceed two round Seeds, either *naked*, or each enclos'd in a looſe dry Huſk or *Berry*; the *Flowers* are ſometimes ſituated round the *Joints*, or upon the Top of the *Stalk*, like the *Umbelliferous Plants*, thick ſet upon the upper Part of the *Stalk*.

Tournefort has thought fit to join *Aſperula odorata*, and *Aparine* in one Genus, though the Habit of the *Plant* ſhews them to be much different.

The *Deſcription.*

IX. *Aparine* or *Gooſe-Graſs* is an annual Plant, with two large *Seed-Leaves*, to which ſucceed ſeveral long infirm rough *quadrangular* jointed Stalks

Stalks *ſurrounded* by five or ſeven narrow rough *Leaves*, upon the Joints at certain Diſtances. The *Flowers* ariſe from the ſame Joints at the upper Part of the *Stalk* upon long *Foot-ſtalks*; ſmall, *pale yellow*, divided into four narrow *Segments*, to each of which ſucceed two round rough Seeds, near to the Bigneſs of *Coriander*. The whole *Plant* is ſo rough, that it eaſily ſticks to what touches it; upon which it is call'd *Clivers*, as it were, *Cleavers*. It is alſo call'd *ſive* or *ſearch* Graſs, becauſe ſome uſe to paſs the new Milk through a Bunch of it to cleanſe it from *Motes*, *Hairs*, &c. It is alſo call'd *Gooſe-Graſs*, becauſe the *Geeſe* or *Gooſelins* eat it very greedily.

X. *Woodroof* is a perennial *Plant* with a ſmall fibrous *Root*, ſeveral of the *quadrangular Stalks* ariſe thick together, ſtreight, about one Foot high; its long narrow *Leaves* five or ſeven round the Joints, are not ſo rough, and lighter green. The *Flowers* are ſituated upon the Top of the *Stalk*, ſupported by ſmall ſeparate *Foot-ſtalks*, like the *Umbelliferous Plants*, white, larger than the former, and two *Seeds* like it, but not ſo *rough*.

XI. *Madder* has long, ſimple, round *Roots*, very numerous, and ſtriking deep in the Ground, of a pure *red*. The *Leaves* long, narrow, but much larger than any of the reſt; the *quadrangular Stalks* long and infirm, proportionally larger; the *Flowers*, from the Joints at the upper Part of the *Stalk*, to which ſucceed two round juicy *Berries*, black when ripe, each containing one *umbilicated Seed*.

Its Nouriſhment is ſo much exhauſted in its far ſpreading *Stalks* and *Leaves*, and much *branched Root*, that it ſeldom produces the *Flower* and *Fruit* in our *Gardens*, but is eaſily propagated by the *Root*. It is cultivated in great plenty in *Wratiſlavia*, and *Alſatia*, and from thence exported every where for the Uſe of *Dyers*, as *Simon Pauli* aſſerts: It is cultivated in the Gardens in *Britain*; but however carefully the *Roots* are dryed, they ſtill dwindle to nothing but the outer *Bark*, without that firm, ſolid Subſtance the *imported Madder Roots* have; where 'tis indigenous is uncertain.

XII. *Yellow Lady's Bedſtraw*, or *Cheeſe-Rennet*, call'd by the *French*, *Caile Lait*, from its Effect in *curdling* of *Milk*, has a ſmall very fibrous *Root*, from which ariſe ſeveral very ſmall, infirm, jointed *quadrangular* tough *Stalks*, ſurrounded with very ſmall *Leaves* at the Joints for the moſt Part. The *ſmall yellow Flowers monopetalous*, divided into four *Segments*, are very numerous, in Cluſters upon the upper Part of the *Stalk* and *Branches*, to each of which ſucceed two ſmall *Seeds*. The whole *Plant* is of a dark green; it grows plentifully on dry Banks and Way-Sides.

XIII. *Groſs-*

XIII. *Croſs-Wort* has a ſmall yellowiſh very *fibrous Root*, infirm, *quadrangular*, rough, jointed *Stalks*, ſometimes emitting *radical* Fibres from the lower Joints, four broader *proportionally* than any of the former, rough or hairy blunt *Leaves* from each Joint, where it alſo ſends forth in Whorles the ſmall yellow *tretrapetaloid Flowers* three and three together, not always from the Boſom of the *Leaves*, but ſometimes in Cluſters from the oppoſite *Angles* of the *Stalk*; to which ſucceed two ſmall rough round *Seeds*. It grows in Woods and ſhady Banks; alſo on the Sides of Ditches. It Flowers in *July*.

Virtues and *Uſes*.

IX. *Gooſe Graſs* ſeems to be a proper *Food* for *Goſlins*, in which, as it were, by proper Inſtinct, they delight very much, as I know by Experience in the fattening of them in the Spring; for when they get Ground, *Malt* and *Milk*, or the like *fattening* Subſtances, being confin'd to an Houſe or Pen, and without Exerciſe, they begin to be glutted and their Stomach clogg'd, then give them *Gooſe Graſs*, which they greedily eat, and which by its Roughneſs cleanſes the inner Surface of their Crop and Gizard; ſo that the viſcid Matter on their inner Surface is rubb'd off, as it were, and their Appetite is ſharpen'd, as we ſee ſeveral gluttenous Birds, as *Pidgeons* ſwallow ſmall Pebble Stones, to *attenuate* their groſs Food, ſuch as *Peaſe*, *Beans*, &c. and there is nothing more frequent in the *Management* of *Goſe-hawks*, &c than to give them pretty groſs Pebble Stones, which paſſing through, carry along that viſcid Matter which was the Cauſe of their loſs of Appetite, and want of Digeſtion. This is what both Nature and Art has contrived to ſupply the want of Teeth in Birds, by which (as in other Animals) the *Contrition* or *Comminution* of the *Aliments* is perform'd. For its *Medicinal* Uſe; *Simon Pauli* ſays, the common People in his Country buy the *Diſtill'd Water* for Pains in the *Breaſt* and *Sides*. Dr. *Needham*, according to Mr. *Ray*, recommends the *Diſtill'd Water*, or its *Infuſion* or *Decoction* in *Wine*, as an excellent Remedy for the *Stone* and *Gravel* in the *Kidneys* and *Bladder*; but it is not much uſed in modern Practice.

X. *Woodroof* is alſo but of little Uſe in *Phyſick*. *S. Pauli* ſays it is preſcribed by ſome Phyſicians in *Vulnerary Potions* and *Emplaſters*. The common People uſe to apply the *Juice* and *contus'd Herb* to freſh Cuts and Wounds, by which it ſeems to have a moderate Aſtringency, as indeed moſt of the Plants of this Tribe ſeem to be endow'd with.

XI. *Madder* is the moſt noted of any of them, for its *Phyſical* and *Mechanical Uſes*; it is a Queſtion not unreaſonably propos'd by Mr. *Ray*, and ſeveral other more *ancient Authors*, Whether its *Medicinal Virtue* proceeds

proceeds from an inherent *Aſtringency*, or from *tenuious* and *ſubtile Particles*, by which it is eſteem'd a good *aperient*. As an *Aſtringent*; its groſs and earthy Parts in *tinging* or *dying* of *Flaxen* or *Linnen*, and *woollen Cloths*, with a deep red, being mix'd with a proportional Part of *viſcid* and *gluiſh* Particles, by which, this Colour is render'd more *adheſive*, and durable, is plain and obvious; but that does not hinder it from conſiſting of *penetrating ſaline Particles* alſo, by which, the *Pores* of theſe ſmall and ſlender *Filaments* are open'd, the groſs Parts farther introduc'd, and more intimately conjoin'd with theſe ſoft and plyable Subſtances; ſo in the *Body*, theſe groſs *aſtringent*, and earthy Parts, may ſerve to *incraſſate* and *obtund* the Liquid *ſerous* and *acrimonious* Parts of the *Blood*, and render its *Craſſamentum* more firm and compact, while its *tenuious* and *penetrating ſaline* Parts, may *attenuate*, cut, and divide the too groſs and viſcid *Particles*, and conciliate a more free Circulation to the *Blood*, diſſolve what of it is grumous and coagulated, and remove the *Obſtructions* of the *Capillaries*, by which it may procure the *fluxus menſtruus* to be more regular, correct the viſcid Humours in the *Jaundice*, obtund the *Acrimony* in the common and *bloody Flux*, provoke the *Urine* in *hydropical* Caſes, and diſſolve the *ſtony* and *gravelly* Subſtances in the *Kidneys* and *Bladder*; in which Reſpect, it may alſo prove a good *vulnerary* in *curbing* of the *proud Fleſh*, *correcting* the *ichorous* and *acrimonious Serum*, and *diſſolving* of the too groſs Parts, ſo as well *digeſted* and concocted *Matter* may flow out at the *Wounds* and *Ulcers*. Therefore it is reaſonably preſcrib'd in moſt *Hyſterical* Caſes, eſpecially, in the *Obſtruction* of the *Menſes* and *Lochia*; and its Roots which are moſt in Uſe, are frequent Ingredients in *Decoctions* and *Infuſions*, in Wine or Ale, for that Purpoſe; alſo, for the *Hydropſy*, *Jaundice*, and other Caſes where *aperient Medicines* are requir'd.

XII. *Gallium Luteum*, or *yellow Lady's Bedſtraw*, ſo call'd from its Reſemblance to *Straw* or *Hay*, when dry. It is eſteem'd ſuch an *Aſtringent*, that its Powder inwardly given, ſtops all kind of *Hemorrages*, and *Fluxes of Blood*, by *encraſſating* of it: This *coagulating* and *encraſſating Quality*, is ſo well known by the *Ancients*, and to the Moderns, for curdling of *Cheeſe*; that beſide ſeveral Inſtances. 'Mr. *Ray* takes Notice, that *Gerard* 'reports, that the Inhabitants of *Nantwitch*, his native Country, where the 'beſt *Cheſhire Cheeſe* is made, mix the *Flowers* of this *Gallium Luteum* among 'the *Runnet*, and obtain thereby, much more *Cheeſe* than otherwiſe.

'It is memorable what Dr. *M. Liſter* reports from *Olaus Borrichius*, '(as related by the ſame Mr. *Ray*) who perform'd the following Ex-'periment. He put ſome *Handfulls* of the freſh *Flowers* of *Gallium* 'Luteum, immediately after the Morning Dew was dry'd up, into 'a *Cucurbite*, and made what haſte he could to put Fire to it, to pre-

'vent the Injuries of the Air, and ſo ſet it a *diſtilling*. He firſt procur'd an Ounce of the *inſipid Serum*, having ſome of the Fragrancy of the Flowers; after that, three Ounces of *Vinegar*, not of a very diſſagreeable *Taſte*. Upon augmenting the Fire, he next obtain'd about two Drams of a yellow *Oil*, mix'd with this *acid Liquor*, neither was this of an unpleaſant *Smell*; and thus having extracted the acid, by continuing the Operation ſome Hours, with a gentle Sand Heat; it evidently appears, this *acid coagulating Spirit* is inherent in the *freſh Flowers*, without any previous Fomentation, ſuch as happens to other Vinegars, which is very ſingular; for this *acid* being mix'd with new Milk, immediately *curdled* it, as other *Vinegars* uſe to do. The ſame Experiment was try'd upon the *Acetoſa*, but none of this inſipid Liquor was obtain'd, ſo that the acid of the *Gallium*, ſeems to be much more ſubtile and volatile, than of the *Acetoſa*: *Raii Hiſt.* 482. The Herb is not much us'd in Phyſick, neither is that of

XIII. *Cruciata*, or *Croſswort*, which is alſo look'd upon as an *aſtringent* and *vulnerary*, both *inwardly* given, and externally *apply'd*; it is by *Camerarius*, recommended as good againſt Ruptures.

Apium, vide *Aniſum*.

XIV. *Aquilegia.*

Aquilegia Sylv. C. B. P. 144. Tournef. 428. Hiſt. des Plants 393. Moriſ. Hiſt. 457. *Aquilegia* Dod. pempt. 181. *Aquilegia flore ſimplici*, J. B. 3. 30. 484. Raii Hiſt. 706. Syn. 155. Columbines.

The *TRIBE.*

Tournefort claſſes this among the *polypetalous anomalous Flowers*: A *Claſs* whoſe *Flowers* differ very much from each other, but moſt of them have a Reſemblance in the *Fruit*; and therefore by Dr. *Morriſon* and all his Followers, it is reckon'd among the *Plantæ Polyſpermæ Multiſiliquæ Corniculatæ*; to whoſe *Flower* ſucceed ſeveral horned *Seed-Veſſels* joined together, each of which contain ſeveral *Seeds*.

The *Deſcription.*

XIV. *Columbines*, ſo called from the Reſemblance of ſeveral of its *Petals* to a *Dove*, has a groſs carnous *Root*, larger than the Bigneſs of ones Thumb; *perennial*, and running deep in the Ground; divided firſt into

into larger *Portions*, then into ſmaller *Fibres* as it deſcends : From whence ariſe ſeveral long *Pedicles*, or *Foot-ſtalks*, ſub-divided for the moſt Part into three leſſer *Foot ſtalks*, each ſupporting three bluiſh green, blunt, broad, *lobed Leaves*, like thoſe of the *Thalictrum*, according to ſome, but rather like unto thoſe of the *Chelidonium maj.* Amidſt theſe ariſes a ſmall, round, ſtraight, jointed, branched, ſomewhat rough *Stalk*, with its Branches from the Boſom of the *Foot ſtalks* of the *Leaves*, at the Joints of the *Stalk*; both ſupport ſeveral fine pendulous *Flowers*, hanging upon ſmall *Foot-ſtalks*, conſiſting of ten *Petals*; five of which are plain, ſmall at the exit, and afterwards being enlarged, ſpread forth like *Wings*; betwixt theſe, are five other hollow *Petals*, bended inwards like a Horn, but ending in a kind of hollow *Button :* Its Figure is not unjuſtly compar'd to a *Cornucopia*, (a Bundle of *Flowers* ſo painted by the Ancients.) According to *Boerhave*, this *Tube* or Hollowneſs is enlarg'd towards the *lower Part*, and bending outwards, all theſe being joined in the Center, there ariſe many *Chives* with yellow Summits, loaded with a great Quantity of the *Male Duſt*; and ſurrounding a *Pointal*, conſiſting of five or ſix ſmall green Portions, which become ſo many oblong or *flatiſh Seed-Veſſels*, bending outwards like ſo many Horns; being *corniculated Pods*, opening at the upper Part, endow'd at the back Part with a longitudinal *Placenta*; to which adhere ſeveral ſmall, black, ſhining *Seeds*, not unlike thoſe of *Millet*. It flowers in *May* and *June*, and is eaſily propagated both by the *Seed* and *Root*; that with the *blue* ſimple *Flower*; (from which I look upon all the other to be only Variations, as we ſhall ſhew in a little while) is ſaid to grow wild in the Woods, and near to Hedges, but rarely here in *England*. I have ſeen it grow wild in a Wood on the Banks of the River *Tay*, betwixt the *Caſtle* of *Kinclaven* and *Inernity* in *Scotland*; but I ſuſpected it to be an *Ejectamentum*, there being a ruinous Chapel within a Quarter of a Mile of it, though I ſaw no other Plant which I ſuppos'd to have come from a *Garden* but itſelf.

Virtues and *Uſes.*

XIV. This *Plant* ſeems to be endow'd with *ſubtile, penetrating, ſaline Particles*; by which a *Gargariſm* of a *Tea* or *Decoction* of its *Leaves*, is eſteem'd a noted *Remedy* for a *ſore Throat*, and to cleanſe the *proud Fleſh* of the *Gums* corrupted by the *Scurvy*. *Tournefort* recommends a *Tincture* of the *Flowers*, made with *Spirit* of *Wine*, for the ſame Purpoſe; and ſays, it is an *incomparable Remedy*, if mix'd with the following *Tincture* —— Take ℥ij *Gum Lacc*, and ℥j of *Maſtick*; diſſolve both in *Spirit* of *Wine*, ſo as to make a ſtrong *Tincture*, with which you may mix a proportionable

nable Quantity of this *Tinctura Aquilegia.* Its *Seeds* are eſteem'd potent *Diureticks*, and therefore are preſcribed in moſt Obſtructions of the *Viſcera*, and in the *Jaundice*; in which Caſe I have frequently uſed it among other *Icterical Medicines* with good Succeſs. *Leſelius* preſcribes *Pulv. Sem. Aquileg. ℥j Croci. pulv. gr. x. pro doſi* for that *Diſtemper.* It is likewiſe ſaid to be a good *Partum Provocans*, and that the *diſtilled Water* is a good *Coſmetick* for ſmoothing the Skin of the *Face.* It is ſaid to be good for ſtrengthning of the *Sight*, and removing the Dimneſs of the *Eyes*: All which muſt proceed from its ſubtile penetrating *Salts.*

N. B. I have diſcourſed at large on this *Aquilegia* in a ſeparate Diſſertation, to which I refer the Reader.

Argentina, vide *Pentaphyllum.*

XV. *Ariſtolochia.*

1. *Ariſtolochia Longa vera*, C. B. P. 307. Tournef. Inſtit. 162. T. 71. *Longa*, J. B. 3. 22. 560. Moriſ. Hiſt. 3. 509. Raii Hiſt. 761. Dod. pempt. 354. Long rooted Birthwort.

2. *Ariſtolochia rotunda flore ex purpuro nigro*, C. B. P. Tournef. Inſtit. *rotunda*, J. B. 559. Dod. pempt. Moriſ. Raii Hiſt. 762. Round Birthwort.

3. *Ariſtolochia Clematitis recta*, C. B. P. *Clematitis vulg.* J. B. 560. *Saraſenica Dod.* pempt. Moriſ. Hiſt. Raii Hiſt. Tournef. Hiſt. des Plantes 175. Running rooted Birthwort.

The *TRIBE.*

Theſe *Plants* are juſtly term'd *anomalous* by *Tournefort*, becauſe of the Singularity in their *Fruit* and *Flower*, which he compares to a *Tongue.* Mr. *Ray* calls them *flores diſformes*, a Term I do not underſtand, ſince they have all their conſtituent Parts, as regular as any other, according to the Shape aſſign'd to them by Nature; and therefore I do not love *Rivinus* Diſtinction into *regular* and *irregular*: Indeed in *polypetalous Flowers*, they may be diſtinguiſh'd into *ſimilar* and *diſſimilar*, not being of the ſame Shape and Bigneſs, as in the foregoing *Aquilequia*; but that will not hold in *monopetalous Flowers*, v. g. in the *Lip Flowers*; they may be call'd *Oris Inæqualibus*, but they cannot be call'd *Irregulares*, ſo long as they keep up to the *deſtinated* Rules. Their *Flower* is of a peculiar *Shape*, being hollow, protuberant at the *Baſe*, where they cover the Embryon, when they are contracted into a ſmall Pipe or Tube, which is afterwards expanded into an Oblong, ſomewhat blunt, hollow

low Portion, not unfitly compared to a Concave Tongue. It has no *Empalement* without, and within is lodged an *Hexagonal Ovarium*, with a Button of the like Figure, ſurrounded by twelve very ſhort *Chives*. The Fruit becomes *oval*, *ſix cornered*, *membranous*, like unto the *Melopepo*, about the Bigneſs of a *Walnut*; in which are lodged ſeveral ſmall, unequal, cornered, ſomewhat compreſſed *Seeds*. This Texture of the *Fruit* makes it be number'd among the *Multiſiliquæ*, or rather *Multicapſulares* by *Moriſon*, and *Polyangiæ-Polyſpermæ* by *Herman* and *Boerhave*.

The *Deſcription*.

1. The firſt has a long, groſs, thick, *perennial Root*, about the Bigneſs of ones Wriſt, and near one Foot long, if it has been any Time in the Ground; ſending forth ſeveral ſmall Fibres from the lower Part. The numerous *Stalks* not much branch'd, are weak, infirm, and *quadrangular*. The alternate *Leaves* without *Pedicles*, are heart-like, ſometimes blunt, at other Times pointed, with two ſubrotund Lobes at the Baſe; by which they almoſt ſurround the *Stalk*, ſomewhat concave above, and convex below, of a thin Texture and pale green Colour, about one Inch broad at the Baſe, and one and a half Inch long. The *Flowers* (upon *Pedicles* one Inch long, from the Boſom of the *Leaves*) are greeniſh white. To which ſucceeds the *Hexagonal*, or roundiſh Pear-faſhion'd Fruit, about the Bigneſs of a *Walnut*.

2. The Second has a round, hard, large, Knobby *Root*; the *Leaves* and *Flowers* are leſs than the former: The *Flowers* of a *pale yellow*, with a *blackiſh* red *Border*. Both theſe are planted in Gardens, and flower in *May* and *June*.

3. *Ariſtolochia Clematitis*, is the largeſt of the Three: Its *Stalks* ariſe much higher, is pale green, having large Leaves upon long Pedicles; the *Fruit* is larger, about the Bigneſs of a ſmall *Apple*; its *Root* is long, ſmall, very running; it is not ſo rare as the two former. I have ſeen it grow wild in *Flanders*, near *Ghent*; and near *Vilvorde* in *Brabant*.

Virtues and *Uſes*.

XV. The long, but eſpecially the round *Roots*, are chiefly uſed in the Shops. They ſeem to conſiſt of tenuious and ſubtile Particles, mixt with drying and earthy ones. They are frequently preſcrib'd among Ingredients for Infuſions in Wine or Ale, for *Hiſterical Caſes*; alſo in the *Obſtructio menſium*, and *Lochiorum*: The Powder of *Ariſtolochia Rotunda* is either apply'd alone to *ſordid*, or *Cacoethes* Ulcers for the curbing of proud Fleſh, or it may be mixt with the *Pulv. Myrrhæ & Aloes*: Some

alſo make a Tincture of it with them, among Spirit of Wine for the ſame Purpoſe. The *Longa* enters the *Theriaca Andromachi.*

Armeniaca Malus, vide *Amygdalus.*

XVI. *Artanita* Offic. *Cyclamen.*

Cyclamen Hederæ folio C. B. Pin. 308. Raii Hiſt. 1206. Mor. Hiſt. 3. 552. Sect 13. Tab. 7. Tourn. Inſt. 155. *Cyclaminus folio anguloſo* I. B. 3. 553. *Cyclaminus orbicularis* Dod. pempt. 337. Sow Bread.

The *TRIBE.*

This *Plant* is plac'd among the *monopetalous Wheel Flowers*, by *Tournefort.* It is juſtly claſs'd among the *Monocotyledones* by *Boerhave.* Mr. *Ray* places it among the *bulboſis Affines.* And *Moriſon* calls it ſimply a *bacciferous Plant.*

The *Deſcription.*

It has a round knobby *Root*, blackiſh without, and whitiſh within; the Leaves are broad, and angular, not unlike thoſe of *Ivy*, lightly indented about the Edges, dark *green* above, interſpers'd with ſeveral white Spots, and a whitiſh Line about the Middle; purpliſh below; ſpread upon the Ground; its Flowers ariſe from proper *Pedicles* from the *Root*, and being bended downwards, their Baſe appears firſt above Ground, about the Beginning of *September*, or in the Autumn; being ſpread forth, they are deeply divided into five narrow pointed *Segments*, of a bluiſh or purpliſh Colour, and bended backwards, terminating in a hollow Tube, endow'd with five *Stamina*, to which ſucceeds a round *globular Seed*, or rather *Bulb*, which when committed to the Ground, ſends forth one ſingle Seed Leaf, like the Tubercles on the Top of the Stalks in *Garlicks* and *Onions.*

Virtues and *Uſes.*

It ſeems to conſiſt of ſharp and acrimonious Particles; and is chiefly preſcrib'd in *Cataplaſms* and *Liniments* againſt Worms; ſuch as the *Ung. de Artanita*, made of the Juice of its Leaves, or Decoction of its Root. Some recommend it for a *Looch* and *Menſes provocans*; and its Juice as a potent *Errhine.* But as there are ſeveral as effectual Medicines for theſe Uſes, this is not much in modern Practice on that Account.

Artemiſia,

Artemiſia, vide *Abſinthium.*

Arum, vide *Dracontium.*

Arundo, vide *Avena.*

XVII. *Aſarum.*

Aſarum, C. B. P. 197. J. B. 2. 32. 548. Tourn. Inſt. 501. Hiſt. des Plantes 318. Raii Hiſt. 207. Mor. Hiſt. 3. 511. Dod. pempt. 358. Aſarabacca.

The *TRIBE.*

I rather go into Dr. *Moriſon*'s Sentiments of placing this among the *multicapſulares Polyſpermæ*, than with Mr. *Ray*, to place it among the *flores imperfecti*, ſince there can be no ſuch Thing as a *flos imperfectus*, when all the Parts requiſite to conſtitute ſuch a *Genus*, are ſtill preſent, neither can you look upon it as an *apetalous Flower*, with *Tournefort* and *Boerhave*, ſince what they look upon as a *Calix*, may be as well eſteem'd a *monopetalous Flower*, without an Empalement; divided into three Segments. Since according to *Tournefort*'s Notion of a Petal, it muſt be *colore inſignis:* Beſides; it does not anſwer the Definition of the *Fructification* of an *apetalous Flower*; *Enimvero* (ſays he) *quæ petala dici poſſunt pro calice habendi ſunt, cum abeant in ſeminis involucrum adeoque neceſſum eſt ut eorum piſtillum in ſemen abeat*; whereas here, neither do the three *Segments* become the *ſeminis involucrum*; for they ſtill remain diſtinct from the *Capſula*, and of a different Colour from the *Bottom*, or the *Calix*, one being green, the other purpliſh; nor does the *Piſtillum* become *one Seed*; for the *Ovarium* is for the moſt part divided into ſix Pouches: Tho' *Herman* ſays, it's only *tricapſular*, which afterwards become a *Fruit*, containing ſeveral *Seeds* in each Pouch.

The *Deſcription.*

XVII. It has a ſmall Root, about the Bigneſs of a *Quill*, divided below into ſeveral ſmall *Fibres*, gather'd together into one Head at the Top; each of them ſend forth two dark Green ſtiff Heart-like roundiſh Leaves without Stalks, but upon long Foot-Stalks; it being a low Plant ſpread on the Ground. The *Flowers* proceed from the *Foot-Stalks*, below the Leaf, oblong, hard, like a *Pomegrante Flower*, Green

at the Bottom; divided at the *Top*, into three *dull Purpliſh*, or cream Colour *Segments*; the *Ovarium* is endow'd at the Top, with ſix bended *Buttons*, round it are plac'd twelve *Stamina*; it afterwards becomes a Fruit divided into ſix *Pouches*, full of ſmall *Seeds*; it is an ever Green, the Leaves remaining freſh all the Winter; it *flowers* early in the Spring; but they are ſeldom ſeen, unleſs you turn up the Leaf: It is cultivated in the Gardens, and delights in moiſt ſhady Places. *Aſarum*, *C. B. P. Dod.* grows plentifully (as I have been lately adviſ'd, by the expert Mr. *Thomas Knowlton*, Gardiner to Mr. *James Sherard*, at his Seat at *Eltham* in *Kent*) at the Bottom of *Chernal-Green*, the firſt Field in the Hedge Row, on the left Hand, as ſoon as you enter the Gate going to Sir *Thomas Seabright's* Beach-Wood in *Hartfordſhire*.

Virtues and *Uſes*.

XVII. It conſiſts of acrimonious, ſubtile and ſaline Particles; it is a noted emetick, well known to Gardiners, and frequently call'd for by the Country People, one, two, three, or more, according to the Patient's Strength. The Leaves infuſed among Small-Beer one Night, is a competent Doſe; thoſe that are of a ſtrong Conſtitution, may take two, three, or more: It both *Vomits* and *Purges*, and is recommended in *intermitting Fevers*, the *Dropſy*, *Gout*, *Sciatica*, and more particularly in the common and *bloody Flux*. The dry'd Root is kept in the Shops, and given in *Powder* to a Scruple as an *Emetick*; but its Quality is not ſo ſtrong as when green. I have given five or ſix Grains of the Powder of the dry'd *Leaves* with great Succeſs, being taken by Way of an *Errhine*, or Snuff at the Noſe at Bed-time; it cauſes a violent Sneezing, and towards the Morning it becomes a potent *Sudorifick*; let the *Patient's Head* be very well cover'd all Night, and it becomes an effectual Remedy in a violent and inveterate Head-ach. It enters the *Theriaca Andromachi*.

XVIII. *Aſclepias*.

Aſclepias albo flore C. B. P. 303. Raii Hiſt. 1098. Tournef. Inſtit. 94. Hiſt. des Plantes 55. *ſive Vincetoxicum multis fl. Albicantibus*, J. B. 2. 15. 138. Moriſ. Hiſt. 3. 611. *Vincetoxicum* Dod. pempt. 407. Swallow-wort.

Virtue

The *TRIBE.*

This *Plant* is juſtly reckon'd among the *Anomalæ* by Dr. *Moriſon*, ſince it cannot be brought into any *Claſs*, as to its *Flower*: And for the *Fruit*, it is the neareſt of any to the *Apocinums*, becauſe of its *pappous Seed*. *Tournefort* brings it in among the *monopetalous Bell Flowers*, tho' it does not very well ſuit with that *Figure*. Mr. *Ray* places them among the *Flores pentapetaloides vaſculiferæ*; and *Herman* and *Boerhave* very juſtly among the *Siliquoſæ*.

The *Deſcription.*

XVIII. It has a very fibrous *Root*, from whence ariſe ſeveral ſtraight *Stalks*, one or two Foot high, hairy and jointed. The *Leaves* from the Joints by Pairs upon *Foot-ſtalks* bended upwards, are oblong, broad at the Baſe, and pointed, ſhining green like thoſe of *Ivy*. The *Flowers* upon ſmall ſeparate Foot-ſtalks from the Boſom of the *Leaves*, are whitiſh, narrow, oblong, *monopetalous*, deeply divided into five narrow pointed *Segments*; endowed with a tubulous *pentaphyllous Empalement*, and a green Pointal in the middle, ſurrounded by five *Stamina* and two Summits. The *Pointal* becomes a long *Pod*, divided into two Pouches filled with broad flat downy *Seeds*. It is cultivated in the Gardens and *Flowers* in *June* and *July*.

Virtues and *Uſes.*

XVIII. It is eſteem'd a potent *Alexipharmick*: The dry'd *Root* is kept in the Shops, and it is reckon'd good in the *Dropſy* and *Jaundice*, but it is not now much in Uſe.

XIX. *Aſparagus.*

Aſparagus ſativa, C. B. P. 489. Tournef. Inſtit. 300. *Hortenſis & pratenſis*, I. B. 3. 36. 721. Raii Hiſt. 683. *Domeſticus*, Moriſ. Hiſt. 2. 3. Garden Aſparagus.

The *TRIBE.*

It is placed among the *baccifera non ſcandentes*, by *Moriſon* and all his Followers, except *Tournefort*, who places it among the *roſaceous Flowers*.

The *Deſcription.*

XIX. This noted *Plant* has a great many groſs, large, white *Roots*, about the Bigneſs of ones Finger, running deep in the Ground, and gathered together in one Head, at the Top: From whence ariſe, in the Months of *April* and *May*, round, ſtrait, naked Shoots, about one Foot high; afterwards ſending forth ſmall, round, ſmooth, dark green Branches; from a ſtrait, round, marrowy Stalk; ſometimes aſcending to above four or five Foot high: The numerous Branches are cloathed with five or ſix ſmall *capillary* green *Leaves*, like thoſe of *Fennel*, from one Beginning: Among which are ſmall, *yellowiſh*, *pentapetalous*, naked *Flowers*, endow'd with ſix Chives; to which ſucceed ſo many round *Berries*, red when ripe; containing ſeveral black roundiſh *Seeds*. It is planted in the Gardens. The Root will continue many Years, ſending forth new Shoots every Spring; well known to the Gardiners, and much eſteem'd for Kitchen Uſe, becauſe of the Tenderneſs and ſweet delicious Taſte. It is alſo propagated by the Seeds, but it is ſome Time before it is ſo large as to be of Uſe.

Virtues and *Uſes.*

XIX. Its *Root* is numbred among the five opening *Roots*, in the Shops; and eſteem'd very *nutritive* and *aperient*; and becauſe of its agreeable Taſte, is very fit to be boil'd in Broths, nouriſhing and ſtrengthening Jellies, and Ptiſans, for conſumptive Perſons. It enters the *Syr. de quinque radicibus.* The *Seeds* are alſo eſteem'd *aperient*, and enter the Compoſitions for the Jaundice, Dropſie, Gravel, *&c.* Both *Roots*, *Shoots*, and *Seeds*, are ſaid to be *ad Venerem provocantia.*

Aſperula odorata, vide *Aparine.*

XX. *Aſphodelus.*

1. *Aſphodelus albus ramoſus mas*, C. B. P. 28. Tournef. Inſtit. 343. *albus ramoſus.* Moriſ. Hiſt. 2. 330. *Major flore albo ramoſus*, I. B. 2. 19. 625. Raii Hiſt. 1191. *Aſphodelus*, 1. Cluſ. Hiſt. 196. White Aſphodele.

2. *Aſphodelus luteus*, I. B. 2. 19. 632. Raii Hiſt. 1192. *luteus & flore & radice*, C. B. P. Tournef. Inſtit. 344. *folio fiſtuloſo ſtriato non ramoſus luteus, & flore & radice.* Moriſ. Hiſt. 2. 331. *Luteus minor, Iphyon Theophraſti & Anguillara, Erizembac Arabum* Lob. Icon. 91. Yellow Aſphodele.

The

The *TRIBE.*

This is the ſecond Tribe of *liliaceous Flowers* I have met with. It is reckon'd by *Moriſon* among the *hexapetala Tricapſulares.* By *Ray*, among the *Bulboſis Affines.* And by *Boerhave*, among the *Monocotyledones bracteata.*

The *Deſcription.*

XX. 1. The firſt or white Aſphodel, has a great many Knobs adhering to ſmaller *Fibres*; and all gathered together in one Head; from whence proceed ſeveral oblong, narrow, pointed, dark-green, ſpungy, juicy *Leaves*; amidſt which, ariſes a ſtrait, marrowy, ſmooth *Stalk*, about two or three Foot high; ſending forth thin ſet large *Branches*; at the Top adorn'd with ſeveral white Flowers, hexapetalous, or conſiſting of ſix white Petals, Star-like; and endow'd with as many *Stamina* or *Chives*; The Pointal afterwards becomes an *oblong Fruit*, or *Berry*; divided into three *Pouches* fill'd with ſeveral three-corner'd Seeds.

2. The Second has its knobby *Roots*, much leſs; of a yellow Colour, and affording a yellow Juice: Its *Leaves* much ſmaller and thicker; its *Flowering Stem* in the Middle, is ſtrait, ariſing above two Foot unbranched, loaded with *Flowers* from the Middle upwards; its Flower like the former, but *yellow*; the Fruit the ſame.

Vertues and *Uſes.*

Its Roots are eſteem'd a *potent Diuretick*, and good for provoking the *Menſes*; but they are not now much uſed in Medicines.

Aſplenium, vide *Adiantum.*

XXI. *Aſter.*

1. *Aſter Atticus cæruleus, vulg.* C. B. P. 267. Tournef. Inſtit. 481. *Atticus purpureo flore*, I. B. 2. 24. 1044. *Italorum purpuraſcens*, Lob. Icon. 345. Raii Hiſt. 268. Moriſ. Hiſt. 3. 119. *Atticus*, Dod. pempt. 266 Common Starwort.

2. *Aſter omnium maximus, Helenium dictus.* Tournef. Inſtit. 483. Hiſt. des plantes, 396. *Helenium vulg.* C. B. P. 276. Dod. pempt. 344. Raii Hiſt. 273. Synopſ. 81. *Helenium ſive Enulacampana*, J. B. 3. 26. 108. Moriſ. Hiſt. 3. 129. Elecampane.

The

The *TRIBE.*

These *Plants* introduce the *radiate* Kind so called by *Tournefort.* Mr. *Ray* says, they are *flore Discoide semine papposo*, by which they are distinguish'd from the *Corymbifer æ Radiat æ*, which are *seminibus pappo destitutis. Herman* places them among the *Pappescentes & Lactescentes. Boerhave* calls them *Gymnomonosperm æ discifior æ.* But *Morison* rightly calls this *Genus*, *Pappescentes & non Lactescentes.* The general Character of this is, that they have a common *Empalement*, endow'd with a *Thalamus*; in which are coucht several *small strait Embryons*, surrounded by small *downy Hairs*, on the *Top* of each of which, are placed so many *Flosculi*, which occupying the Middle, are call'd the *Discus*, and surrounded by so many *Semiflosculi*, which make up the *Radius*, the *Embryons* become so many oblong *Seeds.*

The *Description.*

XXI. 1. This *purple Italian Starwort* (being one of a great many Species, particularly noted for an Officinal Plant, tho' most of the others partake of the same *Virtues*) arises from a small *fibrous Root*, into several small, round, hard, hairy, reddish *Stalks*, about one Foot and a half high; adorn'd with oblong, narrow, pointed, dark-green Leaves, alternately plac'd. Towards the Top it is subdivided into several smaller *Branches*; each supporting a Flower about the Bigness of a Daisy; whose *Radius* consist of bluish or purplish *Semiflosculi*; and *Discus*, or *Umbo* of small yellowish *Flosculi*; to which succeed small, naked, *downy Seeds.* It is cultivated in *Gardens.* Its *Root* is perennial and very running. Flowers in *July* and *August.*

2. Tho' the *Helenium* has all the *Characters* of an *Aster*, and is by *Tournefort* reckon'd as such; yet it has peculiar distinctive *Notes*, by which it may be reasonably treated separately: However, I have thought fit to discourse of it in this Place, because the accurate *Boerhave* goes into *Tournefort*'s Sentiments. It has a big, gross, carnous, perennial *Root*, increasing considerably, according to the Time it has remain'd in the Ground, divided into several *Branches*, duskish without, and whitish within; from whence arise several gross, large, round, hairy, whitish, marrowy *Stalks*: Some 3, 4, or 5 Foot high; adorn'd with long, large, broad, pointed, soft, whitish Leaves: Those from the Root incline towards the Ground: Those on the Stalks are alternately plac'd. The Top of the Stalk is subdivided into several smaller Branches, each supporting a large yellowish *Flower*, *larger* than those of a *Marigold*,

and ſomewhat leſs than a *Sun-Flower*, whoſe *Radius* conſiſts of ſeveral ſmall five pointed *half Flouriſhes*. And Diſks of ſeveral *Flouriſhes*, ſuperficially divided into five pointed Segments, as other *Corymbiferous Flowers*: ſo which ſucceed ſmall, oblong, downy *Seeds*.

Virtues and *Uſes*.

XXI. 1. The common *Starwort* (otherwiſe called *Inguinalis*) is ſcarce in modern Uſe; tho' it has been commended by the Antients for *Tumefactions* of the *Glands* in the *Groin*, ſuch as *Buboes*, *&c.*

XXI. 2. The Roots of *Helenium*, or *Enulacampana*, is only in Uſe. It is eſteem'd one of the moſt potent *Antiſcorbuticks* of all the vegetable Part of *Materia medica*. It is *attenuating*, *diſcutient*, and *abſorbent*: It is of and *acrimonious bitter*, *glutinous*, and ſomewhat *Aromatick Taſte*. It is look'd upon as a good *Stomachick*, *Pectoral*, *Diuretick*, and good for provoking the *Menſes*. It is kept dry in the *Shops*, and is an *Ingredient* in *Antiſcorbutick* and *Hiſterical Compoſitions*, for *medicate Infuſions*, in *Wine* or *Ale*: Its *Powder* enters in *pectoral Electuaries*; ſuch as the *Pulv. Helenii*, *Liquiritiæ*, *Iridis Florentinæ* a' ℥j. *fl. ſulphuris* ℥ſs *mellis communis* q. ſ. f. *Linctus*, for inveterate *Coughs*, to *attenuate* the groſs and *tough Defluctions*. It is employ'd *externally*, and in the *ung. enulatum cum mercurio*, being eſteemed a *potent Remedy* againſt *ſcorbutical Eruptions*. The *Root* is likewiſe *candied* and chew'd, as ſome do *Tobacco*, for *Coughs* and *Conſumptions*. It alſo enters *Pectoral Syrups*, ſuch as *Syr. de Eryſimo*, *Aqua Abſynthii compoſita*, *pulv. Diacinamomi*, *Theriaca Londinenſis*, *&c.*

Tho' the *Tripolium*, or *Sea Starwort*, be not an *Officinal Plant*; yet ſince it grows moſt frequently in theſe Parts where I live, and affords a moſt agreeable Aſpect, I thought fit to inſert it here.

Aſter maritimus cæruleus, *Tripolium dictus*, Raii Hiſt. 270. *Aſter cæruleus glaber littoricus pinguis*, *Tripolium dictus*, Moriſ. Hiſt. 3. 121. *Tripolium majus & minus*, I. B. 2. 24. 1064. C. B. P. 267. Sea Starwort.

The *Deſcription*.

This Plant has a very fibrous annual *Root*; from whence ariſe, in the Spring, ſeveral oblong, flat, ſtiff, ſhining, dark-green, pointed *Leaves*. The *flowering* Stem in the Middle, is groſs, thick, round, hollow, jointed, adorn'd with Leaves like the former; branched towards the Top (it being uſually one or two Foot high) ſupporting ſeveral *Radiate Flowers*, whoſe *Radii* are blue, and *Umbo*, or *Diſcus* yellow, like the common *Starwort*; to which ſucceeds a great many ſmall *pappous Seeds*. It grows moſt plentifully along all the Sea Coaſt in *Holland* in *Lincolnſhire*,

ſhire, on the Sides of all the Ditches and Drains: It delights in moiſt Places overflow'd by the Tide. It flowers in *Auguſt*, when it affords an agreeable Spectacle. Mr. *Ray* ſays he has obſerv'd it with a *naked Flower*. I ſuppoſe he has taken it for ſuch before the *Radii* begin to appear; for it peculiar to this Plant that the *Floſculi*, or *Flouriſhes* appear a long Time before the *Semifloſculus* or *Radius* is ſeen. Mr. *Ray* alſo propoſes, that there are two Kinds; one perennial, and the other annual. But this I ſuppoſe, is becauſe ſome may have riſen from Seed late in the Year, and endured all Winter, and flower'd the following Year.

Aſtrantia, vide *Imperatoria.*

Atractylis, vide *Carthamus.*

XXII. *Atriplex.*

1. *Atriplex hort. alba*, I. B. 2. 23. 970. *Hort. alba, ſive pallide virens*, C. B. P. 119. Tournef. Inſtit. 505. Moriſ. Hiſt. 2. 606. Raii Hiſt. 191. *Sativa alba*, Lob. Icones 253. Garden Orach.

The *TRIBE.*

This introduces a new Tribe of *apetalous Flowers*, whoſe Character by *Tournefort*, is, that it has a pentaphyllous *Empalement*, ſurrounding ſeveral yellow Summits; to which ſucceeds one ſingle round or flat Seed, enclos'd in a two leav'd *Capſule* or Seed *Veſſel.*

The *Deſcription.*

It is an *annual Plant*, with a ſtrait round *Stalk*; one or two Foot high; round at the lower, and *quadrangular* at the upper Part; adorn'd with *Leaves*, broad towards the *Stalk*, becoming narrower towards the *Point*; as it were *triangular*, pale-green, not unlike thoſe of a Beet. Its *Flowers* are thick ſet, without *Foot Stalks* upon the upper Part of the *Stalk* and *Branches*, conſiſting of a green *Empalement*, ſurrounding greeniſh yellow *Summits*, ſoon ſucceeded by two ſmall green *Leaves*, which containing *one* ſingle, flat, round Seed, becomes a flat Seed Veſſel. It is ſown in the Gardens.

Virtues and *Uſes.*

This is a freſh Inſtance of the great Harmony and *Agreement* betwixt the *Characters* and Virtues of a *Plant*; for tho' this Garden *Atriplex* be fix'd

fix'd upon as a *Diſpenſatory Species*; yet all the *Atriplex Kinds*, which are very numerous, both *Garden*, *wild* and *maritime*, partake of the ſame Virtues; they are potent *Emollients* and *Laxatives*: Their chief Uſe is for boil'd Sallads in the *Kitchin*, and for *Glyſters*; ſo that it is a Pot, rather than a medicinal Herb. I have thought fit, becauſe of the Singularity of the Plant, not upon Account of its different Virtues to add

2. *Atriplex Maritima Boſtonienſis.*

2. *Atriplex Maritima Boſtonienſis Nobis. Atriplex Maritima, Halimus dicta erecta, ſemine Folliculis Membranaceis bivalvibus, in Latitudinem porrectis, & utrinque Recurvis, longo pediculo Inſidentibus, clauſo* Plukn. Phytogr. Brit. Tab. 36. Petiv. Engliſh Herbal. Tab. 7. No. 8. Raii Suppl. 123. Synopſ. Stirp. Brit. 63. Sea purſlane of Boſton.

The *TRIBE.*

The firſt who ſeems to have diſcover'd this Plant, was Dr. *Pluknet*, about forty Years ago, growing plentifully near to *Skerbeck Church-Yard*, within a Mile of *Boſton* in *Lincolnſhire*. I diſcovered it about three Years ago, growing within a quarter of a Mile of *Boſton*, about a Bow ſhot from a Wind-Mill, as you go from *South-End*, along the Sea Bank, towards *Skerbeck Church*. Mr. *Ray* ſays it is *forte minor Germanicus* Park. *minor*. C. B. P. *Halimus aurei arvi*. C. B. Prodr. 59. That it is not that of *Parkinſon*'s may be prov'd, becauſe he knew nothing of the Diſtinction between the *Atriplices* and *Chenopodia*, and it might have been the other *Halimus*, as well as this. That it is none of thoſe mention'd by *Bauhinus* is plain; for he ſays *folia habet utrinque una Lacinia diviſa*, whereas theſe are always *integra oblonga ovata foliis portulacæ ſimillima*. His has *Capſula quadruplicia*; whereas ours has *Capſula compreſſa Cordiformia*, which makes his a *Chenopodium*, and ours an *Atriplex*. Mr. *Ray* ſays, Mr. *Du Bois* obſerv'd it in *Maritimis Belgicis*; perhaps that of Mr. *Du Bois* is the ſame mention'd by *Boerhave*, different from *ours*; for the one is *floribus longo pediculo Inſidentibus*, and the other *Cauliculo Arcte Adhærentibus*, Boer. Ind. 2. 89. ſo that there is Reaſon to believe, this Plant is only peculiar to *Boſton*, at leaſt by what has yet been obſerv'd.

The

The *Deſcription.*

It has an *annual, fibrous, hard Root, ſtriated* or *angular, knotted, branched Stalks*, ariſing half a Foot, even to one or two Foot when luxurient, adorn'd with Aſh coloured, oblong, oval, or blunt Leaves; the largeſt of which, are about one Inch long, and half an Inch broad, alternately or irregularly plac'd; from whoſe Boſom ariſe the ſmall *Branches*, having two ſmall Leaves at their Exit, and loaded with thick ſmall *Flowers*, conſiſting of ſeveral duſkiſh, yellow Summits, ſurrounded by four very ſmall, thick Leaves for a *Calix*, both which, ſoon fall off, and then the flat *Piſtillum* with its *Stylus* in the Middle appears, which ſoon becomes a compreſs'd Heart-like triangular Fruit, bended outwards like two Horns, with a Depreſſion in the Middle; as it is ſaid of *Burſa Paſtoris, Triangulum Iſoſceles quaſi referens.* N. B. Theſe *Flowers* are thick ſet on the Top of the Stalk and Branches, without any Pedicle at firſt, but no ſooner does the Fruit or Seed-Veſſels appear, than it is ſtretch'd forth, upon Pedicles, one, two or three Lines long. It cannot be diſtinguiſh'd from the other *Halimus*, till the Flower and Fruit appear, which is about the Middle of *Auguſt.*

XXIII. *Chenopodium* ſive *Blitum Sylveſtre.*

1. *Atriplex fœtida*, C. B. P. 119. Moriſ. Hiſt. 2. 605. Raii Hiſt. 198. *Chenopodium fœtidum*, Tournef. Inſtit. 506. Hiſt. des Plantes 17. *Blitum fœtidum Vulvaria dictum*, Synopſ. Stirp. 64. *Vulvaria* Tab. Icones 428. Stinking Orrach.

2. *Bonus Henricus*, J. B. 2. 23. 965. *Blitum perenne Spinachiæ facie*, Moriſ. Hiſt. 2. 599. *Blitum bonus Henricus dictum*, Raii Hiſt. 195. *Lapathum unctuoſum folio Triangulo*, C. B. P. 115. *Chenopodium folio Triangulo.* Tournef. Inſtit. Engliſh Mercury.

3. *Botrys Ambroſioides vulg.* C. B. P. 138. Raii Hiſt. 196. Dod pempt. 34. *Atriplex odora ſive ſuaveolens.* Moriſ. Hiſt. 2. 605. Hort. Lugd. Bat. 68. *Chenodopium Ambroſioides, folio ſinuato.* Tournef. Inſtit. Boerh. Ind. 2. 90. Oak of Jeruſalem.

The *TRIBE.*

Tournefort diſcover'd, and *Boerhave* has very much improv'd the Diſtinction betwixt the *Atriplices Blita* and *Chenopodia. Tournefort* has given the Name of *Chenopodium* to the whole Tribe, becauſe *Atriplex Sylv. latif. Pes anſerinus dicta* happens to be of the Number. The diſtinctive

Notes

Notes of theſe three *Genera*, according to theſe two *Authors*, are: *Atriplex* has a *pentaphyllous Calix*, which afterwards becomes a flat *Huſk*, containing one Seed. *Boerhave* farther obſerves, that it has *Hermaphrodite Flowers*, with five *Stamina* and a *Piſtillum*, which becomes a round Seed: and Male Flowers, only compos'd of *Stamina* and two ſmall *corner'd* or heart-like Leaves.

The Character of a *Chenopodium* is, that it has a *quadrifid* or *quinquifid* deep divided *Calix*, with eight or ten *Stamina*, and a forked, long, diſtended *Tube*; which upon the ripening incloſed in a *quadrifid* or *quinquifid Star-like Fruit*, becomes a ſmall round *Seed*.

The Blites have a trifid *Calix*, (which afterwards becomes a Bladder Huſk) three *Stamina*, with a forked Tube, which becomes a ſingle oblong *Seed*. Such ſtrict Examination of the *Flower* and *Fruit*, is the moſt probable Means of acquiring the true Knowledge of the *Genera* of *Plants*.

The *Deſcription*.

1. *Stinking Orrach* (ſo call'd from its *fœtid Smell*) is a low *Plant* about a Span high, very much *branched* with ſmall round alternate *Leaves*, not unlike the Sea purſlane, the lower moſt whitiſh, being ſprinkled with a kind of Duſt; the upper more pointed. The *Flowers* are *branch'd* on the Top of the *Stalk* like other *Orrachs* of the *Chenopodium* kind. It is an *annual Plant*, grows in fat Places, and the Ground where Dunghills have been laid.

2. *Engliſh Mercury* has a *perennial*, *parenchymatous Root*, ſending forth ſome Fibres from the lower Part; with ſeveral corner'd, and hollow, long *foot Stalks*; ariſing from the *Root*, and ſupporting Triangular *Leaves*; dark green above, ſprinkled with a whitiſh Powder below, not unlike thoſe of *Arum*. The *flowering Stem* ariſes in the middle, groſs, round, marrowy, loaded on the Top with thick ſet ſmall *Apetalous Flowers*, like the former. It grows plentifully in ſhady *Orchards*, round *Garden Walls*, Bottoms of *Dunghills*, and other fat Places. It is alſo cultivated in moſt Gardens, where it loves a fat Soil and a ſhady Place.

3. *Oak* of *Jeruſalem* is an *annual Plant*, ariſing about Half or One Foot high, from a ſmall, ſomewhat *fibrous Root*; it ſends forth a round ſtiff ſtrait *Stalk*, much branched from the Root upwards; adorn'd with Leaves, notch'd and deep divided, like thoſe of *groundſel* or *Jacobæa*, but much leſs; the Diviſions, or rather *Sinus*, are not unlike thoſe of an *Oak*, from whence its Name; reddiſh below, but afterwards greeniſh yellow: at the Top of the *Stalk*, and *Branches*, it is thick

beſet with ſmall *Flowers*, like the former. The whole Plant has a pleaſant agreeable Smell: It is ſown in Gardens.

Virtues and *Uſes.*

1. Theſe Plants are but of little or no Uſe in Phyſick. The *Stinking Orrach* is eſteem'd a good *Hyſterick*, becauſe of its high *fœtid* Smell, which moſt People compare to the *Impurities of a Proſtitute*. *Tournefort* adviſes to make a Tincture of it with *Brandy*, which, he ſays, is a good *Anti-Hyſterick*; others preſcribe a *Tea* of the dry'd Leaves. I have ſeen a *Syrup* of the *Juice* kept as an *Anti-Hyſterick* in the Shops; but if it is at all good for *Vapours*, it muſt be by its high *Scent*, when *Women* are in a *deliquium* or Fainting, as they uſe to do with burnt Feathers, which are put to the Noſe in ſuch Caſes. I look upon it to be an *emollient*, with others of that Tribe; but not much in Uſe, becauſe of its *Smell*.

2. *Engliſh Mercury* is ſo univerſally known here in *England*, for a boil'd Sallad, that it is cultivated every where in the *Gardens*, and is greedily ſought after in the *Spring*, becauſe then the Leaves are moſt tender and delicious. It may be an Ingredient in *emollient Cataplaſms*, *Fomentations* and *Clyſters*: But however it be recommended with us, the *Mercurialis Dioſcoridis*, or *Cynocrambe* is preſcribed as one of the *emollient Herbs* for *Clyſters* in other Countries. In a Word, all the *Beet*, *Blite*, *Orach*, *Spinage*, and *Mercury* Kinds, partake of the ſame Virtues, and may be preſcribed in the ſame Caſes.

3. *Oak of Jeruſalem* is ſcarce of any Uſe in *Phyſick*. The Ancients look'd upon it as a good *Pectoral*, an *Attenuater*, *a Provoker* of the *Menſes* and *Secundine*, which I ſuppoſe is becauſe of its *ſweet Smell*. They uſe to dry the Leaves, and put them among Cloaths, to preſerve them from the Moths, which I ſuppoſe is alſo on Account of the Smell.

Avellana, vide *Corylus*.

XXIV. *Avena.*

Avena alba, C. B. P. 23. Tournef. Inſtit. 514. J. B. 2. 18. 432. Moriſ. Hiſt. 3. 209. Raii Hiſt. 1253. Dod. pempt. 511. White Oats.

In treating of ſo uſeful a Grain as Oats, I ſhall obſerve the following Particulars.

1. In declaring of the *Tribe*, I ſhall explain ſeveral Terms of Art, peculiar to this *Genus*.

2. I ſhall

2. I ſhall give the Deſcription, with an Account of the different *Species*
3. Add the *Virtues* and *Uſes.*
4. Give the Manner of preparing *Oatmeal.*
5. Shew the different Methods of preparing *Oatmeal* for *Food.*
6. The Culture of manur'd Ground.
7. The Improvement of Barren Ground.
8. Other Improvements to be made by ſowing of Oats.

The *TRIBE.*

Avena is a *culmiferous annual graſs-leav'd Plant*, with *ſparſed Panicles*, and an *eſculent*, or *eatable Grain*, ſown in the Fields for *Food* to *Man*, and *Fodder* for *Beaſts.*

Before I proceed, it is fit I ſhould explain the following *Terms of Art*, ſuch as *Coma*, *Cotyledon*, *Culmen*, or *Culmus*, *Juba*, *Panicula*, *Spica.*

Coma ſignifies the *branching* out of ſeveral ſmall *Pedicles*, from the Top of a *Stalk*; which being ſpread forth, reſemble ſo many *Locks* of *Hair*, ſuch as the ſmall Pedicles on which the ſeveral Grains of *Oats* depend.

Cotyledon; As in the *Uterus* of *Cows*, and ſome other *Animals*, there are ſeveral carnous Protuberances, not unlike to ſo many large *Figs*, diſperſed up and down the *Chorion*, in which the *Fœtus* is included; each of which furniſh a *Blood-Veſſel* to the *Navel String* (by which the *Fœtus* is nouriſhed) call'd *Cotyledon*, *& Cotyledones* in Plants; ſignifies the firſt ſtretching forth of the *Seed-Leaf* from the *Point* of the *Radicle*, by which it is nouriſh'd. This Expanſion is either double or ſingle, *i. e.* There are either one or two Seed-Leaves ſtretch'd forth; if but one, it is called *Monocotyledon*; if two, it is ſaid to be *Dicotyledon.* The chief of the *Monocotyledones* are the *Bulboſæ*, the *Bulboſis affines*, the *Frumenta* and *Gramina*; all which, for the moſt Part, are call'd *Graminifolia*, from the Reſemblance of their Leaf to that of Graſs.

The *Frumenta* Corn, and *Gramina* Graſs-Kind, are alſo call'd *Plantæ Culmiferæ*, which has a two-fold Derivation.

1. From the Top or Roof of a thatch'd Houſe, which is call'd *Culmus*, or *Culmen*, by which they are ſaid to be *Culmiferæ quaſi Culmeniferæ*, when the *apetalous Flowers* are placed upon the Top of the *Stalk* of the Corn and Graſs Kind.

2. From *Calamus*, a Reed or Quill, then they are *Culmiferæ quaſi Calamiferæ*, becauſe the *Stalks* are hollow and jointed; the larger of theſe are the *Cereales*, or *Frumentaceæ grano eſculento*; the leſs, are the *Gramina ſemine non eſculento.*

The largeſt of the Graſs-kind are the *Arundines*, and the *Gramina Arundinacea*; the *Reed* and *Reed-Graſs*, whoſe Top is call'd the *Juba*, from thence they are called *Plantæ Jubatæ*, which only differ from *Panicula*, becauſe the one is *branched*, and the other not. It is a *Collection* of the *Flowers* and *Seeds* of the *Corn* and *Graſs-kind*, for the moſt Part looſely diſpos'd, hanging down from the ſmall *Pedicles*, ſituated on the Top of the *Stalk*

Spica, on the contrary, is when the *Flowers* are compactly united and ſituated on the *Top* of the *Stalk* and *Branches*, in Form of a *Cylinder*, or more *Conical*. It chiefly relates to the *Corn* and *Graſs*-kind, though it is to be obſerv'd among other *Genera*, as *Lavendula*, &c. among the *Lip-flowers*: *Plantago*, *Perſicaria*, *Biſtorta*, &c. among the other *apetalous Flowers*.

The *Deſcription.*

Avena is an *annual Plant*, with a ſmall hard fibrous *Root*, ſending forth one or more ſtraight, hollow, jointed *Stalks*; with one thin, long, tapering, pointed, dark-green *Leaf* from each Joint. The *flowering Stem* ariſes from the ſecond or third Joint, bearing two or three long, ſmall Pedicles, at certain Intervals, ſupporting ſo many Flowers, conſiſting of two oblong, cavous green *Leaves*, inſtead of an *Empalement* called the *Gluma*, or Chaff; ſurrounding ſeveral *Stamina* or *Chives*, with the *Pointal* in the middle, which afterwards becomes an oblong, blunt, *farinaceous Seed*, cover'd with a *thick Coat* or Huſk, endow'd with an *Ariſta* or *Aun*, which was formerly the *Stylus* on the Top of the *Piſtillum*, and cover'd with the *Chaff*, which was the *Calix*, and containing a ſmall Seed in its Boſom. The *Seeds* are diſpos'd in *Panicles*, or looſe *Spikes*; which, as *Dioſcorides* obſerves, hang downwards, like the Feet of a Locuſt.

Different Species.

Oats are cultivated in moſt Parts of *Europe*; in the hotter, but more eſpecially colder Regions: In moſt Parts of *Germany*, *Great Britain*, eſpecially *Scotland*, *Borders* of *England*; *Cornwal*, *Wales*, and *Ireland*. It agrees with any Soil and Climate, if it is not too dry, nor too moiſt, and thrives as well in the more barren, as in the more fertile Ground.

There

There are ſeveral Kinds of it.

1. *White Infield Oats* (which is chiefly ſown in *Scotland)* has an oblong, turbinated, or bilg'd, blunt, farinaceous Seed, with a ſhort Aun, and large Chaff.

2. *Black Infield Oats* is of the ſame *Shape* and *Bigneſs*, with a dark brown Huſk, for which it is call'd *Corby Oats*, reſembling a *Raven*, which is there call'd a *Corby*. It is chiefly ſown in ſome Parts of *Fyfe* and *Kinroſs-ſhire*, a ſmall adjacent County.

3. *Barley*, or *early Oats*, becauſe it is ſown late, and ripens early with the *Barley*. This is a ſhort turbinated Grain, uſually ſown in moiſt Places, becauſe it ripens ſoon, tho' the Seaſon ſhould be otherwiſe cold and late.

4. *White* and *Black Outfield Oats*. Theſe are long, ſmall, hungry Grains, with a thick Huſk, but ſmall Kernel, and a long Aun, chiefly uſed for *Horſe Corn*: Its *Straw* is ſo ſweet and tender, that it is not much worſe than Hay for Horſes. A double Quantity of this Grain is ſold at the Price of a ſingle Quantity of the *Infield Oats*.

This is the fitteſt Grain for manuring or cultivating of barren Ground, as ſhall be ſhewn hereafter.

Mr. *Ray* obſerves, that *Gerard*, *Parkinſon*, and *Joannes Bauhinus*, make no Diſtinction betwixt the *Black* and *White Oats*: But he adds, that the *Black Oats* are chiefly ſown in *England*. This ſeems to be the ſame with the *Outfield Black Oats*, call'd *Sciochs* in ſome Places of *Scotland*; for the Horſe Corn in *England* is no wiſe ſo farinaceous as the *Infield Oats* in *Scotland*: It has a longer Grain and Aun; neither are there any other required, ſince *Oats* are only given to Horſes; ſave in the North of *England*, *Cornwal*, and *Wales*; and I am inform'd by Mr. *Ray* and others, that in *Cornwal* they have a kind of Oats call'd

5. *Naked Oats*, where it is almoſt ſold at the ſame Rate as *Wheat*, by the Name of *Pilch Corn*. I am alſo told, it is of late frequently ſown in *Durham*. I ſuſpect it may labour under the ſame Inconveniency which I obſerved in the *early Oats*, that it may be ſoon ſhaken in a windy Seaſon; but it has the good Advantage beſide, ſaving the Pains of huſking or ſhelling of it, (as 'tis uſually call'd) in a Water Mill. One Meaſure of this *Naked Oats* may afford the ſame Quantity of Oatmeal as three of the other Kinds; for the uſual Calculation is, that three Bolls of unſhell'd, or unhuſk'd Oats, only yield one Boll of what is ſhell'd or huſk'd, ready to be ground into Oatmeal. It is of this ſhell'd Oats that they make the Grotts, whoſe Uſe ſhall be ſhewn hereafter.

N. B. What they call a Boll in *Scotland*, contains four Buſhels, in ſome Places call'd a Seam in *England*.

Mr. *Ray* tak.s Notice, that *inter ſegetes nimis frequens eſt*, and that once being got into ſuch Ground, it becomes wild, ſows itſelf without Culture, and can ſcarce be rooted out or ſeparated from any other Grain, the Reaſon of which (if he means *Wheat* by *ſegetes)* that Ground is ſo till'd, and the Seed for the moſt Part being ſown in *September*, *October*, or at furtheſt *November*; the ſhaken Oat Seed, which ripens ſooner than *Wheat*, is by this Means covered along with it; and being thus cheriſhed during the Winter, it ripens more early than its ordinary Seaſon; ſo that being again timely ripe, it mixes and ſhakes before any other Grain, ſuch as Peaſe, Rye, *&c.* and thus continues to propagate itſelf, without Manure or Culture: But if it has been a windy Seaſon, and no Care has been taken to Till the Ground over the ſhaken Seed, either the Beaſts eat up the tender Plants, which immediately ſpring forth, having no Root in the Ground; the Birds pick up the *Seeds*, or it dies with the Winter Froſts: So that if *Barley* is ſown in the ſame Ground next Year, Oats are ſeldom obſerved to riſe up with it in any Quantity.

Vertues and *Uſes.*

Oats are of a temperate Nature, drying, moderately digeſting, and ſomewhat Aſtringent: It is of frequent Uſe both for *Food* and *Phyſick*. The chief of its medicinal Uſes is the *Dimetick*, or nutritive Part. Water-gruel made of Oatmeal, coarſly grinded and well boil'd among Water, of a drinking thin Conſiſtence, is of great Uſe in Fevers, moderately ſalted, ſweeten'd with Sugar, if requi'r'd, or aromatiſed with a little White Wine, Powder of Cinnamon, Mace, *&c.*

Th's I have ſucceſsfully often uſed in *malignant* and *putrid Fevers*, when the Patient has been delirious many Days, and taken nothing but this thin *Water-gruel* for the ordinary Drink, which both diluted their Blood and nouriſhed their Body: If inclin'd to be conſtipated, take the coarſeſt ground Oatmeal call'd *Grots*, mix a good Quantity of *Currants*, boil all very well, ſtrain out the thin Liquor, and let that be for the ordinary Drink; eat the thick *Gruel* and *Currants*, with *Sugar* and *White Wine*, or without, for an ordinary *Meal*. *Water-gruel* is in *England* differently prepared for a Breakfaſt, or in a Morning, both among the higher and lower Sort of People, Noble and Ignoble, Gentleman and Farmer; ſo that there is ſcarce any who know not how to make uſe of it. Mr. *Ray* ſays, it is chiefly ſown for Provender for Horſes; that they fatten Geeſe, and feed Hens with it; but withal he adds,

adds, that the meaner Sort of People, who live only on Oatmeal differently prepared, are the moſt healthful and long liv'd People of any. He alſo obſerves, that ſuch enjoy a better State of Health than thoſe who live upon the moſt delicate and fine Diſhes the Art of Cookery can invent. And indeed thoſe who conſider the Strength, the Robuſtneſs, the moſt laborious and toilſome Work, ſuch as live only upon Oatmeal undergo, it may be look'd upon as no leſs Nutritive than any of the eſculent Grains. *Peaſe* and *Beans*, which ſome of thoſe working People frequently make uſe of, being ground into *Meal*, and baked, are a much ſtronger Food, but ſo heavy and clogging, that unleſs mix'd with other Grains, few can continue long in the uſe of them. *Wheat* is the moſt delicious, and can be beſt refin'd of any of theſe Grains. *Barley* and *Rye* are ſomewhat rougher and coarſer, when bak'd alone; but *Oats* are a Grain, which if any are accuſtomed to, they can live as long in Health, perform as laborious a Taſk without wearying on the Uſe of it, as any who have the other Grains chiefly for their Food.

Difference of Oatmeal.

Oatmeal is diverſely prepared, according to the Cuſtom of the ſeveral Countries. When the *Oats* are threſh'd out, they dry them very well on Kilns, made on purpoſe: They Shell or Huſk them in a Mill, which chiefly goes by Water; they winnow or fan off the Huſk, call'd in ſome Places the Shellings. Sometimes they paſs them a ſecond Time through the Mill, ſo that the whole Huſks are removed: After which they grind it ſmall.

The whiteſt and faireſt is eſteem'd the beſt, not being ground ſo very ſmall, and being the freeſt from theſe Huſks; tho' ſome, eſpecially they who grind it for publick Markets, make it ſo ſmall, that the Duſt and remaining Huſks are all mixt together. This is not eſteem'd ſo good, nor will it afford ſuch a Price. That ground from white Oats is preferr'd, but there is ſome Allowance given for the Colour of the Meal from the *Corby Oats*, which tho' not ſo white in Colour, yet it is as ſubſtantial a Grain. They ſometimes alſo grind the *Outfield*, or *Scioch Scotch Oats*, but that is the coarſeſt of all, and is uſually call'd *grey Meal*: The moſt frequent Uſe of this Grain is for Horſe Corn, as is obſerved.

Differ-

Different Preparations of Oatmeal for Food.

The Food made of Oatmeal is alſo diverſly prepared; thoſe called *Grots*, which is the *Oats* more carefully ſhell'd or huſk'd, are made uſe of for *Water-gruel*, and it is ſaid they frequently mix the Leaves of *Colworts*, commonly call'd *Kail*, either cut very ſmall, or the tendereſt of the Leaves are put in whole; with this they often boil *Salt Beef*, *Mutton*, &c. which makes very good nouriſhing Broth and Food: After they have ſearch'd or ſifted the Meal from the remaining Huſks, they take them with what of the farinaceous Part remains, and put all together in a large Veſſel, and ſometimes a big Stone dug hollow, which will hold ſeveral Gallons; they infuſe it in hot boiling Water, cover up the Veſſel for two or three Days, and ſet it by a Fire, that it may become acid or ſower. They ſtrain out every Evening as much of this Liquor from the Huſks or Seeds (as they call them) as will ſerve the Family for a Supper. They let this Liquor ſtand for ſometime, and pour off the more watry Part, that the remaining Part, (which is very white) may be boil'd up to the Conſiſtence of a Poultice or Mucilage: This is call'd *Llummery* in *Wales*, *Flummery* in *England*, and *Sowens* in *Scotland*. They make as much of this as will ſerve for five, ſix, or ſeven Days, becauſe it never eats well, till ſower, which does not happen untill the third or fourth Day: They ſometimes boil an Egg with this, or eat it with Milk, Ale, Claret Wine, and Sugar, *&c.*

The uſual Breakfaſt where Oatmeal is ſo much in Uſe, is what is call'd in *England*, *Haſty-Pudding*, and *Porrage* in *Scotland* made of boiling Water and Oatmeal ſtirr'd well amongſt it, until it be of a convenient Thickneſs; this they alſo eat with Butter-Milk, Ale, *&c.* They ſometimes take the Oatmeal Broth with the Colworts, and ſprinkle the *Oatmeal* among it to convenient Thickneſs, and this is call'd *Brewis*; or they dry the Oatmeal very well in a Frying-Pan, and mix very well with it the float or fat which ſwims on the Top of the Broth of Salt-Beef; this is call'd *Beef-Brewis*: They alſo toaſt the Oatcake very well, and putting it in a Diſh, they pour upon it this float or fat of Beef, which the Bread thus dry'd, being well-ſoak'd, they call Beef-Soup.

The Manner of making Bread or baking of Oatmeal is alſo various, and under different Denominations, as Loaves, Baps, Cakes, Bannocks.

The Oatmeal Loaves are made into a Paſte, with a proportional Quantity of Water and Barm, or Yeſt, and bak'd in the Oven, as Wheat

Wheat Loaves; and if the Meal is made of fair white Oats, well ſifted, and duly fermented with the Barm, though Inferior to Wheat Flower, yet it eats very Pleaſant; it's uſually with a thick hard friable Cruſt, and an agreeable Crumb; but it requires a cloſe ſhut Oven if made ſo large as four-penny or ſix penny Loaves.

Theſe called Baps, are the Oatmeal likewiſe fermented with Barm; they are baked out thin, of an Oval Figure, ſoon ſwell in an open Oven along with Wheat Bread; they eat very friable and Pleaſant, being chiefly all Cruſt, which is brittle, and eaſily diſſolves in the Mouth. They uſually Bake *Oat Cakes* after the ſame Manner, ſpreading the Paſte into a large Circle, and cutting it into four equal Squares.

The other kind of Cakes are made into a Paſte with Water alone, ſo thick and dry, that it's with much ado they can Knead it with the Knuckles of their Fingers; and after they have preſs'd it out to a tolerable large Circle, they cut it into four equal Squares, and lay it upon a Back made of moulted Iron, caſt with ſeveral Figures on one Side, and ſmooth on the other. This is uſually plac'd at the Back of the Kitchen Chimney, to reverberate the Heat at Roaſting or Boiling; and when they go to bake, they turn it down, lay it over the Fire, and bake theſe Cakes when 'tis throughly heated, by laying of them on its ſmooth Side. They eat not ſo friable as thoſe bak'd with Barm, but are of an agreeable Taſte, and Pleaſant to chew; they will keep a long Time without turning ſtale or muſty, or becoming too dry, even in the Summer. Theſe are bak'd thicker or thinner, according to the Mode of the ſeveral Counties. In *Cumberland* and *Weſtmoreland*, they are bak'd very thin; thicker at *Edinborough*, where they are very frequent in Publick Houſes; and thicker ſtill the further you go *North*; but moderately thin at *Aberdeen*.

There is a kind of Cakes bak'd in the *Stormond*, *Perthſhire*, and about the middle Parts of *Scotland*, called Sour Cakes. They make a Paſte, or Dough, of Oatmeal and boiling hot Water, they ſuffer this Dough to become Sour, for two or three Days, or longer, according to the Seaſon. They have a large round Plate of Iron, called a Girdle, beat thin out, to about two or three, or near four Foot Diameter; they have alſo thin Boards, about three or four Foot ſquare, called Bake Breads. They take about a quarter of a Pound, or more, of this Dough, made firſt into a round Lump, or Ball; this they beat out, by Degrees, with the Palms of their Hands, as they ſtretch out Linnen, when they Waſh Cloaths, ſhufling, ſhifting of it, and ſprinkling it afreſh with Oatmeal, to keep it from adhering to the Board, until 'tis as thin as coarſe brown Paper; they put it upon this Girdle on the Fire, to give it a tollerable Heat; after which they fold it four

fold, and keep it for Uſe. 'Tis made ſo very thin, that one may bite through ſixteen or twenty fold of it. It will keep without ſpoiling, turning mouldy or ſtale, two or three Months. They toaſt it, and put it in a Cup of Ale at a Mornings Draught (as ſome do Sage) to which it gives a pleaſant Taſte; they afterwards add a little Sugar, which makes it eat very agreeable; they fry it with Butter, or eat it in Soup, with Float, or Fat of Beef; as we ſaid of the other Oat Cakes. I doubt not, but if the ſame Method were us'd with the Dough of Wheatmeal, it would eat very agreeably, ſince it is more malleable (as it were) can be more eaſily ſtretch'd forth, and is as capable of a Sourneſs, or Leavening, as the other.

Theſe Iron Plates, called Girdles, chiefly made at *Cultroſs* in *Perthſhire*, are likewiſe made uſe of throughout the moſt Part of *Scotland*, for baking the Ordinary *Oat* and *Barley Bread*, for common Uſe, called *Bannocks*, which are of ſeveral Kinds; the ſoft *Bannocks* are made into a moiſt Paſte with Water, then ſtretch'd forth into thin Circles, about the bigneſs of an ordinary *Pewter Plate*, and laid on this *Girdle* hot upon the Fire, they toaſt the one Side ſufficiently, then turn the other Side and toaſt it; the *Girdle* will hold five, ſix, or ſeven of them at once. This method is chiefly taken in moſt Places where the Farmers have many Servants, ſo that it would not be eaſy to furniſh them all with Bread, were there not ſuch an expeditious Method taken as this. The hard *Bannocks* are bak'd hard, as we ſpoke, in Cakes made pretty large and round, about one Foot Diameter, thicker than the Cakes; they will keep for ſeveral Days. Sometimes they uſe to bake them ſtill thicker, putting them on a *Gridiron*, called uſually a *Brander*, and toaſting each Side ſucceſſively, for which they are called *Brander Bannocks*. They ſometimes add Barm to them, or Butter, the one raiſes them to a good thickneſs, making them ſoft and ſpungy; the other makes them eat very friable. They add alſo Barm to the ſoft *Bannocks*, which is a great Advantage to them in the eating.

Culture of Oats.

For the better Underſtanding of the Manner of manuring and cultivating of *Oats*, by which it may not only be very much improv'd, as to itſelf, but be of great Uſe towards the Improvement of ſeveral or moſt Grains and Trees; it is fit I give an Account of their Management of it in *Scotland*, where it is made uſe of to the beſt Advantage.

Though there be a great deal of fertile Lands in *Scotland*, eſpecially on the *South* Side of the River called the *Forth*: Thoſe, called *Carſes*,

as

as that of *Gourey*, *Cambuſkenneth* and *Stirling*; alſo thoſe called *Straiths* in the *North*, and *Dales* in the *South* and *Weſt* Parts, which are pleaſant Valleys between long *Ridges* of *Hills*, with agreeable Chriſtal Rivers, abounding with Fiſhes in the Middle, and beſet with fertile Lands on each Side, which in fruitful Years produce vaſt Quantities of *Corn*; yet they are not ſufficient for the Maintenance of ſo prolifick a People; and therefore they are obliged to be at a great deal of Pains, and uſe great Induſtry in improving of theſe Arable Lands, while the Sides of Hills ſerve for Paſture to their Sheep and Beaſts. Therefore all theſe Valleys are continually employ'd with Tillage and Sowing, and they are always endeavouring to make what Improvements they can, in the bringing in of the Higher Grounds and Hill Sides.

The Method uſually taken is thus: They do not divide their Lands, as they do in the more fertile Places of *England*, into Acres and Pearches; but they conſider what it will take to be plow'd by eight Oxen, and two, or four Horſes; and this they call a *Room* of *Land*, he that *Farms* it is called the *Huſbandman*, and according to his Stock, to furniſh himſelf with Beaſts, Sheep, and Servants to take Care of them, and Corn to ſow the Ground, he farms, one, two, three or four of theſe Rooms.

The *Huſbandmen*, or *Farmers*, have Houſes built for them by their Landlord, near to each other, which little Village is called the *Huſband Town*; and becauſe it requires many Hands and Mouths to manage ſo large a ſpot of Ground, the *Huſbandmen* have the Priviledge of letting out, to *Sub-tenants*, ſuch a Spot of Ground as is thought ſufficient Maintenance to their Servants, who help them in labouring and manuring of the Ground. They build Cottages, or ſmall Houſes, at a Diſtance from the *Huſband Town*, which they call *Cot Towns*, to each of which is parcelled out one, two, three, or four Acres, as is agreed upon, and given the Seed to ſow it, the Product of which becomes their Maintenance. Thus it is that they render theſe Lands ſo very fertile as they are; ſometimes they overdo it, ſo that though they be ſo induſtrious as to manure it from Year to Year, according to their Method; would they ſometimes lay out their Infield Lands to Graſs, and not be plowing of it continually up, but rather reſt it, as they call it, for a Year, two or three, and then plow it up again, it would turn to a better Account, with leſs Labour, than uſually it does; which ſome of the more conſiderate have experienc'd, to a good Advantage.

What is called *Infield Land*, lies neareſt to the *Huſband Town*, for the Conveniency of laying out the Manure Muck, or Dung, for which they uſe ſeveral Methods.

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All the Dung, and Litter from the Straw, Hay, and other Provender, furniſhed to their Horſes and labouring Oxen, is gathered together into one Dunghill, or Midden, which they drive out in the Seaſon and ſpread it on the Land, the *Wheat*, or *Barley*, for a Foundation, or Bottom to this Midden; after the Time of plowing, they bring from the adjacent Heath, or Common, ſeveral Loads of the Surface, dug into thick ſquare Pieces, called Fail, and lay the Dung gathered throughout the Year, on the Top of it. If they are furniſhed with ſo much Graſs, as will maintain their *Plow Oxen*, and Cows at home, they build a Fold, with a Wall, of ſuch barren Earth, of five or ſix Foot high, they lay the Bottom of it with thin digg'd Turf, which they call Divolts, and bringing home their Cattle into this Fold every Night, the Earth and their Dung rotting, and being mix'd together, makes excellent Manure, or Muck (as they call it.) Another Method is to caſt, or dig up theſe Divots, and building of them up into a large Heap, ſet Fire to it, and burn it to Aſhes; this they ſtrew along on the Land, or mix it with other Dung; this done, they proceed to labour the Infield Land as follows.

Thoſe Lands which will not produce Wheat, are only ſown with Barley, Oats, and Peaſe, alternately, or every other Year: No ſooner are the Oats taken from the Ground, than they *Rib* the Land (as they call it) that is, they make thin Furrows, according to the Depth of the Furrow, they turn them up at a proportional Diſtance, and accordingly make the digg'd up Furrow cover that which was not *Till'd*, or *Plow'd* up; thus it lies all Winter. Towards the Spring they *Till*, or *Plow*, that which was laſt Year *Barley*, with a cloſe *Furrow*, that is, each *Furrow* lies as near to the other as poſſible. In the beginning of *March* they ſow the Infield Oats; this is no ſooner done than they *Stir* (as they call it) the Ground for the Barley; that is, they give it a ſuperficial *cloſe Furrow*, turning up that again which was *Rib'd* in the *Autumn*; upon which they drive out the Muck, lay it in Heaps at certain Diſtances, and ſpread it forth; they plow it a third Time, and then ſow the Seed; but in moſt Places they give it no third Furrow, but drive the Muck on the *Rib'd Land*, ſtir it, or plow it a ſecond Time, and immediately *ſow* and *harrow* the Ground.

Improvement of Barren Ground.

The ſecond and third Part of this *Room* of *Land* are the *Outfield* and *Common*. The *Outfield Land* is that, which being at a good Diſtance from the *Huſband*, or *Farm Town*, cannot be ſupply'd with any of the

Manure

Manure from Home. Therefore they take ſeveral other Methods to render it more Fertile.

They *ſow* it with the *Sciochs* above mentioned, for three ſucceſſive Years, after which they reſt it, and let it lie *Lee* for other three Years; the firſt of which, they bring the whole Sheep in Town to feed on it, as on a Common. Then every one fall a *Taithing* (as they call it) of his own proportional Share, *i. e.* ſo much *Outfield Land* is allowed to ſo much of *Infield*. Suppoſe a Spot of *Outfield Land*, lying on the Side of a riſing Ground, or Hill, of ſuch an Aſcent as a Plow can manage, conſiſting of ſeveral Ridges about fifteen Foot broad, and a proportional Length, provide twelve *Flakes*, or what they call *Trea's* in *Holland* in *Lincolnſhire*, with which they ſurround the Stacks of *Hay*, or like the *Styles* by which they enter and paſs out from the Paſtures, being either made of two upright *Poles*, of about four or five Foot high, to which are faſtned three, four, or more, *Horizontal Poles*, five Foot long, three of theſe being placed at each End, acroſs the Ridge, and three along each Side, or Furrow, betwixt the Ridges, and the other three acroſs the other Part of the Ridge; ſo that there being three and three oppoſite to each other, they make up a *Quadrangulum æquilaterum*, a *moveable Fold* of fifteen Foot ſquare. They drive in fifty or ſixty Sheep into this Fold at Night, and turn them out in the Morning, when the whole Ground will be wholly laid, or covered over with their Dung. Theſe *Flakes*, or *Trea's*, are each of them ſupported and faſtned by a *Pole*, forked at the one end, to which the *Flake* leans, and fix'd into the Ground by a Pin at the other, to keep it immoveable. About four in the Afternoon, the *Shepherd* removes his Fold to the next adjacent Spot; and thus he continues all the Summer, until the whole ſpot of Ground is *taith'd*. I do not determine the particular Dimentions of theſe moveable *Folds*, for ſome will be no larger than an ordinary *Pond Fold*, and others much larger, according to the Number of the Sheep to be kept in it.

That ſame *Autumn*, or perhaps next Spring, they fallow the *taith'd* Ground, by turning up thin Furrows with a Plow, and laying the Furrow turn'd up, upon the Space betwixt the two Furrows; and thus they ſuffer it to reſt another, after which, they till and ſow it the third Seaſon. The next Method of manuring *Outfield Land* is by fix'd Folds, thus, they mark out a large Field, and run ſo many Furrows with a Plow as they deſign to build *Folds*, dividing the Ground into oblong, or equilateral Squares, as they think proper; they dig up the Earth into ſeveral thick ſquare Pieces, called Fail, into ſo many Rows, three or four Foot on each Side of theſe *Furrows*, and build a *Wall* therewith, about four or five Foot high; theſe Folds have a Communication

with each other, and into them they drive Oxen, Cows, Sheep, which (feeding on the neighbouring Lee Grounds) are brought hither about an Hour in the Heat of the Day; they are alſo turn'd into theſe Folds all Night, and let out in the Morning; thus they do from Fold to Fold, until all the Ground be dung'd, or *taith'd.* They uſually let them remain thus for two or three Years, after which, they take down the Walls, lay the Fail into that ſame Order they were taken up, and levelling all by Tillage, they have an excellent Crop the third or fourth Year: They do not *Fallow* it, as in the former Caſe, but plow and ſow it immediately after taking down the Folds. And here it is obſervable, that notwithſtanding the volatile Salt in the Dung of theſe Animals, the Nitro aerious Particles, which, paſſing through, is received into the Pores of the ſpungy Earth, thus dry'd and expos'd in theſe Walls, contributes much more towards the Fertility of the firſt and ſecond year's Crop, as is very evident, by the Corn being much more Luxuriant in thoſe Places where the Mud Walls have been built, than any where elſe; inſomuch, that in a cold wet Summer, the Stalks are ready to fall down and rot before the Grain is Ripe; ſo that in ſuch Places of the Ridge, both acroſs and lengthways, as the Walls have been, the Corn is to be ſown very thin; and if ſuch Precautions are obſerved, ſeveral Stalks will ariſe from one Root, and the Crop will be more plentiful than otherways.

Agreeable to this is the Method us'd by others, of digging and building of *Earthen Walls*, at about ſix or eight Foot diſtance, lengthways, throughout the Ridge; the whole Surface of the Earth, about one Foot deep, is employ'd in building of theſe Walls; and after they have thus remain'd two or three Years, the Fails are plac'd in their former Order, the Ground levell'd, *till'd*, or *plow'd* and *ſown*, and produce a very plentiful Crop. This way is preferable to the *dunging*, or *fatning* of the Ground by *Cattle*; but much more laborious; for they build at leaſt three or four of theſe Walls for one of the other. It's upon this Account, that however the Houſes of theſe *Huſbandmen* is built with Stone and Mortar, or Lime; they chuſe to build, or at leaſt to cover their *Out* or *Office Houſes* with Earth, digg'd into very thin Turf, carefully dry'd, which they call *Divots*, this they either lay alone, or upon *Thatch*, made of Wheat and Rye Straw, which, upon Occaſion, they take down and lay upon the Ground for Manure, after a few Years.

The third Method is by *Burning*, which is uſually practis'd in cold *Heathy Black Ground*; they dig thin Turf, dry it moderately, lay it up in ſeveral ſmall Heaps, or ſometimes into one common large one, burn and reduce it to *Aſhes*, which they ſpread over the Surface of all the Ground,

Ground, whence the burnt Turf was digg'd. This blackiſh Earth, tho' of itſelf not very Fertile, being *Sulphurous*, and mix'd with the *Roots* of the *Heath*; when Burnt, its Aſhes partaking of a good Quantity of fix'd Salt, improves the Ground very much; eſpecially if the Ground abounds with the *Female Fern*, called uſually *Brakes*; or if, being brought from the neighbouring Woods, and ſhady Places where it much abounds. They are alſo very fit for fertillizing of Ground, and otherwiſe uſeful for *whiting*, or *bleaching* of *Linnen*; it's endow'd with a very penetrating Salt, with which they make a *Lee*, or *Lixive*; they let the Cloth ſteep, and ſometimes boil it among the Lee. Theſe Aſhes are much eſteem'd in *Perthſhire*, where they make the greateſt Quantity of the white Linnen Cloth for the Market.

After the Ground has been thus *ſtrew'd*, or *cover'd* over with theſe Aſhes, they fallow it for one Seaſon, till and ſow it the next, and it will continue to yield a tollerable good Crop of Outfield Oats for three ſucceſſive Years; and if they ſhall *taith*, or build it into Folds for three Years following, in Time, it may become tollerably well manur'd Ground. In *Fife*, and *Lothian*, where they have plenty of *Coal Pits*, and *Lime Quarries*, they burn abundance of *Lime* upon theſe cold Grounds, lay it in Heaps and ſpread it forth, then *fallow* and *till* it. This is a good Method to render theſe cold mooriſh Grounds Fertile. I could alſo mention the laying on of Marle, of which there is a white and blue Kind; and the ſpreading forth of the Droſs, which remains in the Bottoms of Pits, in theſe Places, where their Fewel chiefly conſiſts of Pets, which are ſmall ſquare Portions of a black fat Sulphureous rotten Earth, digg'd out of Pits, four or five Foot deep, of a proportional Bigneſs; the ſmall Earth is taken out, and laid either in the Dunghills or Middens, or immediately carry'd to the adjacent Land, which is of a more ſandy and clay Soil. But of this, with what may remain to be ſaid on the Improvement of Lands more, when I treat of *Hordeum Barley*, ſuch as that of bringing or ſowing the Ground with Sea Salt, and of Sea Ware, *&c.*

The laſt Method I ſhall mention, is of Watering. This uſually happens on riſing Grounds, and Hill Sides, where pure freſh *Chriſtal Streams* of *Water* guſh out from *South* aſpect; one, two, or more of theſe Fountains, form ſo many *Streams*, which, running down the Hill, are carefully damm'd up, and gathered together in ſeveral Places; whence they draw Furrows, running obliquely to and fro, and ſometimes croſs ways, frequently like ſo many Lozenges of Glaſs, or Rhombs; they lay the Earth on the lower Side of the Furrow, through which the Water gradually ſinks, and is diſpers'd over all the Surface of the Ridges, below theſe Streams; and thus they continue to con-

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vey theſe ſmall Currents from Place to Place, until all the Piece of Land, to be thus improv'd, is ſufficiently water'd. This Method is leſs laborious, and more beneficial than any of the reſt; but it's only fit for Declivities, and not for Levels, whether Nitrous Salts are brought from the Boſom of the Earth, or that this Moiſture dilutes, and diſengages the Salts from the hard ſtiff Texture of this rough Earth, and thereby diſpoſes it more for Vegetation, or perhaps both; the Ground, by this Means, is rendred much more Fertile, than by any other Method. Care is taken, that this Watering do not exceed in Proportion; for then, inſtead of a moderate Moiſtning, the too great ruſhing of the Waters may looſe the Roots of the Graſs, carry off the fertile Surface, and only leave a barren Sand. This is uſually done the ſecond and third Year after the Land is ſuffered to be *Lee*; for the firſt Year the Land is too looſe to ſuffer ſuch an Experiment; therefore they order it ſo as the Current may be diverted, and let down the ſeveral hollow Furrows betwixt the Ridges, without being diſpers'd over all the Ridges, as they find convenient.

It's a common Proverb in *Scotland*,

Every Land has its Taith,
Every Country has its Laugh.

The Meaning is, every Place has its own Method of manuring, improving, and cultivating of the Ground, according to its Climate, Soil, Fertility or Barrenneſs; and every Country has its peculiar emphatical Phraſes, and proverbial Speeches; as the ſame Methods are not practis'd in all Places, it's probable, what I have here propos'd, as done in one Place, may come to be practis'd to the ſame good Advantage in another.

Some other Improvements may be made in Barren Grounds, by ſowing of Oats.

As I began the firſt Decad of the Letter A in the Alphabet, with *Abies*, the Firr Tree, in which I gave ſome Directions for Improving of Barren Grounds, by the Planting of it; ſo I conclude the ſame Letter with *Avena*, in this third Decad, by which I ſhall ſhew, how fit the ſowing of Oats may be for ſuch a Deſign.

I ſhall begin with the Manner of encloſing the Ground. The common Method is by a Ditch, three or four Foot broad, dug ſloaping on each Side, about two or three Foot deep, and narrower at the Bottom than Top: But this has the Inconveniency, that it will neither

neither keep out Sheep nor Hares, which ruin and deſtroy all the young Planting in the Winter, and the Ground falling down, makes it require continual Reparation. The better Way is to make the Ditch four or five Foot broad, place large Pebles, or white Stones, which are frequent in thoſe mooriſh Grounds, to face the Ditch on the Inſide, and Fail to face it on the Outſide, as they do Earthen Ramparts; and at about two Foot diſtance from the Ditch, towards the Encloſure, build an Earthen Wall, about two Foot thick, and four Foot high, covering it well with theſe Fails, whoſe green Side is uppermoſt. This will laſt ſeveral Years without Reparation; and if the Sheep, or Hares, ſtill leap it, faſten Branches of Haw-Thorn Briers, *&c.* upon the Top of the Wall, which will hinder them from getting in. In Places where theſe White Stones, or large Pebles, are very numerous, a Stone Wall of a convenient Height may be built of them; but it muſt be covered with Earth about one Foot thick; for if the Rain gets in, being Round, and of a ſmooth Surface, they readily tumble down in the Winter; and Stones from a Quarry are Preferable, if there is any ſuch at Hand, becauſe they are flat, and will not ſo readily fall down; though there be neither Mortar nor Lime made uſe of, they ſhould ſtill be covered with Earth. I have ſeen, eſpecially towards *Northampton*, the *Sedum minus vermiculare*, the leſſer *Houſeleek*, or larger *Stone Crop*, planted over all the Top of the Earthen Walls, which are of great Uſe, to keep the Earth, when dry'd, from mouldring down. The Walls built of Stone, with Mortar, or Lime, or of Brick, will laſt for Ages; but that, perhaps, may be thought too chargeable for Field Encloſures.

A very good Method for theſe Encloſures is, dig a double *Ditch*, four Foot broad, on the *Outſide*, and three Foot deep, and about three Foot broad on the *Inſide*; throw up the Earth on the Space betwixt them, which may be ſix Foot broad, and four Foot high above the Ditch. Plant *Aſhes*, *Birch*, or *Firr*, at convenient Diſtances, or ſow the Seeds in Rows, one Foot broad; in the Middle ſow the Seeds of Furzes, or Whins, on each Side, the better Sort is the Upright, called *Iriſh Whin*; this will ariſe in three Years, ſtreight, three or four Foot high, and then it will be fit to cut down; it's excellent for Fuel, to dry Malt, brew Ale, and bake Bread in an Oven, is of conſtant Uſe where Firing is dear and ſcarce, neither will it ever fail, or require Reparation, for both Sides of the Bank will acquire a graſſy Surface, as Rampart-Walls; and the Whins, continually growing a Top, will faſten the Surface, and no ſooner are they cut down than they riſe afreſh.

Thus much for the Method of Fencing, or Encloſing. The Ground thus taken in, may be different; you are to burn the Surface of the encloſed Ground, as above, and fallow it the ſame Year: Next Spring it may be till'd up, and ſown with theſe Scioch Oats, very thin and if in a good Seaſon, it will yield ſo plentiful a Crop as may near defray the Charges of Encloſing. Rib up the Ground immediately after the Corn is removed, and this will rot the Straw and Stubble all the Winter. Till it for ſowing in the Spring, with a good deep Furrow; take two Pound of the Seeds of the ſeveral Trees you deſign ſhould grow in this Encloſure, *viz* either all *Firr*, all *Birch*, *Oak*, viz *Acorns*, *Aſh*, or *Alder*, if the Ground is Moiſt; or you may take ſeveral of them together, and mix them with as many Oats as will ſow the Ground. I ſuppoſe, one Pound of the Seeds may go to an Acre, which being mix'd with the ordinary Proportion of the Oats for an Acre, will be thereby ſpread the farther, and have the greater Space to grow; Harrow the Ground thus ſown very well, and if it is a light ſandy Ground, ſmooth it all over, as they uſe with the Top of a Footſtoll to do, when they ſow Flax. Thus the young Trees, and Oats, will grow up; the Oats will keep the young Plants of Trees warm, cheriſh, and ſuffer no Weeds to ariſe and choak them, You are not to cut down the Oats any more, but let them ſhake; the Straw will keep the Trees warm in the Winter, and the ſhaken Seeds will ariſe inſtead of Graſs, or Weeds, in the Spring. Thus both may continue to grow together, from Year to Year, until the Trees have grown to ſuch a Bigneſs as to over-ſhade the Oats, which, then, for want of Air will decay, and a tender Graſs will ariſe in their ſtead. If the Trees ariſe too thick, or grow at unequal Diſtances, they may be thin'd, and tranſplanted from where they are too thick, to where they are too thin.

This Method is preferable to any Nurſery, for they here grow undiſturb'd, in a natural Soil; and tho' the Charge of Encloſing be at firſt conſiderable, yet there is no more, but only the keeping up of theſe Encloſures; and the Improvements to be reap'd thereafter will be very great, eſpecially in ſuch Barren Places, where they are deſtitute both of Fire, and Wood for Timber; for in a few Years time, they may be ſupply'd with both; for the Broom, Whins and Branches of the Trees, may ſerve for the one, and the Trees themſelves, when at a competent Bigneſs, will be very uſeful for the other.

Which leads me to an Improvement, for that Purpoſe, may be made by Broom. Encloſe, with an ordinary Ditch, about four Acres ſquare of this Barren Mooriſh Ground, Burn, Fallow, Till the Ground as above, ſow two Parts of Oats, and a third of Broom Seed, let both grow up together; Reap the Oats the firſt Year, make another Encloſure

next

next to it, of the ſame Dimentions, next Year, and do with it in the ſame Manner; make a third Encloſure the third Year. On the fourth Year you may dig up the Broom from the firſt Encloſure, which will be then very thick, about four or five Foot high, and will make up ſeveral Loads, which, in ſome Places, may afford a good Price for Fire, and for Thatching of Houſes, ſome chuſing to pay ſo much a Rood for it, dig and carry it off themſelves, others by the Load; the fifth Year dig up the Broom from the ſecond Encloſure; and the third Encloſure may be digg'd up on the ſixth Year. The Year after the Broom is digg'd up from every Encloſure, they ſow it with Oats, and continue to ſow and reap it for three ſucceſſive Years; after which, they let the three Encloſures lie Lee, each in his Turn ſucceſſively, and then the Broom ariſes, and affords as good a Price, after three Years growing, as at firſt; and if Pains is taken to make the Encloſure ſo good, as neither Sheep nor Hares can get in, the laſt of which ſtrive earneſtly after ſuch Shelters, this Method may turn to a very good Account; and if young Firr's, Birch, Aſhes, Alders, Sycamores, Sallows, if the Ground is Moiſt, are planted for a Fence within the Walls, the Uſe and Advantage of them will ſtill be the greater.

There are ſo many mountainous, heathy, and barren Places in *England*, beſide what are in its Northern Parts, *Scotland*, *Wales*, and *Cornwal*, as is obſerved, where, perhaps ſuch Methods of Improvement are wanting, and hitherto not practiſed, that I thought it would be uſeful to the Publick to communicate theſe eſpecially, ſince they have not been taken Notice of by any of thoſe curious Gardiners, and Nurſery Men, who make it their Buſineſs to improve Planting and Gardening in more fertile Places.

One may, by this Means, come to encompaſs a large Parcel of Ground at a very gradual Charge, *i. e*, by encloſing, ſowing and improving four or ſix Acres from Year to Year, joining the one Encloſure to the other: This, after ſome Years, may render a large Quantity of Ground of great Value, which was formerly good for nothing.

XXV. *Arundo.*

Arundo vulgaris ſive φραγμίτης *Dioſcoridis* C. B. P. 17. *Arundo vulgaris paluſtris* J. B. 2. 18. 485. Raii Hiſt. 1275. Moriſ. Hiſt. 3. 218. Tournef. 526. Common Reed.

XXVI. *Milium.*

Milium ſemine luteo vel albo C. B. P. 26. *Milium* J. B. 2. 18. 446. Raii Hiſt. 1251. Moriſ. Hiſt. 196. Tournef. 514. Millet.

XXVII.

XXVII. *Panicum.*

Panicum Germanicum C. B. P. 27. Tournef. 515. Raii Hiſt. 1247. Moriſ. Hiſt. 188. *vulgare* I. B. 2. 18. 440. Panick.

The *TRIBE.*

I have joined theſe three culmiferous Plants together, next to *Avena*, that, with them, I may conclude this Decad, and the Letter A.

The *Deſcription.*

Common Reed has a very knotty jointed Root, by which it runs and ſpreads very much, ſending forth large hollow jointed Stalks, about a Man's Height, with one broad, graſſy, tapering, ſomewhat pointed Leaf, from each Joint, and carrying on the Top, a large groſs branched *Juba*, *Coma*, or buſhy Spike, of a browniſh red Colour, conſiſting of ſeveral ſmall Pedicles, with ſmall Chaff encloſing the Flower, which becomes a ſmall pappous or downy Seed.

The *Millet* is an annual Plant, with graſs Leaves, like the former. The knotted, or jointed hollow Stalk, ariſes about two or three Foot high, ſupporting a looſe branched much ſpread forth *Juba*; the ſmall Flowers have only one hollow ſmall Leaf for an Empalement, or Chaff, ſurrounding ſmall, white, hard, ſhining Grains for Seeds.

Panick is a Plant which reſembles Wheat, being as tall, with broader Leaves; its Spike is compos'd of ſeveral other ſmall Spikes, as it were branched, containing a great Number of Seeds, ſmaller than thoſe of *Millet*.

The *Common Reed* is often ſeen among Corn, in moiſt Grounds, and grows very plentifully in Ditches and Marſhes, eſpecially in *Holland* in *Lincolnſhire*.

Millet is ſown in the Gardens, as is the Panick, but rarely.

Virtues and *Uſes.*

Common Reed is of little or no Uſe in Phyſick, but very uſeful for thatching and covering of Houſes, where it will laſt as long as either Tiles or Slate; neither is *Millet*, nor *Panick*, of much Uſe in Phyſick; the former is made uſe of for Food, in ſome Countries; the latter is ſaid to be Aſtringent; but rarely to be had in *England*.

Auricula muris, vide *Piloſella*.

FINIS.

PHARMACO-BOTANOLOGIA:

OR,

An Alphabetical and Classical

DISSERTATION

ON ALL THE

British Indigenous and Garden Plants

OF THE

New *London* DISPENSATORY.

In Which

Their GENERA, SPECIES, *Characteristick and Distinctive* NOTES are Methodically described; the *Botanical* TERMS of ART explain'd; their *Virtues, Uses,* and *Shop-Preparations* declared.

With many CURIOUS and USEFUL REMARKS, from proper Observation.

DECAD IV.

By *PATRICK BLAIR*, M. D. of *Boston* in *Lincolnshire*, and Fellow of the ROYAL SOCIETY.

Miseri mortales qui Naturam ejusque Artificium abdunt, ubique diligentia Patens, & Amplissimos solis Radios Nubecula obfuscant. Barth. Epist. ad Lyserum.

LONDON:

Printed for G. STRAHAN, at the *Golden Ball*, over-against the *Royal Exchange* in *Cornhill*; W. and J. INNYS, at the West End of St. *Paul*'s Churchyard; and W. MEARS, at the *Lamb* without *Temple-Bar*. MDCCXXVII.

The PLANTS of the Fourth DECAD.

THE PREFACE TO THE Fourth DECAD.

THE *Reaſon why this* Fourth Decad *has not been publiſh'd before this Time is, that I was lately diverted by making large Improvements of what I had formerly advanc'd on the* Generation *of* Plants *and* Animals, *and in anſwering of ſome Objections propos'd againſt it.*

This comes abroad at length, to ſhew, that though I have made ſuch a Delay, yet I have not abandon'd the Undertaking, and the Reader may be aſſured, the reſt *ſhall follow with all ſuitable Diligence. As theſe firſt four* Decads *contain an Explanation of the moſt material* Claſſes, *and* Technical Words; *and as ſeveral* Plants *from other* Letters, *have been brought hither, and join'd with their* Congeners: *So though the follow-*

ing (notwithſtanding of the ſmall Progreſs made in the Alphabet) will not be extended to ſuch a Number as may be ſuppoſed; yet uſeful and uncommon Obſervations ſhall not be wanting.

The ingenious Mr. Martyn, *having of late enterpriz'd a moſt noble Deſign of teaching* Botany, Viva Voce; *to demonſtrate the* Characters *of the* Specimens *themſelves; making Uſe of the* Diſpenſatory Plants *for his Examples, according to Mr.* Ray's Method, *and abridging the Characters in a few Tables, entituled,* Tabulæ Synopticæ Plantarum Officinalium. *A fit Undertaking for ſuch a* Genius, *and moſt conducing towards the Inſtruction of thoſe whoſe Inclination leads them to make farther Improvements in the Knowledge of* Botany, Materia Medica, *and* Pharmacy. *The Spirits of many, who have hitherto been addicted to thoſe Studies, and have remained dull and unactive for want of a Teacher, may now be excited and ſtirr'd up by the lively Repreſentation and Demonſtration of the* Plants *themſelves.*

My worthy Friend has thought fit to take Notice, that I have made two different Diſtributions of the Diſpenſatory Plants, *the one purely* Medicinal, *the other* Botanical *and* Medicinal, *or* Alphabetical *and* Claſſical. *Leſt any ſhould ſuppoſe he has thereby accus'd me of an Inconſiſtency, I think it proper to give my Reaſons for ſo doing in this Place, and to ſhew how I take his Meaning of the following Paragraph.*

Cæterum Diſtributionem illam ex viribus, cujuſmodi Tabulam ab Amico noſtro *Patricio Blair* compoſitam habemus, ſuos fateor habere uſus; illam vero ad ipſas plantas diſcendas eſſe utilem ne ipſe quidem *eruditus Auctor* in animum induxit; qui, in *Pharmaco-Botanologia* ſua, aliam plane inſiſtit viam. Quin ipſæ plantarum Vires a Generum ſimilitudine ſæpiſſime inveniuntur. *Quæ enim generis ſocie-*

tate

tate junguntur, plerumque, & similes possident facultates. Cesalp. præf. ad lib. de Plantis.

Being ever intent to teach Botany *and* Materia Medica *in the most succinct and compendious Manner, and desirous to contribute what in me lay for the Instruction of the Young Beginners, I composed the* Table *of the* Dispensatory Plants, distributed according to their Virtues, *for the Benefit of those who only wanted to be instructed in* Materia Medica, *and the* Therapeutical *or* practical *Part of* Physick. *To which this* Table *may serve (as it were) for a perpetual* Almanack; *and since the ancient Method of distributing the* Simples *according to their* Qualities and Degrees, *as* Calidum Siccum, &c. in 1mo, 2do Gradu, &c. *is now exploded, and the* Rationale *upon the Operation of* Medicines *is plac'd upon another* Basis *by the Moderns; since no certain Rule has been establish'd to succeed, I thought fit to make a new* Distribution *according to their* Particles *and* Pores, *as* gross *and* tenuious, &c. *or according to the Effect they are supposed to have on the several Parts of the* Body, *as* Cephalick, Stomachick, &c. *as is to be seen and explain'd,* Transact. N° 364. *Nor is the Harmony betwixt their* Characters *and* Virtues *quite neglected, for the* Sem. 4 frigid. maj. *are all of the* Cucurbitaceæ; *the* Calida minora *of the* Umbelliferæ; *many of the* Cephalica *among the* Galeatæ & Labiatæ, &c. *The* Absinthia *and* Abrotana *are* Stomachicks *and* Vermifuges, &c.

Being also desirous that the knowing in Materia Medica, *should thoroughly understand the* Vegetable, *which is its chief and principal Part, I could do it to no better Advantage than fully to make good the great Correspondence betwixt their* Notes *and* Virtues, *so far as it could be brought to bear. This is what I have had in my Mind long before I had any Hints of it from my late worthy Correspondent,* Mr. Petiver, *in* Transact. N° 255, *or consider'd the Celebrated* Herman's *Proposition,* Quæcunque & flore & semine conveniunt easdem possident virtutes; *and again,*

Omnia

Omniia semina striata sunt carminativa; *and I am glad to find by my worthy Friend, that* Cæsalpinus *was of the same Mind* 150 *Years ago.*

It was that Consideration that induced me first to project the present PHARMACO-BOTANOLOGIA, *the Plan of which is to be seen,* Miscellan. Observ. N° IV. VII. IX. *where also the several Improvements made by* Mr. Petiver *and me, are to be observ'd on that Account.*

I was sensible, a Distribution purely Alphabetical, would never answer the Design, as my Learned Friend has well observ'd, that it is, ad docendos Tyrones minus apta. *For by that means instead of* Separata conjungere, *there must be* Conjungenda separare v. g. *It's better to unite* Pinus *to* Abies, *than to treat of* Abies *at* A, *and after a great Interval, to treat of* Pinus *at* P. *Many such Examples are to be seen in this present Undertaking; nor would a Method purely* Classical *do, where the same Regard is to be had to the* Virtues *as to the Notes of Plants, as may be seen by* Mr. Dale's Pharmacologia *after* Mr. Ray's; *and as I once essay'd to treat of the* Dispensatory Plants *after* Tournefort's Method: *So that I could contrive no better Means to answer my Purpose, than this mix'd Distribution,* partly Alphabetical, *partly* Classical, *and both* Botanical *and* Medicinal. *For in the former* Medicinal *Distribution I was confin'd to ascribe such* Virtues *to them as were* longo usu recepta; *in this I have the Opportunity of uniting so many* Plants *together as correspond in their Notes, and at the same Time agree in their Virtues. I have also by this* Method *the Advantage of avoiding the Censure of Partiality, which, how equally soever I could behave, I am sensible the Bigotry of some, and their being too zealously affected to one more than another, and the Rashness of others more inconsiderate, by their not being acquainted with any more than one Method, would be ready to cast upon me.*

By

By this Means I am at the greateſt Freedom; not being obliged to recommend one Method *as more excellent, or decry the other as not ſo good; but to join them all together, and ſo to reconcile them, as to ſhew their Excellency in general, and the great Advantages that attend the teaching by* Method, *demonſtrating thereby that there is no ſuch Diſcrepancy among them as at firſt View may appear, or the more ignorant may imagine; but that every one is able to lead the* Student *into a more intimate Knowledge of* Plants *than they could well acquire without* Method: *The great Difference chiefly lying in the different Manner of Expreſſion, and in the Terms of Art which I have taken Care to explain when they firſt come in my Way.*

By what is ſaid, it's plain, I neither have been inconſiſtent with myſelf in theſe ſo far different Diſtributions, nor do's my Friend *ſeem to blame me for being ſo. I join with him, that both a purely* Alphabetical, *and purely* Medicinal Method, *are,* ad Tyrones Botanicos docendos minus aptæ, *tho' the latter* ſuos habet uſus; *and I hope, he'll allow that a Diſtribution purely* Methodical, *was no wiſe ſuitable to my Deſign.*

I acknowledge he was neceſſarily obliged to confine himſelf to one particular Method, *nor was there any ſo fit for his Purpoſe as that of* Mr. Ray: *For as* Tournefort's Method *is ſtill taught in* France, *and* Herman's (*built upon* Dr. Morriſon's *Foundation and improv'd by* Boerhave) *is ſtill uſed at* Leyden. *So* Mr. Ray's *is the only one proper for* Mr. Martyn, *it being univerſally adher'd to in* England; *beſides, it is no ſmall Advantage that the* Indigenous Britiſh Plants, *with their* Locus Natalis, *are moſt regularly diſpoſed, and plainly inſerted according to the ſame Method in that valuable* Treatiſe *of* Mr. Ray's Synop. Stirp. Brit. *of late ſo much improv'd and augmented.*

To conclude, it's my humble Opinion, nothing can contribute more to lay a ſolid Foundation for the Knowledge of Botany and Materia Medica *than theſe our joint Endeavours; for as he lays*

the Foundation for Botany *by one particular Method, ſo all the reſt are to be known by the Uſe of this preſent Undertaking; and as he has pitch'd upon the* Diſpenſatory Plants *for his Examples, ſo my* Medicinal Table, *and the Account I herein give of their* Virtues *and* Uſes, *lays a good Foundation for the Knowledge of the* Vegetable, *which is the chief Part of* Materia Medica: *And I may further add, that by theſe Specimens of* Simples *and their* Virtues, *we are able to demonſtrate, that* Britain *alone, can furniſh a ſufficient Number of Drugs of its own Product, to compound fit Medicines for the Cure of the* Diſeaſes *incident to the Inhabitants of this* Iſland, *as I could prove more largely, if it were requiſite.*

This Decad contains ſeveral Things notatu digna, *as* 1. The Claſſes: Bardana major *begins the Letter B, with the* Capitatæ. Minor *is either* claſs'd *with* the Apetali, *or* flores floſculoſi. *The* Behen *of the* Antients *being unknown,* Lychnis Sylv. *the firſt of the* Caryophyleous Tribe, *is ſubſtituted for the* Album, *and* Limonium, *another of* Tournefort's Caryophylleous Genera *for the* Rubrum. Bellis major *and* minor, Bupthalmum *and* Calendula *continue the* Corymbiferæ Radiatæ: Beta *and* Biſtorta *are of the* Apetalæ. Betonica aquat. *and* Scrophularia *are among the* Monopetalæ anomalæ. Braſſica ſativa *and* Burſa paſtoris *are among the* Tetrapetalæ Siliquoſæ. Braſſica marina *is the only* Indigenous Officinal Convolvulus. Bruſcus, &c. *are among the* Bacciferæ non Scandentes, *and* Bryonia *of the* Scandentes. Borrago *introduces the* Gymnotetraſpermæ Aſperifoliæ, *which is continu'd in* Bugloſſum, &c. Calamintha *begins the Letter C.* Mentha, *by the* Affinity *of the* Taſte, Smell, *and* Virtues, *might have been join'd to it, but the* Flower *would not admit of the Union. When* Hedera Terreſtris *might have been ſeparated on the ſame Account, if it had not been for the* Flower. Caprifolium *is the firſt* Bacciferous Shrub, *and* concludes *this* Decad.

2. The

2. The universal and perennial Circulation of the Sap, *is hinted at in* Betula, *where 'tis observable, that instead of* stagnating *and* thickning, *like a Gum in the Winter, as a certain* Writer *has asserted, it's chiefly employ'd in the Accretion of the* Wood, *and* Bark, *as appears by the* annual *Circles of the former. That at the* Winter *and* Summer Solstice, *these being call'd the Setting Times, it's chiefly employ'd in augmenting and stretching forth of the* Root; *and when these Functions are perform'd, its Business is to push forth the* annual Surface *and* vernal Shoots, *and ripening of the* Fruit *in the* Autumn. *So that this plentiful Effusion of* Sap, *upon boring or piercing of the* Birch Tree *in the* Spring, *is because the* Sap *being diverted from augmenting of* Wood, Bark, *and* Root, *forc'd up by a daily additional Supply of Particles, which ascend from the Earth in greater Quantity by the Heat of the* Sun, *in its nearer Approach to our* Horizon, *and being confin'd in narrower Bounds before the* Annual Surface. viz. *the* Leaves, Katkins, *and* Vernal Shoots *be fully stretcht, continues to flow in such Abundance throughout the* Trunk *of the* Tree; *and, what is most remarkable, as this* Surface *is gradually augmented, so this* Efflux *of the* Sap *sensibly diminishes. Let me add, that at the drying up of the exile Membranes of the* Bark, *the Orifices of the Vessels which nourish'd them are stopp'd, and the Quantity of the Sap which flows into the* Sap-Vessels *of the* Trunk *is thereby augmented.*

The same is also observable in Caprifolium *and* Vitis, *which throw their Bark every 2d or 3d Year, by which the* Sap *of the* Trunk *is vastly augmented, as may be observ'd in the tapping or wounding of a* Vine *in the Spring, before the* Annual Surface *is fully stretcht forth.*

3. The Sexes of Plants *in* Bryonia *and* Cannabis, *when because the* Male *often happens to be at a great Distance in the* first; *also in* Lupulus, *they are more frequently propagated by the*

the Root, *than by the Seed*; *and when the* ſecond *being annual, if the* Male Plants *be too ſoon pull'd, the* Female Embryons *become abortive and barren*; *an Error ſeveral have been guilty of, who, to ſave the* Hemp *of what they call the* Femmels, (i. e. *the* Male Plants) *have pull'd them before the* Farina *from the* Flowers *was* ſhed, *and the* Female Embryons *were* impregnated: *So that they have loſt the Value of their Seed for* Oil, *and the Product of the Ground, if they chance to ſow it with that Seed next Year.*

4. The Effect of Air on Plants. *If* Lewenhock *has obſerv'd* 172090 *perſpiring* Pores *in one Surface of ſo ſmall and firm a Leaf as that of the* Box Tree, *making* 344180 *in both* Surfaces, *what an infinite Number muſt we imagine to be, in one of ſo looſe a Texture as that of a* Vine, *and how much more in that of* Tobacco; *and if the Pores be for the Tranſmiſſion of ſuperfluous Particles, which Way can we ſuppoſe any* aerial *Particles to be admitted, and where's the Neceſſity of* Tracheæ *or* Air Veſſels? *From whence I may reaſonably conclude, the good and bad Effect of the* Air *upon* Plants, *muſt depend upon the greater or leſs Preſſure of the* Atmoſphere, *the conciliating of a more* free *and* regular, *the more* moderate *or* immoderate Perſpiration *of* Particles *from the* Sap Veſſels *in* Plants, *as of the* Blood *in* Animals; *and that the* Air *can in no wiſe contribute exwards the* Nouriſhment *of the* one *more than of the* other.

Though I have treated, and reſolve to continue in treating at large on theſe three, viz. *The* Generation *and* Manner *of* Impregnation *of* Plants, *the* univerſal *and* perennial Circulation *of their* Sap, *and the Effect of Air, and Manner of* Nouriſhment *of* Plants *on other Occaſions*; *yet I thought fit to give theſe Hints, in diſcourſing on* Plants *fit for that Purpoſe in this Decad, hoping the Reader will excuſe ſo tedious and prolix a Preface.*

PHARMACO-

PHARMACO-BOTANOLOGIA:

OR, A

TREATISE

OF

DISPENSATORY PLANTS,

Alphabetically and Claſſically diſpoſed.

DECAD IV.

B.

Balſamita Mas, vide *Abrotanum Fœmina.*

I. *BARDANA MAJOR.*

LAPPA Arctium Dioſcoridis, C. B. P. 198. Tournef. Inſt. 50. *Perſonata ſive Lappa major aut Bardana,* J. B. 3. 32. 570. Raii Hiſt. 332. Synop. Stirp. Brit. 3. 197. Moriſ. Hiſt. 3. 146. *Perſonata, Lappa major, Bardana* Lob. Ic. 588. Common Burdock.

The *TRIBE* of *Bardana.*

This is the firſt of thoſe call'd by moſt Authors, *Capitatæ,* to which *Boerhave* has added *Gymnomonoſpermæ,* becauſe one Seed ſucceeds to each *Flower,* and *Tournefort,* who always regards the *Flower,* calls it *Flos*

floſculoſus. Mr. *Ray* ſays they are *flores ex floſculis fiſtularibus compoſiti.* They are ſaid to be *Capitatæ*, becauſe they have a large turgid ſcaly *Empalement*, called their *Head*, conſiſting of ſeveral ſmall pointed Leaves ſpirally plac'd like the *Scale* of a Fiſh, cloſely ſurrounding the *floſcules* until the Expanſion; which afterwards burſt forth, each being divided into five pointed Segments with a *Vagina* ſurrounding the bifid *Capillamentum.* See *Abrotanum, Decad* I.

The *Deſcription.*

This is a *biennial Plant* ariſing from the *Seed* the firſt Year, and ſpread forth into ſeveral large broad ſomewhat pointed ſoft *Leaves*, ſomewhat downy below, upon long *Foot-ſtalks* branch'd into ſeveral round creſted *Stalks* and *Branches* loaded with the *Burs* on the upper Part, conſiſting of an *Empalement*, each of whoſe *Squamæ* are endow'd with bended Hooks, by which they catch hold of or adhere to the Cloaths of the Paſſengers. The *floſcules* burſt forth purpliſh, the *bifid Capillamenta* ariſe much higher, pouring the *Farina* into the *Sheath*, which conveys it into the *Embryo ſeminis*, which afterwards becomes an angular oblong hard and ſolid *Seed* perpendicularly plac'd in a *Thalamus*, and ſurrounded with a *Pappo* or Down, when the *Seeds* are ripe, the ſecond Year, the whole *Plant* decays. The *Root* is ſimple, groſs, and *Carnous*; the firſt Year it becomes hard and Woody, when the *flowering Stem* begins to be puſh'd forth, cover'd with a *ſpongy* thick Bark, which eaſily ſeparates and is the Part us'd in *Phyſick.*

Virtues and *Uſes.*

The *Burdock* ſeldom enters any Diſpenſatory Preparations. The whole Plant is aperient; I have ſeen a Ptiſane made of the *Rad. Bardanæ*, and *Petaſit.* and given with Succeſs to thoſe ſeiz'd with *malignant Fevers* and *Small Pox.* The Seeds are alſo aperient, and either drank in Infuſions for the Gravel or Jaundice, *&c.* or given in Powder with other Lithontriptick and aperient Medicines. The freſh Leaves apply'd to the affected Joint, are ſaid to eaſe the Gout.

II. *Bardana Minor*, ſive *Xanthium.*

Xanthium, Dod. Pempt. 39. *Lappa minor, Xanthium Dioſcoridis*, C. B. 198 Tournef. Inſtit. 439. *Xanthium, ſive Lappa*, J. B. 3. 33. 572. Raii Hiſt.

Hiſt. 165. Synops. Stirp. Brit. 55. Moriſ. Hiſt. 604. Hort. Edinb. 185. Hiſt. des Plantes, 312. Leſſer Burdock.

The *TRIBE.*

Authors differ much in the claſſing of this Plant: *Bobart* places it among the *Anomala*, i. e. *incertæ ſedis*, *Ray* will have it to be *flore apetalo, ſive ſtamineo a fructu remoto*; *Tournefort* places it among the *flores floſculoſi*, *Boerhave* is indifferent which, for he ſays it has either *flores floſculoſi* or *Apetali.*

The *Deſcription.*

It is an annual *Plant* ariſing one or two Foot high, with a ſtreight rough round branched *Stalk*, and alternate Leaves upon long *Pedicles*, which from a narrow Beginning is enlarg'd towards the Middle, whence it is taper, and becomes narrower towards the Point, notcht or indented at the Edges like thoſe of *Trachelion* or *Urtica*, rough and darker or paler Green. The *Flowers* ariſe in Cluſters from the Bottom of the *Foot-ſtalks* or *Branches*, globulous, and endow'd with ſeveral long ſmall bifid *Capillaments* from ſhort almoſt imperceptible *floſcules*: Theſe having no ſucceeding Embryons, may be called *male Flowers*; below theſe from the ſame Joints appear an echinated or prickly oval Fruit, divided into two Pouches, each containing for the moſt part one ſingle compreſs'd *Seed.*

It loves a fat Soil; I have obſerv'd it frequently growing in the Bottoms of Dunghills in *Flanders:* In *England*, it has been obſerv'd by *Mr. Ray* in the Road betwixt *Portſmouth* and *London*; alſo near *Dulwich.*

Virtues and *Uſes.*

It's not much in moden Uſe. It's recommended for *Scrophulous Tumors*, *Tetters*, and purifying of the *Blood.* The clarify'd Juice may either be given with a little White Wine, or a Tea may be made of the dry'd Leaves. An Extract of it may be given to ℈j. The Leaves may be apply'd externally to the *Piles* and *Scrophulous Tumors.*

Becabunga,

Becabunga, vide *Anagallis.*

III. *Behen Album.*

Been album Offic. Ger. 550. J. B. 3. 356. *Lychnis ſylv. quæ Been alb. vulg.* C. B. P. 205. *ſylv. perennis que Been alb. vulg.* Moriſ. Hiſt. 2. 535. Raii Hiſt. 998. Tournef. 335. Boerh. Ind. 211. Spatling Poppy.

The *TRIBE.*

This Plant is claſs'd among that Genus of Plants ſaid to be *flore Caryophylleo donatæ* by *Tournefort*, whoſe Notes are, that they conſiſt of ſeveral Petals ariſing from an oblong tubulous *Calix*, the only Note by which they are diſtinguiſhed from the *flores Roſacei*, whoſe *Calix* is not tubulous. Mr. *Ray* places thoſe of this Claſs with ſeveral others, among the *pentapetalæ vaſculiferæ*, as does *Boerhave* with the *Monangioſpermæ.*

The *Deſcription.*

It's a perennial Plant with a white woody Root, emitting ſmall ſmooth, round, jointed *Stalks*, about half a Foot high. Its *Leaves* proceed from the joints by Pairs, without *Foot-ſtalks*, like the other *Lychnis*, broad at the Baſe, tapering and pointed, in ſome Species more rough, in others ſmooth. The *Flowers* on the upper Part of the *Stalk* and Branches are white, *pentapetalous* in ſome Species, or rather variations; much larger in others. The Petals are flat and narrow, as they ariſe from the *Calix*, being as it were *Foot-ſtalks* to the Heart-like expanded Part, ſurrounded by an oblong looſe tubulous tumid Empalement, divided into five pointed Segments at the Top, with ten *Stamina* in the Center, whereof 5 are longer and 5 ſhorter, with yellow *apices*, and a tripartite *Stylus*, or rather 3 white round *Styli* ariſing from the Top of the *Embryo fructus*, incurvated and mounting higher than the *Stamina.* This *Embryon* becomes an oblong conical or pointed *Capſule* or *Seed Veſſel*, opening by ſix Diviſions at the Top, and pouring out ſmall round dark-colour'd *Seeds* from the *Pouches* when ripe. It grows frequently in the Corn Fields. It's ſeldom us'd in Phyſick, and Authors are ſilent as to its Virtues.

IV. *Beken*

IV. *Behen rubrum.*

Limonium marit. C. B. P. 192. Tournef. Inſtit. 342. *maj. vulg.* Park. 1234. *Limonium* Ger. 411. Raii Hiſt. 395. Synopſ. Stirp. Brit. 99. Moriſ. Hiſt. 3. 600. *maj. multis aliis Been rub.* J. B. 2. App. 879. *Valerianæ rubræ ſimilis pro Limonio miſſa.* Dod. Pemp. 351. Sea Lavender.

The *TRIBE.*

Authors differ much in the Diſtribution of this *Plant*. *Bobart* places it among the *Anomala*. Mr. *Ray* in his Hiſtory, places it among the *Umbelliferæ*, being (I ſuppoſe) induced to it by Dr. *Moriſon*, who has a Section of thoſe he calls *Umbelliferæ Improprie dictæ*, among which is *Valeriana*, and near to it, by Mr. *Ray*'s Method, *Limonium* is always placed; but in the *Synopſ. Stirp. Brit.* it's rank'd among the *Flores ſimplices ſeminibus nudis ſolitariis*. *Tournefort* places it among the *Flores Caryophyllei*, and not unfitly makes it a Neighbour to *Statice* or *Caryophyllus maritimus*. *Boerhave* with *Ray* makes it one of the *Gymnomonoſpermæ fl. ſimplici.* A more ſtrict Examination would almoſt incline me to place it along with *Primula veris*, for Reaſons to be aſſign'd hereafter. But it's not my Deſire to bring *Method* into Confuſion, by an unneceſſary Multiplication or Alteration of the Diſtribution of *Species*, but rather to prevent any Diſorder, by reconciling the ſeveral *Methods* together.

The *Deſcription.*

It has a woody groſs running *Root*, black without and reddiſh within, divided at the upper Part into ſeveral Portions about the Bigneſs of one's little Finger, and running deep in the Ground, which being united below, form ſeveral Knots, from whence proceed ſome *ſtolones*, or new *ſhoots*, which creeping below Ground, propagate the *Species*. At the upper Part of each, the Germen or Bud is cloathed with ſeveral looſe Membranes, amidſt which break forth late in the Spring 5, 6, or 7 Leaves in a Circle, each ſupported by long narrow *Foot-ſtalks*, ſmooth, ſtiff, dark green, and ſhining, about an Inch in the middle or broadeſt Part, 2 Inches long, narrow at each End, more obtuſe or pointed at the Extremity, not unlike the Leaf of the *Limon-tree*, from which Reſemblance it has the Name. The ſmall round ſtiff upright naked Stalk ariſes about half a Foot high from the Middle, branched and ſpread forth at the upper Part, each Branch

thickly beſet with Flowers, tending obliquely upwards, diſpos'd like the Teeth of a Comb on the upper Part. The Flowers are ſmall, pentapetalous and reddiſh, ſeveral included together in one common, and each endow'd with its own proper tubulous *Perianthium*, florid at the Border, of the ſame Colour with the *Flower* like the *Species* of *Primula veris*, called on that Account *Polyanthos*, for after the Flower of *Limoninm* is faded, or the *Petals* dropp'd, the *Perianthium* ſtill remaining, keeps the Appearance of the Flower. This Flower is ſometimes *monopetalous*, with 5 *Stamina*; or it may be reckon'd always *pentapetaloid*, the *Stamina* ariſing from the inner Surface of the deep divided *Petala*. Though it be eſteem'd *ſemine nudo monoſpermos*, yet being at ſome Pains to examine it, I have obſerv'd it to have a conical *Seed Veſſel* like *Primula veris*, and even to have 2 or 3 Seeds to ſucceed each *Flower*; but its *Flowers* are ſo numerous, and it's ſo ready to be propagated by the Root, that it brings but few *Seeds* to perfection; theſe drop ſo ſoon after the *Flower* is decay'd, and it's ſo very minute that it's not worth while to alter the Diſtribution.

This Plant requires rather a Botanical Deſcription, than a Medicinal Conſideration, being ſeldom us'd in Phyſick. It may be juſtly reckon'd an *Aſtringent*, and preſcrib'd with other *aſtringent* Medicines. The *Root* is rather to be *us'd*, for the *Seeds* are rare to be had.

It grows very frequent on the Sea Coaſt in *Holland* in *Lincolnſhire*, on each Side the River *Witham* at *Boſton*, and is very frequent on the other Side of the Waſh towards *Holbeach*, and affords a pleaſant Spectacle in its flowering Time, all the Months of *July* and *Auguſt*.

V. *Bellis major.*

Bellis maj. J. B. 3. 26. 114. *ſylv. Caule folioſo maj.* C. B. P. 261. *major* Dod. pempt. 265. Raii Hiſt. 250. Synopſ. Stirp. Brit. 91. *polyclonos ſylv. maj. caule folioſo* Moriſ. Hiſt. 3. 29. *Leucanthemum* Tournef. Inſtit. 292. Hiſt. des Plants 109. *Great Daiſy.*

VI. *Bellis minor.*

Bellis ſylv. minor C. B. P. 261. Tournef. Inſtit. 491. Hiſt. des plants 57. Raii Hiſt. 349. Synop. Stirp. Brit. 91. *minor ſylv. ſpontanea.* J. B. 3. 26. 111. *minor ſylv.* Tabern. Icones 328. Moriſ. Hiſt. 3. 31. Leſſer wild Daiſy.

The

The *TRIBE.*

Theſe two continue that Genus of Plants called by Mr. *Ray*, *Corymbiferæ Radiatæ*. By *Boerhave*, *Gymnomonoſpermæ diſcifloræ*; and by *Tournefort*, *Flore Radiato donatæ*. I have in the *firſt Decad* explain'd what is meant by *Corymbus*, and ſhewn that the *Corymbiferæ* are divided into *Nudæ* and *Radiatæ* at *After*: That the *Nudæ* conſiſt of the *Diſcus* only, *viz.* of a Congeries of thick ſet ſmall *Floſcules* or *Flouriſhes* in *Capitulum Collectæ*. Theſe here conſiſt of a *Radius* or Row of *Semifloſcules* or *half Flouriſhes*, called by *Tournefort* the *Corona*. What theſe *Floſcules* and *Semifloſcules* are, how they are placed on the Top of the ſeveral *Embryons*, and fixt in a proper *Thalamus*, and ſurrounded by a common *Calyx*, has been already explain'd.

The *Deſcription.*

V. The *greater Daiſy* has a fibrous perennial ſomewhat creeping *Root*, emitting one or more five-ſquare ſolid upright Stalks, about one Foot high, adorn'd with Leaves, and ſometimes branch'd at the upper Part.

The alternate *Leaves* are oblong notcht and blunt pointed of a dark Green. The *Flowers*, one or more on the Top of the *Stalk* and *Branches*, are large, with a yellow *Diſcus* and white *Radii* or *Corona* about the Bigneſs of *Buphthalmum* or *Corn-marigold* call'd *Chryſanthemum Segetum*, on whoſe Account this *Plant* is not unfitly call'd *Leucanthemum* by *Tournefort*, becauſe as the one is of a *ſpecious Gold*, ſo the other is of a *White Colour*. The *Seeds* are ſmall, oblong and ſolid, like thoſe of other *Corymbiferous Plants*.

VI. The *leſſer Daiſy*, from a fine fibrous *Root*, ſends forth numerous ſmall oblong or oval ſtiff ſomewhat hairy *Leaves*, thick ſpread on the Ground, amidſt of which ariſe frequent ſmall round hairy *Footſtalks*, ſupporting proportionally ſmall *Flowers*, with a *yellow Diſcus*, and white *Corona*, ſometimes rediſh without, compos'd of one, two, or more *Rows* of Flouriſhes, and ſometimes more *double*. There is a pleaſant Variety of them in the Gardens, double, or conſiſting only of *Semifloſcules*, red white, or red without and white within, and ſometimes endow'd only with *Floſcules* or tubulous Petals, not like thoſe of the *Diſcus*, but of the former red white, or Party-colour.

Time

Time and *Place.*

Both grow plentifully in the Fields, the former not ſo frequent about Hedge Sides, and upon graſſy Banks, flowering in *May* and *June*. The latter flowering in the Paſtures and Meadows all the Summer, eſpecially the Spring.

Virtues and *Uſes.*

They may be properly called Sub-aſtringents, and are eſteem'd good Vulneraries. The former is frequently us'd in Pectoral Decoctions and Ptiſans in Hectic, Phthyſical, and Conſumptive Caſes, alſo in Vulnerary Decoctions. The latter is call'd in the Shops *Symphytum minimum*, or *Conſolida minima*, becauſe of its vulnerary and aſtringent Quality, by which it is a proper Ingredient in *vulnerary Balſams*, by drawing of the Juice, or boiling of the green Flowers and Leaves among other Ingredients, by which they make Salves or Oyntments, both are great Correctors of Acrimony, and by their Aſtringency fit to ſtop *Hæmorages*, *Dyſenteries*, and *Spitting of Blood*. The Flowers of the former are kept dry in the Shops for the aforeſaid Uſes. The latter is frequently pull'd up green from the Field.

VII. *Berberis.*

Berberis dumetorum, C. B. P. 454. *vulgo quæ Oxyacantha putata*, J. B. 1. 6. 52. Raii 605. Tournef. Inſtit. 614. Boer. Ind. 233. The Barberry.

The *TRIBE.*

This *Tree* or rather *Shrub* is claſs'd by all *Authors* among the *Bacciferæ*, according to the Fruit: And *Flores Roſacei*, by *Tournefort* and *Boerhave*, according to the *Flower*.

The *Deſcription.*

It's of a middle Size, betwixt a *Tree* and a *Shrub*, ſometimes ariſing higher with one Stem, and at other Times lower and buſhy, having ſeveral ſmall Rods or Twigs ariſing ſtreight from the *Root*, and much branch'd at the Top, always very *prickly* or *thorny*, two or three prickles proceeding from the ſame Origine near to the *Leaf*. Its alternate *Leaves* like thoſe of the *Prunus Sylv.* are thinner, of a lighter Green,

Green, narrow at the Bottom, and cloathed with fine ſoft *prickles* round the Edges. The *Flowers* hang looſe upon dependent *Racemi* or *Strings*, yellow, *Roſaceous*, *hexapetalous*, with a ſmall bifid outward, and *hexaphyllous Perianthium* within globulous, each *Petal* being endow'd with a *Balſamick* ſpungy Subſtance at the Origine. At the Bottom is placed a *Cylindrical erect Embryo*, with a ſpongy *placenta* on the Top, from whoſe Center the green *Stylus* ariſes. The *Embryo* becomes afterwards a *Cylindrical* ſoft *ſucculent Fruit* or *Berry*, of a pure Scarlet when ripe, containing one or more, and ſometimes no ſeed at all. The *Bark* is aſh-colour'd or greyiſh without, full of Rents or wrinkles, and of a Saffron Yellow within. The Wood ſpongy, with a large Pith. The *Root* ſpread forth, but not running deep in the Ground, more ſolid, and of a yellow Colour. It's frequently cultivated in Gardens, on Account of the Fruit; grows plentifully on the Chalky Hills near *Saffron-Walden*.

Virtues and *Uſes*.

The *Barberries* have a pleaſant tart or ſowr Taſte, and are eſteem'd one of the moſt delicious *Pickles* at a Table; a *Jelly* may be made of them for quenching of Thirſt in hot Fevers. The inner Bark of the Tree, but eſpecially of the Root, is eſteem'd a great Aperient, and a Specifick in the *Jaundice*: Whether this frequent Uſe of it in ſuch a Diſeaſe, has proceeded from a fond Conceit the Antients had of what they call'd the *Signature*, becauſe of its being of the ſame Colour with thoſe affected with that Diſeaſe, is uncertain; but there is no Medicine more recommended in *Icterical Caſes*, than the *Radix Curcumæ*, *Cort. Berb.* and *Rad. Rhabarb.* all which are diſtinguiſhable for their yellow Colour; but their being ſo good *Deobſtruents* and *Aperients*, are good Reaſons for their being preſcrib'd here. It's likewiſe a good *Diuretick*. The Bark enters medicated Infuſions with Wine or Ale, in *Icterical*, *Lithontriptical*, and other *deobſtruent Medicines*.

VIII. *Beta*.

1. *Beta alba palleſcens quæ ſicula vel ſicla* Offic. C. B. 118. Moriſ. Hiſt. 2. 596. Tournef. Hiſt. 502. Raii Hiſt. 204. *candida*, J. B. 2. 961. White Garden Beet.

2. *Beta rub. vulg.* C. B. Tournef. R. Hiſt. Moriſ. Hiſt. *rub.* J. B. Red Beet.

3. *Beta nig.* C. B. &c. Black Beet.

The *TRIBE.*

Theſe Beets are reckon'd among the *Apetalous* or *Stamineous Flowers* by all Authors. Though the *white*, *red*, and *black*, be only enumerated among the *Diſpenſatory Plants*; yet the *green*, the moſt common in the Gardens, though neglected by moſt Authors except *Bauhinus*, and by ſeveral who have quoted him, is the moſt frequent. I have elſewhere obſerv'd, that ſome *Beets* are black or red with *green Veins*, red with *black Veins*, black with *red Veins*, and ſome of both Colours with *white* or *yellowiſh Veins*, which I rather look upon as Variations than real *Species*, proceeding from the Effluvia of ſeveral *Farina*'s; and although the black and red are ſeldom to be ſeen without Veins of another Colour from that of the Leaf itſelf, yet I'm convinc'd the true *Species* of each were all of the ſame Colour; nay, to go further in this Opinion, 'tis probable that all the Plants in the Garden of *Eden*, or rather on the whole Face of the Earth, were either of a *ſimple Colour* and *ſingle Flower*, and the Variety which have appear'd ſince, are only the Effect of *Culture* or *Effluvia*, v. g. *Aquilegia*, whoſe Deſcription and Uſe ſee *Decad* 3. *p.* 110, has primarily its Colour what they call a true Blue, and its Petals fixt to the Number 10, (*viz.* 5 plain and 5 tubulous) yet what a vaſt Variety of *Stripes*, *Colours*, and *diverſity* in the *Figure* and Number of *Petals*, do we obſerve to have proceeded from thence, which muſt only be the Effect of *Culture* or *Effluvia*; but of this more in another Treatiſe. To add further; the greateſt Variety of *Colours* of this Sort we find to ſtroll from a *primary Blue* or *Red*, which never ceaſe until they have arriv'd at a pure *White*, and from thence ſeldom degenerate; ſeldom does a *Yellow* vary in Colour, ſave to a *White*, and that but rarely; moſt *yellow Flowers* vary in the Number of Petals, and as often do they degenerate from double to ſingle, unleſs prevented by Culture.

The *Deſcription.*

All theſe *Beets* have carneous or ligneous Roots, according to the Age, divided or ſubdivided into large Portions, white, more green or red, according to the Variety of *Species*, from whence proceed the firſt Seaſon ſeveral large oblong and blunt Leaves like thoſe of the *Lapatha*, upon long *Foot-ſtalks* ſtiff, thick, ſmooth, whitiſh, more green, black, red, with different Veins as above. The ſecond Year ariſes the Stalk 1, 2, 3, or more Feet high, according to the Soil, ſmall, round, ſtriated from the Boſom of the Leaves. On the upper Part

of

of the Stalk and Branches proceed the ſmall *Flowers*, thick ſet on a long Row or *Spike*, ſeveral in a Cluſter, and containing ſeveral *ſtamina* with their proper *apices* within a *quinquifid Empalement*, the green *Ovarium* or *Teſta* becomes a Globule, conſiſting of 3 or 4 *Seed Veſſels*, wartlike, or rugged, and ſtoney, cloſely united and firmly adherent, each containing one ſingle *Seed*. They are cultivated in the *Gardens*, produce *Flowers* and Seed after the 2d and 3d Year, love a fat Soil, and may be propagated by Seed or Root.

Virtues and *Uſes*.

The *Beet* is rather fit for the *Kitchin* than the *Shops*; in the former 'tis made Uſe of for a boil'd *Sallad* in the Spring, being eat with Butter, by itſelf or with other *Greens* in that Seaſon. It moderately opens the Body. Its Uſe in the Shops is chiefly with *emolient Herbs* for *Clyſters*. It has a nitrous Smell, and Taſte not unlike *Parietaria*, but more pungent, for the Juice ſuck'd up the Noſe makes a good *Errhine* and a plentiful pituitous Evacuation from thence. It ſerves for the ſame Uſes as others, its Congeners, ſuch as the *Atriplex* and *Chenopodium* Kind.

IX. *Betonica Aquatica & Scrophularia.*

1. *Scrophularia aquat. maj.* C. B. 235. *maxima fibroſa Radice* J. B. 204. 21. *Aquat. Radice fibroſa betonicæ fol.* Moriſ. Hiſt. 2. 482. *Betonica aquatilis* Dod. pempt. 50. Water Betony or Figwort.

2. *Scrophularia nodoſa fœtida* Tournef. Inſtit. 166. T. 74. C. B. 235. *Vulg. & maj.* J. B. 3. 30. 421. *Scrophularia rad. nodoſa fœtida*, Moriſ. Hiſt. 2. 482. *major* Raii Hiſt. 764. *Scrophularia*, Dod. pempt. 56. Hiſt. des Plants 144. Synopſ. Stirp. Brit. 161. Figwort.

Tournefort in claſſing by the *Flower*, places this *Genus* among the *Flores Anomali*, in which he's follow'd by *Boerhave*, who follows *Moriſon*'s Diſtribution by the Fruit: For *Moriſon* places it among the *Monopetalæ Bicapſulares*, and *Boerhave*, with the *Diangiæ Polyſpermæ*. Mr. *Ray*'s Diſtribution is more general, by making it only a *Planta Vaſculifera flore monopetalo*.

1. *Water Betony*, ſo call'd, from the *Reſemblance* of its Leaves with the under-written, has a very fibrous Root, from whence ariſes a jointed four-ſquare ſtreight branched *Stalk* (with Leaves like thoſe of *Betony*, but much larger and lighter green) 3 or 4 Foot high.

2. Common *Figwort* has a large knobby or knotted *Root*, a ſtreight four-Square hollow *Stalk* with the former, but more dark or purpliſh,

from

from whence proceed large dark Leaves nitcht or dented like thoſe of the *Common Nettle*. The *Flowers* from the upper Part of the *Stalk* and *Branches* are of a dark Colour without, *Globulous* or turgent, divided into two Lips, the upper having a ſmall Leaf on each Side like two Ears, the lower dependent or tended downwards with large Jaws; from the Inſide ariſe the 4 *Stamina* with their *apices*; the *Embryo* becomes a round conical and pointed *Fruit*, divided into two Pouches opening at the Top, and pouring out ſmall ripe *Seeds*.

Both are perennial Plants, diſtinguiſhable by the larger and leſs *Leaf*, and by the knobby and fibrous Root, with the ſame Taſte and Smell, the one grows at the Sides of Hedges and ſhady Places of Paſtures and Meadows: The other, *viz.* Water Betony, grows in more moiſt and watry Places.

Virtues and *Uſes*.

Both having the ſame Notes, partake of the ſame Virtues, but the *Figwort* by the *Reſemblance* of the Knobs of the *Root*, is more eſpecially recommended for the *Piles*. It ſeems on Account of the Signature, for which Account it's alſo recomended for *Scrophulous Tumors*: It's eſteem'd a good *Diſcutient* or *Repellent*, very cooling and fit for allaying of *Inflamations*: Its Juice is alſo recommended for cleanſing of the moſt *ſordid Ulcers*: The *Ung. Scrophulariæ* is alſo eſteem'd fit for diſcuſſing of *ſcrophulous Tumours*, and the *Piles* or *Hemorrhoids*. It's not much requir'd for internal Uſe. The Roots of Water Bettony were ſome Years ago recommended to be given in Infuſions, as a great *Corrective* for *Senna*: and certain eminent Phyſicians ſeldom preſcrib'd the one without the other, for what Reaſon I know not, but both the *Figworts* ſeem to me to partake of the ſame Virtues.

X. *Betonica Vulg.*

Betonica purp. Tournef. Inſtit. 202. T. 96. C. B. 235. Hiſt. des Plantes 320. Raii Hiſt. 550. Synopſ. Stirp. Brit. 127. *Vulg. purp.* J. B. 3. 38. 301. *Betonica* Dod. pempt. 40. Moriſ. Hiſt. 364. *Common Betony.*

This Introduces one of the largeſt and moſt remarkable Claſſes in *Botany*, and the leaſt ſubject to *Variations*, being endow'd with a ſmall ſingle ſimple-colour'd *monopetalous Flower*, ſcarce any being *Polypetalous*, becoming double or varying in their *Stripes* or *Colour*, either by *Culture* or *Effluvia*. They are call'd *Verticillatæ & ſpicatæ* by *Moriſon* and *Ray*; *Labiatæ*, by *Tournefort*; *Gymnotetraſpermæ*, by *Boerhave*: There are ſeveral Things remarkable in them in general, as 1. Many of

of them are woody, perennial, commonly call'd *Suffrutices*, or *Under Shrubs*, which will continue for ſome Years. 2. Their *Leaves* always proceed from the *Stalk* by Pairs, by which they differ from the *Aſperifoliæ*; for ſome of them have the ſame Faſhion of *Flower*, and Manner of *Fructification*; yet the *Leaves of the Aſperifoliæ* are always alternate and much larger. 3. Their *Flower* is always ſmall in Proportion to the Plant, and for the moſt part with unequal *Borders*, or divided into two Lips, tho' ſome have a *quadripartite* Diviſion into equal Parts, inſtead of a *bipartite* or *tripartite*; and ſome have only one Lip, the 4 *Stamina* ſupplying the Defect of the other. Some Authors are pleaſed to term theſe *irregular*, *diſſimilar*, and *difform*, which I think ought to be rejected, as well as that of an *imperfect Flower*. I have often obſerv'd, that no *Flower* or Part of any Plant or Animal which keeps up to thoſe Rules determin'd to it by the *Author* of *Nature*, can be call'd *imperfect*: Neither can they be call'd *irregular* for the ſame Reaſon, nor diſſimilar, becauſe every *Flower* of the ſame *Species* has a Reſemblance to the other, neither can it be call'd *difform*, ſince the Form, Shape, and Faſhion of all the *Flowers* is the ſame; but for Diſtinction Sake *oris æqualibus* and *inæqualibus* muſt be admitted, becauſe the one Border often differs from the other in *Figure* and *Dimenſions*. Their *Shape* is tubulous, or contracted into a proportionally long narrow Pipe at the Bottom, and enlarged towards the *Border* into two *Lips*, the upper, (which is frequently call'd the *Galea* or *Helmet*,) and the lower Lip: Sometimes it conſiſts of 4 equal Borders. They are frequently encloſed into an oblong quinquifid *Perianthium*, divided for the moſt Part into 5 *unequal*, and ſometimes equal pointed *Segments*. Their Poſture is frequently obliquely aſcendent. They have an hollow *tubulous*, frequently bended or crooked *Stylus*, without a Button ariſing from the Center of the *Pedicle*, and ſurrounded by four *Embryons*. They have 4 *Stamina* ariſing from the inner Surface of the *Petalon*; when the *Flower* decays, this *Perianthium* becomes a *Capſula* or *Pericarpium*, to contain 4 naked Seeds, which ſoon drop off when ripe. The Diſpoſition of their *Flowers* is ſometimes in a long Spike, when thick ſet, and ſurround the upper Part of the *Stalk* and *Branches*, if there be any. They are ſometimes regularly diſpos'd into ſeveral Rows without *Pedicles* or *Foot-ſtalks*, have no conſpicuous Interval, and then they ſtill retain the Name of *Spicati*; but when theſe Intervals are larger, or theſe regular Circles are at a greater Diſtance from each other, then they are ſaid to be *Verticillati*, *verticillated* or whorled; but when the *Intervals* are but at a moderate Diſtance, they are called *Spicati & Verticillati*. The Colour of the *Flowers* is often ſimple, a *blue*,

red, an *incarnate*, *obſolete red* or *blue*, ſometimes a Variation into a *white*, and ſometimes a *yellow*, but never any artful Variation.

This Betony is *Spicated and Verticillated*, with a *Lip Flower*, whoſe upper Lip is upright, arch'd, and *bifid*, the lower divided into three Parts, the Middle being largeſt.

The *Deſcription.*

Betony has a knobby and hard *Root*, emitting ſeveral ſmall white *Fibres*, the *Leaves* upon long *Pedicles*, ſpread forth on the Ground an Inch broad, 2 Inches long, oval and obtuſe, crenated or denticulated; each of the *Crenæ* or Dentations round the Edges are blunt and obtuſe; alſo amidſt of theſe Leaves ariſes the unbranch'd four-ſquare flowring Stem, about 1 Foot high, with the Leaves by Pairs at certain Diſtances, having firſt a *Verticilla*, or Whorle of thick ſet *Lip Flowers*, whoſe upper *Lip* is upright, the lower tripartite and dependent, the Middle largeſt, of a blue Colour, but ſometimes pure white, with four *Stamina*, one *Stylus*, all of the ſame Colour, a *tubulous Perianthium* divided into five unequal pointed *Segments*. The *Stylus* is ſurrounded by four Embryons, which become ſo many round brown naked Seeds.

Virtues and *Uſes.*

Betony has been a *Plant* much eſteem'd by the Antients for its extraordinary Virtues, tho' it be not much requir'd for modern Uſe: It conſiſts of tenuious and ſubtile *Particles*, is eſteem'd a potent *Cephalick*, good in all Nervine Affections, for Diſeaſes of the *Breaſt*, *diſcutient*, *carminative*, and *aperient*, raiſes the *Wind*, good in the Cholick, provokes *Urine* and the *Menſes*: ſome uſe the ſimple and diſtill'd Water in *Cephalick Mixtures*. It enters the *Sp. Lavendulæ*. *Aq. Pæon. comp. Sp. Lumbricorum*. *Aq. cœleſtis*. *Syr. de Artemis*. *de Betonica*. *de Eryſimo*. *Iv. Arthrit*. *de Philoſella*. *Pæon. comp*. *Raphani*. *de Stœchade*. *de Symphito*. *Conſerv. Beton*. *Pulv. Antilys*. *Ol. Exeſtreuſe*. *Ung. Nervinum*. *Empl. de Betonica*. A Tea of the *Leaves* is recommended for the *Head-Ach*, *Palſy*, *Sciatica*, *Gout*, *Jaundice*, and *Cholick*: Its eſteem'd a good *Vulnerary*, and given in *Ptiſans* for the Expectoration of *purulent Matter*. *The Empl. de Betonica* is frequently apply'd to the Head in a *Vertigo* or *violent Pains* of it; alſo to the *Coronal ſuture*, being mixt with G. *Tacamahaca* and *Caranna* in *Convulſions*, and to ſtrengthen the Head when too open, in Children or in Infants. The *Conſerve* of the *Flowers*, when drank with Milk warm from the Cow in *April* and *May*, is good in *Hectic* and *Conſumptive Caſes* for *Vapours*, and

in

in *Cephalick* Caſes. It enters *Cæphalick* and *Nervine* Ingredients, to be infus'd in *Wine* or *Ale*. The green Leaves put in the Noſtrils in a Morning, are excellent *Sternutatories*, cauſing a plentiful *Evacuation* of pituite and ſerous Humours from the *Sinus* of the *Scull*, and clearing of the Noſe and Head. It was vaſtly eſteem'd in the Days of *Pliny*, who recommends it in *tuſſi, aſthmate, pthyſi Vetonicæ ecleg-ma cum melle detur fabæ magnitudine*, Plin. *lib.* 26. 11. *ad Latera et pectoris dolores vetonicæ farina bibitur cum aq. callida*, ibid. *cap.* 7. *vetonicæ obulis tribus contra purulentas contraque cruentas excretiones*, ibid. *c.* 5. *Stomacho & dyſpnææ medetur Vetonica pondo libra mellis attici ſemuncia ex aq. Callida quotidie bibentibus*, ibid. *c.* 7. *Quartanus Vetonicæ drachmam in aq. mulſa, lib. tribus*, ibid. *lib.* 26. 11. *bibitur in horroribus quæ omnes horrores coercet*, ibid. *Hydropicis vetonicæ drachmæ duæ in duobus cyathis vini aut mulſi Cruditates quæ nauſeam faciunt digerit vetonica*, ibid. *c.* 11. *Tormina ventris cæliacis in vino auſtero datur vetonica*, ibid. *lib.* 26. *c.* 8. *Ictterus morbus Regius cum centaurio Vetonica*, ibid. *c.* 12. *Veſicæ malis contraque calculum auxilio eſt Vetonica*, ibid. *lib.* 26. 8. *&c.* Hence the *Italian* Proverb, when they would extol the Virtues of any Perſon, *Tot habet Virtutes quot Vetonica.*

It grows in Woods, Copices, in the Sides of Hedges of Paſtures, and other ſhady Places. It's ſometimes ſeen with a white Flower; it's ſeldom ſeen with more than one flowering Stem from the Root in the Fields, in Gardens it becomes more luxuriant.

Betonica Pauli, vide *Anagallis.*

XI. *Betula.*

Betula, C. B. 427. Theoph. J. B. 1. 8. 148. Raii Hiſt. 1410. Tournef. Inſtit. 588. Hiſt. des Plants 58. The Birch Tree.

The *TRIBE.*

This is one of the juliferous Trees, or *Flore a fructu remoto*, bearing Katkins diſtinct from the Fruit, on the ſame Tree, and often on the ſame Branch.

The *Deſcription.*

The Tree is of a middle Stature, and ſometimes only a Shrub, emitting many ſmall and for the moſt part dependent Branches with a various Bark; while young it's darkiſh, after a Year or two the outer looſe Skin is grayiſh and eaſily torn off. Afterwards it becomes more

more white both in Trunk and Branches, but the younger are ſtill more duſkiſh; both old and young have ſtill theſe thin, looſe, excite Membranes. The *Leaves* at firſt appear crumpled and criſped, of a pleaſant odoriferous Smell in the Month of *May*, about the Bigneſs or rather leſs than thoſe of the *Populus tremula* or *Aſp*, of a pleaſant ſhining Green, each ſupported by a proper *Foot-ſtalk*, and for the moſt part two, ſometimes three together, proceed from the ſame Origine or Exit. The *Juli* or *Katkins* begin to appear in the Month of *April*, about half an Inch long, conſiſting of ſeveral ſmall reddiſh *Leaves*, adherent to an *Axis medius*, each covering 5 or 6 long *Apices* upon *Stamina*, ſo ſhort that they are ſcarce diſcernable. As the *Apices* ripen, the *Katkins* are lengthen'd, and the *Apices* with their covering *Leaves* are drawn to a greater Diſtance from each other. The *Apices* are yellow, and ſometimes *purpliſh*. The *ſcaly Cone*, as it may be call'd, appears at the ſame Time in different Places, for the moſt part on the ſame Branch, not unlike the *Katkins*, conſiſting of ſeveral *Scales*, endow'd at firſt with 5 or 6 fine *Scarlet Threads* or *Thrumbs*, at whoſe *Root* is the *Embryon* lodg'd, which afterwards acquires a *cylindrical* Form, each of the *Scales* ſtrictly encloſes one ſingle winged *Seed*. It grows ſpontaneouſly in moſt Woods and Coppices, chiefly in moiſt and ſhady Places.

Virtues and *Uſes*.

The *Timber* or *Wood* of it is very profitable for divers kind of Mechanical Uſes. The thin looſe outer *Rind* of this Bark is ſaid by ſome to have been the firſt or original *Papyrus* on which they wrote; and *Tragus* reports, that in his Time there was a Book ſtill extant in a *Library* in *Switzerland*, made of this Kind of Paper.

This Tree affords a notable Experiment to prove the *Circulation* of the *Sap* in *Plants*, by its plentiful Aſcent from the Earth in the Spring, when the nutritive Particles are ſet in a more than ordinary Motion by the Heat of the Sun; for if you bore or pierce it near the *Root*, and place a Spigget in it, there will flow out ſome Pints in a Day. The *Honourable Lord Colvil*, *valuable* for his *ſuperior* Knowledge in *Muſick*, *Botany*, and other Parts of *Natural Hiſtory*, moſt of the *Liberal Sciences* and *Belles Lettres*, being deſirous to have ſome of it, underſtanding the Trees of a Wood in *Scotland*, near to him, which abounded with that Kind, was to be fell'd or cut down, being allow'd to draw what Quantity he pleas'd, he got as much as made near a Hogſhead of Birch Wine, of which I have drank. It taſted as delicious as Muſcade, and was as intoxicating as the ſtrongeſt Mountain Wine. His Method was to evaporate near one Third over a gentle Fire,

Fire, then to ferment it with a proportional Quantity of Sugar. This plainly ſhews the Sap muſt circulate, for the Time of its plentiful running is in *April*, when the *annual Surface* has not appear'd, and before the Buds are extended or ſpread forth into *Leaves*: So that this ſuperabundant *Sap*, muſt either be evaporated, there not being ſufficient *Sap Veſſels* to contain it all as yet; or return by the *venal Sap Veſſels* to the *Root*; and thus by maintaining a perpetual *Circulation*, it's by Degrees attenuated and prepared to puſh forth and nouriſh the *annual Surface*; for no ſooner are the *Leaves*, *Katkins*, and *Cylindrical Fruit* ſtretcht forth to the full Bigneſs, than this *Sap* ceaſes to flow out at the *Perforation*. But this does not favour Mr. *Bradley*'s Opinion, 'That the *Sap* thickens, acquires the Conſiſtence of a Gum, ſtagnates, 'cannot move in the Winter, and becoming more fluid, begins to 'circulate in the Spring.' Whereas the true Reaſon is, the *Sap* which in *Winter* nouriſhed the *Wood* and *Bark*, is diverted in the *Spring*, and then flows more plentifully to nouriſh the *annual Surface*; the more plentiful Aſcent of nutritive Particles is cauſed by the Heat of the Sun, after it begins to approach nearer to our Horizon, as is obſerv'd. The Honourable and Curious *Paul Dudley*, Eſq; and R. S. S. was pleaſed to preſent to the *Royal Society* a Quantity of Sugar from the Juice of the *Maple*, drawn after the ſame Manner, and has ſince confirm'd the ſame by another Letter. I'm perſuaded, if any ſhall have an Opportunity to try this Experiment, by a gentle Evaporation of the Juice of this Tree, then placing it in a cold Cellar, to produce the Eſſential Salt, it would be as good a Sugar as the other, and in as great a Quantity; for as common *Sugar* is only the *Eſſential Salt* of the *Sugar Cane*, and this *Birch Tree*, when new drawn, taſtes very ſweet, like the *Muſtum* of Wine, I am ready to believe it would likewiſe make good Sugar. Its Taſte is alſo Balſamick, and ſomewhat ſubaſtringent, by which it's recommended as good in *Spitting* of *Blood*, *Hectic* and *Conſumptive Caſes*, by correcting of the *Acrimony* of the *Blood*, to any who have the Opportunity to uſe it. It's alſo ſaid to be diuretick.

Biſlingua, vide *Bruſcus*.

XII. *Biſtorta.*

Biſtorta maj. Radice minus intorta. C. B. P. 192. Tournef. Inſtit. 511. Moriſ. Hiſt. 2. 585. *major*, Raii Hiſt. 189. Synopſ. Stirp. Brit. 59. *major rugoſioribus foliis*, J. B. 3. 31. *Biſtorta*, Dod. Pempt. 333. Biſtort *or* Snakeweed.

The *TRIBE.*

This is one of the *Apetalous Claſs*, by the unanimous Conſent of *Authors*, and may be rightly join'd with the *Lapathum* and *Acetoſa Kind*, by ſome Reſemblance in the Leaf, and by the *three ſquare Seed.*

The *Deſcription.*

It has an hard knobby *Root*, about the Bigneſs of one's Finger, crooked or bended inwards, enlarging or multiplying yearly, and running; emitting ſmall *Fibres.* From below theſe in the Spring, ariſe ſeveral Leaves upon Footſtalks, ſtiff, ſmooth, dark green above, and lighter below, of the Shape of thoſe of a *Dock*, but not ſo large; from whoſe Middle ariſes a ſmall ſmooth jointed Stalk, ſometimes a Foot high, ſupporting proportionally big reddiſh *Flowers*, thick ſet in a groſs Spike, like thoſe of *Perſicaria*, with a *monophyllous* double *Calix*, one ſurrounding the other, plac'd upon a ſhort *Foot-ſtalk*, and encloſing a *monopetalous Flower*, deeply divided into 5 *Segments*, endow'd with 8 *Stamina*, with their Apices: In the Center is placed the Embryo, (with a *triple Stylus*) which becomes a *three ſquare Seed*, ripening within the *Flower* and *Calix.*

N. B. Though this has a diſtinct *Monopetalous Flower* from the *Calix*, yet it is juſtly eſteem'd *Apetalous*, becauſe the *Flower* does not decay firſt and fall off; for *Flos non deciduus*, and *Semine plerumque ſingulari in Capſula quæ floris Calix fuit matureſcente*, is the chief Character of an *Apetalous Flower*, according to *Tournefort.*

Virtues and *Uſes.*

This is one of the moſt potent aſtringent Vegetables in the *diſpenſatory Catalogue.* Its *Root* is only us'd in *Powders*, *Decoctions*, *Infuſions*, to ſtop *Hemoragies*, *Fluxes*, *Spitting of Blood*, and for the *fluxus Menſtruorum nimius* and *fluor albus*, externally it enters in *Vulnerary Lotions*, for *ichorous* and *ſanies Ulcers*, and for curbing proud Fleſh. In *Fomentation* to allay *Inflammations*, and in *Collyriums* for *Blood-ſhot Eyes*, and for *Rheums* and *Catarrhs.* It enters *Syr. de Piloſella*, *Diaſcordium*, *Aſtringent Plaiſters* and *Oyntments* in general; whatever is preſcrib'd as a potent *Aſtringent*, this may be an Ingredient either to be given inwardly, or externally apply'd.

Blitum, vide *Atriplex.*

Bonus

Bonus Henricus, vide *Atriplex*.

XIII. *Anchusa & Buglossum.*

The *TRIBE.*

The same Affinity seems betwixt the *Asperifoliæ* or *rough leav'd Plants*, and these call'd *Labiatæ* or *lipp'd*, from the *Figure* and *Verticillate*, *whorl'd* and *spiked Disposition* of the *Flowers*, as there is betwixt *tetrapetalous*, call'd by *Tournefort Cruciatæ*, *Cross-like Flowers*, with *plain similar Petals*, and the *Papilionaceæ*, *Pea Bloom*, with *four dissimilar Petals* of various *Figures*; for as both these *Classes* with *Tetrapetalous* Plants have *Siliquæ*, *Pods*, and *Siliculæ*, *little Pods*, as is observ'd when discoursing of *Alliaria*; so the *rough-leav'd* and *verticillate* and *spiked* have both *monopetalous Flowers*, *plain* and *uniform* in the *rough leav'd* Kind, or *dissimilar* and *difform* in their *Segments*, as in the *lip flower'd*, *verticilate Plants*. But both *Classes* are succeeded by four naked *Embryons*, surrounding a *Pointal*, which become so many naked *Seeds*, contain'd in an open Seed Vessel, which was formerly the *Empalement* of the *Flower*, and which is *deeply divided* into five equal *Segments* in the one, and *superficially divided* into five unequal *ones* in the other.

But the Κεφαλαιον, the Mark of Distinction, does not lie either in the *Flower* and *Fruit*, as some of our *Methodizers* would have it, or in the *Fruit* and *Flower*, as it has pleased others; but from other Parts of the Plant, which are the *genuine Characters* of such and such a Class, without either having recourse to the *Flowering* or *Fructification*. v. g. The *Character* of the *Asperifoliæ* is, that they have *alternate rough simple Leaves*, and a *Flower* divided into 5 *Segments*; but the being *lipp'd* or not, is of no Moment; for *Echium* cannot be separated from its *Congeners*, for having a *lipp'd Flower*, since it has *alternate rough Leaves*; tho' Dr. *Knaut*, having only Regard to the *Flower*, would have it chas'd from its *Brethren*, and expell'd that *Family*, when it can only be a *Bastard* in any other: And *Mentha*, *Pulegium*, *Thymus*, *Majorana*, and several others of the most noted *Lip Flowers*, must be driven from that *Class*, because they have neither *labiated*, nor *galeated Flowers*, but divided in the Border into four equal *Segments*; but as they are *smooth leav'd*, their *Leaves* arise by *Pairs*, and not *alternate*, and as they are *whorl'd* and *spiked*, they may justly have the Preference among their *Brethren*, and therefore I heartily join with Mr. *Ray* in this, that he will not be confin'd to any particular Part of the *Plant*, from

from whence its *Characteriſticks* are to be taken, but to whatever Part is moſt *determinate*, and the leaſt ſubject to Variation.

1. *Anchuſa puniceis floribus*, C. B. P. 255. *Monſpeliana*, J. B. 3. 33. 584. Raii Hiſt. 496. *Bugloſſum minus perenne*, Hiſt. Oxon. 3. 438. *Radice rubra, ſive Anchuſa vulgatior puniceis floribus* Tournef. 134. *Anchuſa parva* Lob. Icon. 578. Alkanet.

2. *Bugloſſum Anguſtif. maj. flore cæruleo*, C. B. P. 256. Tournef. *vulg. maj.* J. B. 3. 33. 578. *Anguſtiſol.* Lob. Icon. 576. Raii Hiſt. 493. *perenne maj. ſativum.* Hiſt. Oxon. 3. 437. Garden Bugloſs.

3. *Bugloſſum ſylv.* C. B. P. Tournef. Inſtit. Hiſt. des Plants 62. *Echium Fuchſii, ſive Borrago ſylv.* J. B. 3. 33. 581. *Bugloſſ. ſylv.* Dod. Pempt. 628. Raii Hiſt. Synopſ. Stirp. Brit. 119. Hiſt. Ox. *Echioides* Riv. Irr. mon. Wild Bugloſs.

The *Deſcription.*

1. *Alkanet* has a long, ſimple, deep red, pretty groſs *Root*; a ſtreight, round, rough *Stalk*, about a Span or two high; *Flowers* upon the upper Part of the *Stalk* of a deep Purple, monopetalous, divided into 5 blunt *Segments*, a little tubulous and hollow in the Center; from whence ariſe 5 ſtreight *Chives*, ſurrounding the *Pointal*, which ariſes from the *Empalement*, and is ſupported by 4 *Embryons*, which, upon ripening, become ſo many oblong aſh-colour'd *Seeds*, like a Viper's Head, contain'd in a five-leav'd *Empalement*, which now becomes an open *Seed Veſſel*. The *Leaves* are narrow, about one Inch or two Inches long, and pointed, very *rough* and alternate.

2. *Garden Bugloſs* has a carnous, ſimple, pretty thick and groſs perennial *Root*. The rough and round *Stalk* ariſes 2, 3, or 4 Foot high. The alternate *Leaves* are very rough, large, oblong, and pointed. The *Flowers* larger, of a lighter Blue, the *Segments*, *Empalement*, and *Seed*, the ſame with the former.

3. *Wild Bugloſs* is leſs than the *Alkanet*, has *Leaves* like it, but rougher and more whitiſh, a little ſinuated. Thoſe in the upper Part ariſing from the *Stalk*, without Foot-ſtalks; from whoſe Boſom the *Flowers*, upon very ſhort *Foot-ſtalks*, proceed; are broad at the Baſe, ſhort, and as it were *triangular*. The *light blue Flowers* are very ſmall, the Pointal ſmall alſo, and hid. The *Seeds* ripen in the *Empalement*, which becomes the open Seed Veſſel with the others. The tubulous Part of the *Flower* being bent in the Middle like a Knee, renders this Plant very diſtinguiſhable from all the reſt of the Tribe.

XIV. *Borrago.*

Borrago fl. cæruleis, J. B. 3. 33. 574. Tournef. 133. Raii Hiſt. 493. *Bugloſſum latifolium Borrago*, C. B. P. 256. *Bugloſſum ſive Borrago* Math. 1. 786. *Borrago hortenſ.* Hiſt. Oxon. 3. 437. Burrage.

The *Deſcription.*

Burrage is an annual *Plant*, with a more fibrous *Root*, more branch'd and ſpreading forth, has rough, alternate *Leaves*, much broader and blunter. The *Flowers* larger, very open, divided into 5 ſharp pointed *Segments* of a pale Blue, with 5 ſmall flat (as it were) *Flower-Leaves*, whitiſh, bifid, divided at the Top, ſurrounded at the Bottom by other 5 ſmall ſtreight ſharp *Segments*, among which are plac'd the 5 Chives. The *Empalement* is deeply divided into 5 pointed Leaves with 4 *Embryons* in the Center, ſurrounding the *Pointal*, and adhering to a fungous *Placenta*. The *Flower* ſoon ſeparates, and quickly falls off, when the *Leaves* of the *Empalement* immediately contracting, unite together to guard the encloſed *Seeds*, compared to the Head of a *Viper*, which, upon their ripening, do alſo ſoon fall off.

Garden Bugloſs, *Burrage* and *Alkanet*, are cultivated and propagated in the *Britiſh* Gardens. *Wild Bugloſs* grows in the Corn Fields, in neglected Gardens, and Way Sides.

Virtues and *Uſes.*

As theſe *Aſperifoliæ* agree in their *Characters*, ſo for the moſt Part in their *Virtues*. They are all of what they call a cooling Nature, more or leſs *aſtringent*; ſome *viſcid*, and others *ſoporifick* and *anodyne*. *Burrage* and *Bugloſs Flowers* are with the *Violet Flowers* called *Flores Cordiales*, by the *Diſpenſatories*. The Ancients who inhabited the hotter Regions, eſteem'd them as ſuch, becauſe, whatever there, calmed the Motion of the *Blood*, and prevented a too violent *Diſpendium* of *Spirits*, was by them eſteem'd a *Cordial*, refreſhing the Body, and relieving it from that Laſſitude and Weariedneſs, the uſual Conſequence of ſultry hot Weather: Whereas, in theſe colder Climates, whatever raiſes and exalts the *Spirits*, and quickens the *Circulation* of the *Blood*, is the rather to be eſteem'd a *Cordial*, as rendring the Body more active, and making the *Animal Faculties* be more vigorouſly and lively exerted; ſo that the Uſe of the *Flowers* of *Burrage* and *Bugloſs* dry'd is chiefly in cooling *Ptiſanes*, and the *diſtill'd Water* of *Burrage* in

cooling *Juleps* in hot burning Fevers, to calm and quiet the *Blood* when too violently agitated, and the *Spirits* like to be too ſpeedily exhauſted. Some uſe the tender *Leaves* of *Borrage* in cold *Sallads*: They put them in *Wine* and *cold Tankards*, as cooling and refreſhing in the Heat of Summer. The *Conſerve* of the *Leaves* of *Borrage* is alſo kept in the Shops, as one of the *Ingredients* in *Bolus*'s and *Electuaries*. *Borrage* and *Bugloſs*, whether Garden or wild, may be promiſcuoſly uſed, but the *wild*, tho' the weaker and more common, is more frequently taken. I would rather chuſe the *Garden*. *Alkanet* is of the ſame Virtues, and its *Root* is only kept in the Shops, becauſe of the *Red Tincture* the *Bark* or outer Coat of its *Root* affords. Its chief Uſe is to give a *Red Tincture* to the Oil of Roſes: For as there are but few Oils, when infus'd, inſolated, or boil'd with a *Plant*, will be *tinctur'd* with any Colour from it, unleſs it be a Green, eſpecially the Roſe *Flower Leaves*; ſo the Apothecaries are forced to uſe the Stratagem of mixing ſome of the dry'd Roots of *Alkanet* among the Roſes, to give the Oil a Red Tincture, otherwiſe the Buyer will not take it. Nor does it ſeem to be improper, ſince by its moderate Aſtringency, it may be aſſiſting to the Virtues of the Roſe Leaves.

Botrys, vide *Atriplex*.

XV. *Braſſica Sativa*.

Braſſica rubra, C. B. P. 111. Tournef. Inſtit. 219. T. 106. Tabern. Icones 396. *rubra vulgaris*, J. B. 2. 21. 880. Raii Hiſt. 196. *ſativa rubra aperta lævis*, Moriſ. Hiſt. 2. 207. *Common red Cole*, or *Colwort*.

The *TRIBE*.

This noted *Plant* is by all Authors reckon'd among the *Tetrapetalæ ſiliquoſæ*, call'd *Flore Cruciformi donatæ* by *Tournefort*, with a long Cylindrical Pod, divided into two Pouches.

The *Deſcription*.

From an Heart-like Pair of *Seed Leaves*, common to moſt Part of the *Tetrapetalous* Claſs, its ſecond Leaves ariſe leſs, ſomewhat broad and oval, afterwards they encreaſe by Degrees 'till they are very large, roundiſh, of a ſmooth blueiſh Colour, thick ſet on the Top of a groſs round marrowy *Stalk* the firſt Year: The ſecond Seaſon, this *Stalk* becomes ſmaller, ariſes two or three Foot high, marrowy, tender and

and branch'd. The yellow *Tetrapetalous Flowers*, larger than is uſual to the *Claſs*, but ſmall in Proportion to the *Plant*, are plac'd in a long thin *Spike*, on the Top of the *Stalk* and *Branches*, to which ſucceed ſmall round *Cylindrical* Pods, about one Inch long, divided into two Pouches, containing ſmall round Seeds of a *bitteriſh*, not very hot Taſte.

The *Colwort* of the *Diſpenſatory*, is the *Braſſica rubra aperta* of *Moriſon*, a reddiſh blue *Leaf*, and groſs, round, red alternate *Veins* proceeding from the *Midrib*, always keeping open and never ſhutting at the Heart. It were needleſs to name the various *Coleworts* and *Cabbages* made Uſe of in the Kitchen, and to be ſeen in the Kitchen-Gardens. The chief of which, for common Uſe are the *open Colewort*, with red and white *Veins*. Theſe in ſome Places are much us'd for feeding of Cows in the Winter, alſo to fatten Bullocks; and the common Sort of People make a Broth of them, mixing a little Oatmeal cut or uncut, and eat them for daily Food. The *White Cabage* is uſually boild and eat with Beef and other Fleſh Meats. The *red Dutch Cabbages* are cut down very fine in *Holland*, and eat for a cold Sallad, with Vineger and Oil; here they boil them as they do the white: But of all the three, the *Savoys* are the moſt tender, but do not ſo well endure the Winter's Froſt. The *Colyflower* is the moſt delicious of all the Coleworts.

Virtues and *Uſes*.

Colewort Leaves are vulnerary, and ſubaſtringent; the Leaf of a red Colewort, (though all the others are of the ſame Virtue) being depriv'd of the tender outward Membrane, and apply'd to a green Wound, it becomes a good Digeſtive; ſome alſo apply it thus prepar'd, to digeſt and keep Iſſues open. It is alſo apply'd, being rubb'd over with a little freſh Butter, to keep open Bliſters, after the Application of an Epiſpaſtick; but their moſt frequent Uſe is in the Kitchen, as has been obſerv'd, where the Sprouts or tender Shoots of theſe open Coleworts, as well as the other Cabbages, are much us'd for boil'd Sallads, with other Greens, ſuch as *Beets*, *Spinage*, *&c.* in the Spring Seaſon. They are cultivated in the Gardens, and no where Indigenous in *Britain*. This open *Colewort*, with the *Rape*, and others of the ſame Kind, are ſown in the Fields for the *Seeds*, of which they make what is call'd the *Rape Oil*. Mr. *Miller*'s noted Experiment in *Tranſact.* 369. about the Mongrels, by ſowing of ſeveral Kinds of Cabbages near to each other, is a powerful Argument to prove the

Sexes

Sexes of Plants, and their Impregnation by *Effluvia*, as I have taken Notice elsewhere.

XVI. *Brassica Marina s. Soldanella.*

Brassica Marina s. Soldanella, J. B. 2. 15. 166. *Soldanella marit. minor*, C. B. P. 295. Raii Hist. 726. *Convolvulus marit. noster rotundifolius*, Morif. Hist. 2. 11. Tournef. Instit. 82. Boerh. Index 247. *Sea Bindweed*, falsly *Sea Colewort*, by some call'd *Scottish Sea Scurvy-grass.*

The *TRIBE.*

This is the only *Indigenous Convolvulus* of the *Dispensatory*, whose Characters are to have alternate *Leaves*, climbing *Stalks*, a milky *Juice*, a two-leav'd *Perianthium* or *Empalement*, with a *Monopetalous Bell Flower*, tubulous in the Bottom, and spread forth in the Top with 5 Holes in the Bottom, 5 *Stamina*, and a forked *Stylus*, to which succeeds a *subrotund membranous Fruit* divided into three *Pouches* with *corner'd Seeds.*

The *Description.*

This *Convolvulus* has a creeping *Root* slender reddish *Stalks* running two or three Foot on the Ground (not climbing unless supported by a Pole) the Bottom alternate *Leaves* are round like those of *Dutch Scurvy-Grass*, the others more pointed, like those of *Aristolochia*, upon long *Foot-stalks* of a dark Green, with a milky *Juice.* The *Flowers* are large, reddish, of the Bigness of the *Convolvulus maj. albus*, in a *two-leav'd tubulous Calix*, to which succeed round membranous *Seed Vessels*, divided into three *Pouches*, each containing two *Seeds.*

It grows frequently on the *Sea Coasts*, I have seen it near to *Fifeness* in *Scotland*, and on the *sandy* Sea Coast at *Yarmouth*, where by the Largeness and Brightness of the Flower it appears at a great Distance, when by its lower Stature it's scarce to be discern'd by the *Leaf.*

Virtues and *Uses.*

This is a pregnant Instance of the Affinity betwixt the *Characters* and *Virtues* of a *Plant*, *Herman* says, *Vegetabilia quæ simili inter se gaudent fructificatione, & proinde generis Societate conjunguntur, ut plurimum inter se convenire principiis activis atque virtute differente duntaxat secundum majus & minus prout sapor vel odor est intensior vel remissior pervulgatum est Botanicorum axioma; quod experientia non omnino repugnat:*

Inter

inter alia innumera teſtes ſunt Scammonium, Jallapa, Mechoacana, Soldanella cæteraq; hujus Familiæ. 'Tis here to be noted, that the true *Species* which affords the *Radix Jallapæ*, was not known even to *Herman* himſelf, for he does not condeſcend upon the particular *Species*, as a *Convolvulus*, nor does he take Notice that it's a Species of the *Mirabilis Peruviana*. Tho' it do's come very near to a *Convolvulus*, with the Difference of a *naked Calix*, on which the *Flower* is fix'd; an *Unicapſular Fruit*, by which it's *Monocarpos* or *Monangio-Monoſpermos*, and that it's neither *ſcandent* nor *Lacteſcent* but the *Flower* reſembles very much that of a *Convolvulus*, but of this elſewhere.

Soldanella is eſteem'd by all a violent *Purgative* and *Emetick*, is chiefly recommended in *Hydropical Caſes* as are moſt of the *Convolvuli*; but by its Acrimony, which is noxious to the *Stomach*, it's ſeldom preſcrib'd, and therefore of little Uſe in the Shops.

XVII. *Bruſcus.*

Ruſcus ſive Bruſcus, Ger. C. B. 470. J. B. 1. 579. Hort. Lugd. Bat. 530. Moriſ. Hiſt. 3. 540. *Myrtifol. aculatus*, Tournef. Inſtit. 79. Hiſt. des Plantes 528. *Oxymyrſine*, Raii Hiſt. 664. Dod. Pempt. 744. *Butchers-Broom.*

XVIII. *Hypogloſſum.*

Ruſcus Latif. fructu folio innaſcente, Tournef. Inſtit. *Laurus Alexandrina fructu pediculo inſidente*, C. B. 304. *Bonefacia ſeu Biſlingua*, J. B. 1. 575. *Hypogloſſum Lauro Hypogloſſum maſ. et fæm.* Raii Hiſt. 664. *Laurus Alexandrina folii medio Ligula inſidente*, Moriſ. Hiſt. 3. 540. *Horſe Tongue*, or *Tongue upon Tongue.*

XIX. *Laurus Alexandrina.*

Ruſcus Anguſtifol. fructu folio innaſcente, Tournef. Inſtit. *Laurus Alexandrina fructu ſolio inſidente*, C.B. 305. Moriſ. Hiſt. 3. 541. *Laurus Alexandrina*, J. B. 1. 574. Raii Hiſt. 663. Laurel of *Alexandria.*

The *TRIBE.*

The *Bacciferous Plants* are generally divided into *Bacciferæ non ſcandentes & ſcandentes*, and *Moriſon* not unfitly diſtinguiſhes betwixt the *Semper virentes*, as in theſe three, which are otherwiſe call'd, Επιφυλλόκαρποι, and the *non ſcandentes foliis deciduis*, as in the *Solana* formerly treated on. *Tournefort* places them among the *Flores Campaniformes*,

and moſt *Authors* bring them in the Vicinity to *Chriſtophoriana* and *Polygonatum*. They may be alſo called *Epiphylloſpermi*, but with this Diſtinction from the *Herbæ Capillares*, that the one is *ab Anteriori*, and the other *ex adverſa folii parte*.

The *Deſcription*.

XVII. *Bruſcus* or *Butchers Broom*, has hard white *Roots*, ſending ſeveral large Branches from one Head, like the Roots of *Aſparagus*, from whence ariſe ſeveral green, hard, tough, *ſtriated*, dark-green *Stalks*, much branch'd, about the Bigneſs of a Gooſe Quill, about 1 or 2 Feet high, thick ſet with ſtiff, ſmooth, dark-green, Myrtle-like *Leaves*, ſomewhat prickly at the Point without *Foot-ſtalks*, from whoſe Middle and upper Part ariſes a ſmall Flower like a big Pin's Head, at firſt Appearance expanded into a *globulous monopetalous whitiſh Flower*, ſurrounded by a *Perianthium*, divided into ſeveral *Segments*, with ſeveral purpliſh *Stamina* in the Middle, to which ſucceeds a red round Berry, bigger than that of *Aſparagus*, containing 1 or 2 Seeds. *Mr. Ray* is in a Doubt whether this may be called an Herb or Shrub, I think the latter, becauſe the *Gemmæ* of the new Leaves are to be ſeen before the old ones drop, as in other *Evergreens*, but ſince the two following have not the ſame Appearance, all may go together among the Herbs.

This is an *Indigenous Plant*, and has been obſerv'd by *Mr. Ray* in the Pariſh of *Blacknotly*, where he liv'd; near to *Reading*, in Woods of *Berkſhire* and *Oxfordſhire*, and pretty frequent near the Heaths near *Woolwich*.

XVIII. *Hypogloſſum*, *Horſe Tongue*, or *Tongue upon Tongue*, has an hard whitiſh *Root*, with ſeveral knobby Heads, whence are emitted ſeveral *Fibres* ſpread forth in the Ground. The *Stalks* ariſe 1 Foot high, round, green, creſted and tough, adorn'd with ſeveral hard ſtiff, dark-green, pointed, nervous *Leaves*, about an Inch broad, in the Middle of each Leaf ariſes tending obliquely forward, another ſmaller Leaf or *Tongue*, whence its Name; from whoſe Boſom proceeds a ſmall Flower, like that of *Ruſcus*, to which ſucceeds a round or oval red *Berry*, larger than that of *Aſparagus*.

XIX. *Laurel* of *Alexandria* has a Root like that of the former, from whence proceed Stalks like it, but much ſmaller, ſtreight, about 1 Foot high: Its Leaves are almoſt like thoſe of the following, being pointed, but *broader*, ſofter and rounder, and of a lighter green, for the moſt part alternate; but ſometimes 2, 3 or more will proceed radiated from the *Stalk*. The ſmall Lineaments of the Leaf or Tongue appear

pear ſometimes on the upper and ſometimes on the lower Side of the Leaf, from whoſe Boſom ariſes one or more ſmall half Inch *Foot-ſtalks*, ſupporting a ſmall *Flower* like the reſt, to which ſucceeds a red round *Berry*, for the moſt part containing one ſtony hard Seed like the Eye of a *Fiſh*.

Virtues and *Uſes*.

All theſe partake of the ſame Virtues according to their Notes and Characters, but the *Roots* of the *Bruſcus* are moſt in Uſe; they make one of the *five* opening *Roots*, in the *Diſpenſatory*: It's very much recommended for the *Hydropſy*, *Cachexia*, *Jaundice*, and *Suppreſſion* of *Urine*, alſo in *Scrophulous* Caſes. It may alſo be given in *Broaths* and *Ptiſans* along with *Parſley* and *Aſparagus*, and may be an Ingredient in *aperitive medicate Infuſions* for *Wine* or *Ale*. It enters the *Syr. de 5 Rad.* and *Syr. Raphani compoſitus*: Some preſcribe the Seeds as an Ingredient in *Benedicta Laxativa*, but that's often omitted, becauſe they are rare to be got; for it may be obſerv'd in general, that no Evergreens *fructify* frequently or bring their Fruit ſo often to Perfection, as they who have an annual Surface, which decays ſhortly after the Fruit or Seed is ripe.

XX. *Bryonia Alba*.

Bryonia alba ſive aſpera baccis rubris, C. B. 297. Tournef. Hiſt. des Plantes 249. *Alba*. Raii Hiſt. 659. Synopſ. Stirp. Brit. 146. *Alba ſive aſpera incana baccis rubris*, Moriſ. Hiſt. 2. 5. *Vitis alba ſ. Bryonia*, J. B. 2. 15. 143. White Bryony.

XXI. *Bryonia Nigra*.

Bryonia nigra. Tamus Racemoſa flore minore luteo palleſcente, Tournef. Inſtit. 102. Hiſt. des Plantes 536. *Bryonia lævis ſive nigra racemoſa*, C. B. 297. Moriſ. Hiſt. 2. 5. *Vitis nigra quæ Tamus Plinii folio Cyclaminis*, J. B. 2. 15. 147. *Vitis Sylv.* Dod. pempt. 461. *Bryonia nig. ſylv.* Raii. Hiſt. 660. Synopſ. Stirp. 536. Black Bryony.

The *TRIBE*.

Theſe two, though they be near of *Kin*, yet they ſpecifically differ from each other. They are claſs'd among the *monopetalous Bell-Flowers* by *Tournefort*, and among the *Bacciferæ ſcandentes*, by all other *Authors*. They are *flore a fructu remoto*, with others of the *ſcandent Tribe*,

Tribe, but *in diverſis plantis*, for ſome Plants have only the Male Flowers, and others, the Hermaphrodite ones.

The *Deſcription.*

XX. White Bryony has the *biggeſt* carnous *Root* of any of the *Herbaceous Race*, being according to the Time it has remain'd in one Place and Depth of the Soil, as big as one's Arm, and ſometimes as the Leg, ſtriking deep in the Ground with big *Fibres*, white, ſoft, pulpy, but not ſpungy, emitting in the Spring a great Number of weak infirm *Stalks*, by which it climbs to a great Height upon any Tree, or what elſe is near it, emitting Tendrils here and there to catch hold of any thing. The *Leaves* are broad, rough, whitiſh, *pentagonal* or *trigonal*, according to the Diſtance from the Root like thoſe of *Hedera Arborea:* The *Flowers* from the Boſom of the alternate *Leaves* ariſe 3, 4, 5, or more together, from a common *Pedicle*, each upon a ſmall proper *Foot-ſtalk*, yellowiſh-green, *monopetalous*, divided into five pointed *Segments*, ſurrounded by a quinquifid *Perianthium*, with 5 green *Stamina*, and their *yellow apices*, though I have often obſerv'd them in the *Male Flowers*, with only 3 *Stamina*, two of which were *bifid*, with 2 *apices*, and the 3 having only one *apex*. The *Hermaphrodite Flowers* are much leſs, more greeniſh, with a green *quinquifid Perianthium* cloſely adherent, and the *tuba* on the Center into 5 green *apices*, without any remarkable *farina*. This *Flower* is plac'd upon a very ſhort ſmall *Pedicle*, ariſing from the Top of a ſmall *Sphærical* or *oval green Embryo fructus*, which becomes a round or *oval* pulpy ſucculent *Berry* of the Bigneſs of a Pea, red when ripe, containing ſeveral oval Seeds. It often happens that the *Male Plant* grows at a great Diſtance from the *Hermaphrodite* one, for which *Pontedera* propoſes it as one of the Examples againſt the *Sexes* of *Plants*, and in Favour of thoſe he calls *barren Flowers*, of which I have diſcours'd at large elſewhere.

XXI. *Black Bryony* has alſo a long groſs *Root*, not ſo big as the other, running deep in the Ground, not ſo ſoft: Its infirm *Stalks* climb very high, and thruſt themſelves round the *Trunks* and *Branches* of *Trees*, without any *Claviculæ* or *Climbers*. The alternate *Leaves* upon very long *Pedicles*, are dark-green, ſmooth, ſhining, and angled, not unlike thoſe of *Cyclamen* or the *Tree Ivy*, but leſs, *heart-like*, and pointed. The Branches or Cluſters of *Flowers*, like the former, are ſmall, *greeniſh-yellow*, *monopetalous*, deep divided into 6 *Segments*, with 6 *Stamina*, with their *Apices* without any *Perianthium*. In the *Hermaphrodite Flowers*, on the ſame *Plant* with the *Male*, but in different Places have a long green oval Embryon upon the Top of the Pedicle

dicle, terminating in another ſmall ſhort Pedicle, which ſupports the Flower, as in the former, with a trifid Tube in the Center. This Embryon becomes an oval, oblong, pulpy, dark red Berry full of Seeds.

Both of theſe *Bryonies* grow at the *Roots* of *Hedges*, but the *white* is the far more frequent. Some laſcivious Perſons uſe to take the groſs *Root*, and make obſcene Figures, repreſenting Human Bodies of both *Sexes*, and expoſing them for Monſters, which they ſell and diſpoſe of for what they call *Mandrakes*.

Virtues and *Uſes*.

The *Root* of both *Bryonies* are moſt in uſe, but the *white* more frequent. It conſiſts of *tenuious* and *ſubtile* Particles, mixt with *acrimonious Salts*. It's recommended as a potent *Antihyſteric*, good in the *Dropſy*, *Gout*, and *Rheumatiſms*. The dry'd *Root* is kept in the *Shops*, and is a frequent Ingredient in *Medicate Infuſions* for *Wine* or *Ale*, in the *Menſtruorum obſtructio*, and *other Hyſterical* and *Hydropical* Caſes. It's ſaid to be purgative, but I could never obſerve its Effect that Way. I look upon it to be a good *Diuretic*, and not a bad *Febrifuge*. The *Fæcula* is made of it, by drawing of the *Juice*, and ſuffering it to be evaporated by the Heat of the Sun. The *Fæcula* or Impalpable Powder, which ſubſides and remains in the Bottom of the Veſſel, is given with good Succeſs in *Hyſterical* Caſes, along with *Coral. rub. pulv. Caſtor. Sal. Volat. ſuccini*, and *Ol. Rutæ. Aq. Bryon. comp.* is preſcrib'd in moſt *Hyſterical Mixtures*, *Cordials* and *Juleps*. The *Roots* of *Black Bryony* are not ſo frequently us'd; they are ſaid to be good *Diuretics* and *Antihyſterics*, but ſeldom kept in the *Shops*.

XXII. *Bugula*.

Bugula, Dod. Pempt. 135. Tournef. Inſtit. Hiſt. des Plants 321. *Sylvatica vulg. cærulea*, Moriſ. Hiſt. 3. 391. Raii Hiſt. 575. Synopſ. Stirp. Brit. 133. *Conſolida media quibuſdam Bugula*, J. B. 3. 30. 340. *Conſolida media perennis cærulea*, C. B. 260. Hort. Lugd. Bat. 172. Hort. Edinb. 91. *Common Bugle*.

The *TRIBE*.

This is the firſt *unilabiated* or *one lipp'd Plant* we met with, whoſe *Character* is, that the lower Lip is dependent, and for the moſt part divided in three blunt Portions, the middle largeſt and *bifid*, with 4

Stamina and their *Apices* plac'd parallel and aſcendent, which being more protuberant, ſerve inſtead of the *upper Lip*. There are but few of this *Sort*, and thoſe chiefly of the ſame Virtues, as ſhall be ſhewn.

The *Deſcription.*

This has a ſmall fibrous *Root*, ſending forth ſeveral jointed round *Stolones* or Shoots above Ground, emitting *Fibres* at each joint, which propagate the *Species*. Its lower *Leaves* upon long *Foot-ſtalks* are dark Green, or Purpliſh, oblong and oval, not unlike the *Anagallis aquat.* a little *crenated*. The ſquare *Stalks* ariſe near half a Foot, a little rough, blueiſh, ſending forth the *Leaves* by thin ſet Pairs, the *Flowers* are plac'd in a pretty groſs Spike, or rather divided into *Whorles* by Intervals, with a ſmaller Pair of Leaves at the Bottom of each Whorle, dark blue, large in Proportion to *Plants* of that Claſs, *one lipp'd*, with 4 *Stamina* ſupplying the *upper* one, to which ſucceed four *Seeds*. The whole when cultivated is a buſhy low *Plant*, with the *Stalks* groſs, in Proportion, ſtreight and thick ſet. It grows frequent in Meadows and Paſtures.

Virtues and *Uſes.*

This is an Inſtance where not only Plants of a general *Character*, but even with particular *diſtinctive Notes*, have a Reſemblance in their *Virtues*; for tho' *Polium* and *Scordium* and *Scorodonia* have their *Particles* more attenuating than their *Congeners*, yet all of the *unilabiated Plants* partake of greater *Aſtringency*, and are leſs attenuating than moſt of the *bilabiated*. This is ſuch an *Aſtringent*, that it's call'd *Conſolida media*, but it's leſs viſcid and more deterſive and penetrating, than the *Aſperifoliæ*; as *Symphytum maj.* and *Pulmonaria*; for it's not only recommended in *Piſans*, with other *Pectorals* in *Conſumptive* and *Hectic Caſes*, but alſo is much eſteem'd as an *Aperient*, *diuretic* and *deobſtruent*, and preſcrib'd where *Obſtructions* in the *Viſcera* and *Liver* are ſuſpected. It enters the *Decoctum Traumaticum* of the *Old Diſpenſatory*.

XXIII. *Bupthalmum.*

Bupthalmum vulg. Chryſanthemo Congener Cluſ. Hiſt. 332. Tourneſ. Inſtit. 495. *Tanaceti min. fol.* C. B. 134. *Chryſanthemi Tanaceti minoris fol.* Hort. Lugd. Bat. 145. *Chamæmelum Chryſanthemum quorundam*, J. B. 3. 26. 122. *Buphthalm. vulg.* Raii Hiſt. 341. *Chryſanthemum perenne brevioribus & incanis foliis Tanaceti inſtar alatis*, Moriſ. Hiſt. 3. 20. Ox Eye.

The

The *TRIBE.*

This is another of the *Corymbiferæ Radiatæ*, whoſe large yellow Diſk, with not ſo deep a *Ray* as that of the *Leucanthemum* or *Bellis maj.* has obtain'd to it the Name of *Ox Eye.*

The *Deſcription.*

This Plant has a hard fibrous *Root*, with ſeveral ſmall round whitiſh *Stalks*, one or two Foot high. The *Leaves* upon the *Stalks*, eſpecially the *Branches*, are whitiſh, hoary or downy, *pennated*, and deep divided, like thoſe of *Milfoil*, or rather *Tanſy*, but ſhorter, of a *Camomile Smell.* The ſingle *Flowers* on the Top of each *Branch* are large, *radiated*, like thoſe of *Chryſanthemum*, with long ſharp *Apices* in the *Diſcus*, and a ſhort *Corona.* The *Empalement* is downy and ſcaly, ſmall, oblong ſolid *Seeds*, with other *Corymbiferous Plants*, obſerv'd by Mr. *Ray*, on the River *Tees*, near *Sogburn* in the *Biſhoprick of Durham.*

It's ſeldom us'd in *Phyſick.* It ſeems to have been introduc'd into the *Diſpenſatory Catalogue* by *Dioſcorides.* By the *Taſte* and *Smell* it may be a *Diſcutient* and *Vermifuge* with moſt of the other *Corymbiferæ*, and may be an *Ingredient* in *Fomentations.*

XXIV. *Burſa paſtoris.*

Burſa paſtoris major fol. ſinuato, C. B. 108. Tournef. Inſtit. 216. T. 103. Hiſt. des Plants 11. *Paſtoria* J. B. 2. 22. 936. *Paſtoria Burſa*, Dod. Pempt. 103. *maj. Capſula cordata fol. laciniatis*, Moriſ. Hiſt. 2. 304. *Thlaſpi fatuum Burſa paſtoris dictum*, Raii Hiſt. 838. Synopſ. Stirp. Brit. 176. Shepherd's Purſe.

The *TRIBE.*

This is a noted Plant among the *Tetrapetalæ ſiliquoſæ*, with a *flat Pod*, upon which Account it's not improperly call'd *Thlaſpi fatuum* by Mr. *Ray.*

The *Deſcription.*

Shepherd's Purſe has an hard white annual fibrous *Root*, large, ſcollop'd or *ſlaſht bottom Leaves* lying on the Ground, an hard, ſmall, round, ſomewhat rough, much branched *Stalk*, adorn'd with long narrow *pointed undivided Leaves*, ſupporting ſmall white *tetrapetalons Flowers*,

Flowers, to which ſucceed triangular *Flat Pods*, with the acute Angle towards the *Foot-ſtalks*, and the Baſe at the Extremity not unfitly ſaid to be *Triangulum Iſoceles inverſum quaſi referens*, divided into two *Pouches*, and fill'd with ſmall round *Seeds*. It's very common in Gardens, among Rubbiſh, and on Banks and Walls.

There are ſome who add to this, *Burſa paſtoris minor loculis longis* for the *Paronychia Offic.* but I rather chuſe the *Paronychia rutaceo fol.* called *Sedum minus Tridactylites tectorum*, for which ſee *Sedum*.

Virtues and *Uſes.*

This is eſteem'd the *greateſt* Aſtringent among all the *Tetrapetalous Tribe*, neither Herb nor Seeds have that acrimonious and *hot Taſte* incident to the reſt of that *Claſs*. It's therefore call'd *fatuum* by Mr. *Ray*; it's recommended for *ſpitting of Blood*, *Vulnerary* Caſes in the *Menſtruorum fluxus nimius*, but is not frequently preſcrib'd.

XXV. *Buxus.*

Buxus Arboreſcens, C. B. 472. *Buxus* J. B. 1. 4. 496. Raii Hiſt. 1693. Tournef. Inſtit. 578. Boer. Ind. 472. Dod. Pempt. 782. The Box Tree.

The *TRIBE.*

Mr. *Ray* claſſes this Tree among the *Arbores fructu ſicco*. But *Tournefort*, upon a more ſtrict Obſervation, has diſcover'd that it's *flore a fructu remoto in aliis ejuſdem plantæ locis*. It is ſaid by *Boerhave* to have an *apetalous Flower*, with a groſs *tetraphyllous Calix*, endow'd for the moſt Part with 4, but often with many more *Stamina*. *Tournefort* makes it a *Monophyllous Calix*, divided into four blunt *Segments*. Both agree that the *Fruit* ariſes in diſtinct Parts. It ſeems to be *Planta ſui Generis*: for *Empetrum* or *Erica baccifera procumbens nigra*, only agrees with it in being *Flore a fructu remoto*; for it rather ſeems to have a ſmall *amentaceous Flower*, with *Juniperus*, and an *eſculent umbilicated black Berry*, without any Diviſion of the *Seeds* into *Pouches*.

The *Deſcription.*

The *Box Tree* is but of a low Stature, very much branch'd, with a rough Bark, yellow *Wood*, or Subſtance, moſt ſolid and ponderous, with thick-ſet ever-green *Leaves*, like thoſe of the *Myrtle*, but of a lighter Colour, and not ſo pointed, hollow ſometimes, and ſo ſenſibly

bly double, that the two Parts may be divided with a Knife, as Mr. *Ray* informs us, of a diſagreeable Taſte and Smell. That learned *Author* alſo obſerves, that the yellow apetalous Flowers appear firſt in ſmall Globules, which afterwards break forth into ſeveral Cluſters, abounding with *Stamina*; but theſe *Tournefort* affirms are diſtinct from the *Fruit*, which, according to him, becomes like an *inverted Pot*, or what is turn'd upſide down, divided into three *Pouches*, which when ripe, pours out the *Seeds* contain'd, with an Elaſticity. It's of a very ſlow Growth, and long Life, which uſually happens to all ſuch ponderous and ſolid *Woods*. It grows naturally at *Box Hill* near *Darking* in *Surry*, alſo in *Boxwell* in *Coteſwold* in *Glouceſterſhire*, and at *Boxly*, where there are Woods of it. Here we may remark, that 'tis not only *Indigenous*, but muſt have remain'd there ſo long as to be the Reaſon of impoſing the Names of theſe three ſeveral Places.

Virtues and *Uſes.*

It's not much in Uſe in the *Shops*, unleſs for Utenſils, and other Mechanical Inſtruments. They who would ſubſtitute it for *Guajacum* and *Saſſafras*, are under no Neceſſity to do it, the other being not much dearer, and much more agreeable; nor is it worth while to diſtil the *Oil*, on Account of the *Tooth-ach*. Its being ſo fœtid, may make it of Uſe in the *Epilepſy* and *Vapours*; and *Tournefort* teaches a very good Method of rectifying it, by putting it in a Circulatory Veſſel, with one Third of *Sp. Vini*, of which he preſcribes 20 Drops for a Doſe, given with *Sugar* and Powder of *Liquorice*; but ſince *Ol. Guajaci*, *Saſſafr. &c.* are much more pleaſant, and eaſy to be had, without ſo tedious a *Rectification*, I ſuppoſe few will have Recourſe to it. Its Uſes in Mechanicks are ſo various, and ſo well known, that I need not name them; and what agreeable Ground Plots and Borders they make of it in the *Gardens* of the Curious, every one is ſenſible.

I might in this Place raiſe a very good Argument, to prove that *Plants* have no manner of *Air Veſſels*, or *Tracheæ*, as Dr. *Grew* and *Malpighi* aſcribe to them, that they have neither *Syſtole* nor *Diaſtole*, as Dr. *Chambers* would alledge, from *Malpighius*'s *Syſtem*, that the *Plantæ folium* can never be eſteem'd the *Plantarum Pulmo*, as he would have it; neither can a *Plant* receive any manner of *Nouriſhment* from the *Air*, with Mr. *Bradley*; but that as the *Capillaries* of the Leaves ſerve to *attenuate* and *ſubtilize* the *Sap* in the *Sap Veſſels*, and render it more capable of *Circulation* to the *Capillaries* in the *Petals*, and both Male and Female Parts of the *Flower* ſerve as *Vaſa preparantia*, to elaborate the *Seminary Particles*, ſo that the *Pores* in the Surface of the

Leaves, *Flowers*, and *Bark*, are ſo far from being *Orifices* for admiſſion of *Air* into theſe *Tracheæ*, (*Air Veſſels*) that they are true *excretory Ducts*, for the *inſenſible Tranſpiration*, for the emitting of the *ſuperfluous* Particles of the *Sap*, during its *Circulation*, after the ſame Manner as the more *ſubtile* and *ſpirituous Particles* are ſecern'd by the *Pores* from the *Blood* in *Animal Bodies*, with which the *Lungs* have no manner of Concern. And this I think is fully demonſtrated by *Lewenhock*'s curious Obſervation on the Pores in a *Box Tree Leaf*, one half of which amounting to 172,090, and the whole to 344,180. His Words are, (*Tranſact.* 369.) *Sequitur unam folii* Buxi *ſuperficiem oſculis* 172090 *præditam eſſe cum autem altera ſuperficies haud paucioribus inſtructa ſit tandem exſurget numerus* 344,180, *quorum ope perſpiratio & exhalatio fiat.* And again, chuſing the downy Part of the Bark of a Peach, he expreſſes himſelf thus, Ibid. *Cum lanuginem illam quæ mala perſica vulgo montana, conveſtit nupera æſtate ſine Microſcopio conſiderarem fruſtula quædam mali perſici ex cortice exciſa ante Microſcopium collocavi —— ut autem Multitudinem oſculorum habitus expirantium palam proponam unaque ingentem numerum exhalantium humorum qui aerem ingreſſi particulas oblongas, ſed alias aliis longiores ſpiſceſcunt oculis ſubjiciam exiguam mali perſici portionem delineari & in icone ——* By which he declares, That being impoſſible to enumerate the Pores that the very Particles of Humours which perſpir'd through this Portion of the *Peach*, thicken'd the very *Air*, as the Breath we expire, being impregnated by the Particles of our *Blood*, darkens the Surface of a Looking-glaſs.

By which I may briefly conclude, that if the *Sap* did not circulate, or were not in perpetual Motion, how can we ſuppoſe ſuch abundance of Particles could be ſeparated or exhale from it? 2dly, If the *perſpiring Pores*, by which theſe Particles paſs out, where is there any Room for aereal Particles to enter, and be admitted into the *Tracheæ*, or Air Veſſels? For it's impoſſible there can be two different Paſſages, an *Exitus* and *Introitus*, by the ſame *Pore*: Surely thoſe who conſider this, will believe there can be no ſuch Thing as 'The *Sap* thickning 'or being condens'd, or turn'd to the Conſiſtence of a Gum by the 'Winter's Cold, ſo that it can move no more.' That there can be no ſuch Thing as a *Syſtole* and *Diaſtole*, where there is neither a *Fibra motrix*, nor *Villum contractile*: That the Plants can never be nouriſh'd by the *Air*, when there is no imaginable Admittance of *Air* into their *Veſſels*, and that ſome other Uſe muſt be aſſign'd to the *Leaves* and *Flowers*, than that they ſhould perform the ſame Office in *Plants*, as the *Lungs* do in *Animals*. But enough in this Place, ſince I am reſolv'd, *Deo vitam largente & otium & valetudinem ſuppeditante*, as Mr. *Ray* expreſſes it, both to prove an *univerſal*, *perpetual*, and *perennial*

Circulation

Circulation of *Sap*; and that the *Air* has a quite different Effect upon *Plants*, than that of their *Nouriſhment*. And thus I have finiſh'd ſuch of the Diſpenſatory Plants as belong to the Letter B.

C.

XXVI. *Calamintha* and *Hedera terreſtris.*

1. *Calamintha paluſtris* Officin. *Calamintha arvenſis verticillata*, C. B. 229. *Mentha arvenſis verticillata hirſuta*, J. B. 3. 2. 217. Mor. Hiſt. Ox. 3. 369. *Mentha ſeu Calamintha aquatica*, Ger. emac. Raii Hiſt. 530. Synopſ. Stirp. Brit. 232. Water Calaminth.

2. *Calamintha flore minore odore Pulegii*, J. B. *Pulegii odore ſ. Nepeta*, C. B. Raii Hiſt. H. Oxon. *&c.* Field Calaminth.

3. *Calamintha vulg. vel officin. Germaniæ*, C. B. 228. Tournef. Inſt. 194. *flore majore*, J. B. 3. 18. 223. Mor. Hiſt. 3. 412. Raii Hiſt. 569. Synopſ. Stirp. Brit. 243. Hiſt. des Plants, 405. *montana*, Dod. Pempt. 98. Common Calaminth.

4. *Hedera terreſtris vulgaris*, C. B. 206. *Calamintha humilior folio rotundiore*, Tournef. Inſt. 194. Hiſt. des Plants, 181. *Chamæciſſus ſ. Hedera terreſtris*, J. B. 3. Raii Hiſt. 566. Synopſ. Stirp. Brit. 131. Dod. Pempt. 394. Moriſ. Hiſt. 409. Ground Ivy, Tun Hoof, Ale Hoof.

The *TRIBE.*

All theſe are comprehended under the general Title of *Flore labiato donati cujus Labium ſuperius eſt erectum*, or Lip Flower, with a ſtreight *upper Lip*; by *Boerhave*, among the *Gymnotetraſpermæ Verticillatæ*, or *whorled Flowers*, to which ſucceed 4 naked Seeds. Mr. *Ray* places the firſt among the *Verticillatæ*, and the reſt with the *Spicatæ*.

N. B. 1ſt, *Spica* is a Compoſition of *Flowers* or *Seeds*, thick ſet, ſo as to make up a long *Cone* or *Cylinder* on the Top of a *Stalk*.

2dly, *Verticillum* is when a Cluſter of *Flowers* cloſely ſurround the Top or upper Part of the *Stalk*, either with or without *Pedicles* or *Foot-ſtalks*, as it were an *Hooping* or *Whorle*. Theſe *Verticillatæ* differ from the *Spicæ* in the *Lip* or *Helmet Flowers*, when they are at certain Diſtances betwixt the *Whorles*, frequently with a Pair of Leaves at the *Baſe*, eſpecially when the Diſtance is conſpicuous; but when they are near to each other, then they are call'd both *ſpiked* and *whorled*.

N. B. What *Tournefort* calls ſimply *Flores Labiati*, *Lip Flowers*, *Ray* calls *Galeatæ*, (*Helmet Flowers*) and ſometimes *Labiatæ & Galeatæ*, ſome *Flowers* in the ſame *Genus* reſembling an *Helmet*, and others

what

what may be more properly call'd a *Lip.* Thus *Calamintha aq.* is call'd *Planta verticillata.* The other *Calaminths* are *Spicatæ & Verticillatæ*, and the *Menthæ* for the moſt Part are only *Spicatæ.*

I was doubtful whether I ſhould bring *Hedera terreſtris* to this Place, or treat of it at H. Mr. *Ray* blames *Tournefort* for lightly changing the Names of *Plants*, which are *longo uſu receptæ*, when under no Neceſſity. Thus it was neceſſary for Dr. *Moriſon* to place *Alſine Hederulæ folio & Veronicæ folio* among the *Veronica's*, becauſe they have the ſame Characters, and much the ſame *modus creſcendi*, and to place the *Anagallides aquat.* among the *Veronica's* alſo, becauſe of the ſame *Flower* and *Fruit*; but *Tournefort* was under no ſuch Obligation to make *Angelica hort.* an *Imperatoria*, *Raph. ruſt.* a *Cochlearia*, and this *Hedera terreſtris* a *Calamintha*, becauſe ſome have not the ſame *Notes*; for *Imperatoria* differs from *Angelica* by the *Umbell*, *compreſſion* of the *Fruit* and *Taſte.* *Raphanus* by the *facies externa* and *Taſte*, differs much from *Cochlearia.* *Hedera Terreſt.* by the *modus creſcendi* and the *Taſte* and *Smell* is very diſtinct from *Calamintha.* For all the *genuine Mints* (by which I exclude *Pulegium*) and *Calamints*, have a peculiar *Taſte* and *Smell*, by which they reſemble each other, and differ from all others of the *Gymnotetraſpermous*, *ſpicated* and *verticillated Tribe.* However, I have choſen to inſert *Hedera Terreſtris* here, both becauſe the expert and judicious *Editor* of *Ray's Synopſ.* Edit. 3d, has thought fit to do ſo, and that I might treat of as many of that Claſs together, as that the 2d and 3d Decads, ſeriouſly conſider'd, giving a very good Idea of the *Umbelliferous Plants*, this 4th may give a true Repreſentation of the *labiated*, or *Lip Flower Tribe*, after the ſame Manner,

Both Mr. *Ray* and *Tournefort* agree, that this *Calamintha aquat. offic.* is truly a *Mentha*, becauſe the *Borders* of the ſmall *Flowers* appear equal; ſo that inſtead of an *upper* and *lower Lip*, it's ſo divided as if it were *quadripartite*, whereas the *upper Lip* of the *Calaminths* is *erect:* But how this will anſwer with *Tournefort's* General Title of the *Sect. viz.* to be *Cochlearis inſtar excavatum* (Hollow) I know not: But be how it will, though it have a *Mint Flower*, yet it has a *Callamint* Taſte and Smell, conſequently of the ſame *Virtues*, which is all I'm concern'd for in the *Officinal* View.

The *Deſcription.*

1. *Water* or *Field Calamint* is a low *Plant*, growing ſometimes on the Sides of Ditches, alſo in moiſt Corn Fields, with a fibrous running *Root*, ſquare, ſomewhat hairy and whitiſh *Stalks*, *Leaves* by *Pairs*, of a *Calamint* Scent, on ſhort *Foot-ſtalks*, roundiſh, but longer and larger

larger than the *common Calamint*, ſomewhat indented, and much of the ſame hoary and whitiſh Green Colour. The thick *Whorles* of *Flowers* are at pretty diſtant Intervals, upon the Top of the *Stalk*, with a Pair of *Leaves* ſupporting each Whorl of *Flowers* and *Seeds*, as above.

2. *Field Calamint* has the *Stalks* more reddiſh, *Branches* inclining more downwards, *Leaves* not ſo *hairy*, and whitiſh, both *Leaves* and *Flowers* leſs than the former, a vehement Smell, rather inclining to that of *Penny Royal* than *Mint*. Both grow on dry *Banks* on the Sides of High Ways. The ſecond is more frequent, and flowers later in the Year.

3. *Common Calamint* has its *Leaves* upon a *quadrangular*, *jointed*, ſomewhat rough Stalk, about half an Inch long, a little crenated, hoary, and of a whitiſh Colour, the Flowers two or three upon one common Pedicle, ariſe from the oppoſite Sides of each joint and Boſom of the *Leaves*, at leaſt the upper Part of the *Stalk* and *Branches*; the *Lip Flowers* have their upper *Lip* erect of a pale red, the *Calix tubulous*, and for the moſt part trifid, of a *Mint* Smell, but more vehement.

'Till of late, I always look'd upon the *Calamintha vulg.* now call'd *Montana*, to be the *Calamintha Offic.* But ſince the *New London Diſpenſatory* has been pleaſed to eſtabliſh the *Calamintha odore pulegii*, becauſe it ſeems more frequently Indigenous here in *England*, as ſuch; I yield to Authority, and ſuperior Judgments.

4. *Ground Ivy* propagates itſelf as much, by emitting *radical Fibres* from the Joints of the *Stalks*, as moſt of the *Mint* Kinds do, below Ground, running along, and ſpreading under *Hedges*, and on the Sides of *Ditches*, ſending forth alſo long round Pedicles by *Pairs*, each ſupporting round Leaves, dark Green above, White below, ſomewhat hairy, crenated, with round Nitches about an Inch Diameter, and deep divaricated *Veins*; the *Flowers* ariſe from the Boſom of the *Leaves*, two or three together on each Side, upon one *common Pedicle* or *Foot-ſtalk*, in an oblong *tubulous Calix*, *Blue*, with a *bifid* erect upper *Lip*, the under one *tripartite*, the Middle *larger* and bifid alſo, to which ſucceed the 4 *Seeds*, as above.

I have often obſerv'd a larger and leſs Species of *Hedera terreſtris*, the one *flowering* more early in the Spring, and far more plentifully, the other later, the *Leaves* of the one much leſs, of a purpliſh Red, the *Stalks* not ſpreading ſo far, growing on dry Banks, craggy Ground, and tollerably good *Paſtures*, but much expoſed to the Sun; whether Culture, or Alteration of Soil, will ſhew them to be Variations, I know not; but upon ſeveral Years Continuance in the ſame Place, I have ſeen them have the ſame Appearance. *Rivinus* gives an handſome Figure of both, by the *Names* of *Major* and *Minor*.

Virtues and *Uſes.*

All the *Calamints* conſiſting of *tenuious* and *ſubtile Particles*, and exalted Oil, are *carminative*, *diſcutient*, and *aperitive*, good for the *Stomach* and *Cholick Pains*. It may be drank in a *Tea*, or in Infuſion of it in *White Wine*, made afterwards in a Poſſet, and drank hot, may be an effectual and ſpeedy Remedy to appeaſe *Cholick Pains*, alſo to provoke the *Menſes*; but to *ſome* its heavy ſtrong *Scent* and *Taſte*, may be more noxious than that of the other *Mints*. It enters *Syr. de Artemis. Ivæ Arthrit. de praſſio. de Stæchade. de Epithymo. Oxymell Elleboratum. Looch Sanans. Spec. Diacalaminth. Dianis. Theriaca Androm. &c.*

4. *Ground Ivy* having a quite different *Taſte* and *Smell*, can never be juſtly reckon'd a *Calamint*, as is obſerv'd. It's eſteem'd *aperitive*, *deterſive*, and *vulnerary*; above all, it's look'd upon as a good *Pectoral*, conſiſting of *viſcid* and *balſamick Particles*; ſo that being *ſubaſtringent*, it contracts the Orifices of the *Capillaries*, and curbs the *Acrimony* of the *Blood*. It's of an *heavy Smell*, and moderately *bitter Taſte*; by its *Viſcidity*, the groſſer *Particles* of *fermenting Malt Liquors* adhere to it, which, by the Gravity, ſubſides to the Bottom of the *Veſſel*; and thus it clarifies the Liquor, as Whites of *Eggs* do, *Whey*, and the Decoction of *Green Herbs*. It's on that Account call'd *Ale-hoof*, or *Tun-hoof*, and we may ſay with Mr. *Ray*'s *Synopſis*, *Edit.* 3*d*, *olim* (*& nunc etiam*) *doliis Immiſſa uti ſoliti ſunt ad depurandam ſeu clarificandam Cereviſiam.* For there's ſcarce any Publick Houſe in *London*, but keeps what they call *Gill Ale*, which they reckon a good *Pectoral*, and for *Shortneſs* of *Breath*; though I have often obſerv'd, if the *Ale* was thereby more depurated, yet it ſtopp'd the *Fermentation* of it ſo far as not to ſuffer it to have ſo *keen Edge* as otherwiſe, it ſtill remaining a dull heavy *Taſte*. It's ſeldom us'd in the *Shops*, ſave in Ptiſans, with other *Pectoral Ingredients*.

Before I quit theſe *Calamints*, I cannot paſs by a *Species* ſent me by an *ingenious Correſpondent*, which I have for ſome Years cultivated in my Garden, and ſuppoſed it to be a *Calamintha flore magno præſtantior*; but upon a more ſtrict Examination of the ſeveral *Species*, I find that to differ from any of its *Congeners*, except it be *Calamintha odore pulegii*, *Hiſt. Oxon.* 3. 413. I ſhall therefore give the *Synonima* of both, and compare the Deſcriptions.

Calamintha magna flore, C. B. 229. *Montana fl. magno ex Calyce oblongo*, J. B. 3. 28. 229. *Montana præſtantior Lob.* Icon. 512. *Raii Hiſt.* 569. *Rivini Icon. ad fl. Irregular*, *monopet.* Field Calamint, with a large Flower.

Calaminth

Calamintha odore pulegii fol. latioribus, Hort. Lugd. Bat. 102. *Magno fl. odore pulegii*, Hiſt. Oxon. 3. 413.

The firſt has ſeveral ſquare Stalks ariſing from the *Root*, endow'd with Leaves by Pairs at the *Joints*, half an Inch long, ſays Mr. *Ray*; an Inch long, and oval, ſays *Bobart*; from two Inches to one and half long; and from one Inch, to half an Inch broad, according to *Rivini*'s Figure, and Spear pointed. The Flower is twice as large as that of the common *Calamint*, and the common Pedicle, with the *Calix*, proportionable. The Leaves of this are roundiſh and broad pointed, deeply crenated with the former, dark Green and ſmooth; thoſe of the Bottom about an Inch Broad at the Baſe, and an Inch and half long, upon an half Inch Pedicle; the others as they aſcend gradually leſs and more pointed, with deep ſulcated Veins, oblong *Calix* and Flower, proportionally leſs than the *Calamintha magno flore*, and much larger than the other two; ſo that whether we conſider the *Surface*, it differs very much from the two firſt *Calamints*; the Figure of the *Leaf* is much ſhorter, broader, and leſs pointed than the third, with both *Flower*, *Calix*, and *Pedicles* leſs; in a Word, the whole *Plant* is both leſs and of a lower Stature: But what is moſt remarkable is its *Smell*, not ſo vehement and heavy as the reſt, but agreeable Smelling like a *Citron*, rather than *Penny-royal*; and its *Taſte* agreeably hot, much more pleaſant than either the *Calamint* or *Mint* Kind; much reſembling a *Citron* in the Flavour, and not unlike *Pepper Mint*, by the Hotneſs of the *Taſte*, of which hereafter. I am ready to believe it's the *Pulegii odore foliis latioribus*, of *Hort. Lugd. Bat.* for which *Herman* aſſigns no Author, and ſhould think it were that mention'd by *Bobart*, if the Figure to which he refers it, *Sect.* XI. *Tab.* 21. did not expreſs the Leaves much more narrow pointed. To conclude: I was ever averſe from an unneceſſary Multiplication of Species; but this muſt either be a *non deſcript*, or the Deſcription of it muſt be erroneous, according to the Figures.

XXVII. *Calendula.*

Calendula, Dod. Pempt. 254. *Caltha vulg. fol. pallido*, C. B. 275. Tournef. Inſtit. 498. *fl. ſimplici*, J. B. 3. 26, 101. Raii Hiſt. 337. Moriſ. Hiſt. 3. 13. Common Marygold.

The

The *TRIBE.*

This is one of the principal *Corymbiferæ Radiatæ*, chiefly differing from its *Congeners* by its frequently *bended ſolid Seeds*, ſooner throwing off the *Floſcules* or *Flouriſhes* than uſual.

The *Deſcription.*

It has a whitiſh thick annual *Root*, a low very much branched ſmall round ſomewhat rough corner'd *Stalk*, obduced with a Clammyneſs perceptible by the Touch. The yellow green *Leaves* like a Tongue furround the *Stalk* without *Pedicles* or Footſtalks, narrow at the Baſe, juicy and hoary; ſupporting numerous yellow or Gold-colour'd *radiated Corymbiferous Flowers* upon the upper Part of the *Stalks* and Branches with a large creſted and fringed rough *Empalement*, and large broad crooked *Seeds*, convex and broad on the outſide, ſharp and narrow on the Inſide. It very much abounds in moſt Gardens, frequently with full large double *Flowers*, only conſiſting of half Flouriſhes.

Virtues and *Uſes.*

Marygold Flowers may be juſtly call'd *Crocus pauperum*, there being ſcarce any Caſe where *Crocus* or *Saffron* is preſcrib'd to thoſe who are able to purchaſe it; but the meaner Sort of People uſe *Marygold*, eſpecially in the *Malignant Fevers*, *Purples*, *Scarlets*, *Small Pox*, *Chicken Pox*, *Meazles*, or where a *critical Eruption* is ſuſpected, or accompanies any ſuch *Fevers*. They take the dry *Semifloſcles* and ſuſpend them in a *Bag*, in *Chicken* or *Barley Broths*. They infuſe them in *Small Beer*, *Sack*, or *White Wine*; which afterwards they turn into a *Poſſet* with Milk; they take off the *Poſſet* Head, and give the *Poſſet* to be drank plentifully upon the firſt acceſs of any ſuch *Fever*. They are eſteem'd *Cordials provoking Sweats*, expelling theſe *critical Puſtules*, good for the *Jaundice*, (probably *per Signaturam*) provoking the *Partus* and *Menſes* in all which it reſembles the *Crocus*, as ſhall be ſhewn, though its Principles, either by *Taſte* or *Smell* do not ſeem to be very active, yet its balſamic Particles, which are evident by the viſcid and clammy Surface, may very much invelope and obtund the *acrimonious* Particles in the Texture of the *Blood* of thoſe who are affected with the abovenamed *Diſtempers*. There is a *ſimple diſtill'd Water* of the *Herb* and *Flower*, which is not unfitly order'd to be after a previous Maceration, and Digeſtion. Both *Herb* and *Flowers* enter *Aq. Epidemica*. The *Conſerve*, with

with a triple Quantity of Sugar, is a very proper *Vehicle* for *Cordial Powders*, &c. becauſe its Taſte is in no wiſe diſagreeable to nice Palates.

Camphorata, vide *Chamæpitys*.

XXVIII. *Cannabis.*

Cannabis ſativa, C B. 320. Tournef. Inſtit. 334. *mas & fœm.* J. B. 3. 30. 448. *fœcunda & ſterilis*, Dod. Pempt. 335. Raii Hiſt. 158. Synop. Stirp. Brit. 53. Moriſ. Hiſt. 3. 433. Common Hemp.

The *TRIBE.*

This is one of the *Apetelous Plants*, *flore a fructu remoto in diverſis plantis*, and join'd with *Spinachia* and *Mercurialis*. *Bryonia* and this, the one *perennial*, the other *annual*, afford moſt powerful *Arguments* for the *Sexes* of *Plants*; for tho' the *Male Plant* of *Bryony* may be, and often is obſerv'd, at a great Diſtance from the *Female*, yet it can be propagated by the *Root*; ſo that it's not neceſſary for its Berries always to be *impregnated* or *productive*; whereas, if the *Male Plants* which grow promiſcuouſly among the *Female Plants* of *Cannabis*, be pull'd up, before the *Male Duſt* is fully ſhed, the *Seeds* will prove abortive, produce nothing if ſown next Year, neither will thoſe concern'd in the *Oil Mills* give any thing for them, there being only empty Huſks, without any Kernel to produce the *Oil*. This I have mention'd elſewhere, and is well known to the Inhabitants of *Bickar*, *Swineſhead*, and *Dunnington*, three Pariſhes in *Holland* in *Lincolnſhire*, where *Hemp* is cultivated in great Abundance, and where they who unwilling to loſe the Benefit of the *Hemp*, pull what they call the *Femmels* (*i. e.* the Male Plants) too ſoon to their dear bought Experience, as I have been inform'd by Perſons of good Credit.

The *Deſcription.*

From an *annual*, *ſimple*, white, woody, *not* very fibrous *Root*, this Plant ariſes with a ſtreight, ſquare, hollow, branched Stalk, about a Man's Height, cloathed with a dark, thick, green, rough Bark. The *digitated Leaves* upon long Pedicles, proceed 5, 6, or 7, together, oblong, narrow, pointed, nervous, rough, dark green, and indented. From their Boſom in the *Male Plants* proceed four *racemi*, or ſmall Spikes, decuſſated two and two, like a St. *Andrew*'s Croſs X, loaded with *Apetalous ſmall Flowers*, deep divided into five Segments, purpliſh

 without,

without, and light green within, with 5 *Stamina*, and yellow *Apices*, plentifully endow'd with Duſt. Theſe *Plants* produce the *Flower* much ſooner, are more early blown, and the Duſt is ſhed before the *Embryons* appear; after which, the whole Plant immediately dries up, and unleſs pull'd before they decay, their Bark or *Hemp* will be good for nothing. The Female *Plants*, which are always much taller and larger, have their Embryons thick ſet round the Joints, at the Boſom of the *Pedicles*; they are at firſt dark green, rough and obduced with a Viſcidity, and afterwards become oblong or oval, a little flattiſh towards the *Stalk*, ſmooth, purpliſh, and ſhining *Seeds* when ripe.

It is ſown in fat well cultivated Ground, and in the Bottoms of Dunghills. Mr. *Ray* obſerves, that in the pooreſt Soil the *Male Plants*, and in the richer the *Female Plants* are more numerous. The Reaſon is, the *Male Plants*, which only produce the *Flower*, do not require ſo much Nouriſhment as the *Female*, which muſt perfect the *Seeds*, requiring fatter Ground, do not ſo readily ſpring forth in a poor Soil as the *Male*.

N.B. *Folium digitatum* is when 5, 6, or 7 *Leaves*, united at the Center and extremity of the Pedicle, are ſpread forth towards the *Circumference*, like ſo many Fingers, as in this *Cannabis*, *Helleborus niger*, and *Floſs paſſionalis*, or the *Paſſion Flower*; and differs from *Folium pinnatum*, when the ſmall *Leaves* are join'd by Pairs to the *Midrib*, or *Coſta media*, which is only an elongation of the *Pedicle*.

Virtues and *Uſes*.

The *Culture*, *dreſſing*, and *preparing* of *Hemp*, for the *Mechanical Uſes* of all Kind of Cordages and coarſe Cloths, is well known, and of *Hemp Seed* for *Oil*. The medicinal Virtues of the *Seeds* are variouſly treated; ſome aſſerting it to be *Venereal*, others *e contra*, others recommend it for ſtopping the *fluor albus*, and others reckoning it a *Specific* for the *Jaundice*. I look upon it to conſiſt of *oleaginous Particles*, and fit for obtunding of *Acrimony*. I have ſeen it given in Emulſions for the *fluor albus*, and *Jaundice*, mix'd with other Emollients for *Cataplaſms*, and with *Sem. Pſyllii* and *Cydon.* for *Collyriums*, for a Lenitive to ſore Eyes. It ſeems to partake of the ſame Virtues with *Sem. Lini*, but not quite ſo *Viſcid*. Its Uſe for Food to tame Birds is well known.

Capillus Veneris, vide *Adianthium*.

XXIX. *Caprifolium*.

XXIX. *Caprifolium.*

Caprifolium. Periclymenum non perfoliatum, J. B. Tom. 2. l. 15. *Periclymenum non perfoliatum Germanicum*, C. B. 302. Raii Hiſt. 1490. *Caprifolium Germanicum*, Dod. Pempt. 411. Boerh. Ind. 2. 226. Honey-Suckle.

The *TRIBE.*

This is the firſt Bacciferous Shrub in the Alphabet. It has an oblong tubulous *Flower*, like an Hunting-Horn, enlarged at the Border, and divided into two *Lips*. It differs much in the Flower from all thoſe claſs'd with it by *Authors*: Therefore *Tournefort* muſt lay aſide his Claſſing by the *Flower*, when he comes to *Trees* and *Shrubs*, and place their *Characteriſticks* in the Fruit with other *Authors*. This *Caprifolium* is among the *Dicotylidones Bacciferæ*, with *Boerhave*, and *Bacciferæ Umbilicatæ Polypyrenæ*, with Mr. *Ray*.

The *Deſcription.*

This *Shrub*, from a white woody fibrous *Root*, ſends forth ſeveral weak infirm branched Twigs, unable to ſupport themſelves, but climbing upon whatever *Shrub*, *Tree*, *Bank*, or *Wall*, to which it's neareſt, and ariſing to a great Heighth, if ſupported as the Twigs ariſe, ſeldom exceeding the Groſſneſs of one's Thumb. The *Leaves* by Pairs, are oblong, oval, ſmooth, light green, about two Inches long, and half an Inch broad. The *Flowers* on the upper Part ariſe aggregated, or in Tufts, 5, 6, or 7 together, from the ſame Origin, without *Pedicles*, oblong, tubulous, and bended like an Hunting-Horn, reddiſh without, divided at the Border into two Lips, the upper erect and bifid or trifid, the lower larger, dependent and *fring'd*, yellowiſh, of an agreeable Smell, with five long ſmall *Stamina*, and round *Apices* about the Bigneſs of a Pin's Head; the *Stylus* is long, bending upwards, and much longer than the *Stamina*. To each of theſe Flowers ſucceeds an oblong or oval Berry, red when ripe, full of ſmall *Seeds*.

It grows in *Woods* and ſhady Places, the Sides of Houſes, and *Garden Walls*; the *Bark* is green, ſmooth, cloſely adherent the firſt Year, becoming more looſe the ſecond, drying and thrown off, the third Year, as the *Vine*, *&c.* to which ſucceeds a new Coat or Bark.

Theſe looſe exile Membranes yearly thrown off a few *Trees* and climbing *Shrubs*, as *Betula*, *Caprifolium*, *Vitis*, *&c.* brings again under Conſideration the *Circulation* of the *Sap*; for as theſe ſeveral *Tunicles* of the

the *Bark* dry up the Orifices of the *Sap Veſſels* which nouriſh'd them are ſhut, ſo that the *Sap* is more concentrated, and confin'd within leſs Bounds, which may be one Reaſon why the Sap aſcends in ſuch Abundance in the *Birch*, before it puſh forth the annual Surface, and why it has been obſerv'd to flow ſo ſwiftly in the *Vine*, that by placing of a *ſmall Glaſs Tube* upon a *Vine* Branch tranſverſly cut, the *Sap* has been obſerv'd to riſe and fall like *Mercury* in a *Barometer*, according as the *Heat* of the Sun is more or leſs intenſe, and to aſcend two or three Foot high in a viſible Fluid, in the Month of *March* and *April*, and to continue thus until the *annual Surface* be wholly puſh'd forth; but of this more when I come to *Vitis*.

Virtues and *Uſes*.

It's of little or no Uſe in *Phyſick*. Its Leaves, which uſed to be preſcrib'd in *Gargariſms* for *ſore Throats*, are ſuſpected for their Acrimony; but perhaps they may be as effectual as the *Folia Solani vulgaris*, which, though leſs Acrimonious, are frequently, in this Country drank as *Tea* for that Diſtemper, and ſo effectual, that it's look'd upon as a Specifick.

Capſicum, vide *Amoris Pomum*.

F I N I S.

PHARMACO-BOTANOLOGIA;

OR,

An Alphabetical and Classical

DISSERTATION

ON ALL THE

British Indigenous and Garden Plants

OF THE

New *London* DISPENSATORY.

In which

Their GENERA, SPECIES, *Characteristick* and *Distinctive* NOTES are Methodically described; the *Botanical* TERMS of ART explained; their *Virtues*, *Uses*, and *Shop-Preparations* declared.

With many CURIOUS and USEFUL REMARKS from proper Observation.

DECAD V.

By *PATRICK BLAIR*, M. D. of *Boston* in *Lincolnshire*, and Fellow of the ROYAL SOCIETY.

Miseri mortales qui Naturam ejusque artificium Abdunt, ubique diligentia patens, & Amplissimos solis radios Nubecula obfuscant. Barth. Epist. ad Lyserum.

LONDON:

Printed for G. STRAHAN at the *Golden Ball* over-against the *Royal Exchange* in *Cornhill*; W. and J. INNYS at the West End of St. *Paul's* Church-Yard; and W. MEARS at the *Lamb* without *Temple-Bar*. MDCCXXVII.

The PLANTS of the Fifth DECAD.

THE PREFACE TO THE FIFTH DECAD.

THIS *comes abroad in due Time, as I promiſed in the laſt, and is to be followed in the ſame gradual Manner by all the remaining* Decads, *until the whole* Diſpenſatory Catalogue *is finiſhed.*

It contains three remarkable Particulars; 1. *A Variety of* Species, *by which the* Diſtinctive Notes *are further explained.* 2. *Several Plants famous for their frequent Uſe in Phyſick.* 3. *An Account of the Correſpondence betwixt their Notes and Virtues.*

The Species *begin with the* Tetrapetalæ Siliquoſæ; *ſuch as* Cardamine; *The* Capitatæ *are* Carduus Mariæ, Benedictus, Carthamus, Atractylis, Centaurium majus, Cinara. *The* Umbelliferæ *are* Carum, Cicuta *and* Coriandrum; Caryophyllata *is one of the* Gymnopolyſpermæ *or* Flores Roſacei *of* Tournefort; Caryophyllus *is the firſt of* Tournefort's Caryophylleous *Claſs*; Caſtanea, Ceraſus, Cornus, Corylus, *are* Trees *of ſeveral* Genera; Chamædrys, &c. *with* Chamepitys *are a Continuation of the* Unilabiated Tribe; Chamæmelum, &c. *of the* Radiate; Citrullus *brings in the whole Officinal Species of the* Pomiferæ Scandentes; Centaurium min. *is one Example of the* Diangiæ-polyſpermæ; Cochlearia *affords Examples of the* Tetrapetalæ Siliculoſæ; Conſolida *ſhews ſome of the moſt conſiderable* Aſperifoliæ: *Three Species of* Conyza *are produced, becauſe, though they have been eſteem'd by the Ancients, yet there remains an*

Uncertainty

Uncertainty of the Officinal Species *among the* Moderns; Coronopus *leads the* Plantain, *and* Craſſula *the* Sedum *Kinds.*

2. Eſteem'd for their Virtues and Uſe, *are* Carduus Benedict. *Fol. Sem.* Carthamus, Carum, Coriandrum, *Sem.* Caryophyllatæ, *Rad.* Caryophylli *Fl.* Ceraſi *Fruct.* Chamædryos, Scordii, Chamæpityos, *Herb.* Chamæmelum Matricaria *Herb. Fl.* Centaur. min. *ſummitates* Cochl. *Herb.* Raph. ruſt. *Rad.* Conſolida Cynogloſſ. *Rad.* Plantago *Herb. Sem.* Pſyllii *Sem.* Sedum *Herb. and* Citrullus *with his Congeners make up the* Sem. 4. frigida maj.

3. Correſpondence in Virtues. *The* Capitatæ *of Virtues more or leſs potent, the ſame with* Carduus: *The* Seeds *of the* Umbelliferæ, ſalutiferous *and* carminative, *or* poiſonous *and more* acrimonious; *as* Cicuta, Œnanthe aquat. *and* Phelandrium: *The Difference I ſuppoſe being, though all the* Umbelliferæ *conſiſt of* tenuious *and* ſubtile Particles, *yet the* Salts *of theſe eſteem'd* poiſonous Plants *muſt be more* acrimonious *than the other, and 'tis probable that this* Acrimony *may be chiefly lodg'd in the* Herb, *and the* Seeds *may be more inoffenſive; the more* acrimonious Particles *being deny'd admittance at the compoſing of the* Seed, *which, generally ſpeaking, have a different* Taſte *and* Texture *from the other Parts of a* Plant. *The* Virtues *of the* Corymbiferæ nudæ *and* Radiatæ *are chiefly the ſame, in a more or leſs degree, with* Chamæmelum. *I have remark'd, that moſt of the* Unilabiated, *when treating of* Bugula, *have the ſame* Virtues. *The* Tetrapetalæ Siliculoſæ *are potent* Antiſcorbuticks *with* Cochlearia. *The* Aſperifoliæ *more or leſs* Coolers, aſtringent *or* anodyne, *of which* Bugloſſum, *Decad.* IV. Conſolida maj. *and* Cynogloſſum *are the Examples; for tho'* Cynogloſſum *be chiefly eſteem'd* narcotick, *yet it is alſo* aſtringent; *and I look upon the* pernicious *Effects of it, and its* Congener, Cynogloſſum marinum, *to be only becauſe they exceeded in the* Doſe, *as a great many Medicines, when taken in too great a Quantity, prove both* noxious *and* poiſonous. Colocynthis *and* Cucumis agreſt. *only differ from their* Congeners *by two* acrimonious Salts. *All the* Plantain *Kinds are* Aſtringents, *and the* Seda *Coolers and Repellents.*

Since the Explanation of the general Characters and Terms of Art are much paſt, Theſe, and the following Sheets, will be chiefly employ'd in a more full Declaration of the Diſtinctive Notes, and farther Demonſtrations of the great Correſpondence betwixt them and the Virtues of Plants, *which I hope will ſtill prove entertaining and inſtructive. The next* DECAD *ſhall come abroad in a ſhort Time, and will give an Account of ſome Plants of ſpecial Conſideration.*

PHAR-

PHARMACO-BOTANOLOGIA;

OR, A

TREATISE

OF

DISPENSATORY PLANTS,

Alphabetically and Classically disposed.

DECAD V.

I. CARDAMINE, NASTURTIUM AQUATICUM, & SOPHIA CHIRURGORUM.

1. *Cardamine pratensis magno flore purpurascente.* Tournef. Instit. 224. T. 109. *Nasturtium pratense magno flore*, C. B. 104. *Iberis Fuchsii sive Nasturtium Sylvestre*, J. B. 2, 21, 889. *pratense magno flore simplici*, Morif. Hist. 2, 223. Hort. Lugd. Bat. 445. *Cardamine*, Raij Hist. 814. Synopf. Stirp. Brit. 170. *Flos Cuculi*, Dod. pempt. 592. Ladies Smock, or Cuckow Flower.

2. *Sisymbrium aquat.* Math. 487. Tournef. Instit. 226. *Sisymbrium Cardamine sive Nasturtium aquat.* J. B. 2, 21, 889. *Nasturtium aquat. supinum*, C. B. 104. *aquat. supinum flore albo*, Morif. Hist. 2, 223. Raij Hist. 816. Water Cresses.

3. *Siſymbrium annum Abſinthii minoris fol.* Tournef. Inſtit. Hiſt. des Plantes. *Naſturtium ſylv. tenuiſſime diviſum*, C. B. 105. *Naſturtium ſylv. tenuiſſime diviſum ſive Naſturtium* μυειόφυλλον, *fl. luteo minimo*, Moriſ. Hiſt. *no.* 5. *Eryſimum Sophia dictum* Raij Hiſt. 812. Synop. Stirp. Brit. 170. *Seriphium Germanicum ſive Sophia quibuſdam*, J. B. 2, 21, 886. *Sophia Chirurgorum.* Lob. Icon. 738. Flixweed.

The *Tribe.*

Tournefort, though he brings theſe into one *Section*, yet divides them into different *Genera*; and though it be agreed that they are *Tetrapetalæ Siliquoſæ*, yet *Boerhaave*'s only Diſtinction between them is, that *Cardamine* has the *Siliquæ per maturitatem diſſilientes*, which is more particularly obſervable in that *Species* called *Cardamine impatiens*, and that this *Naſturtium* has them not ſo. This is juſtly term'd *Siſymbrium aq.* that it may be diſtinguiſh'd from *Naſturtium hortenſe*; but care is to be taken that it be not confounded with *Siſymbrium aq. Menthæ Species.* Though *Sophia Chirurgorum* does not fully partake of the ſame Virtues, yet I have brought it hither becauſe of the *Notes.*

The *Deſcription.*

1. *Ladies Smock* is a low Plant with fibrous *Roots*, ſending forth ſeveral *pinnated Leaves*, conſiſting of four or five Pair of ſmall roundiſh *Pinnæ*, not always directly oppoſite, with an odd one, ſpread on the Ground; the flowering Stem in the middle riſes about one foot high, endowed with a few alternate more narrow and ſharp-pointed *Pinnæ*, bearing a few large *Tetrapetalous*, purpliſh, or more white *Flowers* on the top, with yellow Apices, and ſmall long *cylindrical* bivalve Pods ſucceeding, full of ſmall round Seeds.

It flowers in *March* and *April*; grows at the ſides of Ditches and other fenny or boggy moiſt and ſhady Places.

2. *Water Creſſes* has many ſmall white Fibres of the *Root*, ſunk in the Mud at Spring Wells, and in the bottom of Ditches and other watry Places, chiefly where there is a *Spring.* The *Leaves* are *pinnated*, conſiſting chiefly of ſix pair, oblong or ſubrotund, light and ſmooth, with a ſingle one largeſt, and frequently more purpliſh. The numerous *flowering Stems* ariſe one foot high, ſupporting ſmall white *tetrapetalous Flowers* in *Tufts*, to which ſucceed ſmall cylindrical bivalve Pods with round Seeds.

Theſe

Theſe Herbs appear ſooner in the Spring than moſt of the Water-Plants; the Flower is frequently in *April* and *May*.

3. *Flixweed* ariſes on the Walls and dry Ground, with a ſtrait branched hard round *Stalk*, adorn'd with fine deep divided *Fennel*-like *Leaves*, of a blueiſh Colour, like *Roman Wormwood*: The *tetrapetalous Flowers* are very ſmall and yellow, ſucceeded by ſmall *bivalve cylindrical* Pods with numerous *Seeds*; it grows in dry gravelly and ſandy Places.

Virtues and *Uſes.*

1. *Water Creſſes* is reckoned one of the moſt potent *Antiſcorbuticks* in the Shops; and being joined with *Anagallis*, or *Veronica aquat.* or *Becabunga offic.* is drank in the Juice, mix'd with *antiſcorbutical* Infuſions, among *Ale* diſtill'd in *antiſcorbutical Waters*; eat with *Salt* in *cold Sallads* in the Spring; they alſo eat it with freſh Butter; the Teeth are rubb'd with the *Leaves* and *Salt* in a Morning, to preſerve the Gums from *antiſcorbutical Eroſions.* See more of this at *Anagall. aq.* Decad I.

2. *Cardamine* ſerves for the ſame Purpoſes; but being a ſmall Plant, and not ſoon gathered to any quantity, the other is more frequently uſed.

3. *Flixweed Seeds* are not ſo acrid; the whole Plant has more of an *Aſtringency*, and, when uſed in the Shops, 'tis preſcribed for *Diarrhæas* and *Dyſſenteries*; 'tis alſo thought good for the *Gravel*, though the *Seeds* of other *tetrapetalous* Plants more acrimonious ſhould be preferred.

II. *Cardiaca.*

Cardiaca J. B. 3, 28, 320. Tournef. Inſtit. 186. T. 87. Dod. pempt. 94. Lob. Icones 516. Raij Hiſt. 563. Synopſ. Stirp. 134. *Marrubium Cardiaca dictum*, Moriſ. Hiſt. 3, 378. Motherwort.

The *Tribe.*

This is another of the *bilabiated* or *two-lip'd Flowers*, with the upper *Lip* concave. By Mr. *Ray* 'tis plac'd among the *Spicatæ* & *Verticillatæ Herbaceæ.*

The

The *Deſcription.*

This *Plant*, from a *perennial fibrous Root*, ariſes one or two Foot, with groſs ſtrait four-ſquare *Stalks*, with large broad rough *deep-vein'd Leaves*, darker *green* above than below, upon pretty long *Foot-ſtalks*, *roundiſh* towards the *Pedicle*, denticulated before, the upper Leaves from the Joints of the *Stalks* are chiefly divided into three pointed *Segments*, the middle largeſt. The *Whorles* of Flowers from the upper Joints have hard ſhort prickly *Empalements*; the *Flowers* have a ſubrotund hollow *upper Lip*, the *lower trifid*, the *middle* being the largeſt; the *four Seeds* are like others of that kind: It flowers in *July*, grows in *Lanes* in Towns, and near to Gardens; ſo that 'tis doubted whether it be *Indigenous*, or an *Ejectamentum.*

Virtues and *Uſes.*

'Tis eſteem'd *cordial*, *hyſterical*, and fit for *provoking* the *Menſes*, and *promoving* the *Partus*; but its Principles do not ſeem to be ſo active as to anſwer thoſe good Deſigns; therefore, ſince there are others of that Claſs of more potent Virtues, 'tis of no great uſe in Phyſick.

III. *Carduus Mariæ, Carduus Benedictus, Atractylis & Carthamus.*

1. *Carduus Mariæ vulg.* Raij Hiſt. 312. *albus maculis notatus vulg.* C. B. 381. Tournef. Inſtit. 440. Hiſt. des Plantes 323. Boerh. Ind. 136. Moriſ. Hiſt. 3, 154. Ladies Thiſtle.

2. *Carduus Benedictus*, J. B. 3, 25, 75. *Cnicus ſylv. hirſutior ſive Carduus Benedictus* C. B. 378. Tournef. 450. *Carduus nutans & procumbens ſudoriferus & amarus*, Moriſ. Hiſt. 3, 160. Bleſſed Thiſtle.

3. *Atractylis lutea* C. B. 379. *Atractylis vera flore luteo* J. B. 25, 83. *Atractylis* Raij Hiſt. 304. *Carduus luteus erectus reticulatus ramulis fuſum referentibus*, Moriſ. Hiſt. 3, 161. *Cnicus Atractylis lutea dictus*, Tournef. 451. Hiſt. des Plantes 490. Yellow Diſtaff-Thiſtle.

4. *Carthamus offic. flore croceo*, Tournef. 457. Boerh. 139. *ſive Cnicus* J. B. 3, 25, 79. *Cnicus ſive Carthamus offic.* C. B. 378. Moriſ. Hiſt. 3, 145. Raij Hiſt. 302. Baſtard-Saffron, *or* Saf-Flower.

The

The *Tribe.*

I have joined theſe four together, being of the *Capitatæ*, or *Gymnomonoſpermæ Capitatæ*, according to *Boerhaave*; they are alſo of the *Carduus* or the *Thiſtle-kind*; diſtinguiſh'd as they are more or leſs prickly. *Carduus Mariæ* is eſteem'd a genuine *Carduus*, being more prickly than the reſt. *Carduus Benedictus* and *Atractylis* are plac'd among the *Cnici*, being leſs prickly, and having their large turgid *Head* ſurrounded by ſeveral ſmall *Leaves*. Theſe three have *pappous Seeds*; *Carduus Benedictus* has bearded *Seeds* with ſtiff Briſtles, placed like the Feathers in a *Shuttle-Cock*. *Carthamus* Seeds have no down. *Boerhaave* obſerves, that the *Carduus* are ſomewhat milky.

The *Deſcription.*

1. *Ladies Thiſtle* is a biennial *Plant*, with a ſoft carnous *Root*, the firſt Year ſpreading forth large ſinuated ſmooth ſhining dark variegated green *Leaves*, with milky veins, and very prickly round the edges: The ſtrait prickly ſtriated downy branched *flowering Stem* ariſes two or three Foot high; the ſecond or third Year ſupporting large *Heads*, compoſed of ſeveral thin ſmooth prickly *Leaves*, of an *Empalement* ſurrounding many large blue *Floſcules*, to which ſucceed ſeveral flat oval black ſmooth *Seeds* lodged on a Down.

2. *Bleſſed Thiſtle* ariſes with ſeveral infirm rough ſtriated *Stalks* and *Branches*, ſpread forth with large ſlaſh'd, or largely nitch'd, rough light green *Leaves* not ſo prickly as the former. The *Heads* are large bulg'd or protuberant, ſurrounded by ſome rows of leſs prickly *Leaves*, with ſharp prickles at the end, encloſing ſeveral *yellow Floſcules*, to which ſucceed ſeveral oblong large ſtriated light green *Seeds*, with the eye, where it was fix'd in the *Thalamus*, ſomewhat reſembling an human Face; the other end is crown'd with ſeveral ſtiff Briſtles bending outwards, lodg'd in a *Down*. It is an annual *Plant*.

3. *Diſtaff-Thiſtle* has its firſt *Leaves* leſs than the former, lying in a Circle on the Ground, ſlaſh'd and ſurrounded with Prickles. The *flowering Stem* ariſes with leſs alternate Leaves, more prickly, and dented or notch'd, upon a ſtrait not much branched *Stalk*, ſupporting a few Heads, large in proportion, but leſs than the former, ſurrounded with ſmall prickly *Leaves*, and encloſing ſeveral yellow *Saffron*-like *Flouriſhes*, to which ſucceed oblong ſquare *Seeds*, not unlike the following, not very *pappous*.

4. *Baſtard-Saffron*, ſo called from the Colour of its *Flouriſhes*, ariſes with a ſtrait round *Stalk* branched at the top. The alternate ſmooth nervous *Leaves* are endow'd with few Prickles round the edges, about two Inches long, and one Inch broad and pointed. The *Heads* on the top of the *Stalk* and *Branches* are ſcaly, not ſurrounded by ſmall *Leaves*, as the former, with deep *Saffron-coloured Flouriſhes*; to which ſucceed ſeveral oblong hard ſmooth white *Seeds*.

The firſt is *indigenous*, growing among hard ground, rubbiſh of old ruinous Walls, alſo on dry ſandy and gravelly banks. The reſt are either ſown in the Gardens or Fields.

Virtues and *Uſes*.

1. *Ladies Thiſtle* is not much uſed: Its tender Leaves are uſed by ſome as a delicious Green for a boil'd *Sallad* in the Spring. The *Seeds* are eſteem'd *aperient* and *ſudorifick*; they are uſed in *Emulſions* for the *Dropſy*, *Rheumatiſm*, and *Pleuriſy*. Four Ounces of the Juice is recommended for a good Febrifuge, drank up at the beginning of the Fit.

2. *Carduus Benedictus* has been eſteem'd formerly for its excellent Virtues; 'tis reckon'd *Sudorifick*, *Cordial*, and *Alexipharmick*, more of modern Uſe in ſome Places than others. The *diſtill'd Water* is preſcrib'd in *cordial ſudorifick Mixtures* for continued *Fevers*. Becauſe of the bitter Taſte, they infuſe the dry Leaves among warm Water, to become nauſeous to the Stomach at the taking of an *Emetick*. *Carduus Poſſet*, with White-wine drank hot, is a good Remedy to eaſe *Cholick* Pains, and to provoke *Sweating* in violent *Rheumatiſms* and *Pleuriſies*. The *Seeds* are eſteem'd *aperient*, and are either preſcrib'd in Powders for the *Gravel*, or drank in *Emulſions* in the above-named Caſes. It ſeems to partake of the ſame Virtues with *Fl. Chamæmeli*, and may be preſcrib'd along with them. The *Seeds* are often in Ingredients in *Materials* for *medicate Infuſions* in *Wine* and *Ale*, and with the Ingredients for *Decoctum Amarum*. Either Leaves or Seeds of *Atractylis* are fit for the ſame Uſes, and the diſtill'd Water is ſubſtituted for that of *Carduus Benedictus*.

4. I could never be ſenſible of the *purgative* Quality aſſign'd to the *Sem. Carthami*; I look upon it as an *Aperient* with the reſt; it enters the *Elect. Diacarthamum*, which is reckoned an *Hydragogue*: its chief uſe is for Drinks for Horſes. In a word, I look upon all theſe to agree in their *Virtues* as in their *Characters*; but as *Carduus Benedictus* is the more potent, ſo it is deſervedly moſt eſteem'd.

IV. *Carum.*

Carum ſive Carvum Raij Hiſt. 446. Synopſ. Stirp. Britt. 3, 214. *Carui*, Cæſalpin. 291. Tournef. Inſtit. 50. *Carum ſive Carvi* Moriſ. Hiſt. 3. 296. Umbell. 24. *Carvum pratenſe offic.* C. B. 158. *Caruus* J. B. 3, 2, 27. *Carum* Dod. Pempt. 399. Caraway, *or rather* Carui.

The *Tribe.*

This, by all Authors, is one of the umbelliferous Plants, with ſmall ſtriated *Seeds*; to which *Boerhaave* juſtly adds *Seminibus odoratiſſimis.*

Deſcription.

From a *carnous* ſweet-taſted annual Root, the dark green *pinnated* and variouſly diſſected Leaves (the *Pinnæ* without Pedicles or *Foot-ſtalks*) do ariſe: thoſe at the bottom are ſpread forth on the Ground. The branched ſtriated ſmooth jointed *Stalks*, about a foot or a foot and a half high, ſupport the white flat *Umbells* on the top, each with bifid or heart-like *Petals*, with their *Apices* bended inwards; to which ſucceed the longiſh ſmall gibbous and ſtriated *Seeds* of a fragrant *odoriferous Smell.*

It grows abundantly in moſt of the Paſtures of *Holland* in *Lincolnſhire*, *Norfolk*, and at *Hull* in *Yorkſhire.* Mr. *James Sherard* obſerv'd it plentifully in *Chriſt-Church College* Meadows *Cambridge.*

Virtues and *Uſes.*

This produces one of the four larger hot *Seeds* in the Shops; partakes of the ſame Virtues, and is uſed promiſcuouſly with the *Sem. Aniſi*; 'tis one of the greateſt *Carminatives* or *Diſcuſſers* of Wind in the *Shops*; its Uſes, as a *Corrective* for *Senna*; *Carminative Clyſters*; moſt Compoſitions for diſcuſſing of *Wind*, in *Seed Cakes*, *dry Confections*, and *Candies*, &c. are ſo well known, that I need only name them.

V. *Caryophyllata.*

Caryophyllata C. B. 221. Tournef. Inſtit. 294. Hiſt. des Plantes, 254. Moriſ. Hiſt. 2, 430. Raij Hiſt. 606. Synopſ. Stirp. Brit. 3, 253.

253. *vulg. fl. parvo luteo*, J. B. 2, 17, 398. Boerh. Ind. 42. Avens *or* Herb-Bennet.

The *Tribe.*

This Plant is by *Moriſon* placed among the *Pentapetalæ fibroſa radice*; by *Tournefort* among the *Flores Roſacei*; or where there are ſeveral Petals placed in a Circle, or diſpoſed like thoſe of a Roſe. By Mr. *Ray* it is ſaid to be *polyſpermos ſeminibus nudis*, called by *Boerhaave Gymnopolyſpermos.*

The *Deſcription.*

From a carnous *Root* ſoon becoming fibrous, it ſends forth ſeveral rough, ſomewhat hairy, dark green ſerrated *Leaves*; thoſe neareſt the *Root* doubly or triply pinnated, or conjugated upon the *Pedicle* or Mid-rib, with an odd one largeſt at the Extremity: Amidſt the bottom *Leaves* ariſe the ſmall branched Stalks, one or two Foot high, adorn'd with three ſmall Lobes of *Leaves* at each branching, without foot-ſtalks, rough dark green and ſerrated. At the top of the *Stalk* and Branches appear the ſmall yellow *roſaceous Flowers*, from a *monophyllous Calyx*, deeply divided into ten *Segments*, with numerous *Stamina* and *Apices*; to which ſucceeds a rough globulous *Fruit*, compos'd of ſeveral naked *Seeds*, endowed with ſeveral rough hairy ſtiff Filaments adhering to the *Cloaths*, like ſo many Burrs: The Root is perennial.

It grows at the ſides of Hedges and ſhady Places, of Coppices and Woods, flowering in *May* and *June.*

Virtues and *Uſes.*

Its *Root* is only uſed, being *aromatick*, *ſtomachick*, and *cordial*; 'tis moderately *aſtringent*, *vulnerary* and *deterſive*; 'tis ſaid to be good for the *Rheumatiſm*, and reſerating of *Obſtructions* of the *Liver:* It conſiſts of *tenuious* and *ſubtile Particles*, has an *aromatick Taſte* and *Smell*, like *Cloves:* 'Tis a good Ingredient in *medicate Infuſions* for *Wine* or *Ale.* An Infuſion of the dry'd *Roots* alone, in either of them, and drank in a Morning, gives an excellent Reliſh, and proves a very good *Stomachick.*

VI. *Caryo-*

VI. *Caryophyllus ruber, Tunica* ſive *Vetonica.*

Caryophyllus rub. flore ſimplici & multiplici C. B. 267. Tournef. Inſtit. 329. Raij Hiſt. 987. *Altilis maj.* Moriſ. Hiſt. 2, 561. *Betonica Coronaria ſ. flos Caryophilleus* J. B. 3, 29, 327. Clove Gilly-flower.

The *Tribe.*

This *Plant* is claſs'd among the *Pentapetalæ Unicapſulares* by *Moriſon*; Mr. *Ray* calls them *Pentapetalæ Vaſculiferæ*; *Boerhaave*, *Monangioſpermæ*; *Tournefort* looking upon *petalis in orbem poſitis* to be of too large an Extent for one Claſs, divides them into three; *Roſacei*, as in the laſt; *& Umbellatæ*, otherwiſe called *Umbelliferæ*, and *Caryophyllei*, from this *Caryophillus*, whoſe conſtituent *Character* is *petalis ex imo Calyce tanquam e tubo quodam emergentibus:* to which may be added, that all of them have *Folia ſimplicia acuminata nunc latiora alias anguſtiora ſæpe graminea caulibus frequenter nodoſis.*

The *Deſcription.*

From a fibrous *Root* there ariſe many Stolones or *Shoots*, compos'd of ſhort or thick-ſet *Joints*, from each of which ariſe by Pairs ſeveral long narrow cæſious or blueiſh Graſs-like *Leaves*, longitudinally concave within, and convex without, like the hollow-bladed *Swords*; the *Stalks* ariſing in the middle are one or two Feet high, divided into a few *Branches* at the top, with *Leaves* by Pairs from the Joints at long Intervals. The *Flowers* conſiſt of a *tubulous* or *cylindrical* round *Calyx*, about half an Inch long, guarded at the bottom by two ſharp ſhort-*pointed Segments*, more or leſs, according to the bigneſs of the *Flower*, opening into five pointed *Segments*, from whence break forth five Petals, ariſing from the bottom of the *Tube*, continuing narrow until at the top of the *Calix* they are expanded into five broad Portions, flat at the Extremity, notch'd ſimbriated or dented, bending outwards, with ten *Stamina*, ſurrounding an oblong or conical *Embryo fructus*, endow'd with two *Styli*, crooked or bending outwards. This afterwards becomes a cylindrical or conical *Fruit* or *Capſula*, full of cornered *Seeds*, black when ripe.

Virtues and *Uſes.*

Of all the Variety of Colours and elegant Stripes, with which this Plant becomes ſo ornamental in Gardens, that with the deep ſcarlet

and intenſe Clove Smell, is preferr'd for Phyſical Uſes: The pick'd *Flowers* afford an agreeable *Tincture:* Its *Syrup* with double Sugar is a good Ingredient in moſt *Cordials.* The *Conſerve* with triple Sugar is a convenient Menſtruum for *Bolus's.* The dry'd *Flowers* are one of the *Flores Cordiales*, and fit for *Ptiſans* in *Fevers.*

VII. *Caſtanea.*

Caſtanea J. B. 1. 7. 121. *ſativa* C. B. 419. Tournef. Inſtit. 584. Raij Hiſt. 1381. The Cheſnut Tree.

The *Tribe.*

This is one of the juliferous Trees, *flore a fructu remoto in eadem planta.*

The *Deſcription.*

This noted *Tree* growing to a great Age, and ariſing to a great Height and Bigneſs, has large ſtiff ſhining *Leaves*, about two Inches broad, four or five Inches long, nervous, ſerrated round the Edge, and pointed. Its *Catkins* are ſmall, about two Inches and an half long, with the *male Flowers* conſiſting of a *pentaphillous* little Calyx ſurrounding numerous *Stamina* and *Apices*, thin ſet upon the *axis medius* or *Midrib.* In other Places it has *hermaphrodite Flowers*, with a *Calyx* and *Stamina* ſurrounding the *Ovarium*, which afterwards becomes a round prickly or thorny *Fruit*, which opening into four Portions contains that called the *Cheſnut.*

Virtues and *Uſes.*

Its Uſes in Mechanicks are well known; its Nut, the medicinal Part, is ſeldom uſed in Phyſick; while raw, it may be eat by ſuch as are ſubject to the *Flux* or *Bloody Flux*, it being next to the *Acorns* for Aſtringency, which is much abated by roaſting of it.

Cataputia major vide *Ricinus.*

Cataputia minor vide *Tithymalus.*

Cauda Equina vide *Equiſetum.*

VIII. *Cen-*

VIII. *Centaurium majus.*

Centaurium maj. folio in plures lacinias diviſo C. B. 117. Tournef. Inſtit. 443. Raij Hiſt. 329. *maj. Jugland. fol.* J. B. 3, 25, 38. Moriſ. Hiſt. 3, 131. Great Centaury.

The *Tribe.*

This is another of the *Capitatæ* or *Flores floſculoſi* of *Tournefort.*

The *Deſcription.*

This Plant has various *Leaves*, dark green above, whitiſh below; ſome are long large whole and pointed, others deeply cut into ſeveral Sections, both ſerrated about the Edges, with a ſtrait tall branched *Stalk*, about four or five Foot high, adorn'd with leſs deep cut *Leaves*, and ſupporting large ſcaly *Heads*, full of purpliſh *Flouriſhes*, and containing oblong ſhining *Seeds* cover'd with *Down.*

Virtues and *Uſes.*

The Root is ſaid to be *vulnerary* and *aſtringent:* whatever eſteem the Ancients might have of it, 'tis not much in modern Uſe.

IX. *Centaurium minus.*

Centaurium minus, C. B. 278. Tournef. Inſtit. 272. *min. fl. purp.* J. B. 3, 25, 359. Raij Hiſt. 1091. Hiſt. des Plantes 68. *min. rub.* Moriſ. 2, 566. Leſſer Centaury.

The *Tribe.*

Boerhaave places this among the *Diangiæ Polyſpermæ*; *Ray* among the *Pentapetaloides Vaſculiferæ*; afterwards among the *Flores monopetali regulares fructu ſicco Bicapſulari: Tournefort* among the *monopetali infundibuliformes.*

The *Deſcription.*

'Tis an annual Plant, with a ſmall ſtrait *Stalk*, about half a Foot high, beſet with ſmall oblong *Leaves* by Pairs, like thoſe of *St. John's Wort.* The Flowers by Tufts are *monopetalous*, deep divided, purpliſh red,

red, perforating the bottom, arising from an oblong or tubulous *Empalement*, divided at the top into five pointed *Segments*. The *Conical Embryon* has a long *Stylus*, and is surrounded by five *Stamina*. The conical or cylindrical *Fruit*, divided into two *Pouches*, pours out fine small *Seeds*, by its pentagonal opening at the top.

'Tis very frequent in dry Meadows and Pastures; 'tis sometimes seen with a white Flower. The Flower is seldom spread forth, but when the Sun shines very bright.

Virtues and *Uses*.

Tho' upon account of the Difference betwixt *Unicapsular* and *Bicapsular Fruit*, and a *Flower* more or less deeply divided, *Gentiana* is plac'd at a distance by Authors from this LESSER *Centaury*, yet there is such a Resemblance between their *facies externa*, *Taste* and *Virtues*, that where the one is prescribed, the other may be admitted: 'Tis one of the most potent *Bitters* in the Shops; *stomachical*, *febrifuge*, *vermifuge*, and *hysterical*, and may be an Ingredient in all *manner* of *Decoctions*, *Infusions* and *Tinctures* for such Purposes: 'Tis a most powerful *Menses & Lochia movens*. I have known the frequent Use of it in a *Tea* very beneficial in such Cases; nor is it less effectual in *intermittent Distempers*; it reserates the *Obstructions* of the *Viscera*, and is a good Medicine in the Jaundice; it enters the *Infusio amara* in the dispensatory and *medicate Infusions* for *Wine* or *Ale*.

Cepa vide *Allium*.

X. *Cerasa nigra & rubra*.

Cerasus major & sylv. fructu subdulci, & nigro colore inficiente C. B. 450. *sylv. fructu nigro* J. B. 1, 2, 208. Tournef. 625. Raij Hist. 1537. The common Black Cherry.

Cerasus sativa rotunda rubra & acida quæ nostris Cerasa sativa C. B. J. B. Tournef. Raij. *&c.* Common red Cherry.

The *Tribe*.

Boerhaave places these among the *Dicotyledones Arbores*: *Tournefort* among the *Trees* with a *rosaceous Flower*: Mr. *Ray* among the *pruniferous Trees*. They are most common, and least of all the esculent Stone Fruits.

The

The *Deſcription.*

Theſe Trees are ſo well known, that they need no Deſcription their roundiſh ſharp-pointed *Leaves* are ſerrated round the *Edges:* Their *Pentapetalous roſaceous Flowers* are puſh'd forth as ſoon, or rather ſooner, than the *Leaves*; the white *Petals* ariſe from the Interſtices betwixt the five *Segments* of the cavous *pentaphyllous Calyx.* Their *Stamina* are very numerous: The *Stylus* upon the top of the *Embryo* is but ſmall. Their Male exceed the *hermaphrodite Flowers* very much in number, and are firſt blown. The *Fruit* of the *Black Cherry* is leſs, more oval, and ſweeter to the Taſte, upon longer Pedicles than thoſe of the *red*, which are rounder larger and ſomewhat ſouriſh; the thin *Stones* contain a proportionally big *Kernel.*

Virtues and *Uſes.*

Black Cherry Water is preſcrib'd in moſt *Cephalick* and *Epileptick* Mixtures: The *Tincture* of *Black Cherries* with *Brandy* is much drank as a *cordial Liquor.* The Jelly of the *Red Cherry* is uſed to quench the Thirſt, in hot and continued *Fevers:* The *Kernels* bruis'd and infus'd in *Brandy* make a good *Rataſia:* The yellowiſh *Gum*, which diſtils from the wounded *Trunk* and *Branches*, makes a finer Sort of *Gummi Arabicum.* Both theſe *Cherries* are ſaid to grow ſpontaneouſly in the *Woods* and Hedges; but 'tis probable their Stones have been convey'd thither from *Gardens* and *Orchards* by the *Birds.* Mr. *Martyn* has obſerv'd the *Black Cherry-Tree* in *Biſhop*'s *Wood* and on *Hamſtead Heath.*

Ceterach vide *Aſplenium.*

XI. *Chærefolium.*

Chærophyllum ſativum C. B. 125. Tournef. Inſtit. 314. *Chærophyllum* J. B. 2, 27, 15. *Chærefolium ſativum* Moriſ. Umb. 46. Hiſt. 3, 303. Raij Hiſt. 430. *Chærefolium* Dod. Pempt. 700. Chervil.

The *Tribe.*

This is an umbelliferous Plant, with oblong ſmall ſtriated *Seeds.*

The *Deſcription.*

This annual *Plant* ariſes a Foot high, with deeply divided *Leaves*, like thoſe of *Myrrhis*, but much fewer ſmall white *Umbells*, to which ſucceed ſmall long ſtriated *Seeds*; 'tis like the Beak of ſome *Birds*; 'tis ſown in Gardens.

Virtues and *Uſes.*

'Tis frequently eat in cold *Sallads* in the *Spring*; but its fragrant Smell and ſweetiſh Taſte is diſagreeable to ſome: 'Tis ſaid to be very *diuretick* and *aperient*; ſome chop the *Leaves*, and, being mix'd with freſh Butter, apply it to the lower *Belly*, or the *Os Pubis* in a Suppreſſion of *Urine:* 'Tis not much uſed in the Shops.

XII. *Chamædrys* ſive *Triſſago, Scordium* & *Scorodonia* ſive *Salvia Sylveſtris.*

1. *Chamædrys maj. repens* C. B. 449. Tournef. 204. Hiſt. des Plantes 69. Raij Hiſt. 527. Moriſ. Hiſt. 3, 422. *vera vulgo exiſtimata* J. B. 3, 28, 288. Common Germander.

2. *Chamædrys paluſtris caneſcens ſive Scordium Officinarum* Tournef. Inſtit. Hiſt. des Plantes 414. *paluſtris Allium redolens* Moriſ. 3, 413. *Scordium* Raij Hiſt. C. B. J. B. 3, 28, 292. Water Germander.

3. *Chamædrys fruticoſa ſylv. Meliſſæ fol.* Tournef. Inſtit. Hiſt. des Plantes 71. *Chamædrys elatior Salviæ fol. flore ochroleuco* Moriſ. Hiſt. 3, 423. *Scorodonia ſive Salvia ſylv.* C. B. *Scordotis ſive Scordium folio Salviæ* J. B. 28, 292. Wood Sage.

The *Tribe.*

Theſe are of the unilabiated Genera. See *Bugula*, Decad IV.

The *Deſcription.*

1, *Germander* has a fibrous very running *Root*; the *Stalks* are low, lying much on the Ground, woody after the firſt Year, rough, green above and white below; *ſlaſh'd Leaves*, like thoſe of an *Oak*, ariſe from the rough ſquare Joints by pairs: The *Verticillæ* of purpliſh red *unila-*

biated

biated or *one-lip Flowers* are frequent on the top of the *Stalk* and *Branches*. It is planted in Gardens.

2. *Water Germander* is much like the former; its *Leaves* ſofter and more hoary; its *Stalks* not woody, lying on the Ground, and ſends forth *radical Fibres* from the *Joints*. The *Flowers* like the former; it has a *Garlick Smell*; 'tis ſaid to grow plentifully in *marſh Places* in the *Iſle* of *Ely*.

3. *Wood Sage* ariſes with a woody ſquare *Stalk*, about one or two Foot high; its rough large *Leaves* by pairs reſemble thoſe of *Sage*; its larger yellow lipp'd *Flowers* are rather ſpiked than whorled upon the top of the *Stalk* and Branches; its fibrous woody *Root* runs, but not ſo much as *common Germander*.

Virtues and *Uſes*.

1. *Germander* is an *Incider*, and *attenuates* groſs and *viſcid Humours*, reſerates *Obſtructions* and provokes *Urine* and *Sweat*; 'tis eſteem'd good in the *Jaundice*, recommended in *tertian* and *quartan Agues*, alſo in the *Scurvy*; 'tis alſo ſaid to aſſwage *goutiſh* and *hæmorrhoidal Pains*; it may be drank in a *Tea*, or infus'd and drank in *Wine* or *Ale*.

2. *Scordium* is eſteem'd a good *Alexipharmick*, a potent *Sudorifick*; they uſed to ſtrew it upon *dead Bodies*, to preſerve them from Corruption. 'Tis ſaid to be *vulnerary* and a *Vermifuge*. A *Ptiſan* is made of it for *malignant Fevers*; an Extract is prepar'd of the Juice; it enters *Diaſcordium Acetum Theriacale Theriaca Androm. Mithrid. &c.*

3. *Wood Sage* is eſteem'd *aperient*, *diuretick*, *diaphoretick*, *vulnerary* and *hyſterical*; 'tis preſcrib'd for the *Dropſy*, *Jaundice*, *tertian Agues*, and *Lues Venerea*. I have obſerv'd at *Bugula*, that moſt of the one-lipp'd *Plants* are *ſubaſtringent*, and do not conſiſt of ſuch ſubtile Particles as the *bilabiated*.

XIII. *Chamæmelum, Cotula fœtida & Matricaria.*

1. *Chamæmelum flore ſimplici & pleno odoratiſſimum repens* J. B. 3, 26, 116. Raij Hiſt. 353. Moriſ. Hiſt. 3, 34. *Chamæmelum ſive Leucanthemum Dioſc. odoratius* C. B. 135. Tournef. Inſtit. 44. Garden Chamomile.

2. *Chamæmelum fœtidum* C. B. 135. Tournef. *Cotula fœtida* J. B. Raij Hiſt. *annuum præcox fœtidum ſemine aureo.* Stinking Chamomile.

3. *Matricaria vulg. ſativa* 133. Moriſ. Hiſt. 3, 32. Tournef. Inſtit. 494. *vulg. min. Parthenium* J. B. 3, 26, 129. Raij Hiſt. 348. Feverfew.

The

The *Tribe.*

Theſe are a Continuation of the *Corymbiferæ Radiatæ.*

The *Deſcription.*

1. *Garden Chamomile* is a low creeping *Plant*, ſending forth *radical Fibres* from each Joint, by which it overſpreads the whole Surface of the Earth where 'tis planted; the *Leaves* are very fine cut and *pinnated*, in the manner of *Tanſy*, but much leſs. The *radiated Flowers* ariſe here and there upon long *Pedicles:* In the ſingle, the *Corona* is white and the *Diſcus* yellow: In the *double*, the whole conſiſts of white *half Flouriſhes*, with ſcarce any conſpicuous *Corona.* The whole *Plant* is odoriferous, though of a very bitter *Taſte.* Thoſe *Plants* which have produced the *Flower* decay, and the Plant is propagated by ſuch creeping Shoots as have not yet *flower'd.*

2. *Stinking Chamomile* is an annual *Plant*, riſes high with a dark green branched *Stalk*, the *Leaves* much thinner ſet and larger *Pinnæ*; the *Flowers* rather larger than the other; 'tis ſcarce diſcernible from the *Chamæmælum ſylv. inodorum*, but by the *Smell*; tho' I have for the moſt Part obſerv'd its *Pinnæ* much larger, and darker green than the other.

3. *Feaverfew*, from a *fibrous* and *woody* white *Root*, ariſes with ſtrait branched *Stalks* one or two Foot high, adorn'd with *pinnated* light green alternate *Leaves*, conſiſting of two or three dented *Pinnæ* with an odd one at the end: The *Flowers* on the top, upon long *Pedicles* in *Tufts* or *Umbells*, are *corymbiferous* white *radiated*; the *Radius* not ſo large as the other; the yellow *Diſcus* much about the ſame Bigneſs.

The *Roman* or ſweet-ſcented *Chamomile* grows ſo plentifully in *Cornwall*, that, according to Mr. *Ray*, one may ſmell it at a great diſtance upon the Road. *Stinking Chamomile* is not ſo frequent as the *Chamæmelum inodorum*, but is ſometimes to be obſerved in *Corn-fields*; it ſometimes varies into a *double Flower*, as many of the *Leucanthemums* and *Chryſanthemums* do; but being an annual, 'tis a queſtion whether it can be ſo propagated by the *Seed.* *Matricaria* grows frequently wild, in rough ſandy gravelly and craggy Places.

Virtues and *Uſes.*

Both *Herb* and *Flower* of *Chamomile* are uſed; the *Herb* in the *inſolated* or *macerated Oil*; alſo in *Fomentations* and ſtrengthening *Ointments* made

made with freſh *Butter* in *May*; for *rickety* Children to ſtrengthen their *Joints*. The *Flowers*, tho' odoriferous and ſweet-ſcented when green, are one of the moſt vehement *Bitters* in the Shops; 'tis *ſtomachick*, *hyſterick*, *febrifuge*, and *vermifuge*. A Poſſet of *Chamomile Flowers* with *white Wine* drank hot, is a ſpeedy Remedy for the *Cholick*; a *Tea* of *Chamomile Flowers* is a moſt effectual Remedy in the *obſtructed Menſes*. The *Powder* of *Chamomile Flowers* in an Electuary is *an excellent Febrifuge*: *Chamomile Flowers* are very fit to be preſcrib'd in *Carminative Clyſters*. All the *ſtomachick bitter febrifuge Ingredients* to be infus'd in *Wine* or *Ale*, have *Chamomile Flowers* for one; it enters the *Infuſ. Amar.* in the *Diſpenſatory*. The *aq. fl. Chamæmeli comp.* is an effectual Remedy *ad Sudores promovendos poſt partum*. *Stinking Chamomile* is ſeldom uſed in *Phyſick*. *Matricaria* has the ſame *Virtues* with *Chamomile*, but not ſo potent; 'tis eſpecially recommended *ad Menſes & Lochia promovenda*; 'tis alſo good in *Fomentations* along with *Chamomile*, and is a frequent Ingredient in *hyſterical Infuſions*.

XIV. *Chamæpitys* ſive *Iva Arthritica*.

Chamæpitys vulg. folio trifido flore luteo C. B. 245. Moriſ. Hiſt. 3, 425. Tournef. Inſtit. 203. *vulg. odorat. fl. luteo* J. B. 3, 28, 295. Hiſt. des Plantes 326. *Ajuga ſive Chamæpitys Dioſcoridis* Lob. Icon. 382. *vulg.* Raij Hiſt. 573. Ground Pine.

The *Tribe*.

This is another of the *Unilabiatæ*.

The *Deſcription*.

'Tis a low *Plant*, not above two Inches high; from a large woody deep running *Root*, it ſends forth numerous *Branches*, thick beſet with ſhort *Leaves* by pairs, each of which are narrow ſhort and triply divided at the Extremity; the thin-ſet Whorles of Flowers by pairs, one on each ſide, for the moſt part are *yellow* and *unilabiated*; the one dependant lower *Lip* is triply divided, the middle largeſt and bifid. The *tubulous Calyx* is bulg'd or protuberant, containing four *Seeds* ſoon dropping when ripe, by which the Species is *ſpontaneouſly propagated* in the *Gardens*. The whole Plant is rough, blueiſh, of an high reſinous Smell. 'Tis an *annual Plant*; but, becauſe the *Plant* ſometimes ſprings up in

the *Autumn*, endures the *Winter*, in which Senſe it may be called perennial: Its *Stalks* then become *woody*; which makes Mr. *Ray* doubt, whether it ſhould be called a *Suffrutex:* 'Tis ſaid to grow in lay Grounds, but rarely, as about the Borders of *Triplow Heath* in *Cambridgeſhire*; and in ſeveral Places of *Kent*; as about *Rocheſter*, *Dartford*, *&c.* Mr. *Martyn* has obſerv'd it plentifully in ſome Fields about *Chatham.*

Virtues and *Uſes.*

'Tis eſteem'd good for the *Gout* and *Sciatica*, on which Account 'tis call'd *Iva Arthritica*; 'tis ſaid to be *nervine*, *antiparalitick*, and *vulnerary*; 'tis look'd upon to be *aperient*, a great *Deobſtruent*, diſſolving coagulated *Blood*, good in the Difficulty of *Urine*, a Provoker of the *Menſes*, *Partus* and *Lochia.* It ſeems to be of a reſinous Texture, by which it may be a good *Aperient*, and by its balſamick *Particles* it may be a good *Vulnerary*; but it ſeems to be *ſubaſtringent* with the other *unilabiated Plants*, and not ſo ſubtile as moſt of the *bilabiated* ones are: It enters *Syr. de Artemiſ.* of the old Diſpenſatory, and *de Chamæpity*, both laborious Compoſitions.

Cheiri vide *Leucoium.*

XV. *Chelidonium majus.*

Chelidonium maj. C. B. 144. Tournef. Inſtit. 231. Moriſ. Hiſt. 2, 251. Dod. Pempt. 48. Raij Hiſt. 888. *Chelidonia* J. B. 2, 30, 482. Raij Synopſ. Stirp. Brit. 2, 181. 3, 309. Boerh. Ind. 305. Greater Celandine.

The *Tribe.*

This *Plant* is variouſly diſtributed by the ſeveral Authors: *Moriſon* places it among the *Tetrapetalæ Siliquoſæ Bicapſulares*, an anomalous *Claſs*, diſtinct from the *regular Tetrapetalæ Siliquoſæ*; and in this he's follow'd by *Boerhaave*, who makes a particular *Claſs* of *Plantæ Siliquoſæ*, containing a long membranous Fruit, with one or more Seeds differently ſituated in the ſeveral Plants, variouſly digeſted, ſome having many *Seeds* in one undivided Pod, without any Diſtinction into *Valves* or *Pouches*, and a great Variety of the Structure of *Flowers.* 2. There are either *Siliquæ* Pods, or *Siliculæ* little Pods. 3. The irregular papilionaceous Siliquous Plants, *Boerhaave*'s *Ind.* 1, 304. Mr. *Ray*'s *Meth. Emend.*

Emend. claſſes the *Tetrapetalæ Anomalæ* together, and continues to make *Chelidonium maj. a Papaver Corniculatum.* *Tournefort*, being fond of his own *Flores Roſacei*, not finding how to make *Chelidonium maj.* one of them becauſe of the Reſemblance with his *Flores Cruciformes*, brings it to make a particular Section, and ſends *Papaver Corniculatum* to make up one of the *Flores Roſacei*, by the Name of *Glaucium*, on account of the largeneſs of the *Petals*, by which it comes ſo near to a *Papaver*, which he has plac'd in the ſame *Claſs.*

The *Deſcription.*

From a ſimple carnous *Root*, divided into ſeveral large Portions, deeply fix'd in the Ground, there ariſe ſeveral blueiſh green *Columbine* like *Leaves*, frequently divided into five larger *Segments*, the odd one being biggeſt. The ſmall much jointed and branched *Stem* ariſes one or two Foot high, with two ſmall *Leaves* at each *Joint*; the *Flowers* on the top in thin Cluſters, upon a common *Pedicle* three or four Inches long, ſupported by ſo many *ſhorter* ones, are *Tetrapetalous*, enclos'd in a *two-leav'd Empalement*, which upon its opening ſoon fall off with ſeveral *Stamina*; the *unicapſular bivalve Pod* upon opening pours out ſmall black ſhining roundiſh *Seeds:* The plentiful Juice of this Plant is yellow inſtead of white or milky, by which it differs from the *Papavers.* The *Root* is perennial; it grows in a rough gravelly Soil, and at the *Root* of *Hedges* and other ſhady Places near to Towns and Villages.

Virtues and *Uſes.*

'Tis eſteem'd *aperient* and *diuretick*, good for opening of *Obſtructions*, particularly recommended in the *Jaundice* (perhaps by the *Signature*) and for Diſeaſes of the *Eyes*; it abounds with *acrimonious ſaline Particles*, by which it may abrade the *Pterigium ſive pannus oculorum*, the *Film* of the *Eyes*, but ſhould be cautiouſly uſed: The *Root* is preſcrib'd; alſo the *Leaves*, whoſe *Juice* is the chief Ingredient in the *aq. Mirabilis.*

XVI. *Chelidonium minus*, & *Hepatica nobilis* ſive *Trifolium aureum.*

1. *Chelidonia rotundifolia minor* C. B. 309. *Chelidonium minus* Raij Hiſt. 579. *Scrophularia minor ſive Chelidonium minus* J. B. 3, 30, 468. *Ranunculus præcox rotundifolius granulata radice* Moriſ. Hiſt. 2, 446. *vernus rotundifol.*

tundifol. minor Tournef. Inſtit. 386. Hiſt. des Plantes 33. Leſſer Celandine.

2. *Hepatica nobilis fl. cæruleo ſimplici* Hort. Lugd. Bat. 310. *Trifolium Hepaticum ſimplici flore* C. B. 330. Moriſ. Hiſt. 2, 433. Raij Hiſt. 580. *Trifolium Hepaticum ſive Tridentatis Herba* J. B. 2, 17, 389. *Ranunculus tridentatus vernus fl. ſimplici* Tournef. Inſtit. 286. Noble Liverwort.

The *Tribe.*

That theſe are Congeners appears from their manner of growing, Time of *flowering*, Faſhion of the *Flower*; but what particularly belongeth to both is the *triphyllous Calyx*, by which they differ from all the other *Ranunculi*, to which they either belong or are near of *Kin*. *Moriſon* has a diſtinct Chapter of *Hepatica*, and joins *Chelidonium minus* with the *Ranunculi*. *Tournefort* makes both *Ranunculi*. *Ray*, *Herman*, and *Boerhaave* place them immediately before the *Ranunculi*, but diſtinguiſh them by their *ancient Names*: They are *Gymnopolyſpermæ* by *Herman*, and *Boerhaave*; *Semine nudo polyſpermæ* by *Ray*; *Flore Roſaceo* by *Tournefort*.

The *Deſcription.*

1. *Leſſer Celandine* is a low Plant with white Joints and knobby *Roots*, *granulata Radice*: The *Leaves* upon long *Pedicles* lie flat on the Ground, ſmooth ſhining broad at the Baſe, roundiſh and a little pointed. The *flowering Stems* are ſmall, low, ſometimes branched, each ſupporting one *Flower* with thin-ſet leſs-pointed *Leaves* upon the *Stalk*, or boſom of the *Branchings*: The *Flowers* are *roſaceous yellow*, for the moſt part, *octopetalous* with a *triphyllous Empalement*; the aggregated *Piſtillum* in the Center conſiſts of *ſeveral* ſmall *Embryons* ſurrounded by many yellow *Stamina* with their *Apices*, which afterwards compoſe a *globular Fruit* conſiſting of naked *Seeds*: 'Tis frequent in Paſtures, moiſt and ſhady Places, flowers early in the Spring; after which both *Leaf* and *Flower* decay.

2. *Noble Liverwort* keeps its *flowering* time with the former; the crumbled up unblown *Flowers* appear before the *Leaves*, with their Heads declining upon long round hairy *Foot-ſtalks*, which afterwards are expanded and appear very *numerous*. The *Leaves* alſo, upon proper *Foot-ſtalks*, ariſe, in the Intervals, broad and whole at the Baſe, divided into three large pointed Lobes or *Portions*, by which they reſemble the *Liver* of ſome *Animals*, and from whence it derives the Name. The *Flowers* are *purpliſh red*, *octopetalous*, with a *triphyllous Ca-*

lyx

lyx with the former; the numerous *Stamina* with whitiſh *Apices* ſurround the aggregated *Piſtillum*, which becomes like the *Polyſpermous Fruit*, compos'd of *naked Seeds:* The *Roots* are *fibrous*, the *Plant* buſhy and *perrennial:* The *Leaves* continue longer than the former; the *Colours* various, ſuch as *purple*, *red*, *fleſh-colour'd*, *white*, with a *ſingle* or very *double Flower*, conſiſting as it were of many ſingle *Floſcules*, ſave that each has not a proper *Capillamentum*; 'tis a very ornamental *Flower* in the Gardens in the Spring, and is no where indigenous in *Britain*, by what I can learn.

Virtues and *Uſes.*

1. *Leſſer Celandine*, on account of the Reſemblance in granulated *Knobs* of the *Roots* with the *Piles*, is eſteem'd good for that Malady, by the Signature. I rather attribute its Virtue to its Affinity to the *Ranunculi*, moſt of which are acrid and hot to the Taſte, by which it may anſwer what its deſign'd for. The contus'd Leaves apply'd to the *Piles* are ſaid to diſcuſs them; and I have known the *inſolated Ointment*, with *Hog's Lard* or freſh Butter, ſucceſsfully made uſe of, to diſcuſs *Scrophulous Tumours*, and what they call the *blind Hemorrhoids.*

2. *Noble Liverwort* is not much uſed in Phyſick: The *Leaves* are recommended as *vulnerary*; but I rather believe it partakes of the ſame Virtues with the former.

XVII. *Cicer.*

Cicer ſativum C. B. 347. Tournef. Inſtit. 389. Moriſ. Hiſt. 275. *arietinum* Dod. Pempt. 529. J. B. 2, 17. 292. *ſativ. ſive arietinum nigrum rubrum vel album* Raij Hiſt. 719. Chich Peaſe.

The *Tribe.*

'Tis a *papilionaceous Plant*, with a broad ſhort inflated *uncicapſular Pod.*

The *Deſcription.*

'Tis an annual *Plant*, with ſtrait, not ſcandent, *Stalks*, with ſmall pinnated alternate *Leaves*, each conſiſting of three or four pair of ſmall broad *Pinnæ*, crenated round, nor directly oppoſite, with an odd one. The *Flowers* are *papilionaceous*, to which ſucceed a rough broad ſhort *Pod*, blown up like a Bladder, containing two or three cornered

turgid *Seeds* with an Eminence, by which they reſemble a *Ram's Head*; 'tis ſown in Gardens.

Virtues and *Uſes.*

'Tis eſteem'd *nutritive* with other *leguminous Plants*, and therefore recommended as augmenting the *Lac* and *Semen*; 'tis alſo ſaid to be *aperient* and *diuretick*; commended for a *Menſes movens & fœtum pellens.* 'Tis uſed externally in *Cataplaſms*, with other *Farines*, to ſuppurate critical Tumours; ſuch as the *Parotids*, &c. 'Tis chiefly of the ſame Uſe with *Farina Fabarum*, *Lupulorum*, &c.

XVIII. *Cichorium hortenſe*, *Cichorium agreſte* ſive *ſylveſtre*, & *Endivia.*

1. *Cichorium ſativum* C. B. 125. Tournef. 497. J. B. 2, 14, 1007. Moriſ. Hiſt. 3, 54. Raij Hiſt. 225. Garden Succory.

2. *Cichorium ſylv. ſive offic.* C. B. Tournef. Inſtit. Hiſt. des Plantes 327. Raij Hiſt. Synopſ. Stirp. Brit. 3, 172. *ſylv. & ſativum* J. B.

3. *Cichoreum latif. ſive Endivia vulg.* Tournef. Inſtit. Raij Hiſt. *vulg.* Park. 774. *Intybus ſativa latif. ſive Endivia vulg.* C. B. Moriſ. Hiſt. *Intybus vulg. ſativa ſive Cichorium domeſticum.* Tabern. Icon. 173. Common Endive.

The *Tribe.*

This is the firſt of *Tournefort*'s Claſſes with *ſemi-floſculous Flowers.* *Moriſon* divides this Kind of compound *Flowers* into *Lacteſcentes & non pappeſcentes*, *pappeſcentes Lacteſcentes* and *pappeſcentes non Lacteſcentes.* *Boerhaave* gives them all the general Title of *planipetalæ Gymnomonoſpermæ.* Mr. *Ray* calls them *planipetalæ natura plenæ Lacteſcentes*; and theſe he divides into *ſeminibus pappoſis & ſolidis.* The Character of theſe here is, that they have *ſemifloſculous Flowers*, or ſuch as only conſiſt of *plain Petals* with a *milky Juice* and *Seeds*, not *pappous*; to call them ſolid is no wiſe neceſſary, becauſe the *Seeds* of the *Capitatæ*, or any other Plant, with a *pappo* or *Down*, are equally *ſolid* as theſe. I have obſerved, that all the *Semifloſcles* or *half Flouriſhes* have a *Capillamentum* and *Vagina*, as well as the *Floſcles* and *Flouriſhes.*

The

The *Deſcription.*

1. 2. Both the *Garden* and wild *Succory* have a *perennial Root* more fleſhy, parenchymatous, ſimple, and endow'd with *fewer Fibres* in the one than the other; the bottom *Leaves* are oblong ſlaſh'd or tooth'd, like thoſe of *Dandelion:* The branched *Stalk* ariſes ſtrait, two or three Foot high, adorn'd with leſs Leaves without *Footſtalks*, leſs and ſharper tooth'd. The *Flowers* on the upper part of the *Stalk* and *Branches* upon very ſhort Footſtalks, are *ſemifloſculous Flowers*; to which ſucceed ſeveral *unibilabiated* wedge-like oblong cornered *Seeds* contained in the *Calyx*, now contracted into a *Pericarpium*. *J. B.* was not much deceiv'd, when he look'd upon the Garden and wild Plant, as only differing by Culture; for the Root of the *wild* is only more fibrous and woody, the *Leaves* darker green and rough, the *Stalks* not ſo high and more bended; ſo that the Soil and Management ſeems only to be wanting, to make the one as good as the other; the one being uſually ſown in a kindly Mould, the other growing naturally in a rugged or rough ſandy Soil.

3. *Endive* is an annual Plant two or three Foot high, with broad ſoft light green *Leaves*, roundiſh at the Extremity and dented: The *Stalk* is groſſer, branched with leſs and narrower *Leaves*: the *Flowers* more numerous than the former, from the upper Part of the *Stalk* and *Branches*; to which ſucceed oblong, not *pappous Seeds* with the former; 'tis ſown in Gardens.

Virtues and *Uſes.*

The whole of theſe *ſemifloſculous* or *lacteſcent Plants* are endow'd with the ſame *Virtues*, may be promiſcuouſly uſed and plac'd together, were it not for their diſtinctive Notes, and that ſome are more tender to the Palate than the other; all of them abound with a milky *Juice*, have an agreeable *bitteriſh* Taſte, and are eſteemed Coolers: Theſe *Leaves* are much uſed in cold Sallads; but thoſe of *Endive* being the tendereſt are preferr'd, and are eſteem'd equally good with *Lettuce*. *Endive Leaves*, may be blanch'd and eat with *Dandelion*. *Cichory* Roots boil'd pick'd and ſliced, may be eat with *Betrave* Roots in the Winter. They are all eſteem'd *aperient*, good in the *Hydropſy*, reſerating of *Obſtructions*, and *hypochondriacal* Caſes; they are alſo thought good *Vermifuges*; the *diſtill'd Water* is preſcrib'd in *Mixtures* for *Worms*; as is the *Syr. de Cichoreo cum Reo* uſed as a good *purgative Syrup* on the ſame account. The *Rad. Cichorei* are uſed in *aperient Ptiſans* for the *Hydropſy*. The *Seeds* of

Cichory

Cichory and *Endive* are among the leſs cold *Seeds* in the Shops. *Endive* is chiefly a *Pot-Herb.*

XIX. *Cicuta.*

Cicuta maj. C. B. 160. Tournef. Inſtit. 106. Moriſ. Hiſt. 3, 290. Umbellif. 18. Raij Hiſt. 450. J. B. 3, 2, 175. Common Hemlock.

The *Tribe.*

This is an umbelliferous Plant with ſmall creſted *Seeds.*

The *Deſcription.*

Hemlock is an annual, or rather biennial *Plant*, ſince it ſeldom puſhes forth the *flowering Stem* until the ſecond Year: The hollow creſted jointed *Stalks* ariſe to four or five Foot high; the large alternate dark green variouſly pinnated or deeply divided *Leaves*, either ariſe from the Pedicles from the *Root*, or adorn the *Stalk* and *Branches*; the *flat* white *Umbells* are large; the *Seeds*, gibbous or bulg'd on the outſide, are ſhort *ſtriated* and of a grayiſh Colour: It grows very common in moſt Places in Dunghills, neglected Gardens, and other Places, near to *Villages* and *Houſes*, where there is for the moſt part a fat Mould.

Virtues and *Uſes.*

Providence has ſo ordered, that the moſt general Rules have their Exceptions; ſcarce any *Botanick Claſs* does more agree in their *Virtues*, than this *umbelliferous Tribe*, eſpecially if their Notes and Characters have ſuch a Correſpendence, as there is in this and ſeveral others of its *Congeners.* If we conſider *Carvi*, which if by the Diviſion of the *Leaf*, colour of the whole Habit of the Plant, not the white *Umbell* excepted, the Bigneſs and Texture of the *Seed*, yet how far are their Virtues different, which are only pointed out by the heavy Smell of the one, and Agreeableneſs of the other. Another Inſtance of *OEnanthe aquat. ſucco viroſo*, which has a great Reſemblance to *Apium*, in the Taſte of the *Roots* and Figure of the *bottom Leaves*, and when grown up reſembles *Paſtinaca*, by the *Plantæ facies*, to an undiſcerning Perſon. I ſay, theſe are two great Exceptions from general Rules; for whereas their *Congeners*, and ſuch as they ſeem to have the greateſt likeneſs, have all the *ſalutiferous* Qualities can be expected from ſuch a *Claſs*, yet theſe are thought

thought to have the moſt *pernicious* and *poiſonous*. There are ſome, who aſſure *Cicuta major* is not *poiſonous*, by the Experience of thoſe who have by accident eat the *Root*; but few will venture to try the Experiment on purpoſe. The pernicious Effects of *Cicuta minor Petroſelino ſimilis*, too frequently growing in moſt Gardens, have been made known to me by three or four Experiments: The one at a Marriage-Dinner in the Spring; a Gentleman who eat heartily of a Diſh of green Broth at the Entertainment, ſicken'd, ſwell'd very much, and dy'd of a ſudden: It was ſuſpected this *Cicuta minor*, being in plenty growing in the *Kitchen-Garden*, was the Cauſe of the Accident. A Gardiner making up a Parcel of *green Herbs* for a Diet-Drink to a *young Woman*; upon drinking it the firſt Time, ſhe ſwell'd and dy'd: Her Acquaintance by chance taſted but a little of it, upon which I was called to her; I adminiſtred a Vomit; ſhe had a plentiful Evacuation of ugly greeniſh Stuff, and was cured by *Alexipharmicks* and *Sudorificks*. This Plant grows moſt plentifully in the Gardens, whence the Herbs were brought. Being in company with another *Phyſician* at a *Gentleman*'s *Houſe*, he eat plentifully of a green Broth at Supper; he was ſeized with violent Gripings, *purging* and *vomiting green* all Night: We had no *Emetick* in the Houſe, but upon giving of *Theriaca*, with ſome Drops of *Laud. Liquid.* he was reliev'd. In viewing of the Gardens next Day, we found this *OEnanthe* planted among the *Pot-Herbs*, and the Gardiner called it *Endive*; and *Cicuta minor* growing there among the *Parſley*, ſcarce look'd upon as a Weed, by which we reaſonably conjectur'd the *Gentleman*'s Illneſs might have proceeded from the *Leaves* of one of theſe Plants, being accidentally gathered along with the other *ſalutiferous Pot-Herbs:* ſo that the internal Uſe of *Cicuta* is much to be ſuſpected. It ſeems to conſiſt of very *acrimonious Particles*, from the Uſe they make of its Juice in waſhing and cleanſing of cancrous and *Cacoethes* Ulcers. *Cicutaria aquat. maj.* ſive *Phellandrium*, an high tall *Plant*, common in the Ditches, is another *Species* no leſs ſuſpected to be noxious than the other. *Zwelfer* has writ a large Treatiſe on theſe poiſonous *Plants*.

XX. *Cinara.*

Cinara fol. non aculeato C. B. 383. Tournef. 452. Raij Hiſt. 299. *Carduus ſive Scolymus minus ſpinoſus* J. B. 2. 25, 28. *domeſticus maj. Capitis ſquamis diſpanſis viridibus* Moriſ. Hiſt. 3, 157. Artichoke.

The *Tribe.*

This, another of the *Capitatæ*, only differs from a genuine *Carduus*, by its want of Prickles, largeneſs of the *Head*, bigneſs of the *Squamæ* and *eſculent Bottom*, or *Thalamus*.

The *Deſcription.*

Though this *Plant* has a perennial ſoft *parenchymatous Root*, divided into large Portions running deep in the Ground; it ſhould only be called *biennial*; for that Part of it which nouriſh'd the *flowering Stem* dies with it, after the *Fruit* is ripe, and the alive Root never ſends forth the *flowering Stem* until the ſecond Year. So that to preſerve the *Fruit* in its full bigneſs, and from degenerating, is to dig ſo deep as to remove all the old Root in the Autumn, by which freſh new Roots more readily proceed againſt the Spring; after which lay an heap of new Mold round the Root, and without that lay the *Manure*, or *Horſe-Dung* and *Litter*, to preſerve it from the Winter *Froſt* and *Cold*. The *Leaves* from this new *Root* lie in a Circle on the ground long large deep *flaſh'd*, or cut into large Dentations, almoſt into the Midrib: the whitiſh Colour more green above than below. The ſtriated whitiſh groſs round ſpongy or marrowy *flowering Stalk* ariſes ſtrait and branched above three or four Foot high, with leſs alternate *Leaves*, ſupporting large round or ſpherical *Heads*, with thick broad *ſquamæ*, a thick eſculent bottom or *Thalamus*, with proportional large purple *flouriſhes* which break forth after ſome time, to which ſucceed large oblong turgid greyiſh Seeds, lodg'd in a Down.

Whether by Art and Culture, or whether they have been imported, I'm not certain; but theſe *Artichokes* have encreas'd very much in their Bigneſs of late Years, for whereas formerly themſelves did not much exceed half a Pound, and their Bottom not above one or two Inches Diameter. Now they may be had of four or five Pound, and their Bottoms five or ſix Inches Diameter. They are daily propagated by the *Root*, and with due Care may be preſerv'd for ſeveral Ages in a *Garden*.

Virtues and *Uſes.*

The nutritive Virtue of the *Bottoms*, together with the *ſofter* Part of the *Squamæ*, is well known. The Root is ſaid to be aperient, but not much us'd in Phyſick.

Citria Malus vide *Malus.*

XXI. *Citrullus, Colocynthis, Cucumis hortenſis, Cucumis agreſtis,* ſive *Aſininus, Cucurbita, Melo & Pepo.*

1. *Citrullus folio Colocynthidis ſecto ſemine nigro quibuſdam Anguria* J. B. 2, 16, 235. *Anguria Citrullus dicta* C. B. 212. Tournef. Moriſ. Hiſt. 2, 28. Raij Hiſt. 643. Hort. Lugd. Bat. 45. *Anguria Cucumis Citrullus* Dod. Pempt. 664. Citruls.

2. *Colocynthis fructu rotundo maj.* Tournef. C. B. 313. Colocynthis J. B. 2, 16, 232. Dod. Pempt. 665. Raij Hiſt. 642. Moriſ. Hiſt. 2, 27. Colocynth *or* bitter Apple, *or* Coloquintida.

3. *Cucumis ſativus vulg. maturo fructu ſubluteo* Tournef. C. B. 310. Moriſ. Hiſt. 2, 31. *Vulg.* Raij Hiſt. 645. Dod. Pempt. 662. *vulg. viridis* J. B. 2, 16, 245. Garden Cucumber.

4. *Cucumis Aſininus dictus* C. B. 314. Moriſ. Hiſt. Raij Hiſt. 647. *ſylv. ſive Aſininus* J. B. *ſylv.* Dod. Pempt. 663. Wild Cucumber.

5. *Cucurbita lagenaria fl. albo* Moriſ. Hiſt. 2, 23. *folio moll.* C. B. 313. J. B. 2, 16, 216. Raij Hiſt. 638. Tournef. *Cucurbita longior.* Dod. Pempt. 669. Calabaſs or Gourd.

6. *Melo vulg.* C. B. 310. Tournef. Moriſ. Hiſt. 229. Raij Hiſt. 644. *Melones* J. B. 2, 16, 242. *Melo ſive Melopepo vulgo Cucumis Galeni* Dod. Pempt. 663. Musk Melon.

7. *Pepo vulg.* Tournef. Raij Hiſt. 639. *maj. rotundus fl. luteo folio aſpero.* Hort. Lugd. Bat. 481. *Cucurbita maj. rotunda aſpera* C. B. 312. *Cucurbita foliis aſperis ſive Ziccha flore luteo* J. B. 2, 16, 218. The common Pompion, called by the vulgar the Melon.

The *Tribe.*

As the *Bacciferæ Scandentes* were brought into the laſt *Decad* with *Bryonia*, ſo the *Pomiferæ Scandentes* are here join'd with *Citrullus*, where I ſhall ſhew in what they agree, and wherein they differ. They have all weak infirm *Stalks* and *Branches*, *Claviculæ* or *Climbers*, by which they lay hold of any thing, and may climb and be ſupported. *Viticulated*, or *Vine-like Leaves*, or whole and incis'd, and of various Bigneſs. *Male* and *hermaphrodite monopetalous Bell-flowers*, according to *Tournefort*, with the ſame number of *Apices* in the one, and *Piſtillum* or Tube in the other, a *ſucculent Fruit* containing the *Seeds*. They differ; The *Root* of the *Bacciferæ* is *perennial*, the *Pomiferæ annual*. *flore a fructu remoto in diverſis Plantis* in the *Bacciferæ*; *In eadem planta* in the *Pomiferæ*. The Leaves and Flower much leſs in the *Bacciferæ*, with the *Berry* not *eſca-*

lent.

lent. The Fruit of the *Pomiferæ* for the moſt part *eſculent.* The *Leaves*, *Flower*, and Fruit much *larger*, and the *Seeds* of a proportional *Bigneſs.*

The *Deſcription.*

1. *Citrullus ſive Anguria* has its large *Leaves* deeply diſſected almoſt into the *Midrib.* Its Flower of a Gold Colour, the *eſculent Fruit* ſtriated and *ſpherical*, rather reſembling a *Pompion* than a *Melon.*

2. *Colocynth* has its *Leaves* dark green and diſſected, many *Climbers*, but it does not *creep* far, nor aſcend high; a ſmall very bitter *Fruit*, of the Shape of an *Apple* or *Pear*, oblong turgid and pointed numerous Seeds.

3. *Garden Cucumber* has its *Leaves* undivided and *pentagonal*, ſmall *Flower:* yellow-green oblong *eſculent Fruit*, the numerous oblong *oval flat Seeds* in four or five longitudinal Celluls.

4. *Wild Cucumber* has *ſoft* whitiſh round *Leaves*, Stalks without *Climbers*, the ſmall *Flowers* pale yellow. The *Fruit* ſmall rough oblong or oval, compar'd to an *Acorn*, without the *Cup*, not eſculent, burſting when ripe, and diſperſing the *Seeds* with Noiſe and Elaſticity: The *Root* is groſs, and ſometimes perennial.

5. *Gourds* have Leaves almoſt as large as thoſe of *Burdock*, ſomewhat pointed. The *Flowers* large white and *tubulous*, expanded at the Borders into five pointed ſuperficial *Segments.* The *Fruit* large, of various Shapes and Figures, frequently oblong like a Pear, or oblong and ſmaller at the *Beginning*, and enlarg'd, like a *Bottle* or *Pitcher.* The *Seeds* are oblong plain flat broad at the end, and terminating in two Points or Horns.

6. *Melons* have *Leaves* like *Cucumbers*, but *leſs* and rounder: yellow ſmall *Flowers:* The *Fruit* large *oval* grey without, ſometimes with long *Ridges*, and other times with *various protuberant Lines.* The Fleſh *yellow*, *Taſte delicious*, numerous Seeds, like thoſe of *Cucumbers.*

7. *Pompion Leaves* are very large rough, ſometimes deeply divided with hairy *Borders.* The *Flowers* are very large *yellow* tubulous, and expanded into five pointed Segments; the *Stamina* and *Apices* groſs abounding with Farina; Tube pyramidal and button oblong, *Fleſh* or Pulp of the *Fruit white eſculent*; the *Seed* white broad plain and *Rhomboid.*

Virtues and *Uſes.*

Though all of them being eſteem'd *cold Fruits*, may ſeem to have a Reſemblance in their *Virtues*; yet, ſince the *Salts* they contain are more

or

or leſs acrimonious. This makes a great Difference in their Operation in the animal Body. I ſhall therefore divide them into three Diviſions. 1. *More*, or 2. *leſs eſculent*, and 3. *purgative*. The *more eſculent* are the *Garden Cucumbers* and *Melons*. The firſt is either eat *green*, being *ſlic'd* with *Salt*, *Pepper* and *Vinegar*, *Oil*, &c. or *pickled*. The *Melons* are eat when ripe, where they have a moſt delicious *Taſte*, according to their ſeveral Kinds. The *leſs eſculent* are the *Citruls*, *Gourd*, and *Pompion*. Theſe, becauſe of their *Largeneſs* do not eat ſo fine as the other, and are look'd upon to be too cold for the *Stomach* when eat raw, except the *Citruls*, which eat ſomewhat like a *Melon*, but more watery, and not ſo delicious. The other two are ſometimes boil'd and eat with Butter and Vinegar, and Pepper, *&c.* like Cabbage; or they are bak'd with Apples, put alſo in the common Shell.

The not eatable or purgative are the wild *Cucumber* and *Colocynth*, otherwiſe called the *bitter Apple*. The firſt is famous for the *Fæcula*, or *Elaterium*, which is a violent *Emetick* and *Carthartick*, and is ſometimes preſcribed in *hydropical* and *anaſarcous Caſes*; but Medicines of ſo violent an Operation are not always to be recommended; and theſe ſhould be us'd with great Caution. The *pulv. Colocynth* alſo in a few Grains *purges* pretty ſmartly, being attended with Gripings, unleſs well corrected, and is not always ſafe, though too frequently given by old Women, Quacks and Mountebanks, to the poorer ſort of People. It enters *Conf. Hamech. Hiera diacolocynthidoſ. Pil. Cochiæ min. ex duobus Rudij.* It's made in Trochiſes by the Name of *Troch-Alhandal*, which enters the *Pil. Cochiæ majores*. The Seeds are *preſcrib'd* in *Decoctions* for *purgative*, *ſharp*, and *irritating Clyſters*. The *Sem. quatuor frigida majora* are the *Cucumeris hort. Cucurbitæ Peponum*, *Melonum*; to which may be added *Citrulli*. They are us'd in *Anodyne Emulſions* for the Gravel, and Pleuriſy: A Paſte of them with *ſem. Hyoſcyami*, *Papaveris*, &c. may be apply'd as a *Frontal* in *violent Head-aches*. They enter *Spec. diatrag. frig. diatrion Santalon. Pulv. Haly Elect. diaſpermaton*, &c.

XXII. *Cochlearia rotundifolia, Cochlearia marina, & Raphanus ruſticanus.*

1. *Cochlearia folio ſubrotundo* C. B. 110. Tournef. Inſtit. 215. *Cochlearia* J. B. 2, 22, 942. Raij Hiſt. 822. Synopſ. Stirp. Brit. 173. Dod. Pempt. 594. *maj. Batavica ſubrotundo folio* Moriſ. Hiſt. 2, 308. Common Scurvygraſs.

2. *Cochlearia folio ſinuato* C. B. 110. Tournef. Inſtit. Raij Hiſt. *Brittanica folio ſinuato* Moriſ. *Brittanica* Dod. Common Sea Scurvygraſs.

3. *Cochlearia folio cubitali* Tournef. *Raphanus Ruſticanus* C. B. 96. Moriſ. Hiſt. 2, 237. Raij Hiſt. 818. Synopſ. Stirp. Brit. 172. *ſylv. ſive armoracia multis* J. B. 2, 21, 851. *ruſticanus craſſa radice Lapathi folio* Lob. Icon. 320. Horſe-Radiſh.

The *Tribe.*

They are of the *Tetrapetalæ Siliculoſæ* or *flore cruciformi cujus Piſtillum abit in ſiliquam ſatis brevem* by *Tournefort*; *Boerhaave* follows *Tournefort* in joining *Raphanus ruſticanus* with *Cochlearia:* Tho' it differs in the *facies externa*, yet ſince they agree in their Virtues as in the Notes, I think proper to bring it into this Place.

The *Deſcription.*

1, 2. Since the firſt two only differ in the Figure of the *Leaf*, I ſhall deſcribe them together: They are both low *branched Plants*; they firſt appear with ſhining ſmooth green *Leaves*, upon long *Pedicles* ariſing from the *Root*, round in the firſt, and hollow'd like a Spoon, from whence the Name. The *Leaves* of the other more narrow, thicker and more *pointed*, of a duller green, and ſomewhat ſinuated round the Edges: Their *flowering Stem* ariſes about half a Foot high, much branched with leſs *Leaves* ſupporting ſmall white *tetrapetalous* Flowers on the upper Part; to which ſucceed round *Capſulæ* or *Seed Veſſels*, rather than *Siliculæ* or *ſmall Pods* bicapſular; *ſepto intermedio*, according to *Tournefort:* They *flower* early in the Spring, ſoon ſhake the *Seed*; ſo that though they diſappear in the Summer, yet they appear again pretty large in a wet Autumn, and the *Leaves* are chiefly uſeful in the Spring. The firſt, though called *Batava*, is pretty frequent on the *Britiſh* Sea-Coaſts; it loves a Soil very near to the Sea; it grows frequent on the Sea-Banks on the top of the *Rocks* at *Dundee*, and ſeveral other Places in *Scotland*, and the North of *England*; 'tis much cultivated in *Gardens*. The ſecond, though by ſome called *Brittanica*, yet is by far more rare: 'tis alſo to be had in ſeveral *Salt Marſhes*.

3. *Horſe-Radiſh* has a deep running ſimple carnous Root, emitting ſeveral large oblong blunt Leaves, ſmooth ſhining, of the bigneſs of *Dock Leaves*, dented about the Edges. The ſmall ſtrait not much branched flowering Stalk ariſes one or two Foot high, with ſmaller and more pointed *Leaves*, ſupporting *tetrapetalous* ſmall white *Flowers* with large

large yellow *Apices*, to which ſucceed ſmall round *Pods* with the former. I have often ſeen it growing wild in arable Grounds, where the Roots being plough'd up ſpring forth again, and the Plant is more diſperſed; for it propagates ſo much by the running Root, that it ſeldom flowers, or brings the Seeds to Perfection.

Virtues and *Uſes.*

1, 2. *Scurvygraſs*, ſo called becauſe of its *Prevalency* againſt that *Diſtemper*, is moſt effectual in all the *Symptoms* which attend it; the frequent internal Uſe of it very much curbs the acrimonious Salts, with which the Blood of *ſcorbutick* Perſons is *tainted*. The juicy Herb chopp'd and put in a Bag, and rubb'd upon the Part, is an effectual Remedy for *ſcorbutick Eroſions* of the *Gums*, which often endanger the Loſs of Teeth. The bruiſed *Leaves*, and even the Juice, put plentifully in a Bathing Tub with cold Water, by frequent Bathing in it, the ſcorbutick Eruptions ſoon abate, and the Skin acquires its natural ſmoothneſs and ſoftneſs, eſpecially if the Patient be under an *antiſcorbutick Regimen* during that time. *N. B.* It will not do ſo well in hot Bathing, its Particles being ſo volatile, that the active Principles ſoon evaporate: It conſiſts of the moſt volatile and ſooneſt extricated ſaline Particles of moſt *Vegetables*; its Preparations are *Aq. ſimpl.* which though the Water may well be impregnated with the more active and volatile Particles of the *Plant*, yet if *Spirits of Wine* be added, it will be more effectual where the firſt or more ſubtile Liquor may be called the *Spirit*, and what is afterwards diſtill'd may be call'd the *Aq. Cochleariæ*; ſome pretend to vend the *plain* and *purging Spirit*, by the Name of the *Golden Spirit of Scurvygraſs*, as a great Secret, and that it infallibly cures the *Scurvy:* This is only done by putting a little *Saffron* in a Bag, which they ſuſpend at the Orifice of the Receiver during the Diſtillation, by which they conciliate the *golden Colour* to the plain; and when they would make it purging, they make a *Tincture* of it with *Reſina Jallap.* or *Scammony*. Some pretend to ferment the Juice with Yeſt or Barm before the Diſtillation; but I am of opinion this Method may do more hurt than good to the Virtues; for by this means the *Spiculæ* of the *volatile Salts* may be broken, and rendred not ſo active; and the Plant is of ſo looſe a Texture of it ſelf, that it ſoon conciliates its Virtues to the *Spirit* of *Wine*, without any ſuch previous Preparation. The clarify'd Juice of *Cochlearia* and *Naſturtium aquat.* drank to three or four Ounces in a Morning during the Spring, is very good for that *Diſtemper*. The way to clarify it is to draw the *Juice*, and place it over a very

very gentle *Fire*; as it warms a Scum will ariſe on the top, which may either be taken off by a Spoon, or it may be ſtrain'd, but the firſt is preferable; for in the ſtraining, the groſs Particles are ready to mix again with the *Liquor:* They either draw the Juice, or mix the contus'd Herb with other *antiſcorbutick Ingredients*, to be infus'd in *Wine* or *Ale*, the laſt of which they chuſe to ferment, by putting them among hot Worts, and adding Yeſt or Barm when moderately cool: It yields a plentiful *eſſential Salt* by drawing the Juice, and placing it in a flat Veſſel in a cool Cellar, and the Chryſtals will adhere to the ſides of the Veſſel after ſome time: It enters *Aq. Raphani compoſita* in good quantity.

3. The *Raphanus ruſticanus* partakes of the very ſame Virtues, and equally powerful. The *Root*, which is moſt uſed, is of a very hot acrimonious Taſte; the compound diſtill'd Water has the Name from it: 'Tis an Ingredient in all *antiſcorbutick* Waters, Infuſions in *Wine* or *Ale*, *&c.* 'Tis alſo given in good quantity among the Corn to *Horſes*, as an effectual Remedy for the Cold in them, for which it is called *Horſe-Radiſh:* 'Tis uſed for Sauces, being ſcrap'd down and eat with Roaſt Beef, *&c.* 'Tis well known; the Root is kept dry in the Shops for medicate *Infuſions* againſt the *Scurvy*; but it looſes much of the hot Taſte in drying, though the remaining *farinaceous* ſweet Taſte is not an uneffectual Remedy for *curbing* of Acrimony in *Coughs* and *Conſumptions*, and therefore may be an Ingredient in Powder in *pectoral Lohochs* and *Electuaries.*

XXIII. *Conſolida major* vel *Symphytum, Pulmonaria & Cynogloſſum.*

1. *Conſolida major Offic. Symphytum Conſolida major* C. B. 259. Tournef. Inſtit. 139. *Symphytum magnum* J. B. 3, 33, 593. Raij Hiſt. 504. Moriſ. Hiſt. 3, 444. Great Comfrey.

2. *Symphytum maculoſum Pulmonaria dictum* C. B. Moriſ. Hiſt. Tournef. 136. *Pulmonaria Italorum ad Bugloſſum accedens* J. B. 3, 33, 595. *maculoſa* Raij Hiſt. 489. Spotted Lungwort.

3. *Cynogloſſum maj. vulg.* C. B. 257. Tournef. Inſtit. 139. Hiſt. des Plantes 74. Raij Hiſt. 489. Moriſ. Hiſt. 3, 448. J. B. 3, 33, 598. Hounds Tongue.

4. *Cynogloſſum marinum Glaucophyllum procumbens floribus purpuro cæruleis* Pluk. Alm. Bot. 126. Miſcell. Obſerv. let. 4. *p.* 53. *an Bugloſſum dulce ex Inſulis Lancaſtriæ* Park 765. *Echium marinum* Phyt. Br. Sibbald Prodr. Scot. *Cynogloſſum perenne marit. procumbens fol. glaucis brevioribus* Moriſ.

Moriſ. Hiſt. 3, 450. *Bugloſſum marit. incanum cæruleo flore* Hort. Ludg. Bat. 98 *marinum* Pet. Herb. Brit. T. xxix. 3. *Cerinthoides Argentea flore pulchro cæruleo* Boerh. Ind. 196. Sea Bugloſs, *falſly*; *rather* Sea Hound's Tongue; *by ſome called* Sea Colewort.

The *Tribe.*

Great *Comfrey* being preſcrib'd in the Shops by the Name of *Conſolida major.* I thought fit to treat of it in this Place, and add the other three to it, becauſe of the Affinity in their *Characters* and *Virtues.*

Moriſon joins the firſt two together; and it's with no leſs Reaſon that I have join'd the laſt two together alſo. Various are the Opinions concerning the Genus of the laſt nam'd. *Phytologia Brit.* ſeems to be the firſt who nam'd it *Echium marin.* Dr. *Sibbald* obſerving it near to the *Queens-ferry* in *Scotland*, continues to call it ſo. Dr. *Pluknet* is the firſt who deſign'd it *Cynogloſſum*, as did Mr. *Watts*, according to Mr. *Ray. Park.* ſuppos'd it to be a *Bugloſſum. Herman* will have it a *Cerinthe.* Mr. *Ray* is of his Mind, though it's ſtill continued by the Name of *Echium* in all his Writings. Mr. *Bobart.* (*Hiſt. Oxon.* 3.) very juſtly acknowledges it to be a *Cynogloſſum*; and having receiv'd it from Mr. *Lawſon*, gives a good Deſcription of it. *Boerhaave* looking upon it as a mongrel *Plant*, terms it *Cerinthoides.* The Reaſon why I treat of it here is, on the account of the *Experience* I have of its *narcotick Quality.* They are all *Gymnotetraſpermæ-Aſperifoliæ*; for which ſee *Borrago Decad.* IV.

The *Deſcription.*

1. *Comfrey* has a groſs thick blackiſh ſimple *Root*, ſending forth large Portions plentifully, endow'd with a viſcid Juice and aſtringent Taſte. The ſeveral larger rough pointed *Leaves* upon Pedicles ariſe firſt from the *Root.* The *flowering Stem* in the middle is groſs, cornered, rough, branched, with leſs Leaves, without Pedicles, about two or three Foot high; the *monopetalous Flowers* ſometimes pale red, ſometimes yellowiſh, a little pendulous, have a groſs *Tube* within the *quinquifid* pointed *Empalement:* are divided at the Border into five *ſuperficial* round *Segments*, with five *Stamina* and their *Apices.* The four *Embryons* round the *Stylus* in the *Pericarpium* ſtill tubulous, become ſo many *rough Seeds*, like a Viper's Head. It grows on Ditch Sides, and other ſhady Places.

2. *Spotted Lungwort*, ſo called by its white Spots diſpers'd over the Leaf, which reſembles a *Lobe* of the *Lungs*, has a carnous Root about the Groſsneſs of ones *Thumb*, ſoon diſpers'd into *Fibres* running deep

in the Ground. The rough light-green oblong and pointed *Leaves*, leſs than thoſe of *Bugloſs*, ariſe very numerous upon long Pedicles from the *Root*, the low *flowering Stem* in the middle, not above one Foot high; is ſmall, rough, not much *branched*, with leſs alternate *Leaves*, but more pointed: The frequent *Flowers* on the upper Part are *tubulous*, within a *quinquifid* and *pointed tubulous* Empalement, ſomewhat *red* at the Beginning, afterwards more blue, and in ſome Species pure white, divided at the Border into five blunt ſuperficial *Segments*, with proportional *Stamina* and *Apices*; the four Embryons round the *Stylus* become ſo many rough *Seeds*. It's a buſhy Plant, cultivated in *Gardens*, *flowers* in the Spring. I have ſeen it wild in the Woods and ſhady Places in *Flanders*.

3. *Hound's Tongue* has a carnous black *Root*; the whole *Plant* reſembles *Comfrey*; but its Leaves are more *blueiſh*, not ſeeming ſo rough ſave to the Touch; the *tubulous Flowers* more numerous, the Tube ſmaller, the deep red or purpliſh Borders not ſo large: It has five *Apices* at the beginning of the *Expanſion*, alternately placed in a Circle, with five *Tubercles*; the four Embryons become ſo many large very rough flat *capſular Seeds*, ſituated obliquely round the groſs Center, formerly the lower part of the *Stylus*, and lying upon the expanded *Pericarpium*. The numerous *Leaves* from the *Root* upon long *Footſtalks* only appear the firſt Year. The *flowering Stem* is puſh'd forth the ſecond Spring, after which the *Root* decays. It grows on the Sides of High-ways, rough and craggy Places, and ſometimes varies into a white *Flower*, at which time the whole Habit of the Plant is of a lighter Green, as is uſual in ſuch Caſes.

4. *Sea-Hound's Tongue* has a pretty groſs black running *Root*, diſperſing ſeveral ſmall Fibres: the *Leaves* upon half Inch Footſtalks are leſs roundiſh, and about one Inch broad at the Baſe, ſhort and tapering to a Point of a cæſious or bluiſh Green, like Coleworts as it were, prinkled with a whitiſh Duſt, ſmooth to the Sight, but hard, ſtiff and rough to the Touch. The infirm Stalks ſpread along the *Sea Sand*, but very ſeldom branch'd or erect; are cloath'd with numerous leſs alternate more pointed and narrower *Leaves*, without *Footſtalks* at the Baſe. The *Flowers*, as are rightly obſerv'd by Mr. *Bobart*, ariſe ſeldom from the Boſom of the Leaves, as moſt of that Tribe; but from the naked *Stalk*, with a *quinquifid Calyx*. The *Flowers* like the former, the *Tube* groſſer and ſhorter, *Borders* not ſo broad, with five *Tubercles* and *Stamina* of a moſt agreeable dark or purpliſh Blue, ſoon falling off, and ſucceeded by four large flat *capſular Seeds*, plac'd upon the expanded *Pericarpium*, round the groſs remaining Part of the Bottom of the *Stylus* in the Center.

ter. Its Root runs deep in the Sand, like *Eryngium Marit.* whoſe Colour much reſembles; it grows very thick together, and ſpreads a good way, being chiefly propagated by the running Root. I knew it to be a *Cynogloſſum* at firſt View, both by the *Flower* and *Fruit*, before I had conſulted Books, or knew any Diſtribution of it by Authors. In its *Facies externa* and Figure of the Leaf it may ſomewhat reſemble a *Cerinthe*; but though the *Tubulus* of the *Flower* be ſhort and groſs, yet it's expanded, and has the *Tubercles* of a *Cynogloſſum Flower*, and *ovum non ovo ſimilius*, than the *Fruit* of this is like to the other. *Pluknet* ſays the *Semina* are *lævia*: they ſeem indeed to be ſmooth at a diſtant View, but are ſtill rough, and hard to the Touch. All genuine *Cynogloſſa* have *capſular Seeds* as much as the *Malvæ*; a moſt diſtinguiſhing *Character* from the other *Aſperifoliæ*, which may be more truly called *Gymnoſpermæ*.

It was obſerv'd at *Scrammerſton* Mill, between the *Salt Pans* and *Berwick:* on the Sea Beach, about a Mile and a half from *Berwick*; alſo near *Whitehaven* in *Cumberland*, and againſt *Bigger* in the *Iſle* of *Walney* in *Lancaſhire*, plentifully, by Mr. *Lawſon*. Near *Trefarthen* in *Angleſea*, and in abundance by the River *Uyſni*, in the Way from *Dinardinlle* to *Clynog* in *Carnarvonſhire*, by Mr. *Lhwyd*. In ſeveral Places along the South Side of the *Firth* of *Forth*, by Sir *R. Sibbald*, and about one Mile from the *Ferry*, over againſt *Dundee*, as you go to *Naughton* in *Fife* by myſelf, where it runs plentifully among the dry, pebbly, or channelly Sand, but not within Flood Mark.

Virtues and *Uſes.*

1. The *Roots* of *Comfrey* are moſt in Uſe. They are potent *Aſtringents*, and are preſcrib'd in *Decoctions* and *Ptiſans*, in *Diarrheas*, *Dyſenteries*, *Menſtruorum fluxus nimius*, and *ſpitting of Blood*; but in ſmall Quantities otherwiſe they make the Liquor ropy and viſcid. The *Powder* may be given inwardly in the aforeſaid Caſes; alſo in a *dry Cough* and *Conſumption*; for it's an excellent Obtunder of Acrimony. It enters the *Syr. de Symphyto* & *de Piloſella*. It's eſteem'd an excellent *Vulnerary*, and is preſcrib'd in *Fomentations* and *Lotions* externally, for ſtopping of Blood in incis'd Wounds, for curbing the Efflux of *ſerious acrimonious Ichorous* and *Sanies Matter*; alſo for keeping down *proud Fleſh*. The Powder may alſo be an Ingredient in *Aſtringent* and *Strengthening Plaiſters*. A Fomentation apply'd to the *Back* is a ſpeedy and effectual Remedy to prevent *Abortion* from exceſſive *Floodings*.

2. *Pulmonaria*, or *Lungwort*, being alſo an *Aſtringent*, may be an *Ingredient* in the aforeſaid Caſes. It's particularly recommended for

pectoral

pectoral Decoctions, *Syrups* and *Ptisans*, for Diseases of the Breast, perhaps by the Signature, because of its Resemblance to the *Lungs*. It's also a good *Vulnerary*, and fit for *Lotions* and *Fomentations*, to curb Acrimony and *proud Flesh* in *Wounds* and *Ulcers*. *Lungwort* being infus'd among small *Beer*, and drank Morning and Evening, is recommended by the *German Ephimerides*, for an effectual Remedy for the *Jaundice*, Raij Synopf. 3, 228.

3. The two *Cynogloſſa* have both the same *ſoporifick*, *narcotick*, and even *poiſonous* Qualities, as appears by theſe two Relations. *Moriſ. Hiſt.* 3. informs us, that a *Woman* near *Oxford*, about twenty-ſix Years before writing of that *Hiſtory*, being deſirous to have a Diſh of green *Broth* made of tender *Comfrey Leaves*, took the *Leaves* of *Hound's-tongue* inſtead of them, boil'd with *Fleſh*. Her *Husband*, *Children*, and herſelf eat plentifully of it; immediately after Dinner all of them were oppreſs'd with Sickneſs; they fell a vomiting violently, after which they were ſo ſtupify'd, that they fell aſleep, and ſlept near forty Hours, before they could be awak'd; and one of them never awoke, but died. I have been inform'd of the following Narrative, exactly parallel. In the Year 1694, there was a great Famine in *Scotland*, ſo that the poor People gathered what kind of green Herbs they could get, and made a green Broth, ſprinkling ſome Oatmeal among them, as they often do with the common *Coleworts*. A Family living at a *Farm Houſe*, (which they call *Peaſe-Hill*, about half a Mile of this Place, where I obſerv'd the *Cynogloſſum marinum procumbens*) obſerving this Plant grow plentifully there, and having a Reſemblance to Coleworts by the Colour, gathered, boil'd, and eat heartily of it. There were five or ſix People in the Family, they all ſickened, vomited, were ſtupified, fell aſleep, and they that ſurviv'd ſlept two Days, but two of them died. I communicated this Hiſtory ſome Years ago to my *late worthy Correſpondent Mr.* Pettiver. See my *Miſcel. Obſerv. Letter* 4. *p.* 53. This is a moſt convincing Argument of the Harmony betwixt the *Characters* and *Virtues* of *Plants*, as the Notes ſhew both to be *Cynogloſſa*, or of the ſame *Genus*. So theſe two Narratives are a full Confirmation of it; and what's very remarkable, I had got this hiſtorical Account of the one, ſeveral Years before I had read or taken Notice of that told in *Hiſt. Oxon.* of the other.

Hound's-tongue is reputed a potent Aſtringent, alſo recommended for ſtopping of *Hemorrhages*, *Fluxes*, *Gonorrhœas*, *ſpitting* of *Blood*. It's alſo eſteem'd good in *dry Coughs*; but its chief Uſe in Phyſick is as an *Anodyne* and *Narcotick*. Dr. *Hulſe*, according to Mr. *Ray*, *Synop. Stirp.* commends its Uſe in *ſcrophulous Tumors*, either a *Decoction* of the *Root* being

being given inwardly, or a Cataplaſm of it being apply'd externally to the *Tumour*. It ſeems, by its *Anodyne* Effect, to be a great Curber of *Acrimony*, as all *Narcoticks* are; but I am not fond of recommending it internally, becauſe too potent *Aſtringents* and *Anodynes* inwardly given are not always ſafe. Its Doſe in the *Pillulæ de Cynogloſſo* is ſo ſmall, and 'tis an Ingredient in the Compoſition in ſo ſmall a quantity, that there is no Danger in the Uſe of it: Moſt Medicines, when given in an immoderate Doſe, prove rather *Venena* than *Medicamenta*. In a word, the *Aſperifoliæ* come up to the propos'd Harmony betwixt the *Characters* and *Virtues* of *Plants*, as much as any: They are more or leſs Coolers; conſiſting of Particles that more or leſs *reſtrain*, and put a ſtop to the too violent *Motion* or *Circulation* of the *Blood*; more or leſs intenſe *Aſtringents*, by contracting or ſhutting up of the *Pores* and Orifices of the *Capillaries*, more or leſs *ſtupifying* of Pain, and curbing of Acrimony; but none of them conſiſt of ſuch tenuious and ſubtile Particles, as to become *Diſcutients*; *Carminatives* can accelerate the *Motion* of the *Blood*, or *reſerate Obſtructions*; that's the Work of the *Galeatæ Verticillatæ*, the *Tetrapetalæ Siliquoſæ* & *Siliculoſæ Umbelliferæ*, &c.

Conſolida media vide *Bugula.*
Conſolida minor vide *Bellis minor.*

XXIV. *Conſolida Regalis* ſive *Delphinium.*

Conſolida Regalis hort. fl. majore & ſimplici C. B. 142. *Delphinium ſive Conſolida Regalis erectior purpureo ſive violaceo flore maj.* J. B. 3, 26, 211. *Delphinium elatius purpureo-violaceo diſtinctum* Tournef. Inſtit. 426. Raij Hiſt. 708. Moriſ. Hiſt. 3, 465. Lark's Spur.

The *Tribe.*

This, by all who claſs by the Fruit, is plac'd among the *Multiſiliquæ Corniculatæ*; and among the *Polypetalæ Anomalæ* by *Tournefort*, who claſſes by the *Flower*.

The *Deſcription.*

From an *annual fibrous Root*, a round ſtrait branched *Stalk* ariſes two or three Foot high, adorn'd with ſeveral dark green roundiſh Leaves, deep divided into many *fine Segments*, like thoſe of *Abrotanum Mas.* The *Flowers* on long *Spikes* on the top of the *Stalk* and Branches are *pentapetalous*, *anomalous*, the *lower* of which are roundiſh; the *fifth* and upper conſiſt of five *Parts*, *viz.* an upright *bifid Galea* or *Helmet*, on the back of which lies as it were another *Petalon*, two Wings, and a cavous or hollow *Calcar*, or ſurrounded as it were with a *Scabbard* or *Sheath*, bending downwards behind. The *Stamina* are ſo numerous,

that being united they form as it were a *ſilken Membrane* in the bottom of the *Flower*. The *Embryo fructus* conſiſts of ſeveral ſmall *Rudiments* of *Capſules* or *Seed-Veſſels*, ſtrait and parallel to each other, each endow'd with a proper *Stylus*, with a white *Button*, which become four or five *Siliquæ* or *Pods*, opening longitudinally, and pouring out ſeveral black, cornered *Seeds*. It is cultivated in Gardens, where 'tis a great Ornament, ſtrolling with a good Variety of *Colours*, as *white*, *blue*, *incarnate*, *ſtrip'd*, *ſingle*, *double*, and very *full* (*flore duplici & pleno*). This is a pregnant Inſtance, not only of the *Sexes* of *Plants*, but of the Prevalency of *Effluvia*: For undoubtedly the original *Colour* was *blew*; ſome Diſpoſition of the *Particles* entering the *Pores* of the *Root*, have at firſt cauſed theſe Variations of *Colours*. The *Effluvia* continue this *ſtrolling*, and the Culture cauſes the *Alteration* from *ſingle* to double, *&c.* Of this ſee more at *Aquilegia* and *Cyanus*.

Virtues and *Uſes*.

'Tis ſaid to be a potent *Vulnerary*, but ſeldom or never uſed: Its Uſe is more for the *Ornament* than for a *Medicine* in Gardens.

Convolvulus vide *Braſſica Marina*.

XXV. *Conyza*.

1. *Conyza maj. Theophraſti major Dioſcoridis* C. B. 284. *maj. Monſpel. odorata* J. B. 2, 24, 105. Raij Hiſt. 261. *Virga aurea maj. fl. glutinoſo graveolente* Tournef. Inſtit. 482. *major vera* Moriſ. Hiſt. 3, 114. Great Fleabane.

2. *Conyza minor flore globoſo* C. B. 266. *minor mas* Raij Hiſt. *After parvo flore globoſo* Tournef. Inſtit. 483. *mediæ minor ſpecies flore vix radiato* J. B. 2, 1050. Synopſ. Stirp. Brit. 3, 174. Small Fleabane.

3. *Conyza media Aſteris flore luteo vel tertia Dioſcoridis* C. B. Raij Hiſt. *media humidis locis proveniens* J. B. *After pratenſ. Autumnalis Conyzæ facie* Tournef. *media repens Aſteris fl. luteo* Moriſ. Hiſt. Middle Fleabane.

The *Tribe*.

The Difference amongſt *Authors* in determining the Officinal Species, has induc'd me to propoſe theſe three; for though none of them be in modern Uſe in the Shops, yet ſince *Dioſcorides* among the *Ancients* propoſes three, according to *Weckerus Antidot.* Spec. 75. MAJOR, MINOR & MEDIA. MAJOR *frutice altior & foliis latioribus quam* MINOR *odore gravi*; MINOR *odore præſtantior*, MEDIA *caule craſſiore & molliore minime pinguis multo tamen gravioris odoris & injucundioris ſed inefficacior*. I ſay, ſince the Ancients name three, and ſince ſome of the Moderns propoſe *Baccharis*, the New *London Diſpenſatory* determines *Conyza flore globoſo* C. B. and Mr. *Dale* condeſcends upon *Conyza media*, I reſolve to treat

treat of all the three. The *Baccharis*, J. B. *maj. Dioſcoridis* C. B. is a *virga Aurea* with *Tournefort*; *minor* and *media aſteris flore* are by him plac'd among the *Aſters*.

The *Deſcription.*

1. *Baccharis* ariſes three or four Foot high, with a ſtrait woody rough branched *Stalk*, glutinous to the Touch; the dark green alternate Leaves two or three Inches long, and pointed, lightly ſerrated hairy and clammy, pale green, as they aſcend, the yellow radiated Flowers, about the Bigneſs of thoſe of *Bellis minor*, are diſpoſed into *Spikes* on the top of the *Stalk* and *Branches*; to which ſucceed ſmall pappous *Seeds*. 'Tis a perennial Plant, with a woody fibrous *Root*.

2. *Small Fleabane.* From an hard *Root* with large white *Fibres*, the round purpliſh ſomewhat hairy *Stalk* ariſes about half a *Foot high*. The alternate *Leaves* two or three Inches long, one or two broad; pointed, and a little *criſp'd* round the Edges, ſurround the *Stalk*, without *Foot-ſtalks*: The little *ſemifloſculous* yellow *Flowers*, from a globulous *ſquammous Empalement*, are plac'd on the top of the Stalk and Branches; to which ſucceed ſeveral pappous Seeds. It grows in moiſt Places, where the Water has ſtagnated in the Winter.

3. *Middle Fleabane* ariſes about one Foot high, with a groſs round whitiſh *Stalk*; the whitiſh hairy alternate *Leaves* ſurround the *Stalk* with an *Ala* or Wing on each ſide, are oblong narrow pointed rough, larger than *Sage Leaves*: The *yellow radiated large Flowers*, on the top of the *Stalk* and Branches, have their *Corona*, conſiſting of two or three Rows of very ſmall *Semifloſcules*: The *Diſcus* is large; its Heads are ſo black, after the Flouriſhes of the *Diſcus* are decay'd, the *Pappo* or Down is ſo ſhort and compact, that at firſt view it would ſeem to be one of the *Corymbiferæ radiatæ*, rather than *Seminibus Pappo inſtructis*; it grows very frequent at the Sides of Ditches and other moiſt Places.

Virtues and *Uſes.*

The Virtues aſcrib'd to this Plant by the Ancients, are, according to the ſaid *Weckerus*, theſe; *Suffitu ſubſtratuque frutex totus* (I ſuppoſe he means of the *major*) *Serpentes fugat culices abigit & pulices necat. Folia convenienter illinuntur ſerpentum plagis & tuberculis ac vulneribus. Flores & folia cum vino ad Menſes partuſque ejiciendos bibuntur, item contra Urinæ Stillicidia arcuatum morbum & tormina Comitiales pota ex aceto adjuvant. Decoctum in deceſſionibus medetur vulvæ malis impoſitus, ſuccus abortum facit. Herba ex oleo efficaciter horroribus oblinitur capitis dolores tenuis illinita ſanat. Dioſcoridis.* The afore-cited Author, *Antidot. lib.* ii. *p.* 569. in *Ung. Aregon.* which ſeems to be a good Diſcutient, preſcribes *Conyzæ maj. min. ana.* ʒjv. *Conyza* was in the ſame Ointment in the *Old Diſpenſatory*, but it is omitted

mitted in the *New:* ſo that the officinal Uſe of that Plant is exploded. *Vid. Math. in Dioſcorid. edit. Bauhin. lib.* 3. *p.* 629.

XXVI. *Coriandrum.*

Coriandrum maj. C. B. 158. Moriſ. Umbell. 48. Hiſt. 3, 269. Tournef. Inſtit. 316. *Coriandrum* Raij Hiſt. 479. J. B. 2, 27. 89. Coriander.

The *Tribe.*

This is a peculiar *umbelliferous* Plant, with *globular* or *ſubrotund Seeds.*

The *Deſcription.*

'Tis an annual *Plant*, with a ſtrait ſmooth round ſtriated, not much branched, *Stalk*; the lower *Leaves* are light-green roundiſh and crenated; the upper, upon the *Stalks*, are longer, and ſtill the deeper divided the higher they grow upon the *Stalk*. The *white Umbells* of *Flowers*, with diſſimilar *Petals*, are ſucceeded by two *globular* or *ſpherical* lightly *ſtriated Seeds*, of an heavy high Smell when green, more agreeable when dry: 'Tis ſown in *Gardens*, alſo in the Fields near *Tilbury*, and other Places in *Eſſex.*

Virtues and *Uſes.*

'Tis one of the moſt potent *Carminatives* in the *Shops*, and preſcrib'd in moſt *anticholical Medicines*; ſuch as *ſtomachick Powders*, *Electuaries*, *Ingredients* for *Infuſions* in *Wine* and *Ale*, and *Tinctures* in *Brandy*. They *candy* Seeds with Sugar for diſcuſſing, or what they call raiſing of *Wind.*

XXVII. *Cornus.*

Cornus mas. C. B. 447. *ſativa ſive domeſtica* J. B. 12, 202. Tournef. Inſtit. 642. The Cornelian Cherry Tree.

The *Tribe.*

This is one of *Tournefort*'s *Arbores flore Roſaceo*; of the *Arbores Dicotyledones* by *Boerhaave*; the *Bacciferæ Umbilicatæ* by Mr. *Ray*; which though 'tis *monopyrene*, yet 'tis *diſpermos*, with only one *nucleus*, but incloſing two Seeds.

The *Deſcription.*

This is near to the Bigneſs of a Cherry Tree, with broader ſmoother, not ſerrated *Leaves*, with *Veins* differently divaricated. The ſmall *Flowers* have firſt a common ſtiff expanded *tetraphyllous Calyx*; within that is another, *pentaphyllous*, with more pointed *Segments*; theſe involve ſeveral ſmall *tetrapetalous yellow Flowers*, each with four *Stamina* thick-ſet in Cluſters, with a long *Stylus*; to which ſucceeds an oblong *Fruit*, like a little Olive, *red* when ripe, with a ſweetiſh *Pulp*, including an

an hard *Stone*, containing two *Seeds*: The *Buds* of the aggregated *Flowers* appear early in the Spring, before the *Leaves* break forth. The male *Tree*, which ariſes pretty high, is planted in Gardens. The Female, called *Virga Sanguinea*, is only a *Shrub*, its Fruit not ſo large, and is planted in *Hedges*.

Virtues and *Uſes*.

The ſubaſtringent Fruit is palateable, and eat with other Fruits ſold in the Markets, in the Seaſon: It is ſaid to be good in *Diarrhœa's*, *Dyſenteries*, &c. The *Rob de Coruis* is ſometimes uſed in the Shops, but is not much in uſe.

Coronopus vide *Plantago*.

XXVIII. *Corylus*.

1. *Corylus offic. Corylus ſativa* J. B. 1, 3, 266. *ſativa vulg.* C. B. 417. Raij Hiſt. 1379. Tournef. 581. Boerh. Ind. 176. Filbert Nut.
2. *Corylus ſylv.* C. B. 418. Læſelij Flora Pruſſica 55. The Hazel Nut.

The *Tribe*.

This is another kind of *juliferous Trees*, whoſe *Flower* is ſeparated from the *Fruit* in the ſame *Plant*. No ſooner are the *Nuts* ripe, than the *Juli* or *Katkins* begin to appear, ſome ſingle, ſome two or three together, upon ſmall Pedicles hanging down from the Joints or Boſom of the Leaves; ſhort and ſmall at firſt, ſomewhat reſembling an Earth-worm, but afterwards ſtretch'd forth to an Inch and an half in length, conſiſting of a *Midrib*; to which adhere, at certain regular Intervals, three ſmall ſcaly *Leaves*, one larger above, the other two leſs, convex above and concave below; beneath which are lodg'd ſix Chives with their Summits, which burſt and ſhed their *Duſt* in the Months of *January* and *February*. In the beginning of *March*, the *Embryons* of the *Fruit* begin to appear, at diſtant Places; conſiſting of a ſcaly *Empalement*, compoſed of ſeveral ſmall *Leaves*, ſurrounding many ſmall round bended ſharp ſcarlet *Threads*, with the *Embryon* in the middle, which afterwards becomes a *Stone-Fruit* or *Nut*, conſiſting of an hard *Shell*, encloſing a *Kernel*, and contained in a thin tough ſpread forth *Empalement* or *Huſk*; theſe Embryons are ſometimes three four five or more in a *Cluſter*, ariſing from one *Pedicle*; but they ſeldom amount to *Læſilius*'s Number; whereof hereafter.

The *Deſcription*.

Theſe two *Trees* differ only in the Soil and Culture: The *Filbert* ariſes to a ſtrait Tree of a middle Stature, with ſmall tough flexible

or plyable *Branches* when young; but riſing up to a pretty big *Trunk*, with a rough *Bark* when of age; the *Leaves* alternate from the Joints, upon ſhort *Pedicles*, are large, about two or three Inches diameter, round, ſomewhat pointed and ſlightly nitch'd, rough, dark green above, with ſix or ſeven Pair of protuberant *Veins*. The *Katkins* and *Fruit* appear in their Seaſon upon ſhort *ſmall Pedicles* from the *Joints*. The Hazel Nut only differs from the other, by its being rather a *Shrub* than a *Tree*, ſeldom ariſing into one ſingle *Trunk*, but ſoon diſpers'd from the Root into ſeveral long, infirm, flexile *Branches*, with *Leaves* and *Fruit* like the former, but much leſs in Proportion.

Læſelius obſerves, that the Hazle is ſo fertile in *Pruſſia*, that he has ſeen 17, 21, or 22 Nuts hanging in a Cluſter from the ſame *Pedicle*, with four different kinds of Husks. 1. With the Nut wholly hid. 2. With an open Husk. 3. When the Husk is half open. And 4. with a ſhort Husk.

The Husk of the *Filbert*, for the moſt part, wholly covers the Nut, thick at the Baſe, becoming afterwards thin, tapering and fimbriated at the Top,. *Authors* reckon'd four Kinds of thoſe Nuts. 1. The common *Filbert*, with a white *Fruit*, leſs. 2. A large, round, white *Kernel*. 3. With an oblong *Kernel* and a red *Pellicle*, or inner Skin. 4. With an oblong red *Kernel* cover'd with a white *Skin*. I have alſo obſerv'd it with a large oblong *Kernel* cover'd with a *ſtrip'd*, *red* and *white Skin*.

Læſelius (who wrote ſeventy Years ago, when the *Sexes* of Plants were not known) ſays they err, who take the *Katkins* or *Juli* to be the *Flower*; for he looks upon the *Embryons* with the Scarlet *Threads* to be it. But withal he adds, *Notandum* CORYLUS *quo magis* JULIS *abundat eo copioſiores alit* FLORES (the *Female Embryons* ſo called by him) *deſtituta iiſdem pauciſſima oſtendit*. A fair Inſinuation, that the *Impregnation* of the *Fruit* muſt depend upon the Duſt from the *Apices*. I muſt here take Notice of what *Agricola* juſtly obſerves that the Baſe of the *Kernel* is always towards the Pedicle, and the ſharp Extremity, where the Point of the *Radicle*, the *Punctum Vitæ* is lodg'd, towards the *Flower* or *Piſtillum*. But this is far from confirming Mr. *Moreland* and Mr. *Bradley*'s Opinion, "That the *Farina* is a *Congeries* of *ſeminal Plants*, one of "which muſt enter the *Embryon* of the *Seed*, before it can become pro-"lifick; and that there's a manifeſt Perforation of the Eye of each Seed "which is towards the *Piſtillum*, into which the *ſeminal Plant* does en-"ter, that it *demonſtrates* quite the contrary". For tho' the *Point* of the *Radicle* be towards the *Piſtillum* or *Stylus* in *Stone-Fruits*, yet it has no Communication with it: for in theſe *Filbert* and *Hazel-nuts* it plainly receives

receives the Nouriſhment by a ſtrong, looſe *Navel-ſtring*; which aringſi from the Center of the *Shell* at the *Baſe*, runs to the ſharp End, and there conveys Nouriſhment to the *Kernel*, by means of the *Point* of the *Radicle:* For its obvious to any who ſhall examine, that the Center of the *Eye*, which in Nuts of *Hazel* and the *Filbert* are very large, is protuberant, from whence this *Navel-ſtring* ariſes, and runs ſtrait along on one of the Sides of the *Kernel* to the Point of the *Radicle*, where 'tis plainly inſerted. Nor does it happen otherwiſe to all other Kinds of *Stone-fruits*; for though Mr. *Bradley* in his *Agricola*, impos'd ſo far upon the World and me, as to make believe there is lodg'd a ſmall Orifice on the thick Side of the Shell of an *Almond*, towards the Top, which will admit of an Hog's Briſtle reaching to the Point of the *Radicle:* This is ſo far from being Fact, that theſe *Holes*, of which I have obſerv'd four, five, or ſix chiefly in that Part of the *Shell* (which may be called its Eye) are for Admiſſion of large *Sap Veſſels*, ſome of which are diſpers'd in the Subſtance of the *Shell*, running along either the *Laminæ* or *Diploæ*, betwixt, as we ſee *Blood-Veſſels* diſpers'd all over the *Human Scull*; and others of theſe Veſſels paſs ſtrait to the thick Membrane, which covers the Shell. And I have, with the greateſt Exactneſs, often ſearch'd after this pretended *Hole*, but could never find it. What I have obſerv'd is that in *Apricot*, *Peach*, *Plumb-ſtones:* the Eye is depreſs'd, the Stone has one thick Side, frequently endow'd with two longitudinal *Sulci* or *Furrows*, making a Protuberance in the *middle*. Every Shell is divided into two Halves joined together by the *Sutare*, called in *Oſteology Symphiſis*, like the *Commiſſura*, or joining of the two Bones of the *Noſe*. The *Navel-ſtring* ariſing from the Center of the *Eye*, runs half way along the *Furrow* of this *Suture* within; and then paſſing to the *Kernel*, runs along the half of the upper Part of the *Kernel*, being at laſt inſerted in the *Point* of the *Radicle*. And it's very remarkable, that when a *Stone-fruit* is fully ripe, the *Kernel* is full; but when unripe, that Part of the Pellicle or outer Skin, towards the Baſe, is half empty. When the *Vegetation* begins, the *Kernel*, by the *Fotus* from the *Earth* (like the Heat of a *Hen* at the *hatching* of an *Egg*) begins to ſwell; the Halves of the Shell, ſeparate at theſe *Sutures*; and no ſooner do the *nutritive Particles* enter the *Point* of the *Radicle*, than the *Seed Leaves* begin to be expanded and ſpread forth. All which time the *Point* of the *Radicle* receives nothing from the *Top*, but from the *Baſe* of the *Shell* where the Opening begins, the nutritive Particles enter by the *Navel-ſtring*, and continue to do ſo, until the *Point* of the *Radicle*, being fully dilated, there's no more need for the Navel-ſtring.

Thus

Thus it is that both *Shell* and *Kernel* are nouriſhed; and thus, as the Navel-ſtring was the laſt by which is convey'd the Nouriſhment from the *Pedicle*; it's the firſt which receives it from the *Earth*. Neither does this *Kernel* any otherwiſe communicate with the *Point* of the *Shell* which is towards the *Piſtillum*. And though this *Navel-ſtring* is not ſo obvious in *Almonds*, *Apricots*, *Peaches*, *Plumbs*, &c. as in the Filbert and Hazel Nuts; yet thoſe who ſhall pleaſe to examine any of theſe Stones, eſpecially when freſh, will find this outer *Coat* always ſtrictly adherent to the middle of this Shell, at the thick Side, where the *Navel-ſtring* paſſes from it to the *Kernel*. Therefore ſince 'tis acknowledg'd by all, that there's an *Uniformity* in all *natural Productions*, ſo there is the greateſt reaſon to believe all *Kernels* of *Stone-fruits* are to be nouriſhed after the ſame manner. I have diſcours'd more fully on this Subject in another *Treatiſe*, which I hope will ſhortly be publiſh'd.

Virtues and *Uſes.*

Neither the Wood, Bark, nor Fruit of the Filbert and Hazle are of much Uſe in Phyſick. The Kernels ſeem to partake of the ſame Virtues with Walnuts and Almonds, but they are not ſo oily. I'm ſenſible, by Experience, that the Kernels of Filbert-nuts eaten in any Quantity, when freſh, are laxative, and open the Body gently. And I doubt not but they may be good *Pectorals*, being beat into a Pulp, and made up into a *Linctus*, as they do with *blanch'd Almonds*. When dry they are more *Aſtringent*; and becauſe of the outer Husk, which is very *drying*, and ready to ſtir up a tickling Cough, they, perhaps, may not be ſo very good for *Aſthmatick Perſons*. They are of a *farinaceous* Subſtance; and I have known thoſe who, having abundance of *Hazel-nuts*, have husk'd them, and ground the Kernels in a Mill, of which they have made *Meal*, and bak'd it into *Bread*, which has been look'd upon as very nouriſhing, as indeed the Seeds of *Kernels* of moſt Stone-fruits are.

Læſelius obſerves, that in *Pruſſia* (where he ſays the *Hazel-nuts* are in ſuch Plenty) they beat out a Powder from the *Katkins*, which affords a delicate yellow *Colour* to the *Painters*: And that the *Barbers* and *Surgeons* make uſe of it, by applying it to Wounds as a good *Conſolidater* being *drying* and *aſtringent*. He alſo obſerves, that the old Wood is brittle, the young Twigs are very flexile, tough, and bending; ſo that they make very good Hoops, they make good Panniers of them for Fiſh Cadgers, and other coarſe Baskets; for they will bend, and can be twiſted any way.

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I cannot paſs by what is ſaid to be uſual in the Iſlands and remote Parts of this Iſle of *Britain*; where Families, who keep *Ale*, being at a Diſtance from any Neighbours, they take a Hazel Rod and twiſt it, ſo as there be wide *Chinks* and *Gaps* in it. They ſhake and toſs this Rod a long time among *Yeſt*, *Barm*, or working Ale. They afterwards lay it up, and carefully dry it; and when they *brew* they toſs this *Rod* among the *Worts*, until the dried *Ferment* in the Rents and Gaps of the Rod begin to ſoften and mix with the *Wort*, by which they ſet it in working as well as if the beſt *Barm* were put to it; and the *Rod* having imbib'd freſh *Ferment*, they dry it again, and keep it for Uſe. And thus a Family may be ſerv'd for whole Ages; for the oftner it's us'd, the *Ferment* will ſtill be the freſher. And I doubt not, being thus dried, it may be ſtronger than *Barm*, which being brought from weaker *Ale* is put to *ſtronger Worts*. The *twiſted* Rods from other Trees may do the ſame; but as moſt of them have ſome peculiar *Taſte* or *Virtue*, ſo Hazel is look'd upon as beſt, ſince what it is mix'd with will not affect the *Taſte*.

It's of the *Hazel* or *Oak* that they make the *Virgula divinatoria*, *Baquette divinatoire*, or *divining Rod* for finding out of Metals, and, as ſome pretend, purſuing after Blood upon the committing of Murder, of which Authors may be conſulted.

The laſt thing I conſider about theſe *Trees* is their Culture. *Læſelius* puts us in mind of an old adage *Corylus eo fructuoſior quo pejus tractatur*. This I have often known, when the middle Stem, bing uſually the greateſt, has been cut down for *Plow-goads*, or *Fiſhing-rods*. Next Year it puſh'd forth more Twigs, which being allow'd to ſpread forth at their Liberty, have been very fertile. And we always ſee that the Hazel confin'd to Hedges, however little Care be taken in dreſſing and pruning of them, are neither ſo fertile, nor produce ſo good Nuts as thoſe in the Woods, which grow at full Liberty. So much ought the Air, Manner of growing, and Soil of every *Tree*, to be conſidered in its Culture. For as the Hazel is an *Indigenous Tree*, and, as is obſerv'd, never delights in growing up into one ſtrait Stem, which may afterwards become the Trunk or Body of the Tree, I'm of Opinion, the ſuffering of it to grow naturally in a Wood on a Hill Side, and Banks of a River, with a good Aſpect, it will there grow far better, be much more fruitful, and produce larger Nuts than otherwiſe.

The Filbert on the other hand not being indigenous, and naturally growing up in one principal Trunk or Stem, is capable of being confin'd to be *engrafted*, *prun'd*, &c. and dreſs'd up ſo as to make an Hedge not only pleaſant but profitable, by the Abundance of its Fruit:

but as to the planting out its Culture and Management, I leave that to the expert Gardeners, who are now at work in informing the World with their curious Obſervations. I ſhall only add, that if well car'd for, it may make as good an Hedge as *Elm* or *Horn-beam*, ſince its tender Twigs may as eaſily be *dreſs'd*, *twiſted*, and put into any Figure the *expert Gardener* thinks proper: And it will have the Advantage of producing Plenty of *eſculent* Nuts, which the other have not.

Cotula fœtida vide *Chamæmelum.*

XXIX. *Cotyledon* ſive *Umbilicus Veneris*, *Craſſula* ſive *Telephium* & *Sedum.*

1. *Cotyledon vera tuberoſa Radice* J. B. 3, 35, 633. Raij Hiſt. 1878. *maj.* C. B. 285. Tournef. 9. *Sedum murale luteum fol. Umbilicato* Moriſ. Hiſt. 3, 471. *Cotyledon Umbilicus Veneris* Cluſ. Hiſt. lxiii. Venus Navelwort.

2. *Craſſula maj.* Dod. Pempt. 130. *Anacampſeros vulgo Faba Craſſa* J. B. 3, 32, 681. Tournef. Inſtit. 260. *Telephium vulg.* C. B. 287. Moriſ. Hiſt. 3, 467. Raij Hiſt. 689. Hiſt. des Plantes 387. Common Orpine.

3. *Sedum maj. vulg.* C. B. 283. Tournef. Inſtit. 262. Hiſt. des Plantes 233, J. B. 3, 35, 687. *Sempervivum maj. alterum ſ. herba Jovis* Dod. Pempt. 127. Moriſ. Hiſt. 3, 474. Common Houſeleek.

4. *Sedum minus teretifolium album* C. B. 283. Tournef. Inſtit. Hiſt. des Plantes 146. *minus fol. longiuſculo fl. albo* J. B. 3, 35, 690. Moriſ. Hiſt. 3, 472. *Vermicularis Craſſula minor offic. & Illecebra maj.* Lob. Icon. 377. Small Houſeleek.

5. *Sedum parvum acre flore luteo* J. B. 3, 35, 694. *minus vermiculatum acre* C. B. 283. Moriſ. Hiſt. 471. Stone-crop *or* Wall-Pepper.

The *Tribe.*

I conclude this Decad with what moſt Authors term *Miltiſiliquæ corniculatæ* and *Polyſpermæ ſeminibus pulverulentis* by *Moriſon*; to each of whoſe *Flowers* ſucceed five, for the moſt part, *oblong Seed Veſſels*, or *univalve Siliquæ* or *Siliculæ*, opening *length-wiſe*, and pouring out five ſmall *Seeds*. *Tournefort*, by his Method of claſſing by the *Flower*, ſeparates far from each other the *Plants* which agree by the *Fruit* and *Virtues*; for he places *Umbilicus Veneris* among the *monopetalous Bell-flowers*, and the *Craſſula* and *Seda* among the *Polypetalæ Roſaceæ*, by which we may ſee the Advantages of claſſing by the *Fruit* and *Seed*, rather than by the *Fruit alone*, as *Rivini*; or *Flower* and *Fruit*, as *Tournefort* has done.

The *Deſcription.*

1. *Venus Navelwort* has a *tuberous Root*, roundiſh *white* and juicy, ſend-

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ing forth a few *Fibres* from the *ſeſſile Part*. After the *Flower* and *Fruit* is gone, and the *Seed* is ripe, there ariſe ſeveral ſmall round *Pedicles*, one two or more from each *Knob*, ſtrait, about two or three Inches high, each ſupporting round ſmooth light *ſhining* green *Leaves*, ſuperficially nitch'd about one Inch Diameter, lying horizontally depreſs'd, and hollowiſh, oppoſite to the *Inſertion* of the *Stalk* in the Center, after the manner of *Muſhrooms*. In the Month of *April* or *May* ariſe ſtrait round naked Stalks, about three or four Inches high, loaded with Flowers thick-ſet in a Spike oblong *monopetalous yellowiſh* green, ſuperficially divided at the Border into five pointed *Segments*, with five *Stamina*, and a *quinquifid Calyx*; to which ſucceed four oblong *Capſules* containing ſmall *Seeds*. *N. B.* The Flower does not fall off, but, like *Helleborus niger*, continues until the *Capſules* are formed, which makes ſome ſuppoſe it crumbles up and forms the *Capſules*; it grows on the *Church Walls* of *Tatterſhall* in *Lincolnſhire*. The larger *Leaves* fade, when the flowering Stem begin to be puſh'd forth: ſo that the Plant is inviſible in the Month of *July* and beginning of *Auguſt*; in *September* the Leaves are in the full bigneſs, and continue green all the Winter. Mr. *Martyn* informs me, that he has obſerv'd it no where about *London*, except in a Gravel-pit near *Highberry Barn*; but that he has ſeen it in great Plenty in ſome of the Southern Counties of *Wales*, where every Wall and Bank is full of it.

2. *Orpine:* From a groſs Root, endow'd with ſeveral *Tubercles*, there ariſe ſeveral ſtrait round ſolid *Stalks*, about one Foot high, adorn'd with ſeveral oblong or oval ſmooth juicy green *Leaves*, alternately and inordinately plac'd. The *Tuff* or *Umbells* of *Flowers* on the top of the *Stalk* and *Branches* are *pentapetalous*, with five pointed *purpliſh Petals*, ſurrounded by a *pentaphyllous Calyx* with five *Stamina*, to which ſucceed ſo many *Capſules* or *Seed Veſſels*, gathered together into an Head full of very ſmall Seeds. *N. B.* The Petals obſerve no definite Number, but the Leaves of the *Calyx*, *Petals* of the *Flower*, *Stamina* and *Seed Veſſels*, all correſpond.

3. From a groſs Root in the greater *Houſeleek*, there ariſe ſeveral thick blueiſh green ſucculent broad roundiſh pointed *Leaves*, thick, orbicularly diſpoſed, forming ſeveral Circles from the Center to the Circumference, and ſeveral of theſe *Orbiculi* larger and leſs, are uſually placed at the Sides of each other; when the *flowering Stem* is puſh'd forth, which is but ſeldom, it ariſes with a groſs ſtrait round *Stalk*, about one Foot high, thick beſet with alternate and inordinate ſmall narrow pointed *Leaves*, inclining to a red, ſupporting Tufts or Umbels of *pentapetalous yellow Flowers*; to which ſucceed ſo many *Capſules* full

full of *Seeds*. 'Tis called *Sempervivum* becauſe the Leaves are always green. 'Tis a queſtion whether it be indigenous; 'tis uſually planted on the top of *earthen Walls*, or on the Walls or Roof of muddy *thatch'd Houſes*, where it propagates and ſpreads forth Childings theſe Globules of Leaves: It ſeldom flowers, but after ſeveral Years Continuance in a Place.

4. *Small Houſeleek*. The round ſtrait Stalk, about a Span high, thick beſet with many inordinate oblong round *Leaves*, like unto the Worms or Maggots on *Cheeſe* or *Fleſhes*, from whence 'tis called *Vermicularis*. The *pentapetalous* white *Flowers* are diſpos'd in ſmall *Umbells* or Tuffs on the top, to which ſucceed the *Capſulæ* or *Seed Veſſels*, gathered in a Head full of ſmall Seeds.

5. *Stone-crop*, or *Wall Pepper*, is a much ſmaller Plant; the ſmall thick conical or pointed Leaves, inordinately ſet on the Stalks, with yellow pentapetalous *Flowers* on the top, to diſtinguiſh it from the other; both of them grow on the Walls of *Houſes* and *Gardens*, alſo on rough ſtony and craggy Ground and *Rocks*. This laſt grows with a white *Flower* at the *Mill* of *Craggy*, as you paſs from the South-eaſt of *Perth* in *Scotland*.

Virtues and *Uſes*.

1. *Venus Navelwort* partakes of the ſame Virtues with the following *Craſſula* and *Seda*: 'Tis ſaid to be good in Diſtempers of the *Liver*, and for allaying the *Heat* and Acrimony of *Urine*; but internal Uſe of ſuch noted *Coolers* is much to be ſuſpected, nor are they always to be uſed in ſuch *Inflammations*, as an *Eriſipelas* or St. *Anthony*'s Fire, where there is more need to open than to obſtruct the *Pores*. It may be uſed as a *Repellent* to prevent the Increaſe and aſſwage the Pain of the *Piles*, and may alſo be of Uſe for the *Kibes* and *Chilblanes*: Its moſt frequent Uſe in Phyſick is to enter *Ung. Populneum*.

All of them are potent *Coolers*, fit for compeſcing the Motion of the *Blood*, and allaying *Inflammations*: They are not uſed internally: The *Leaves* chopp'd, and apply'd by way of a *Cataplaſm*, repel *ſcrophulous Tumours*, when apply'd at the beginning to *Phlegmons*, and allay *Inflammations*; but ſuch Sort of Remedies ſhould be cautiouſly apply'd, the Conſequences of ſuch *Repellents* being not always deſireable: They are alſo apply'd in the Fold of a *Linnen* Cloath for *Inflammations* of the *Eyes*: The Juice is much recommended to curb the *Acrimony* of *cancrous Tumours* and *Ulcers*. The green *Leaf* of an *Orpine*, the Membrane being remov'd, apply'd to a recent Wound is a good *Vulnerary*.

F I N I S.

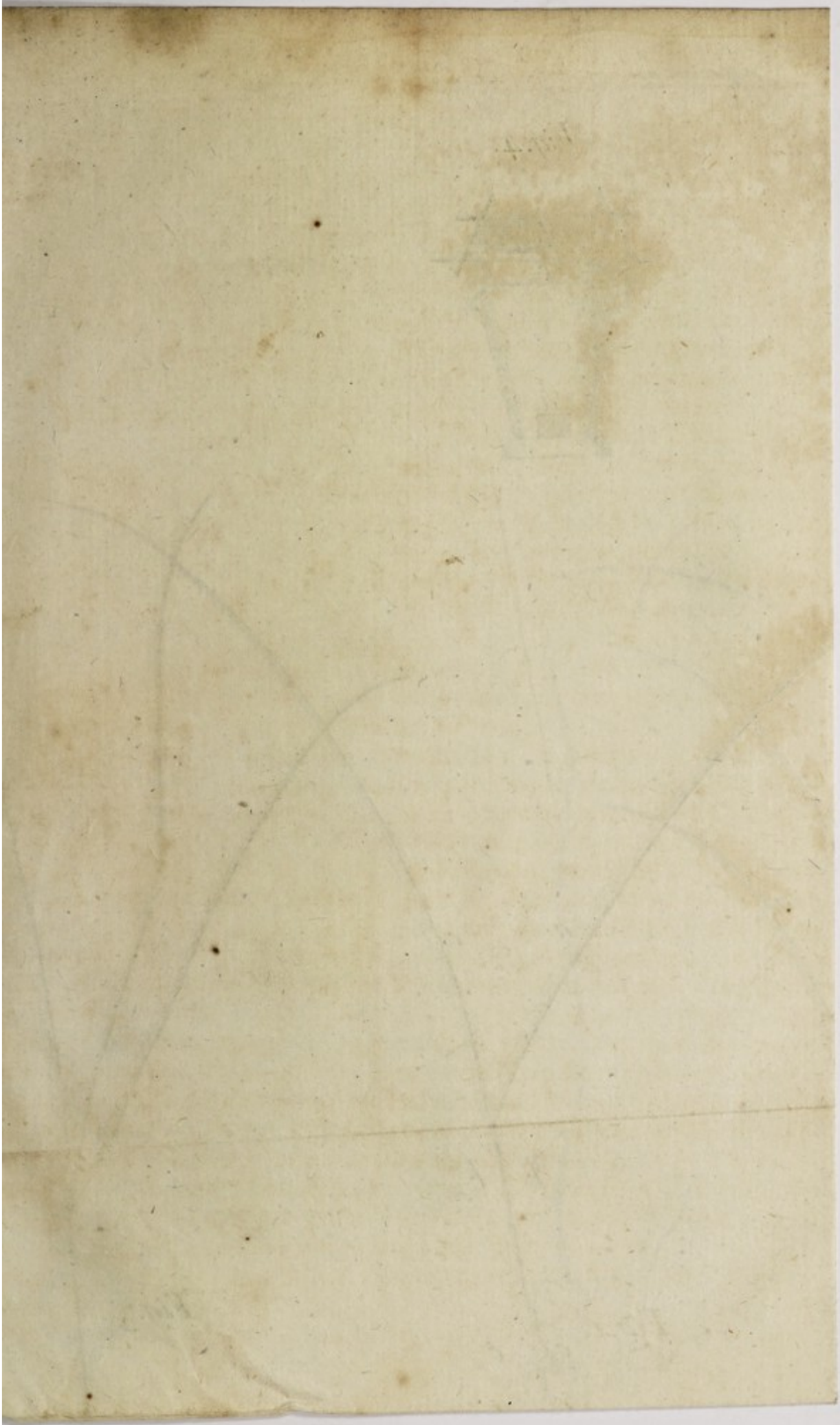
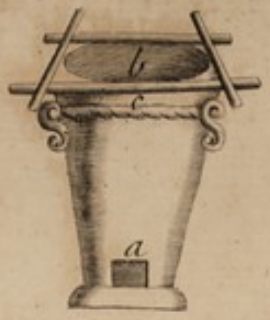
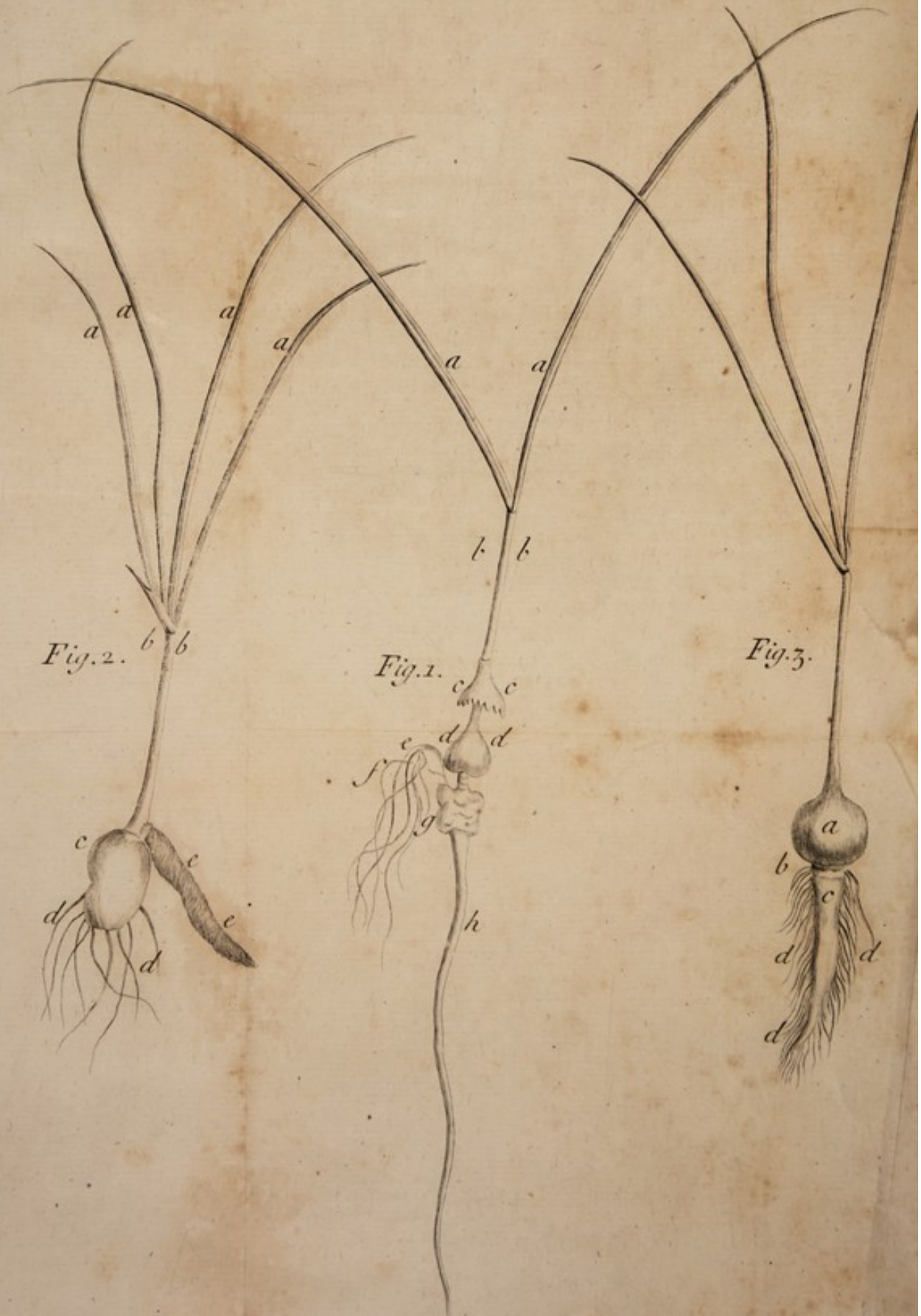


Fig. 4.





PHARMACO-BOTANOLOGIA:

OR,

An Alphabetical and Classical

DISSERTATION

ON ALL THE

British Indigenous and Garden Plants

OF THE

New *London* DISPENSATORY.

In Which

Their GENERA, SPECIES, *Characteristick and Distinctive* NOTES are Methodically described; the *Botanical* TERMS of ART explain'd; their *Virtues*, *Uses*, and *Shop-Preparations* declared, from proper Observation.

Together With

A large DISCOURSE on the Culture of the SAFFRON, and the considerable Profit reap'd from it. Enrich'd with Variety of REMARKS, both Diverting and Useful. Illustrated with FIGURES Drawn after the LIFE.

DECAD VI.

By *PATRICK BLAIR*, M. D. of *Boston* in *Lincolnshire*, and Fellow of the ROYAL SOCIETY.

Miseri mortales qui Naturam ejusque Artificium abdunt, ubique diligentia Patens, & Amplissimos solis Radios Nubecula obfuscant. Barth. Epist. ad Lyserum.

LONDON:

Printed for G. STRAHAN, at the *Golden Ball*, over-against the *Royal Exchange* in *Cornhill*; W. and J. INNYS, at the West End of St. *Paul*'s Churchyard; and W. MEARS, at the *Lamb* without *Temple-Bar*. M.DCC.XXVII.

BOOKS Printed for George Strahan, *at the* Golden Ball, *over-against the* Royal Exchange *in* Cornhill.

Cystitomia Hypogastrica: Or, The Method of performing the *High Operation*, in which the *Stone* is extracted out of the *Bladder*, above the *Os Pubis*, in the Region of *Hypogastrium*; faithfully collected from the Writings of the famous *Triumvirate.*

Tabulæ Synopticæ Plantarum Officinalium, ad Methodum Raianam dispositæ. Authore *Johanne Martyn.*

A New Table of Dispensatory Plants, distributed according to their principal Virtues. By *Patrick Blair*, M. D. and F. R. S.

Index Materiæ Medicæ: Or, a Catalogue of *Simple Medicines*, that are fit to be used in the Practice of *Physick* and *Surgery:* Containing, 1st. The Official Name of each, in *Latin.* 2d. A short *Botanical* Description of the *Species* that is commonly used. 3d. The Name in *Greek* and *English.* 4th. The Part that is most in use. And 5th, The Names of the Dispensatory or Shop-Preparations, and Compositions: To which are added Two Tables, in the First the *Simple Medicines* are reduced under general Heads, and in the Second they are Classed according to their principal Virtues.

The History of the *Lateral Operation*; Or, an Account of the Method of extracting a *Stone*, by making a *Wound* near the great *Protuberance* of the *Os Ischium*, through the common *Integuments* and *Levator Ani*, into the Side of the *Bladder*, without touching the *Urethra*, *Prostrate Glands*, *Vesiculæ Seminales*, or any other of the *Urinary* or *Seminal* Vessels; first attempted by *Frere Jacques*, in *France*, and afterwards successfully perform'd by Professor *Rau*, in *Holland*; with a Postscript concerning the Introduction and Improvement of this Method here in *London.* By *James Douglas*, M. D.

A New Theory of acute and slow continued Fevers: Wherein, besides their Appearances, and the Manner of their Cure occasionally, the Structure of the *Glands*, and the Manner and Laws of *Secretion*, the Operation of *Purgative*, *Vomitive*, and *Mercurial Medicines*, are *Mechanically* explained. To which is prefix'd, an Essay concerning the Improvement of the Theory of *Medicine.* The Fourth Edition, Corrected.

An Essay of the true Nature and due Method of treating the Gout: Together with an Account of the Nature and Quality of *Bath Waters*, the Manner of using them, and the Diseases in which they are proper: As also of the Nature and Cure of most Chronical Distempers. Both by *Geo. Cheyne*, M. D. and F. R. S. The Fifth Edition, enlarged to more than double the former.

THE PREFACE TO THE Sixth DECAD.

THE Alphabet *having brought me to* Crocus offic. *I could not avoid the taking particular Notice of a* Plant, *which affords ſo Valauable a* Simple *in* Materia Medica ; *and which, as it is one of the* GLORIES *of* ENGLAND, *ſo if cultivated in a ſuitable Soil, yields as great, if not greater Profit, than any of the* Vegetable Kingdom.

I ſhall not inſiſt on the ſeveral Heads of which I have choſen to diſcourſe, ſince they are propos'd at the Beginning of this WORK. *I ſhall only here give an ingenuous Account of the Aſſiſtance I have had in the compoſing of it. I have not conſulted many* Authors ; *for to quote all who have writ on the Subject,*

Subject, would only have wire-drawn these Sheets to an unnecessary Length. I have mention'd but a few of the more Modern, *and for the rest, I have got my Information from the best Hands, upon whose proper Observation, and curious Enquiries, I could justly rely.*

The first is Mr. Philip Miller, *Gardener to the* Physick-Garden *at* Chelsea, *who, when in a more private Station, favoured me with his frequent Correspondence, communicating what he judg'd would be acceptable, with some of whose* curious Experiments *the Publick have been acquainted in the* Transactions. *It's several Years since he advis'd me to bestow some of my Enquiries on this* Plant, *and how far he has from that Time been assisting to me by his* Letters, *may be seen in these Sheets.*

The next Help I made use of, is Mr. Charles Howard, *in* Transact. N° 188, *who has given such an accurate Account of the Culture of this* Plant, *with the manner of preparing* Saffron, *that having writ long ago, and that* Transaction *being now but in few Hands, I thought fit to extract for a publick Good what he has delivered on the Subject. And since Mr.* Bradley *has of late been making farther Enquiries on that Head, I have so compar'd both together, that what is wanting in the one, might be supply'd by the other, adding my own Remarks.*

Thus I have digested the whole into a proper Method, given an Historical Account of the Root *from Mr.* Miller's *Observations, added to my own, together with my Thoughts on its* Vegetation, Propagation, *and* Circulation *of the* Sap. *What Information I have receiv'd, and Observations have been made on the* Leaf *and* Flower, *shall be declar'd in due Place. In a Word, I have taken Care to omit nothing material, or worthy of Consideration, in so valuable a* Plant; *and to encourage to a more frequent Culture of it, I have given such an Estimate of*

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the Profit to be reap'd by it, as I hope will give a general Satisfaction, especially to the Curious.

And it being my chief Endeavour to enrich every new Decad *with suitable Entertainments, and Means of Instruction, I am glad that the* Alphabet *has so happily led me to an agreeable Variety of* Plants, *fit for my Purpose in this Place; for the most considerable Tribes and Terms of Art being* explain'd, *this* 6th Decad *affords several of those termed by* Tournefort, Anomalous Plants. *I have elsewhere observ'd, that no kind of* Natural Production *can be said to be* Anomalous *or* Irregular, *so long as it does not swerve from those* Rules, Figures, Dimensions, *&c. destinated to it* ab Origine, *by the Omnipotent* AUTHOR *of* Nature. *But what is here called* Anomalous, *is, when tho' a Plant may agree in its own constituent Parts, yet in as much as it partakes in some of its considerable* Characteristicks *with one, and in others with another of the more numerous* Classes, *it's in that Sense* Anomalous *to any one of them, but still* Regular *as to itself.*

Thus Cuscuta *and* Epithymum *agree with* Viscum *and* Hedera Arborea, *in being* parasitical Plants, *yet they disagree both in* Substance *and* Notes; *and the last two, tho' they agree in being* Ligneous, *yet they still disagree in* Flower, *though not so much in* Fruit. Dictamnus albus *is plac'd by most* Botanists *among the* Multisitique *by the* Fruit, *but it's distinct from all other Genera by the* Flower. Digitalis, Elatine, Euphrasia, *are* Bicapsular *by the Fruit, but differ among themselves, and from all others, by the* Flower; v. g. Euphrasia *by the* Flower, *might seem to come in with the* Galeatæ & Labiatæ, *but it has not a Gymnotetraspermous Fruit.* Arum *and* Dracuntium *have* Arisarum *for their Companion, but by the* Fruit *differ from all other* Genera. Ebulus *and* Sambucus *differ in* Substance, *agree in their other* Characters, *but are still* Plantæ suæ generis. Linaria *agree with* Antirrhinum *by the* Rictus, *and* Delphinium *by the* Calcar, *or* Spur; *but the one is* Monopetalous, *the other*

Polypetalous; *the one* Multifiliquos, *and the other* Bicapſular. *The* Eſula *Kinds have a ſingular* Flower, *and peculiar* Fruit, *are* Tricoccous, Emetick, *and* Cathartick, *with* Ricinus; *but it differs from them by an apetalous* Flower, *and not* lacteſcent Juice.

Sambucus, Linaria, Arum digitalis, *are made diſtinct Genera by ſome, and by others they are join'd with* Ebulus, Elatine Dracuntium, *and* Gratiola.

For the reſt, Cupreſſus *is one of the Ever-green Trees*; Cyperus *of the* Bulmiferæ, *and* Daucus *of the* Umbelliferæ. Dens Leonis *introduces the* Lacteſcent *and* Papeſcent Tribe: Dipſacus, *and* Cupatoreum Canabinum, *are of the* Flores Floſculoſi Eryngium, *by ſome Claſs'd among the* Umbelliferæ, *by others among the* Plantæ Flore compoſito. Eryſimum *and* Eruca *are the* tetrapetalæ ſiliculoſæ. *I have made ſome uncommon Remarks upon* Equiſetum, *and join'd* Salicornia, *or* Kali geniculatum *with it.*

I ſubmit the Performance to the Cenſure of the Impartial, Judicious, *and* Learned. *What remains, is to give ſatisfactory Reaſons for the unuſual Length to which this* Decad *is extended. They who have conſidered the former, may obſerve I take Care to omit nothing I can find materially to be advanced concerning any Plant I treat of; and according as it requires, I reſt contented to diſcourſe of it in the uſual Manner, but when any Thing extraordinary occurs, I paſs from a bare* Deſcription *to a* Diſſertation. *This being what I at firſt propos'd, I could by no Means depart from my* Method, *when ſo Notable a* Plant *came in my Way, and when I found it afforded ſo much Matter of Diſcourſe, I ſhould have been injurious to the Publick, and wanting to my ſelf, if I had not perform'd what was to be expected; and if I had not communicated what I judg'd would be both* diverting *and* profitable. *And whereas before I had finiſhed this Diſcourſe on one Plant, the Number of the Sheets propos'd*

for

for every Decad, *was partly compleated, and the Expectation in the* Reader *of seeing so many more treated of within that Bounds, might thereby be frustrated, I judg'd it more convenient to make out my Complement of Plants, being in hopes that none who have got the former, will be discouraged either by the additional* Price *or* Bulk *of this: And if I have added that of a* Copper-Plate Print *to the Charge, the rendring the Subject Matter more clear, and intelligible by it, will, I hope, recompence that. The third Reason is, when the Letter* D. *and* E. *contain but few* Plants, *I rather chose to include those contain'd in both, than abruptly to break off in the Middle of either; and thus I have so ordered it, that the next* Decad *shall begin at the Letter* F.

Some may imagine, that by so small a Progress in the Alphabet, *these* Decads *will exceed the Number I at first propos'd; but when 'tis considered that many of the following* Plants *are already treated along with their* Congeners *in the preceding* Decads, *the subsequent* Catalogue *will be found pretty much abridg'd, as has been intimated* Decad 4.

The

ERRATA. Pag. 238. lin. 36. read *Spear.* Pag. 248. lin. 36. read *area.* Pag. 256. lin. 31. read *bulbous Roots.* Pag. 264. lin. 28. read *Pain.* Pag. 271. lin. 31. read *que.*

The PLANTS of the Sixth DECAD.

PHARMACO-

PHARMACO-BOTANOLOGIA:

OR, A

TREATISE

OF

DISPENSATORY PLANTS,

Alphabetically and Classically disposed.

DECAD VI.

Crithmum vide *Fæniculum.*

I. CROCUS.

A DISSERTATION.

THIS beautiful *Plant* is so much esteemed for the *Excellency* of *Saffron*, which it produces, that I hope a Discourse on its several Accidents will not be improper under the following Heads:

1. The *Synonima.*
2. The *Tribe*, containing the general Character of the whole *Class*, and the particular *Notes* of this *Genus.*

3. The Deſcription of the *Root*, with its various *Appearances.*
4. Suitable Remarks on its *Vegetation*, Manner of *Propagation*, and *Circulation* of the *Sap*, &c.
5. A brief Account of the *Leaves.*
6. What's moſt remarkable in the *Flower.*

To which ſhall be added,

7. The *Culture* of the *Plant.*
8. The Manner of *preparing* and *curing* Saffron.
9. An Eſtimate of the *Profit* of the Product.
10. Its eminent *Virtues.*
11. Its ſeveral *Uſes*, and Shop *Preparations.*
12. Its *Antiquity*, and where the beſt *Saffron* is prepared.

1. *Crocus Sativus*, C. B. 65. Tournef. Inſt. 350. Boer. Ind. 120. J. B. 2. 29. 237. *Autumnalis*, Raii Hiſt. 1170. Synopſ. Stirp. Brit. 3. 374. Philoſoph. Tranſact. N° 380. *Florens & non Florens*, C. B. Math. *Crocum Auſtriacum*, Math. Epiſt. lib. 5. 188. *Crocus floridus & ſine flore*, Moriſ. Hiſt. 2. 335. True Saffron.

2. The *TRIBE.*

Mr. *Ray* rightly diſtinguiſhes the *Seed-Leaves* of all Manner of *Plants* into *Monocotyledones* and *Dicotyledones.* The *Monocotyledones* are again diſtinguiſhed into *Apetalæ* and *Bracteatæ* by *Boerhave*, i. e. with only one *Seed-Leaf* and an *Apetalous Flower*, and ſuch as have a *Petaloid Flower*, as thoſe of this *Claſs.* ii. Authors were formerly contented with diſtinguiſhing the Roots of thoſe of this Claſs into *Bulboſæ* and *Bulboſis affines.* But Dr. *Moriſon* is more exact, for he ranks them thus: 1. They are *Nodoſæ & Fibroſæ*, as *Aſphodelus.* 2. *Tuberoſæ*, tuberous, round and carnous as *Crocus.* 3. *Tuberous*, oblong and jointed, as the *Irides Tuberoſæ*, of which already. 4 *Bulboſæ proprie dictæ*, and theſe are either *Tunicatæ*, compos'd of ſeveral Coats from the Center to the Circumference, as *Onions*, *Leeks*, &c. *& Nucleatæ*, compos'd of ſeveral ſmall tunicated *Bulbs*, united at their ſeſſile Parts, as *Garlick*; *Squamoſæ*, whoſe Coats are not re-united at the *flowering Stem*, but reach near half Way like the *Scales* of a *Fiſh*, as moſt of the *Lillies.* iii. Their *Leaves* are long, ſimple, or undivided, without *Foot Stalks*, and theſe are broad, ſtiff, light, green, two edg'd, and Sphear-pointed, proceeding from the Sides of each other, as *Irides Tuberoſæ*, or broad, bluiſh, green, ariſing in a Circle from the *Roots*, as *Tulips*, *Leeks*, broad and ſhort like moſt of the *Lillies*; long, narrow, Graſs-like, dark green, as *Crocus*, &c. *hollow* or *fiſtulous*, like *Onions.* iv. The

iv. The *Flowers* are *Hexapetalous* or *Hexapetaloid*, i. e. *Monopetalous*, divided into ſix *Segments*, where I obſerve, that both Dr. *Moriſon* and *Tournefort* depart from their own Diſtributions. For though *Moriſon* diſtinguiſhes by the *Fruit*, yet he excludes all *Flowers* from this *Claſs* but the above-named. *Tournefort* diſtinguiſhes by the *Flower*, and yet he makes a *tricapſular Fruit* the moſt certain *Character* of this *Tribe*; thus he admits *Ephemerum* here, though it be only *Tripetalous*, becauſe of its *Fruit*; and *Moriſon* excludes it, becauſe it's not *Hexapetalous*. v. The *Fruit*, of whatever Figure or Dimenſions, is always *Tricapſular*.

The particular Character of this *Genus* is, a *round*, *tuberous*, *parenchymatous Root*, a long, narrow *Graſs Leaf*, with a *white Line*, a *Monopetalous Flower* divided into ſix *Segments*, and a *Tricapſular* Fruit.

3. *The Deſcription of the* Root.

The Root of this Plant has ſuch various Appearances, that it requires ſpecial Conſideration, which obliges me to give an Account of it, both according to the lateſt and moſt modern *Authors*, and from the proper Obſervation of my worthy Correſpondent Mr. *Miller* and *myſelf*. C. B. in his *Mathiolus*, has two Figures of it, *viz. Crocus florens* and *non florens*, and Dr. *Moriſon*'s Epithet of *Crocus floridus* and *ſine flore*, ſeem to imply, that they thought it vary'd from the *florid* to the *barren*, or not *florid Species*, though none of them have obſerved the Alteration of the *Root* of the latter, which has of a long Time been well known to *Saffron Gardeners*, and thoſe who are verſed in the *Culture* of it for Profit. *J. Bod. a Stapel*, as quoted by Mr. *Ray*, is the firſt I ſhall mention who has taken Notice of theſe Variations. He ſays, " That in the Autumn and flowering Time it has but one Bulb, " next Summer it has two, the upper firſt of all leaſt, from whence " the *Leaves* proceed, and together with them it encreaſes by De- " grees, until it become ſo big as the ſecond, or that below, and con- " tinuing to augment, it acquires a firm and ſolid Subſtance, while " the lower Root decays apace, which before next Autumn is vaniſh'd " quite away." *Herman*'s general *Character* of it is, *That it has a two-fold Root, the one below, to which the other above is adherent.* To which *Boerhave* adds, *That the upper is tuberous, round, not fibrous, ſending forth the Leaves; the lower adherent to it ſends forth radical Fibers at the ſeſſile Part, this ſtill remaining is that which was uppermoſt the preceding Year, which, after the other has arrived at its full bigneſs, vaniſhes and dwindles quite away, both being encloſed in one common Membrane.* *Tournefort* is to the ſame Purpoſe, but does not determine the Time of the encreaſe

encreaſe of the one and the decreaſe of the other; nay further, he has delineated both Roots while the Plant is in the full Bloom, which ſeldom happens, ſo that Dr. *Douglaſs* is more exact, who has only delineated one *Bulb* ſending forth the *tender Leaves* and *Flower* above, and *Fibers* at the ſeſſile Part below.

Mr. *Miller* being the firſt that adviſed me concerning what he calls *Tap-Root*, and having ſent me a Bundle of the *Plants* with the *Leaves* in their full Growth, being then the latter End of *February*, and the *Mother Earth* round the *Roots*: in ſeparating them in order to be planted, I obſerved the *Roots* longiſh, groſs at the Top where the Leaves were ſent forth, and gradually tapering like a *Carrot* about two Inches long, and terminating wholly fibrous; removing the Earth, I obſerved the common Membrane ſomewhat thicker than that of an Onion; upon removing of this alſo, I agreeably beheld the round *tuberous Root* with its *Leaves* above, about the bigneſs of a *Cheſtnut*, ſending forth a ſhort, ſmall, round Portion from the Center below, like to that of a Turnip of the ſame bigneſs; to this was adherent, a long, ſmall, tapering *Root*, about the groſſneſs of the End of an ordinary *Tobacco Pipe*, about an Inch and a half long, flat towards the *Bulb*, which is adher'd by this ſmall Portion beſet with ſmall *Fibers* all round, and growing ſmaller, till in the Deſcent it at laſt terminated wholly *fibrous*. Every one of the *Plants* of the Bundle, which were about a Dozen, were after the ſame Manner, only ſome were larger, others leſs. This made me imagine I had now ſeen the *Bulb* and *Tap-Root* in their full Growth, but the Manner of Propagation was the Queſtion.

Some Time after, when I conſidered *Crocus* was at Hand to be treated on according to the *Alphabet*, I found it requiſite to propoſe my Doubts to Mr. *Miller*, in the following Quæries:

1. *After what Manner is the* Species propagated?
2. *Whether does the* Tap-Root *ſpring firſt, or the* Bulb?
3. *At what Seaſon do the* Leaves *ſpring forth?*

To which he had the Civility to favour me with the following curious Return; and which, tho' he firſt modeſtly declined it, yet he at length allowed me to inſert it here for publick Satisfaction, as follows:

SIR,

SIR, *Chelsea, November* 17, 1725.

IN *Answer to your repeated Request, I send the following Return to your Query.*

1. *As to the* Propagation *of the* Species.

This is only by the Root or Off-sets, which the old Roots *produce in great Plenty, for I never yet saw any Thing like* Seed *or a* Seed-Vessel *produced, although I have let stand great Quantities of* Flowers *untouch'd purposely to try. And this leads me to the* 2*d* Quæry, viz. *Whether the* Tap-Root *spring first, and the* Bulb *be afterwards formed? So soon as the Roots begin to shoot upwards, there is commonly two or three large* Tap-Roots *sent forth from the Side of the* old Root, *which will run downright two Inches and a half, or more, into the Ground, at the Place where these* Roots *first come out, from the* old one *will be formed a* Bulb (*sometimes, tho' not always, as you'll hear presently*) *and as this* Tap-Root *decays, the* Bulb *will encrease in its bigness, till at last it quite falls off, and leaves the* Bulb *entire, which commonly happens in* April *when the Green begins to decay, but many Times these* Tap *or* Carroty Roots *never produce any* Bulbs *but always retain the same Figure, and for ever after I believe are barren; for I planted a Parcel of these* Carroty Roots, *four Years ago, in a little Bed where they have ever since remained, but have not produced me one* single Flower, *notwithstanding they have produced a numerous Off-spring of the same* Carroty Roots: *And the People about* Saffron-Walden *are well appris'd of this Barrenness, and therefore throw away all such* Roots *when they make a new Plantation, and have a Name of Distinction for them, which at present I can't recollect; but as this Change of the* Root *is not peculiar to the* Saffron *only, suffer me to digress a little to give you some Account of this Matter. In the Parish of* Fulham *near* London, *the Gardeners used to drive a great Trade in the* Junquil, *or* Narcissus jonquilla folius flore multiplici, *at which Place was the greatest Quantities of those* Roots *raised for Sale as perhaps was in any Part of* England, *and turn'd to as great Account for the Master as any Crop they could imploy their Ground, till within these seven or eight Years, since which Time most of their* Roots *have turned* Carroty, *and so proved barren, or have produced only* single Flowers; *so that the Gardeners being hereby disheartned, have thrown them out entirely, neglected to cultivate them, satisfying themselves with this Reason, That their Ground is tired with them.*

But let us return to our Crocus: *Besides those* Roots *already mentioned, there will be three or four small* Bulbs *form'd upon the upper Part of the* Root, *and some underneath, which from the first Appearance assume the round* Shape *of its Parent* Root, *and have no* Tap-Root *belonging to them,*

thoſe on the upper Part of the Root *rarely emit ſo much as a* Fiber, *but receive their Nouriſhment immediately from the* old Root, *but thoſe on the under Side ſend forth many Fibers all around by which they drew their Nouriſhment from the Ground, theſe being parted from the* old Root *much ſooner than the other, and therefore ſtand in need of* fit Organs *for receiving Nouriſhment. I have ſometimes taken up ſome* Roots *of* Crocus, *through the Middle of which hath been a* Root *of the* Gramen Caninum *or* Couch Graſs, *which ſome People have imagined, had Strength enough to force its Way through the* Crocus Root; *but the Truth is, the* Root *of the* Graſs *cloſely adhering to the* old Root *of the* Crocus *juſt at the Place where the* young Roots *were emitted, theſe* young Roots *being quick of Growth, envelop'd the* Root *of the* Graſs: *And thus have I ſeen ſeveral* Roots *run through each other in the ſame Manner.*

But beſides theſe Off-ſets *mentioned: Directly upon the upper Part of the* Root *is one large* Root *formed, of equal bigneſs with the* old one, *and this is the Time that this* Root *is* radix gemina, *as* Tournefort *calls them, for they are not ſo at any other Seaſon, and therefore I think it a very improper Appellation; for when the* new Roots *are perfectly form'd, the* old one, *with its* Coats, *falls off and dies, and leaves the* new Root *all ſingle: This hath occaſioned ſeveral People to doubt of what* Tournefort *had ſaid of the* Roots, *till I took up ſome Plants at that Seaſon, and with them the two* Roots *of equal bigneſs,* i. e. *the* old one *at bottom, and the* new one *at top.* [More of this Letter hereafter.]

I planted theſe in my Garden, where they remained barren ſome Years, and finding myſelf diſappointed, I neglected them. After the Receipt of the above Letter, I call'd to Mind, that a Gentleman in this Town had ſome Plants of this *Crocus Autumnalis* in his *Garden*, which *flower'd* with him one Year, but never thereafter, he does not well remember how this *Barrenneſs* happen'd, but to the beſt of his knowledge, he tranſplanted it, after it had *flower'd*, into a warmer Place, and rich black Mold; he allow'd me to raiſe the whole Bundle in the Beginning of *December*, when each had only three or four Leaves at their full Length.

Upon viewing of the *Root*, I was ſurpriz'd with a different Appearance from what I had ſeen or heard of before. From the upper Part of the *Bulb*, where it ſends forth all the Leaves within a common Tunicle, at their Exit there was an Appendix about an Inch and half long, about the groſſneſs of a large Turkey or Gooſe Quill, Cylindrical and blunt, without the leaſt *radical Fiber* by which it might receive the Nouriſhment, ſmooth or polite, and bluiſh in the Surface, conſiſting of ſeveral circular Lines when cut tranſverſly, white,

with

with an hard greeniſh Center like a *Carrot*, when it has puſh'd forth the *flowering Stem*, not unlike the *Stolones* of ſome running *Root*, ſuch as the Mints below Ground, only the Extremity deſcended obliquely, inſtead of aſcending to ſend forth *Leaves* to produce a new *Plant*; and what is moſt remarkable, this did not happen to one or two Plants, but to the whole of the Bundle, which were above 20 diſtinct Sets, differing in nothing but *Majus & Minus*. The Bulb ſeem'd at the ſame Time to be pin'd and emaciated, though it emitted large radical Fibers like thoſe of a *Leek*. This Singularity in the Structure oblig'd me again to adviſe my good Friend of it, who was ſo kind as to let me have his Thoughts in the following Letter:

Chelſea, February 24, 1725-6.

SIR,

" I Received yours in Anſwer to my laſt, with the Figure of the " *Roots* of ſome Sets of the *Crocus Autumnalis* you have taken out " of the Ground in a Garden with you. I have found a Figure in " *Dodonæus* which correſponds with it; and theſe *Roots* are no new " Thing with the *Saffron* Gardeners, who always throw them away " when they make freſh Plantations. Your Figure does not agree " with my Tap-Roots, as you'll ſee by the Figure taken as juſt from " the Life as I could, in mine you'll find the Bulb turn'd ſideways, " which I ſtill find to be conſtant in all the Roots I have examin'd, " which have been a great many, which makes me ſuſpect theſe " *Tap-Roots* are occaſion'd by the accidental Poſition of the *Roots* " in Planting, which may retard the aſcending *Sap*, the *flower-* " *ing Stem* being thereby turned into a crooked Figure, and the Tap- " Roots are full of Longitudinal Veſſels of a conſiderable Dimenſion, " ſo that the greater attracting Power of the *Sap* being hereby di- " verted downwards, the *flower Stem* may be quite deſtitute of proper " Nouriſhment. The Method you propoſe to remedy this Inconve- " nience will not do, for I have removed ſome of theſe *Roots* at the " Seaſon when the *Tap-Roots* were forming, and this alone deſtroy'd " them all, ſo that I am perſwaded the cutting them off intirely " will kill them. The Method I uſed with the *Junquills* was, to lay " ſomes Tiles juſt under the *Roots* to prevent their running down- " wards, but this hath not anſwered, nor do I think it poſſible " wholly to recover them; for the Alteration is not only in the " Root and Flower, but alſo in the Leaf or Blade, which before was " Fiſtulous, but after this Alteration in the Root, becomes a plain " ſulcated Leaf, and if it ever Bloſſoms after, the Flowers are large

" and

" and ſingle, which before were ſmall and double. But the Saffron, " after the Change of its Roots, produces a ſmall narrow Blade, ſel- " dom half the Length of thoſe in a natural State. I am,

Your humble Servant,

PHILLIP MILLER.

Theſe additional Obſervations plainly ſhew, that neither the *Carroty Root*, mentioned by my ingenious Correſpondent, nor this Baſtard *Tap-Root*, as I may call it, are merely accidental, or what may be called *Luſus naturæ*, but certain Diſeaſes incident to ſuch Roots, for were they Accidental, they would not have the ſame Appearances to different Perſons in different Soils and Climates, nor would ſo many taken up together, have ſuch a Reſemblance to each other, as I have twice obſerv'd. This leads me to make,

4. *Suitable Remarks on the Vegetation of theſe Roots, in their various Appearances.*

From the above Hiſtorical Account of the Structure of theſe *Roots*, I ſhall conſider them in their *natural* and *preternatural* State. In the *firſt* is the *Bulb* and regular *Tap-Root:* In the *ſecond*, the *Carroty Root* and the *Baſtard Tap-Root.* The firſt two belong to the *florid Species*, the other to its Variation into *Barrenneſs.* For the better underſtanding of what I am to advance on the Subject, I ſhall premiſe ſome general Conſiderations, as, I. All *Plants* are 1. *Annual* both in *Root* and *Surface.* 2. *Perennial* in the *Root*, *Annual* in the *Surface.* 3. *Perennial* in *Root*, *Stalk* or *Trunk*, and *Branches*, *Annual* in *Leaves*, *Flowers* and *Fruit.* 4. *Perennial* in *Leaf* alſo, at leaſt to Appearance, *Annual* in *Flower* and *Fruit*, as the *Ever-Greens.* II. The *Annual Roots* are *Fibrous* and *Multifid* or *Simple* and *Carnous.* The *Perennial Roots* are either *Lignous*, *Simple* and *Carnous*, or *Fibrous* and *Running.* All *Plants* are either *propagated* by the *Root*, *Slip*, *Graft* or *Cion*, *Bud* or *Seed.* For though its highly probable all *Plants* were firſt raiſed from the *Seed*, and deſtinated to be ſo: yet to prevent the *Annihilation* of the *Species*, and other *Inconveniencies*, ſhould any *Plant* fail to produce *Seed:* theſe other Means are ſo provided by the Divine Providence to ſupply ſuch Defects, ſuitable Preparations are always made for Propagation the one Way, when other Means are ready to fail. For the Propagation by the *Seed*, which always happens to *Annuals*, we are to conſider the firſt Principle of *Vegetation*, which begins

begins at the Point of the *Radicle*; which conſiſting of one or more Pores, by the *Fotus* of the *Earth* they are firſt dilated in order to receive the adapted *nutritive Particles*, which crouding in and ſoon diſtending the *Lineaments* of the *Sap Veſſel* paſs from thence to the *Lobe* or *Lobes* of the *Seed Leaf*, and are the Means of explicating it. What's *ſuperfluous* returns by the *Venal Sap Veſſel*, and ſtretches forth the *Fibres* of the *Root* in the ſame Manner; and thus the *Circulation* and mutual Reception of the *Sap* in the aſcendent and deſcendent *Veſſels* is once begun to form the *Seed Leaves*, and the *Plume* (ſo called by Dr. *Grew*) ſucceeds; but according to the Structure of the *Root* it's rendered more or leſs fibrous, or is more or leſs divaricated into *Ramifications*. Thus, the ſimple *parenchymatous eſculent Tap*, or more oblong and rounder *Roots*, are but very little divided into *Fibres*, but a Circulation is maintained betwixt the *Root* and *Leaves*, untill the *Root* has become pretty big or groſs, as *Turnips*, *Radiſhes*, *Carrots*, *Parſnips*, *Onions*, *Leeks*, &c. which is chiefly done that the *Sap*, by ſo many repeated *Circulations*, may be ſo attenuated as to be capable of aſcending higher in order to form the *flowering Stem*, produce the *Flower*, and perfect the *Seed*, which the groſs Particles, upon their firſt entering the *Root*, until duly refin'd and ſubtiliz'd, were not capable to do. This ſhews the Uſe of theſe called *Bottom Leaves*, it lets us ſee the Reaſon why the *Root* muſt be at its full Bigneſs before any Means of Propagation can be provided.

Why no ſooner does the *flowering Stem* aſcend than the *Root* begins to harden and to decline? It lets us ſee that the *annual fibrous-rooted Plants* puſh forth the *flowering Stem* in a very ſhort Time, becauſe there being no Bounds for the *Sap* to remain in the *Root*, it muſt ſtreightway aſcend, whereas the *flowering Stem* of many of the *parenchymatous* do not aſcend until the ſecond Seaſon, when the *Sap* being attenuated to the laſt Degree in forming the *Seed*, and the Deſign of *Propagation* now being anſwered, the whole *Plant* dies, as Animals that have arriv'd at a good old Age. II. For the *Vegetation* of thoſe called the *perennial Roots* of *Herbs*, it often happens that ſo much *Sap* is required to maintain ſuch of them as are very large, that the Nouriſhment is chiefly exhauſted without the *Plants* being able to perfect the *Seed*, as in *Cinara* or *Artichoak*, and *Helenium* or *Elecampane*, &c. where no ſooner is the *Plant* at its full Bigneſs, and *flowering* Stem form'd, than at the proper ſetting Time, of which hereafter, new *radical Fibres* are ſtretch'd forth, and *Off-ſets* for propagating the *Species* are form'd to ſupply the defect of the *Seed*; and in this Senſe theſe commonly eſteem'd *perennial Roots* are only annual, for no ſooner has the *flowering Stem* perform'd its Office in vigorouſly puſhing the *Flower* and perfecting the *Seed*, if it is able, than it decays, and the *Root* which nouriſh'd it dies alſo: ſo that

the whole *Plant*, however *perennial* in appearance, is only *annual* in duration, being ſucceeded by a new *Root* and new *Surface* next Year, as is well known to expert *Gardiners*, who carefully remove the *old rotten Roots* from the *Artichoaks*, that the new freſh *Roots* may be the more vigorous; and this is very evident in *Aſparagus*, where, if the new *Shoots* are prudently cut as they appear in the *Seaſon*, the *Sap* being diverted, daily puſhes forth more, but no ſooner is the *flowering Stem* permitted to remain and produce *Flowers* and *Berries*, than the *Root* which nouriſhed them periſhes with them, and the *Aſparagus* may be properly ſaid to have an *annual Root* in that Senſe.

Which leads me to the fourth Conſideration, *viz.* That when one Means of *Propagation* fails, another is provided, *e. g.* In the *fibrous running Roots* which every where either ſend forth *Stolones* or *Shoots* from below, or emit *radical Fibres* from the *Joints* above Ground. Of this Sort *Mentha*, which though it *Flowers annually* yet ſeldom produces *Seed*, and *Vinca Pervinca flowers* plentifully in the Seaſon, but never produces *Pod* or *Seed*, unleſs it be deprived of its *Climbers* or *Creepers* and only a few *Flowers* left, and then being confin'd to ſmall Bounds in a *Pot* with Earth, it has been known to *fructify* and to produce *Seed*.

My laſt general Conſideration is, concerning the *ſetting* and *ſhooting* Time, which I have taken Notice of in *Botaniek Eſſays*, and in the Fourth of theſe *Decads*, the two *Solſtices* for the one, and the *Spring* and *Autumn* for the other. By the *ſetting* Time I mean, when after the *autumnal Office* is perform'd, the *annual Surface* is decay'd, the *Wood ſhoots*, if in *Trees* and *Shrubs*, are ſtretch'd forth in their full Length for that Seaſon, and the Preſſure of the *Atmoſphere* is of ſuch Force, that the *external Pores* being ſhut, the ſuperfluous *Particles* cannot evaporate, it deſcends with greater Vigour, and puſhes forth the *radical Fibres* more and more every where. This continues until the Sun begins to approach nearer our Horiſon, the nutritive Particles are more plentifully receiv'd into the *radical Fibres*, and aſcend in greater abundance to *ſwell* the three ſeveral Buds, *viz.* thoſe for the *Vernal Shoot*, *Leaf* and *Flower*, this is called the *firſt ſhooting* Time. When again the *Leaf* is fully form'd, the *Spring Flowers* decay, and the Winter Proviſion for the *annual Surface* has perform'd its Work, the *Sap* begins again to be employ'd, to ſtretch forth the *radical Fibers* that it may be the more capable for a freſh Supply of *Sap* for puſhing forth the *autumnal Shoot*, and *ripenning* the *Fruit*, and perfecting the *Seed*, and this happens at the Summer Solſtice. I have mention'd this laſt, that I might the more regularly trace the Vegetation of theſe *Crocus Roots*, the Manner of their *Vegetation*, and the Reaſon of theſe ſeveral Appearances.

The

The vegetative Principle begins in theſe Heads, as it did in the Seeds of the Plants. They are round, with a flat upper and lower Surface in the one, the Pores for the *radical Fibres* are regularly *diſpos'd* in the other, in the other *Orifices* for the *Leaves* in the *Circumference* and the *flowering Stem* are duly ſituated alſo. The proper Time for *planting* them is the latter End of *May* or Beginning of *June*, juſt before the ſetting Time. The *Fotus* of the *Earth* renders the *Sap* contain'd in the *Parenchymatous Veſſels* of the *Bulb* more fluid, and capable of Motion; being thus rarify'd, it ſwells and dilates the *Pores*, eſpecially for the *radical Fibres* which are fully form'd, during the due Term of this *ſetting Time*, which finiſh'd, the *autumnal ſhooting Time* begins, the firſt Part of which is ſpent in maintaining the Circulation between the *Bulb*, *Leaves*, and *flowering Stem*. After the *Sap* is duly prepar'd, it at laſt aſcends in the *Center* and forms the *Flower*, the moſt ſubtile Parts of which are three *delicate Filaments*, the Appendage of the *Stylus*, about which ſo much Care and Induſtry has naturally been employ'd to render it the moſt refin'd Subſtance.

Curious Gardeners and *Floriſts* take up the *bulbous Roots* of *Tulips*, and other delicate *Flowers*, upon the decay of the *annual Surface* in the Summer, and let them remain out of the Ground till near the *Winter ſetting Time*, to render them more firm and ſolid, to prevent too great admiſſion of ſuperfluous *Sap*; now when they are of ſo ſmall an extent, and to preſerve them from degenerating from thoſe delicate Stripes into which their *Flowers* had formerly *broke*. The ſame is done with this *Crocus* after the *annual Surface* is decay'd in the *Spring*, their Heads or Bulbs being firm and ſolid, and of ſmall Bounds, the *radical Fibres* may be more lively puſh'd forth at the *Summer ſetting Time*, and the *Sap* circulating more frequently, may be better attenuated and prepar'd for the *annual Surface* and *Flower* ſpringing forth in the *Autumn*. 'Tis true, this is only done once in three Years, becauſe of the great Pains in raiſing and planting ſo many, but were it done annually, I'm convinc'd the Product of *Flowers* would be the greater.

It's well known, that at the *taping* (as they call it) or cutting off any conſiderable Trunk or Branch of a *Tree*, the *Sap* being diverted in its direct Aſcent, tends laterally, and puſhes forth many ſmall Twigs. It's alſo known, that no ſooner is an *Ovum* of a Female animal Body impregnated than an adventitious Subſtance is generated to communicate with the impregnated Female *Uterus*, and to derive the Nouriſhment for the *Fœtus* from thence. The Sap thus ſet in Motion in the *Crocus Head* circulating frequently in ſo ſmall Bounds, aſcends directly to form the *Flower*, and no ſooner is it form'd than it's pluck'd or pull'd up, the nutritive Particles being thus ſtopp'd in their Career, tend immediately laterally, and firſt enlarge the Compaſs of the

the common Membrane, then ſend forth a round Portion, as it were a *Navel String*, from above or the Side, and ſometimes below the old *Bulb*, new *Tubercles* are here and there form'd at certain Diſtances like the *Cotyledones* of the *Uterus* of a *pregnant Cow*; theſe *Tubercles* increaſe by the *Sap* flowing more plentifully by this new *Chanel*, and the *Navel String* or *Body* of the *Tap-Root* is more and more augmented and ſtretch'd forth, while the *Sap* being more parſimoniouſly beſtow'd on the *old Bulb* it decays apace, the Circulation being now chiefly maintain'd betwixt the *Tap-Root* and its new *Bulbs* the *Leaves*, the former Aſſiſtants to it wither and dry up alſo, ſo that the *annual Surface* and the *old Root* having periſh'd, theſe Fibres of the *Tap-Root* and their *Bulbs* have the Circulation now confin'd within themſelves, and laſt of all the *Tap-Root* dries up as the *Navel String* of a *new-born Infant*, and the *Bulbs*, being the *Roots* of ſo many new Plants, remain ſeparate.

The next Thing I am to endeavour to account for is, the *preternatural* State of theſe *Heads* or *Bulbs*, which, inſtead of producing the *Tap-Root* for Propagation, only produce two kinds of *barren* or *baſtard Roots*.

The *firſt* is the *Carroty Root* mentioned by Mr. *Miller*, who judiciouſly obſerves, theſe *Carroty Roots* never produce *Bulbs* but remain *barren*; this is the ſame with my Obſervation, only he ſays, the *Tap-Root* proceeds laterally from above the old *Bulb*; what I obſerved was, this *Carroty Root* was an Excreſcence adhering by a ſmall Portion to the *old Bulb* below; but be that as it will, it muſt be the Effect of too groſs Particles, which never duly circulating or being truly attenuated ſo as to aſcend and form the *Flower*, only remain in the Ground, and maintaining a partial Circulation, as I have obſerved in the *eſculent Tap-Roots* before the *flowering Stem* is form'd, they neither contribute towards the *Flower* nor Propagation of the *Root*. The ſame may be obſerv'd of the other *Baſtard Root* with the *Appendix*, which Mr. *Miller* has ſo accounted for, and I have ſo deſcrib'd, as no more need to be ſaid about it.

The laſt Thing I ſhall obſerve concerning theſe *Roots*, is the Admonition of my *Cambridge Correſpondent*, viz. That it requires Judgment to chooſe the *Heads* at the Sale of them, the fine bright *Heads* is reckoned the beſt, and a *dull brown* one the worſt, by which it would ſeem, there muſt be a bad Diſpoſition in the Parts of theſe *Baſtard Roots ab origine*, and it's probable theſe *dull brown* ones muſt be they, which become ſuch, and therefore ſhould be thrown aſide as uſeleſs; but I only propoſe this as a Conjecture.

Upon the whole, I'm in hopes theſe three Delineations from the Life will give a better *Idea* of what I have advanc'd; that of Mr. *Miller* ſhews the true Manner of Propagation. *aa.* Shews two of the Leaves

Leaves of the *annual Surface.* *b.* The *Theca* or *Vagina*, in which both are enclos'd at their Exit. *c.* Part of the *common Membrane.* *d.* The *old Bulb.* *e.* The *new Bulb*, with the *Navel String*, by which it proceeds from the *old Bulb.* *f.* The *radical Fibres* of the *new Bulb.* *g.* Another *Tubercle* for a *new Bulb.* *h.* The *Tap-Root* as it descends into the Ground.

Fig. II. *aaaa.* The Leaves of the *annual Surface.* *b.* The common *Theca* covering the *Leaves* at their Exit. *c.* The *old Bulb.* *d.* Its *radical Fibres.* *e.* The preternatural *Appendix.*

Fig. III. Represents the *Carroty barren Root.* *aa.* The *Bulb.* *b.* The Portion from the lower *Part* of the *old Bulb.* *c.* The *Tap* or *Carroty Root.* *d.* The *radical Fibres.*

Dr. *Douglass* has so accurately delineated the *Bulb* when the *Plant's* in the Flower, that it seems to be more natural than that of *Tournefort* who delineates the *Rudiments* of the *new Bulb*, which is seldom to be seen at that Time.

5. *The Description of the* Leaves.

Mr. *Charles Howard*, in his Directions concerning the *Culture* of *Crocus*, of which hereafter, bids, *Hoe or pare the Ground about a Fortnight before* Michaelmas, *as soon as the* Roots *begin to shoot or spire within the Ground.* This is to be understood of the *annual Surface*, for the *radical Fibres* must have been form'd before, and there is no fear of disturbing them by cleaning of the Ground. This I take Notice of, because it has of a long Time been the general Opinion, that the Flowers appear first, which brings me to the second Part of Mr. *Miller's* first Letter, where he observes, *That most* Authors *have been mistaken as to this Article, in saying, the* Flowers *appear in the* Autumn *and the* green Leaves *appear in the* Spring, *whereas it's in* this *as in the* Crocus Vernus. *The* green Leaves *come up first, and arise to an Inch and a half, and then the* Flowers *come up in the Middle, and in a few Days get above the Green three or four Inches, but the Blades continue growing all the Winter. I have taken,* continues he in the above Letter, *some Blades at the latter End of* November, *which have measured fourteen Inches, I cut off some of these* Blades *close to the Ground, to try what Effect it would have on the* Roots. *When I took up my* Roots *they were little larger than large Pin Heads.* October the 3d, *I moved some of the* Roots *as the* Flower *was decaying, and though it was done with great Care not to hurt the* Fibres, *yet the* Roots *in the* Spring *were very small, and have not produced one Flower since, which is three Years ago.* December the 28th, *I removed another Bunch of Roots with the*

same Care, these were larger and fairer than the former, but have as yet remained barren. March the 4th, *I removed another* Parcel *which were entirely form'd, but the Green very fresh, these have remained two Years to all Appearance,* large round Roots *as ever I saw, yet have not produced me one* Flower *since, nor is the* Blade *half so strong as before.*

These curious Observations bring into my Mind the following Considerations. 1. There is an absolute Necessity of an *annual Surface* to maintain the *Circulation* of *Sap* in any *Plant*, in order to make it produce, *flourish* or *fructify*. *Vernal Saffron Roots* have five, six, or seven Leaves in the Circumference which appear before the *Flower*, as Mr. *Miller* observes the *Autumnal* has also, by which Means the Circulation betwixt these tender *Leaves* and the *Root* is maintain'd until 'tis duly prepared and attenuated, and then being render'd more subtile, it ascends directly in the Center, and pushes forth the *Flower* all of a sudden, where the three Filaments of the Style being in the Center of all, is still the more refin'd. 2. After the *Flower* is past, these *Leaves* acquire a greater Length, but are fewer in Number, for they do not then exceed four, or at most five, as the bottom Leaves of another *Plant* decay when the *flowering Stem* has fully mounted. 3. When the *Plant* is not *florid*, or is barren, the *Leaves* occupy the *Center*, and are enclos'd in a common Sheath at the Exit, as is the *flowering Stem* of the *florid Species*. If it is objected, that some *Plants* produce a *flowering Stem* before any *annual Surface* appear, that's only to be seen in such *Plants* as have running *Roots* which lie Horizontally, where the Sap having large Bounds to circulate, the more subtile mounts at certain Distances to form the *flowering Stem* and *Flower*, when 'tis not capable to form the *annual Surface* at the same Time, as in *Tussilago Petasites*, &c. but this does not happen to *Roots* of determinate Dimensions, that do not stroll or run out as the *Creepers* in the Ground do.

The *Leaves* then are long, narrow, dark, green, *Grass*-like, five, six, or seven in a Circle, sulcated above with a Longitudinal white Line, arrive at their full Length in the *Winter* after the *Flower* is past, and continue till the Month of *April* or Beginning of *May*, when they wither and decay. And here I must observe, that Mr. *Bradley*'s Direction to tye them together at the *Top* to stop the Circulation in order to make the *Heads* become bigger, seems not to be well founded, for by what is said it appears, if any Part of the *Plant* is hurt, whether *Bulb*, *radical Fibres*, or *Leaf*, it does an Injury to the *Plant*, and is a Means to make it become *barren*, so that the Method taken with *Shallots*, *Garlick*, or *Onions*, to tye the Leaves together or trample them down that the *Roots* may be the bigger, will not do in this Case.

VI. *Description*

6. *Deſcription of the* Flower.

Dr. *Douglaſs* has ſo accurately deſcrib'd the *Flower* in *Tranſact.* N° 380. that little remains for me to ſay. Its *Stem* ariſes in the *Center*, enclos'd in a common *Theca* or Vagina, tubulous for about two or three Inches; above this *Theca* 'tis enlarg'd into a *Flower*, in Shape like a *Funnel*, urceolated of an oval Figure not fully expanded, at the beginning *Hexapetaloid* or *Monopetalous*, divided into ſix *Segments* of a *beautiful* darker *Purple* without, lighter within, with darker Veins intermixt with a whiter *Colour*. From the inner Surface of the three largeſt *Segments* there ariſe three *Stamina* of a whitiſh *Colour* inclining to a white *Purple*, with proper, longiſh, erect, forked, yellow *Apices*, like the Tongue of a ſmall *Bird* loaded with the *Farina fœcundans*. The *Ovarium* or *fructus Rudimentum* is ſituated at the Baſe of the *tubulous* Part of the *Flower*, endow'd with a long ſmall *Stylus*, which, when it hath reached the upper Part of the *Stamina*, is divided into three Portions, yellow at the Beginning, narrow at their Origine, growing gradually larger, towards their Extremity of a deep red *Colour*, their jagged Extremities are ſtrip'd with white inclining to a yellow, theſe are they for whoſe ſake the Plant is cultivated, and of which ſo valuable a Medicine is prepar'd.

In the general *Character* of theſe *Liliaceous Flowers* I had forgot to take Notice, that they are all *Calicis aut perianthii expertes*, but that three of the *Petals* or *Segments* are ſituated outmoſt, and encloſe the three inner ones, being *green* or of an *herbaceous Colour* before *Expanſion*, and immediately upon the ſpreading forth acquire a *florid Colour* the ſame with the three inner *Petals* or *Segments*, and this is the Reaſon why three of them are broader or larger. 2. The *Hexapetalous* Flowers have ſix *Stamina* ariſing round the *Piſtillum*; the *Hexapetaloid* only three, ariſing from the inner Surface of the larger *Segments*, but as the *Button* of the *Stylus* is always three ſquare, ſo it's here divided into a tripple Appendix. Laſtly, this *Flower* is of ſo fine and delicate a *Texture*, that it can endure no kind of Exceſs of Weather after it begins to open, a ſcorching *Sun* about Mid-day deadens it immediately, a claſhing rainy Morning beats it ſo down that it cannot recover, a Breeze of Wind breaks the Petals ſo as they loſe their Shape, ſo that the only Time of gathering the *Flowers* muſt be early in the Morning, as ſhall be ſhewn.

By what has been obſerv'd by Mr. *Miller*, and by the regularity we find in the *Propagation* of this Species by the *Root*, there is not much to be ſaid concerning its *Fructification*, its Barrenneſs that way

may

may be aſcrib'd to the following Reaſons. 1. A viſcidity peculiar to the Juice of moſt of the *Liliaceous Tribe*, whoſe radical Fibres are uſually ſo large as to admit of ſuch groſs Particles as are not ſoon or eaſily attenuated as to form the *Seed*. *Onions* and *Leeks* puſh forth the *flowering Stem* only the ſecond Year, for after repeated *Circulations* of *Sap* in the *annual Surface* of the firſt Year, the ſtreight *hollow flowering Stem* which ſupports the Tuft of *Flowers* next Seaſon, has the *Sap* ſo confin'd to it, that by the direct aſcent and deſcent of it at length it's render'd ſo tenuious as to compoſe the *Seed*. 'Tis true, Garlick emits the *flowering Stem* the firſt Year, but the Tuft is then more compos'd of radical *Bulbs* than *Flowers* or *Seeds*, and it's frequent for that Species of it, called *Rocambole*, to ſupport the *childing Bulbs* on the Top of the *Stalk*, which have proper *Stalks* of their own by which they ſupport their ſmall Flowers. We ſee the *Lilium album*, *luteum*, and ſeveral other *Lillies*, ſeldom *fructify* or ripen the *Seed*, which is chiefly owing to the *viſcoſity* of their *Sap*. 2. The ſhort Time of *Vegetation* in this Plant before the Flower is produc'd, which is not above ten Weeks, ſo that the *Sap* could ſcarce be prepar'd to form the *Flower* and perfect the *Seed* in ſo ſmall a ſpace. 3. The ſudden revulſion of the Sap, or inverting of its Motion from aſcending to form the Flower, to deſcend to puſh forth the *Tap* and form new *Bulbs*. 4. The Seaſon for the *Crocus vernus*, if it produce Seed at any Time (which is but ſeldom) is owing to the approaching Seaſon and hot Weather, but no ſooner is the Flower of the *Crocus autumnalis* paſt, the cold Weather comes on enough to kill the tender Embryon if it ſhould begin to ſwell. Thus much have I thought fit to advance concerning the Deſcription, Vegetation, &c. of this valuable Plant. I come next to conſider

The Second Part of this *Diſſertation*, which contains the Manner of its Culture, gathering the Flowers, preparing and curing the Saffron, an Eſtimate of the Profit, where cultivated to the greateſt Perfection, its excellent Virtues and manifold Uſes, with a Catalogue of the Shop Preparations into which it enters.

7. *Mr.* Howard *and Mr.* Bradley's *Accounts of the Culture of* Crocus Vernus.

In order to perſwade a more frequent Culture of *Crocus*, I have drawn up a full and authentick Account of the Method of it, from Mr. *Charles Howard*, *Tranſact.* N° 138. and Mr. *Bradley*, in his *Gentleman*

tleman and Farmers Monthly Directions, in their own Words, and adding my Thoughts concerning it, that I might render the whole more compleat.

Mr. *Howard. Plant your* Saffron *Heads in a black rich ſandy Land. Between white and red yields the greateſt Store of* Saffron, *a Clay or ſtiff Ground, be it never ſo rich, produceth but little* Saffron.

Mr. *Bradley.* " A light Loam or middle Soil is ſuch as will do " beſt for Saffron; but I have ſeen it grow very well in common " heathy Ground, which is ſuch as is ſandy, and mix'd with ſmall " Roots. The very ſtiff Ground is not proper for it, unleſs it can " be made tender by Coal Aſhes, ſharp Sand, light freſh Mould, " ſuch as will open its Parts.

Mr. *Howard. Plant the Ground in the Beginning of* April, *and lay it very ſmooth and level.*

Mr. *Bradley.* " Now begin to prepare your Ground for Saffron, " by plowing it ſhallow, for it muſt have another deeper plowing " the next Month.

Mr. *Howard. About three Weeks or a Month after, plow it again, ſpread upon it about twenty Loads of rotten Dung, and plow it in.*

Mr. *Bradley.* " Dung is of bad Conſequence to the *Roots* which " are *bulbous*, by breeding a Canker in them, and though the only " Manure uſed by our Farmers for Saffron Ground, yet there is no " other Reaſon for it, ſave, that it has been a Cuſtom to lay as " much Dung upon an Acre as amounts to 10 or 12 *l.* Value, and " in ſome Places a great deal more; but my Experience teaches me, " that a freſh Earth, a little light, if it has but five or ſix Inches " Surface or Staple, with a tollerable Bottom, will do much better " than all the forc'd Earth by Dungs.

Mr. *Howard At* Midſummer *plow it again, and plant the Saffron Heads in Rows, every way three Inches diſtant one from another, and three Inches deep.*

Mr. *Bradley.* " When your Ground is well ploughed and levelled, " make your firſt Line for Saffron with an Hough, whoſe Blade is " four Inches wide, ſo that the Furrow which is made by drawing " it along will be five Inches wide, and about the ſame depth; plant " your Heads at the Bottom, about four or five Inches diſtant from " each other, draw the next Furrow in the like Manner, cloſe by the " Side of the firſt; ſo that the Bottom where the Roots are planted " may be about five Inches from the Roots in the Line of the firſt " Furrow. By the opening of the ſecond Furrow, the Roots of the " firſt will be covered with Earth; plant the Heads in the ſecond " Furrow as in the firſt, and make the third Furrow to be planted

" like the others : Continue thus to make new Furrows, and plant-
" ing them until there be a Bed of three or four Foot wide, leave a
" narrow Path of about fourteen Inches or a Foot and half, accord-
" ing to ſome, plant the ſecond Bed as the firſt, leave another Alley
" or Path, continue this till the whole Piece of Ground you deſign
" is planted, and then go lightly over each Bed with a Rake. In-
" cloſe this Ground very well, to keep the Ground from being hard,
" and by the trampling of the Ground by Cattle, and from Hares who
" will greatly annoy the tender Graſs and Flowers when they firſt
" appear, which muſt not be ſuffer'd, for the cropping of the Leaves
" only while they are growing, until they decay of themſelves, will
" ſo weaken the Roots that they will not blow at all.

Mr. *Howard. The moſt expedite Way of Planting, is to make a Trench the whole Length of the Field, three Inches deep, with a Spit Shovel, which is to be made of a thin ſtreight Iron, ten Inches long, and five Inches broad, with a Socket in the Side for a Saffron Handle; lay the Heads in the Trench, and with the Shovel Spit three Inches of Earth on the Top of them, by this Means the Heads will be three Inches every way diſtant from each other. Only Paths are to be left at two or three Yards aſunder, which ſerve every Year to hay the Weeds to rot, that are weeded or pared off the Ground, then the Heads begin to ſhoot or ſpear within the Ground, which is uſually a Fortnight before* Michaelmas; *hoe or pare the Ground all over very thin, and rake lightly all the Weeds and Graſs very clean. In* May *the Saffron Graſs will be quite withered, after which the Weeds and Graſs the Ground produces may be cut and mow'd off from Time to Time to feed Cattle till about* Michaelmas, *at which Time the Heads will begin to ſpear within the Ground; hoe, pare, and rake the Ground clean as before, for a ſecond Crop. The like Directions are to be obſerved next Year for a third Crop. The* Midſummer *following dig up all the Saffron Heads, and plant them again in new Ground wherein no Saffron has been planted at leaſt for ſeven Years.*

Mr. *Bradley.* " For the Month of *Auguſt* weed your Saffron
" Ground, for the Saffron will receive Injury if diſturb'd in *Septem-*
" *ber*, when it will be in full Bloſſom.

Their Accounts of the Management of Saffron.

Mr. *Howard. The Flowers are to be gathered as ſoon as they come up, before they be full blown, whether wet or dry.*

Mr. *Bradley.* " *September*; this Month is the *Saffron Harveſt*, and
" Care muſt be taken to provide Hands according as you have Quan-
" tity, for it muſt be gathered ſoon in the Morning, or elſe the

" *Saffron*

" *Saffron* will ſhrink into the Ground. Women and Children are for " the moſt part chiefly employ'd, for they pull all the *Flowers* they " ſee *blown*, and carry them home in a Baſket; pick out the *Saffron* " in Sunſhine, if there is any, to dry a little and prepare it for the " *Kiln.* Very wet Weather, when the *Saffron* is in *bloom*, bears down " the Flowers, bruiſes and ſpoils the *Saffron*, which is the three *Fila-* " *ments* of the Style of the *Flower* of a *Flame* or Orange Colour, and " when this happens, the Saffron will be ſmall and weak.

Mr. *Howard. The Kiln conſiſts of an Oaken Frame, lathed on every Side, twelve Inches ſquare at the bottom, two Foot ſquare at the top, and two Foot high, upon which is nailed a Hair Cloth ſtrain'd hard by Wedges drove into the Sides, a ſquare Board, and about a quarter of a hundred Weight to preſs it down.*

Mr. *Bradley.* " The Kiln is about a Foot ſquare at the bottom, " two Foot ſquare at the top, two Foot high, made of Oak fram'd " together, and cover'd with Laths on the outſide, as well as lined " with them.

Mr. *Howard. The inſides of the Kiln are covered all over with the ſtrongeſt Potters Clay, very well work'd with a little Sand, a little above two Inches thick.*

Mr. *Bradley.* " Upon theſe Laths within ſide is ſpread a ſtrong " Mortar two Inches thick, and the outſide is covered with Lime " and Hair, but the bottom with ſtrong Mortar, to ſerve as an Hearth " to lay the Fire on, leaving an Hole on one Side, to put in Char- " coal Fire, and to give Air. Upon the Top of the Kiln muſt be " ſtrain'd an Hair Cloth, as tight as poſſible, and nailed very faſt, " becauſe when we put our Saffron between the Papers, we muſt " preſs a Weight of 25 or 30 Pound in the drying of it.

Mr. *Howard. Pick out the Chives from the Shells or Flowers, and ſprinkle them two or three Fingers thick, very equally on a double Saffron Paper, and cover it with two or more Saffron Papers, a Piece of woollen Cloth or thick Bayes, and a Cuſhion of Canvas or Barley Straw, whereon lay the Kiln Board.*

Mr. *Bradley.* " You muſt dry it in white Paper, and in many " Places they lay the Paper under and over ſix or ſeven Sheets thick, " eſpecially on the top, on purpoſe to get the Tincture of Saffron, " but this may be guarded againſt, and likewiſe they will put the " outſide Paper to freſh Saffron, on purpoſe to make them fully par- " take of the Tincture; but this weakens the Strength of the Saffron, " and the Paper will ſell well, which are the Dyer's Perquiſite.

Mr. *Howard. Put into the Kiln throughly kindled Charcoal, over Coal or the like, keeping it ſo hot as you can ſcarcely endure your Finger betwixt*

the

the Paper and the Hair Cloth. After an Hour or more turn the Edges of the Cake with a Knife, and looſen it from the Paper if it ſtick faſt, wet the outſide of the Paper with a Feather dipt in Beer, and then dry the Papers. Turn the Cake, that both may be of a Colour. If it ſtick again to the Paper, looſen it, and then dry it with a very gentle Heat, with the addition of a Quarter of a Hundred Weight laid upon the Kiln Board.

Mr. *Bradley.* " Keep the Fire as conſtant and gentle as poſſible, " and as ſoon as it begins to ſmell pretty ſtrong, turn the Papers, " and ſet on the Weight again, till the other Side of the Saffron is " well dry'd.

Mr. *Howard. The Saffron Cake being ſufficiently dry'd, is fit for Uſe, and will laſt a good many Years, being wrapt up and kept cloſe. The beſt Saffron is that which conſiſts of the thickeſt and ſhorteſt Chives, of an high red and ſhining Colour, both without and within all alike. Saffron is often burnt and ſpotted, full of Knots, and mixed with the yellow Threads within the Shells.*

Remarks on the Management of Saffron.

I thought fit to inſert both theſe Accounts in their Turns in the Gentlemens own Words, that what is omitted in the one may be ſupply'd by the other, and to give ſuitable Remarks, that I may render the Manner of cultivating and managing Saffron as full and compleat as in me lies.

They agree, that a rich, black, ſandy Mould, or in a mixed, ſoft, ſandy Land, betwixt white and red, but that a ſtiff Clay is no ways proper; but they differ in the Manner of preparing this Soil, and rendering it fit for Saffron. Mr. *Howard* preſcribes a good Quantity of rotten Dung to be laid upon it after the firſt Plowing or Tillage. Mr. *Bradley* is againſt any ſuch Thing, and ſays, its only a long received Cuſtom which has induced thoſe about *Saffron Walden* to be at ſuch Charge for Dung, when the Heads being bulbous, Roots would be better without. I confeſs, moſt bulbous Roots do not require much Dung, as Tulips, &c. which on account of preſerving their Variegations into Colours and Stripes, require particular Compoſts of Earth and Loams to keep them up to their Kinds, but theſe are the *Bulboſæ propriæ dictæ* of the tunicated and ſquamous Kind, whoſe Juice is already ſo fat and viſcid that a farther Supply of what will fatten them more, will do much to rot them; and yet there are of thoſe of an hot Taſte and ſubtile Particles, as Onions, &c. that encreaſe mainly in one Seaſon, by mixing of fat and rotten Dung thrown

thrown upon the Ground where they are to be ſown; they who bring the largeſt Onions to the Market have the Experience of this. But *Crocus* is none of theſe Bulbs, it has a *carnous* and *tuberous Root*, receiving Nouriſhment from the Earth by the Tap-Root and Fibres of the *feſſile Part*, and whatever Mould is light and porous, eaſily yielding to the Force and Vigour of the Fibres penetrating and ſtriking deeper into its open delicate fine Subſtance, without any ſtiffneſs, too much compactneſs, or roughneſs, to ſtop their Progreſs. So that theſe ſame Fibres, when the ſhooting Time begins, may more abundantly receive the nutritive Particles into the Pores of their Extremities; I ſay, ſuch a Mould cannot be injurious, but rather aſſiſting to the Growth and Vegetation of *Saffron*, and ſuch I take the Quality of the rotten Dung mention'd by Mr. *Howard* to be.

It never can be the worſe for the *Soil* when it is ſo mix'd, that the Heat and *Fermentation* in the *Dung* only deſtroy'd the *oleagenous*, *ſulphureous* and *inflammable* Part, the general Cauſe of *Corruption*, but it rather heightned the Virtue of the *ſaline* Parts, extricated them the more, and render'd them capable of entering the Pores of the *Plant*. We know that Horſe-dung is the moſt capable of Heat and Fermentation, being mixed with the Litter and Hay, partaking both of the *volatile Salts* of *Animal* and *Eſſential Salts* of *Plants*, ſuch a Mixture of *Salts* is preferable to any for promoting *Vegetation*. Their *Virtue* is no ways deſtroy'd by the *Fermentation*. There is no ſuch *Ebulition* or *Effervescence* here, as happens upon the Mixture of *Acidum* and *Alkali*, as *Sal Tartari* and *Ol. Vitrioli*, when upon deſtroying of the *Spiculæ* of one another, a *Coagulum* and *tertium quid* reſults. The *rotten Dung*, when mix'd with another proper *Soil*, make up a fine ſoft *vegetative Mould*, having its own *Salts* more *extricated*, *penetrating* and *ſubtiliz'd*, opening the *Pores*, extricating and attenuating the more *ſtiff* and rigid *Particles* of the *coarſe* ſtiff *Mould* with which it's mix'd, and rendering it much more conformable for the deſign'd Ends and Purpoſes.

I'm of Opinion, five Inches diſtance in the Heads is preferrable to three, becauſe the Charge of them will be leſs, and there will be more Room for propagating the Bulbs, and the Plants and Flowers will be the ſtronger and larger.

But I prefer Mr. *Howard*'s *Spit Shovel* to Mr. *Bradley*'s *Hoe* or *Hough*, as in trenching of the Ground, the Length of the Shovel is highly convenient to make the Furrow deep or ſhallow as you pleaſe.

Mr. *Howard* directs the firſt *ploughing* of the *Saffron Ground* to be in the Month of *April*, Mr. *Bradley* delays it till *May*. In the Preface to his Directions, he mentions, *fallowing*, twy and try *fallowing*

in the Space of one Year, which ſeems very requiſite in this Caſe, for Meadow or Paſture Ground being chiefly employ'd for *Saffron*. That *untry'd Earth*, ſo much recommended by Mr. *Lawrence* and Mr. *Bradley*'s Followers, being naturally ſtiff and hard, cannot be render'd too ſoft and kindly, nor too frequently turn'd over before the Heads are planted, for thereby Roots of the Weeds, Graſs, *&c.* formerly on the Surface of the Ground, is the more readily cut and rotted. I could therefore adviſe, the firſt ploughing to be in *Auguſt* or *September* in the preceding Year, the next in *April*, and the third juſt preceding the planting of the Heads.

Remarks on the Management of Saffron.

Mr. *Bradley*'s Caution about placing too many Papers above and below the *Cake* is worthy of Obſervation; for as the Paper is moſt capable to imbibe the *Tincture*, the *Saffron* is thereby the more weakned, ſo that it's fit there be no more Papers than to make the *Cake* ſmooth, or to avoid its being made too rough by the preſſure againſt the Hair Cloth.

The moiſtening of the Paper, looſening and turning of the *Cake* in due Time, the ſlow gentle Fire, the frequent removing of the Board to take Care it be not burnt, the coarſe Cloth or Bayes, Straw Bag, *&c.* to keep the Weight at a due Diſtance to preſerve the Fumes from getting out, and to make an equal preſſure, are all neceſſary Precautions. Nor is Mr. *Howard*'s Marks of the *Saffron*, being all of an equal *Colour*, that the Spots are ſigns of its being burnt, that the Knots are becauſe the *Chives* were not equally ſpread forth upon the Paper, the white is the reſult of the *Stamina* and *Apices* being pull'd along with the *tripartite Stylus*, unworthy of Obſervation. Mr. *Bradley* juſtly obſerves, that the *Stylus* ſoon decays, that wet Weather in the Seaſon makes weak *Saffron*, and if Care ſhould be taken to dry the *Chives* moderately before the Papers be put into the Kiln, for I am perſwaded, if the Chives and Papers be moderately dry when Fire is put into the Furnace, that's the ready way not to burn the *Saffron*.

I conclude theſe Rules and Directions concerning the *Culture* of this *noted Plant*, with two Advices I lately received; the firſt is the third and laſt Part of Mr. *Miller*'s firſt Letter.

I now come to give you ſome Account of the Culture of this Plant; but as I have had no opportunity of ſeeing its Management in the open Fields at Saffron Walden: *What I ſhall inform you of is from the Experience I have*

have had in Culture in ſmall Beds in Gardens. It loves a free open Air, to be expos'd to the Sun, and will by no means thrive under the Smoke of London; *I have ſeveral times planted it in* Southwark, *where I lived, and had a few Flowers the firſt Year, but it has* dwindled *quite away in a Year's Time, notwithſtanding my Garden was pretty much expos'd to the Air and Sun, nor will they do well under the Drop of Trees, as I have ſeveral Times experienc'd. The Soil they ſeem to delight in is neither too ſtiff a Clay, nor too light a Sand, but a ſort of Chalky Soil mix'd with a Loam, and not too wet nor too deep. This Soil, if poor, is commonly dung'd with Dung if it is well conſum'd, and laid at ſuch a Depth as not to touch the* Bulb, *but that the Fibres may juſt reach it. When the Ground is thus prepar'd, we commonly lay it out in Beds about four Foot over, and between each Bed a Path of about two Foot; in theſe Beds we plant our Roots five Inches aſunder each way, and three Inches deep; and if the Soil is poor, it will be a very good Way next Summer when the Green is quite gone, to lay a ſmall Cover of Tanner's Bark or Dung that is well conſum'd, all over the Bed, this will enrich the Ground, and prevent the growth of Weeds. The beſt way of planting the Heads is from the Beginning of* June *till* Auguſt, *but the ſooner the better, if Regard is to be had to the encreaſe of the Roots, for though the late planted will flower and grow ſtrong, yet they will not give half ſuch Encreaſe as the early planted, nor will the young Roots be ſo ſtrong. The Roots thus planted are ſuffered to remain in the ſame Place three Years without tranſplanting, during which, the Crop of Saffron every Year mends; but if let remain much longer, the encreaſe of the young Roots will be ſo great as to deprive each other of Nouriſhment.* I am,

Your humble Servant,

PHILIP MILLER.

There need no other Remarks on this laſt Part of ſo curious a *Letter*, than firſt, it confirms what I advanced, that the propereſt Time of *Planting* is the Beginning of *June* to avoid the Inconveniencies he has nam'd; ſince he has given ſuch Directions how to know the two preternatural barren Roots, a careful removing them immediately after the flowering Time is paſt, would afford more ſpace to the *fertile Bulbs* to *propagate* and encreaſe. This ſeems the more neceſſary, becauſe my *Friend* is of Opinion, if once they begin to degenerate they never recover; ſo that as the *Honey-Bees* do with the *Drones*, they ought to be pull'd out of the Ground at a proper Time, becauſe they deprive the more fertile and laborious of their Nouriſhment.

The

The laſt Advice I received on this Subject, is from an ingenious Student of *Phyſick* at *Cambridge*.

" I have ſent a Cut of the Kiln which I ſaw at *Fulborn*; it was about " a Yard and a Quarter high, was made of Wood, and thin pieces of " Wood. *a.* Repreſents the Place where the Charcoal Fire is put in. " *b.* A Hair Cloth which they ſpread over the Fire, the Saffron is " laid upon a Piece of Paper over the Cloth about two Feet over the " Fire. *c.* Is a Screw only to ſtretch the Hair Cloth. Some uſe an " Inſtrument made of Wire inſtead of an Hair Cloth, which gives " the Saffron a deeper Colour, I could not learn which was the beſt, " for ſome ſay the Wire, others the Cloth; it ſeems there are a " great Number of Saffron Kilns to be ſold at *London*.

I am, &c.

Adulteration of Saffron.

Mr. *Howard* has given very good Signs to know the good Saffron from bad, and what is well cured or not, but ſpeaks of no Method uſed to adulterate it, which ſome ſay is done by uſing of the *flouriſhes* of *Carthamus*, *Atractylis*, and even of *Carduus Benedictus*, which being near to the ſame *yellow* or *Flame Colour*, it's alledg'd may be uſed inſtead of the *Stylus* of *true Crocus*, but the weakneſs of the *Tincture*, *unfragancy* of the *Smell*, faintneſs or too great blackneſs of the *Colour*, are ſhrewd ſigns of Suſpicion. The Antients uſed a ponderous Subſtance call'd *Croco magma*, which yields a yellow Colour, with which they *tinctured* the *adulterated Saffron*; but as that is unknown to the Moderns, it's well ſuch Means of *Sophiſtication* is loſt alſo. It's worthy of Conſideration, that neither *Crocus Vernus* nor *Colchicum* has ſuch a *Stylus*; if they had, ſuch Impoſtures would have been more frequent than they are.

8. *An* Eſtimate *of the* Charge *and* Profit *in* Cultivating *and* Managing *of* Saffron, *according to Mr.* Howard.

CHARGE.

	l.	*s.*	*d.*
To thrice *plowing* an Acre of *Saffron* Ground	1	0	0
To 20 Load of rotten Dung and Carriage, at 2 *s.* ℔ Load	2	0	0
To 16 Quarter of *Saffron* Heads, at 10 *s.* ℔ Quarter	8	0	0
To planting the *Heads*	4	0	0
To gathering and picking of the *Flowers*, at 1 *s.* ℔ Pound, *inde* for 12 Pound.	0	12	0
To Fire and Care in drying the *Saffron*, at 6 *d.* ℔ Pound	0	6	0
	15	18	0

PROFIT.

Receiv'd by 36 Pound of *Saffron*, being the Product of three Years *Saffron*, at 12 Pound *per Annum*, and 40 *s.* ℔ Pound	72	0	0
To Profit of Graſs for three Years, at 15 *s.* ℔ *Annum*	2	5	0
	74	5	0
To 48 Quarter of *Saffron* Heads, at 10 *s.* ℔ Quarter	24	0	0
	98	5	0
Ballance of Charge	15	18	0
Three Years Rent of an Acre of Ground, at 40 *s.* ℔ Acre	6	0	0
Summa of Charge for three Years	21	18	0
Ballance of Profit	76	7	0
Which ℔ *Annum* amounts to	25	9	0

Remarks upon Mr. Howard's *Calculation.*

I have added the Ground Rent, and ſtated it at 40 *s.* ℔ Acre, (tho' I doubt not ſuch poor uncultivated Ground may be had for 15 or 20 *s.* ℔ Acre) that I may neither ſeem to heighten the Profit nor leſſen the Charge. It's my Opinion, digging with the Spade will be more proper in this Caſe than ploughing, for thereby all the Weeds will

be more carefully remov'd, and the Lumps of hard ſtiff Earth more conveniently broke, and then the Rake will ſoon ſmooth and clean the Ground; but be that as it will, 20 *s.* for thrice ploughing is good enough Price. I believe it may be cheaper if done with the Spade; either the Loads of Dung muſt be ſmall, or twenty Loads is a great Quantity for an Acre, and 2 *s.* for each Load and Carriage is no ſmall Price, but the Quantity of Ground muſt be large, or the Dung muſt be very dear to amount to 15 or 20 *l.* value, which Mr. *Bradley* ſays, ſome People throw unneceſſarily on *Saffron* Ground. My *Cambridge* Correſpondent only propoſes fourteen Quarters of *Heads* to each Acre, but Mr. *Howard* ſtates ſixteen Quarters, and both may be juſt, when Mr. *Howard* only allows three Inches Diſtance betwixt the *Heads* in planting, and moſt others propoſe five, which will more than leſſen the Heads by two Quarters.

When all the above Charge, together with the Pains of Gathering, Picking, Care, and Fire, which is valued at 1 *s.* 6 *d.* ℔ Pound, the whole firſt Year's Charge only amounts to	15	18	0
After which, there is no more additional Charge than the Ground Rent for three Years; for the dreſſing and cleaning of the Ground, Mr. *Howard* ſays, the *Saffron* Graſs, valued at 15 *s.* an Acre ℔ *Annum*, will countervail that	6	0	0
Thus the whole Charge for three Years, ſtated at the full Value, only amounts to	21	18	0
The common Computation of the Product is 12 Pound of Saffron, which is worth, *communibus annis*, 40 *s.* ℔ Pound; for as I have known it ſold lately at 3 *l.* 10 *s.* and 4 *l.* ℔ Pound, ſo it is ſeldom cheaper than 30 *s.* and its probable the Product will amount to 15 Pounds of Saffron, ſome more favourable Years, ſo that 40 *s.* being the middle Price *inde* of Profit for three Years	72	0	0
The general Computation is, that one Quarter of *Heads* when *planted*, will amount to three Quarters when taken up at the End of three Years, *inde* for 48 Quarters at 10 *s.* ℔ Quarter	24	0	0
Total	96	0	0
Deduct	21	18	0
	74	2	0
The yearly Profit then of an Acre of Saffron Ground is	32	0	0
Deduct of yearly Charge	7	6	0
The next Profit is	24	14	0

For the Charge of *Ditching*, *Fencing*, and *Encloſing* of the *Saffron Ground*, alſo for the *Kiln*, and other proper Inſtruments, that will be ſoon countervail'd by the *Improvement* of the *Ground*, which being ſo well manur'd, and ſo painfully look'd after when employ'd for *Saffron*, I'm convinc'd it will be double the Value for any other Crop of whatever Subſtance may be committed to it. Mr. *Howard* ſeems to inſinuate, the ſame Ground will not be fit for *Saffron* again till after ſeven Years; but I am of Opinion, much of that may depend upon the Nature of the Soil, for ſome Ground will be ſo rich and fat that the Farmers cannot do enough to impoveriſh it, and other Ground ſo lean and barren, that after what poſſibly can be done it will not produce the ſame Grain two Years an end, but the Seed muſt be changed every Year, ſo that no certain *Rule* can be given how long it ſhall be before *Saffron* is planted in that ſame Ground again, or whether it will be proper to take up the *Roots*, prepare, refreſh, and plant them in the ſame Ground; all that muſt depend upon the Experience of the *Saffron Gardiners*, and others vers'd in the *Culture* of that Plant.

Antiquity, *and* Places *of* Culture.

As *Saffron* has been of great *Antiquity*, and as it was early brought into, ſo it has all along been the moſt *valuable Simple* in, *Materia Medica*. Mr. *Ray*, and moſt other *Botanick Authors*, look upon it as uncertain where the *Plant* is *Indigenous*. *Mathiolus* ſays, it's the ſame with the *Coryceum* of the *Antients*, and that *Galen* and *Dioſcorides* inform us, it firſt came *ex Montibus Olympæ*. Mr. *Bradley*, from what Authority I know not, ſays, it grows naturally wild in *China*. *Sicily* is ſaid to be the Place where it was firſt cultivated to the greateſt Perfection; from thence it was tranſported to the Continent of *Italy*. *Mathiolus* ſays, the beſt of it grows at *Vienna*, the Imperial Seat of *Auſtria* of *Germany*. *Ruellius*, according to *Moriſon*, ſays, the beſt of it in *France* is in *Agro Agenſi & Narbonenſi*. *Pomet* ſays, the beſt in *France* is cultivated at *Boiſtue* in *Gratinois* in the Province of *Guienne*, whence, he ſays, it's exported to *Holland* and *England*, but they may ſave their Trouble as to the latter. For *Engliſh Saffron*, paſt all Controverſy, has the Preference to any cultivated in any other Part of *Europe*, or perhaps in the *Univerſe*, and inſtead of being ſerv'd by others, they can ſerve all their Neighbours where Commerce leads them, either at Home or Abroad. It's cultivated to a good Advantage in *Hampſhire*, *Herefordſhire*, and the Place which has always been the moſt fam'd for it is *Saffron Walden*. Mr. *Brad-*

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ley by Tradition informs us, it was firſt imported and planted there by Sir *Walter Rawleigh* from *Spain*, but it may probably have been of a more antient Date there, becauſe of its giving the Name to the Place, and moſt Towns had their proper Names, as we may ſuppoſe, long before Sir *Walter Rawleigh*'s Time; whether the antient Inhabitants are remov'd, or they think the Ground about *Fulborn* near *Cambridge*, is the moſt proper, I know not, but I am inform'd, it is now more frequently cultivated there than at the former Place.

Virtues and Uſes.

It's reported of King *James* the Firſt of *Great Britain*, that he admir'd how the *eſculent* Part of an Artichoak came to be diſcover'd. I may, with the ſame Reaſon, wonder how ſo ſmall a Part as this tripartite *Stylus* of a *Flower*, of which there is but one belonging to each *Plant*, ſhould come to be ſo early diſcover'd, and of all Ages ſo celebrated for its *Virtues*, eſpecially when this ſo uſeful a Part has ſcarce been diſtinguiſh'd by *Botaniſts* themſelves till of late Years, and yet now it is known almoſt to every ſimple Woman, and almoſt ſuckling Child, where they uſe to cultivate and manage it. Such a Diſcovery, whoever was the Inventor, has for many Years been of the greateſt Uſe in *Phyſick*. It conſiſts of the moſt *fragrant* and *tenuious*, *ſubtile* and *communicative Particles* of any Simple in *Materia Medica*; for as *Vegetables* and their Productions make up its greateſt Part, ſo *Saffron* among the *Vegetables* is of the moſt *univerſal Uſe* and moſt *potent Virtues*. Its firſt *cephalick*, *nervine*, *anti-epileptick* and *paralitick*, *Henricus Regius*, and moſt other *practical Authors*, in former Times uſed to diſtinguiſh betwixt *Cephalagia*, a *Cauſa Callida*, and a *Cauſa frigida*; the firſt is attended with an intenſe *acute* and *vehement Pains*; *Opiats*, as Anodynes, are *preſcrib'd* as *Remedies*. If *Saffron* is added, the ſtupifying *Quality* is corrected, and the *Medicine* rendered more effectual. In the ſecond, the *Pain* is *heavy*, the Senſation *dull*, and the *Senſes ſtupify'd*; to remove this Evil, no *Medicine* can be of greater Uſe, with other *Volatiles*, than Preparations of *Crocus*; it *abates* their *vehemence*, and by calmer Means *reduces* the *Diſcraſia*, and returns the *Patient* to a more *acute Senſation*. In the *Paralyſis* it's a powerful *Remedy*, both internally given and externally apply'd. *Saffron* is a principal Ingredient in moſt of *Anti-epileptick* Preparations. 2. In Diſeaſes of the *Breaſt*, it attenuates the *groſs* and *viſcid Humours* lodg'd in the *Bronchiæ*. In a *Dyſpnæa* from a *nervine* Defect, it comforts and reſtores their *Tone*, and makes them exert themſelves ſo as to

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act more vigorously on the *Muscles* for *Respiration*, and recovers the *Patient* to their wonted *Orthopnæa* or facility in *Breathing*. 4. For the *Stomach*, *Intestines*, and other *Viscera*, it attenuates the *gross* and *viscid Humours* in the *Primæ viæ*, restores their *Tonus Fibrarum*, by which the *peristaltick Motion* is helped, *reserates* the *Obstructions* in the *Viscera*, opens the *Pores*, *discusses* the *Flatus*, and *mitigates* the *tormina ventris*. It's the most potent *Uterine* we have, for in the *menses nimii* it corrects the Astringents usually prescrib'd in that *Case*, it curbs the *Lochia nimia* when prescrib'd with *Opiats* and other *Anodyns*. It's a most potent *partum provocans* given in *Powder*, or *bruis'd* and drank in a *White Wine Posset*. It's well known, that the *Spiritus*, *Tinctura*, *Syrupus*, *Pulv. Croci*, are of universal Use in the *menstruorum obstructio*. Some give the *Extract* in *Pills*, but I suspect the *Virtue* is much abated by such a Preparation.

A Catalogue of the several Medicinal Uses of Saffron, *and Shop Preparations in which it enters.*

Aq. Angel. mag. comp.
Sp. Lavendulæ.
Croci.
Tinct. Croci.
Elixir proprietatis. D. *Helmontii.*
Laud. Liquid. Sydenham.
Tartarisat.
——Rhabarb.
Vinum Chalybeatum.
Syr. Croci.
——de pomis purgans.
Pulv. Diacinnamomi.
——Species Hieræ Picræ.
——lætificans Galeni.
Conf. de Santalis.
——Mithridat.
——Philon. Romanum.
Theriaca Androm.
——Archigenis.
Theriaca Londinens.
——Raleighana.
Elect. Amar.
Hiera Diacolycinth.
Pil. Aloephangin.
——de Ammoniac magistral.
Pil. de Cynoglosso.
Fœtidæ.
Gutta Gamandra.
Ruffi s. Communes
Stomachicæ cum gummi e Styrace.
Laud. opiat.
Trochisci de Carabe.
Cypheos ad Mithridatium.
Hedrychroi ad Theriacam.
De Terra. Lemnia.
Ol. de Castor.
Hyperici.
Ung. Aureum.
Emolliens.
Emp. Diachylon comp.
Oxycroceum.

Cruciata, vide *Aparine.*

Cucumis hortenſis & ſylveſtris, vide *Citrullus.*

Cucurbita, vide *Citrullus.*

Cuminum, vide *Fœniculum.*

II. *Cupreſſus.*

Cupreſſus Ramis expanſis mas, C. B. 488. *Cupreſſus*, J. B. 1. 9. 282. Tournef. Inſt. 587. Raii Hiſt. 1406. The Cypreſs Tree.

The TRIBE.

It's one of the *Ever-green Trees*, with the *Katkins* or *Juli*, ſeparated from a ſquamous Fruit.

The Deſcription.

It's a tall *Tree*, with a ſtreight groſs *Trunk* far ſpread forth, a greyiſh *Bark*, and ſolid *Wood*. Its numerous Branches are cloath'd with thick ſet, ſmall, narrow, ſhort, dark, and ever-green *Leaves*, like thoſe of *Savine* or *Cedar*. Its little ſhort *Juli* or *Katkins* conſiſting of ſeveral ſmall *ſcaly Leaves*, and numerous *Apices*, ſhedding abundance of the *Farina fœcundans*, are upon diſtinct Parts of the Branches from the *Embryon*, which becomes a big orbicular *Fruit*, conſiſting of ſeveral thick, hard, rhomboid or four ſquare *Squamæ*, like the Heads of *Nails*, encloſing ſeveral black, hard, cornered Seeds. It's cultivated as an Ornament or Ever-green in Gardens, of which, by keeping the Branches upright with ſmall Cords, they uſually form various Pyramids.

Virtues and Uſes.

The *Nuces Cupreſſi* are chiefly uſed in the Shops. They are potent *Aſtringents*, and are given inwardly in *Decoctions* and *Powders* for *Diarrhea's*, *Dyſenteries*, *Hemorrhagies*, ſpitting of *Blood*, *Menſium fluxus nimius*, along with other *aſtringent Medicines*; Externally, they are preſcrib'd in *Fomentations*, *Lotions* for *Inflammations*, ſtopping of *Bleedings*, curbing of *proud Fleſh*, &c. alſo in *Ointments*, as *Ung. Aſtring. Empl. ad Herniam*, &c.

III. *Cuſcuta*

III. *Cuſcuta & Epithymum.*

Cuſcuta maj. C. B. 219. Tournef. Inſtit. 652. Raii Hiſt. 1903. Moriſ. Hiſt. 615. *Cuſcuta*, J. B. 3. 28. 266. *Caſſutha* Tab. Icon. 901. Dodder.

Cuſcuta min. Tournef. Inſtit. Hiſt. des Plantes 426. *Epithymum ſive Cuſcuta min.* C. B. Moriſ. Hiſt. Raii Hiſt. Dodder of Thyme.

The TRIBE.

Theſe are the firſt of thoſe called *paraſitical Plants*, which being the Product of their proper Seed after ſpringing from the Ground, derive their Nouriſhment no more from the Earth, but from whatever *Plant* they graſp or can lay hold on.

The Deſcription.

Theſe two only differ from each other *ſecundum majus & minus*, after they have ſeiz'd upon the Plant by which they are to be nouriſh'd, the Root in the Earth decays, and ſeveral round Filaments mount and twiſt themſelves round the *Stalks* and Branches of the *Plant*; ſuppoſe it to be *Flax*, *Nettles*, &c. theſe *Filaments* are larger, about the Groſſneſs of an ordinary ſmall Pin, in what is called the *Cuſcuta maj.* of a light green without any Leaves. They ſend forth at certain Diſtances pointed Protuberences, which, like ſo many Nails, are as it were duſtail'd into the *Bark*, *Wood*, or *herbaceous* Part of the *Plant*, inſinuating itſelf into the moſt minute Fibres, and imbibing ſo much of the *nutritive Juice* of its nurſing *Plant*, that it ſtarves the other to feed itſelf. The aggregate *Flowers* making up ſmall *Globes* or *Cluſters* are *Monopetalous*, perforated in the Bottom, divided into four or five pointed *Segments*. The *quadrifid* or *quinquifid Calix* ſends the *Pointal* through this perforation of the *Flower*, and is ſurrounded by ſeveral yellow *Apices*. The membranous *Capſules* contain ſeveral ſmall *Seeds*. It's either *annual* or *perennial*, according to the *Plant* on which it grows, but for the moſt Part *annual*, for though the tough Strings ſtill continue round the *perennial Surface* of the *Plant*, yet after the *Seed* is ripe it dries up, and the new Strings twiſted along with it ariſe, from freſh *Seeds* from the Ground.

What is called *Epithymum*, conſiſts of very fine dark or brown *Filaments*, variouſly twiſted, and grows upon *Thymus*, ſome of whoſe Tops are to be ſeen amongſt it. It's imported from the *Levant*; but the-

the common Dodder is a *Plague* to all the *Plants* on which it lays hold, particularly *Flax*. Its fine Seed being mixed with that of the other, and ſown, they grow together, and the one becomes moſt deſtructive to the other.

Virtues and Uſes.

It's preſum'd, this may partake of the Virtues of the *Plant* on which it grows, though that does not always hold, for *Viſcum*, on whatever Tree it may grow, is obſerved ſtill to retain the ſame *Virtues*, of which hereafter. I look upon this Manner of Propagation to be the ſame with *engrafting* and *inoculation*, where the Cyon or *Bud* partakes of the Tree from which it was taken, and though planted upon the Stock of another *Kind*, it ſtill remains the ſame, as in a *Quince* upon a *Pear*, and an *Almond* upon a *Peach Stock*; but for the *purgative Quality* of *Epithymum*, that has ſcarce been yet demonſtrated. I rather believe with *Tournefort*, it may be a good *Stomachick*, not only on Account of the *Thyme* on which it is ſaid to grow, but alſo becauſe of its *aromatick Taſte* and Smell, and of the Parts of *Thyme* it brings along with it. It enters *Decoctum Epithymi*, whoſe purgative Quality muſt rather be owing to the *Senna* and *Turpethum*, than to *Epithymum* and *Polypodium*.

IV. *Cyanus.*

1. *Cyanus major, latif. vel Verbaſculum Cyanoides*, C. B. 273. Tournef. Inſtit. 445. *maj.* Dod. pempt. 251. Raii Hiſt. 222. *Alpinus radice perpetua*, J. B. 3. 25. 23. Moriſ. Hiſt. 3. 134. Great Blue Bottle.

2. *Cyanus ſegetum flore cæruleo*, C. B. Tournef. Raii Hiſt. Moriſ. Hiſt. *Minor vulg.* Synopſ. Stirp. Brit. 3. Common Blue Bottles.

The TRIBE.

Theſe are a Continuation of the *Capitatæ ex floſculis fiſtularibus*, or *Floribus floſculoſis*, according to *Tournefort*. Their *ſquamous Capita* or *Heads* are much leſs, and their *Floſcles* larger, with unequal Borders.

The Deſcription.

1. From a perennial large *Root*, diſperſing many Fibres, there ariſe *Leaves* an Inch broad, three or four Inches long, and pointed whitiſh below and green above, in the *Great Blue Bottle*.

The hairy, whitiſh, ſtreight, not much branch'd *flowering Stem* ariſes one or two Foot high, ſupporting proportionally large *blue Flowers*, with fringed, purple, unequal Borders, from a ſquamous *Head*, to which ſucceed flat, ſmooth, ſhining *Seeds*, lodg'd in a *Pappo* or Down. It's cultivated in Gardens.

2. *Leſſer Blue Bottle.* From an annual fibrous *Root*, ariſes a ſtreight, hairy, whitiſh, branched *Stalk*, with long, narrow, whitiſh, alternate *Leaves*. The *Flowers* on the Top of the *Stalk* and *Branches*, from a little *ſquamous Calix*, conſiſts of one Row of large *Floſcles*, with unequal fimbriated Borders, of a *true*, or what they call a *Bottle Blue* Colour, with ſeveral *Stamina* in the Center, and oblong blue *Apices*.

This Species grows moſt frequently in the Corn-Fields, and ſometimes varies into a White. In the Gardens, *Bottles* are to be ſeen of a good Variety of *Colours*, *incarnate white*, *purple* with *red*, *blue*, *purple*, *white Apices*, diſtinct from the Colours of the *Floſcles* or *Flouriſhes*. I have diſcours'd on this at *Aquilegia*, and ſhewn, this Variation muſt proceed from the *Effluvia* from the *Apices* of divers Colours. I have alſo taken Notice, that *blue* Colours in *Flowers* often vary to thoſe which are ſtill lighter, until they arrive at a pure white; but that all theſe Colours degenerate to their original *blue*, except the white, which always continues the ſame. It's obſervable alſo, that the *Petals* of the perennials often admit of *Stripes* of other *Colours* as in *Aquilegia*. The *Flowers* of *Delphinium*, which is *annual*, has ſometimes ſtrip'd *Flowers*, but rarely; but the *Bottles* for the moſt Part are of an uniform *Colour*, without any Variation into Stripes.

Virtues and Uſes.

Neither of theſe are of Modern Uſe in *Phyſick*, though the *Cyanus minor* be recommended in *Saxony*, according to *Camerarius*, for the *Jaundice*, and retention of *Urine*, by drinking a Glaſs of the Decoction of the *Flowers* with Beer, and that the *diſtill'd* Water mix'd with the *Juice* of *Crabs*, is good for the bringing forth the *Teeth* in Infants, by waſhing their Gums with it; he likewiſe recommends it for an *Eriſipelas* in the *Face*. *Tragus* alſo recommends the Powder or diſtill'd Water for *Inflammation* in the *Eyes*, by which it ſeems to conſiſt of tenuious Particles, and to reſerate Obſtructions. The Painters uſe it for making a blue Colour, thus, they bruiſe the Flowers very well in a wooden Mortar, adding a little *Allom*, they ſtrain the *Juice* through a Linnen Cloth until no more of the *blue* Colour paſs. They dry this *tinctured* Cloth, afterward they moiſten the Cloth with a Solution of *Gum-Arabick* in Water, and this Liquor becomes a fine

blue Tincture fit for Uſe. The ſame Method may be alſo taken with the *Tincture* of *Violets*, which alſo yields a delicate Colour, which they ſoon conciliate to Water, Wine, or Brandy: Both the *Cyani* enter *Aq. Cord. frig. Saxon.*

Cyclamen, vide *Arthanita.*

Cydonia, vide *Malus.*

Cynogloſſum, vide *Conſolida.*

V. *Cyperus.*

Cyperus odoratus radice longa ſive Cyperus Offic. C. B. 14. *Panicula ſparſa.* J. B. 2. 18. 501. Raii Hiſt. 1299. Tournef. Inſtit. 529. Moriſ. Hiſt. 3. 236. *The ordinary ſweet Cyperus, or Engliſh Galingal.*

The TRIBE.

It's a *Culmiferous Plant*, diſtinguiſh'd by its three *ſquare Stalk.*

The Deſcription.

It has a long, round, jointed, running, black *Root*, about the Bigneſs of one's Finger; long, narrow, pointed *Leaves*, like thoſe of the common *Arundo*, with a ſharp longitudinal Ridge in the Back; a ſmooth, ſtreight, three ſquare Stalk, two or three Foot high, with ſeveral ſmall Leaves at the Top, ſupporting the ſmall *Spikes* of *apetalous Flowers*, to which ſucceed the *ſmall Seeds*, in looſe or more diſpers'd *Panicles.* It was obſerv'd in the Iſle of *Purbeck* near *Dorcheſter*, by Mr. *Newton.*

Virtues and Uſes.

Its *Root* conſiſts of tenuious and ſubtile *Particles*, of a pleaſant *bitter* and *aromatick Taſte.* It is *Aperient*, *Stomachick*, and *Carminative*; provokes *Urine* and the *Menſes*, diſcuſſes Wind, and is good for the *Cholick.* It enters *Aq. Imperialis*, *Stomachick* and *Digeſtive* Powders, *Infuſions* in *Wine* and *Brandy*, of which a Glaſs full may be taken in a Morning to help Digeſtion, and create an *Appetite.*

VI. *Daucus*

VI. *Daucus Hortenſis & Sylveſtris.*

1. *Daucus Sativus* Tournef. Inſtit. 307. *Paſtinaca tenuifolia ſativa* Moriſ. Hiſt. 3. 305. Umb. 31. C. B. 151. *ſativa ſive Carota.* J. B. 3. 2. 27. 64. Raii Hiſt. 469. Garden Carrot.

2. *Daucus vulg.* Cluſ. Hiſt. cxcviii. *Paſtinaca tenuifolia ſativa Dioſcoridis vel Daucus offic.* C. B. Moriſ. Hiſt. Umb. *ſive Staphylinus Græc.* J. B. Raii Hiſt. *Wild Carrot,* or Birds Neſt.

The TRIBE.

They are Umbelliferous Plants, with ſmall ſtriated Seeds, and what *Moriſon* calls *foliis plurifariam diviſis.*

The Deſcription.

1. *Garden Carrot* has a long ſimple carnous eſculent *Root,* ſtriking deep in the Ground, large, dark green, deep, finely divided, pinnated *Leaves,* the white Umbells are ſucceeded by flat, light, rough, ſtriated Seeds. It's cultivated in Gardens.

2. *Wild Carrot* has its *Pinnæ* not ſo thick ſet, its *Root* not ſo *carnous* or *eſculent.* The *Umbell* is thick, depreſs'd or hollow in the middle, eſpecially after the *Flower* is paſt, like a *Birds Neſt,* from whence it has the Name.

Virtues and Uſes.

The Garden *Carrot Roots,* ſometimes yellow, more Orange, red, ſtrip'd with red and yellow Stripes, is much us'd as a *Pot-Root.* The *Seeds* of the Wild Carrot are only us'd in *Phyſick,* being one of the ſmall *Carminative,* or hot *Seed:* They are *aperient,* reſerate Obſtructions, provoke *Urine* and the *Menſes,* are often preſcrib'd in *medicate* and *hyſterical Ingredients,* for Infuſions in *Wine* or *Ale.*

VII. *Dens Leonis & Piloſella.*

1. *Dens Leonis latiore folio.* C. B. 126. Tournef. Inſtit. 468. Hiſt. des Plantes, 192. *Dens Leonis vulgo* Moriſ. Hiſt. 3. 74. Raii Hiſt. 244. *Hedypnois ſive Dens Leonis Fuchſii,* J. B. 2. 24. 1035.

2. *Dens Leonis que Piloſella offic:* Tournef. *Piloſella repens* Raii Hiſt. *maj. repens hirſuta,* C. B. 260. *Piloſella Auricula muris,* Tabern. Icon. 136. *maj. flore ſive vulg. repens,* J. B. 2. 24. 1040. *monoclonos repens vulg. min.* Moriſ. Hiſt. 27. *Common Mouſe-ear.*

VIII. *Hi-*

VIII. *Hieracium.*

Hieracium Dentis Leonis folio obtuſio maj. C. B. 127. Tournef. Inſtit. 470. Moriſ. Hiſt. 3. 66. *longius radicatum* Raii Hiſt. 230. *macrocaulon ſive minus primum* Dodonæo J. B. 2. 27. 1031. Long-rooted Hawk-weed.

IX. *Lactuca.*

Lactuca Sativa C. B. 122. Tournef. Inſtit. 473. Moriſ. Hiſt. 3. 57. Raii Hiſt. 220. *vulg. non Capitata*, J. B. 224. 997. Common Lettice.

X. *Sonchus.*

Sonchus lævis laciniatus latif. C. B. 124. Tournef. Inſtit. 474. Hiſt. des *Plantes* 232. Moriſ. Hiſt. 360. *lævis* Raii Hiſt. 222. *minus laciniоſus mitior ſive minus ſpinoſus*, J. B. 2. 24. 1014. Sow-Thiſtle.

XI. *Scorzonera.*

Scorzonera latif. ſinuata, C. B. 275. Tournef. Inſtit. 476. *Hiſpanica mas* Raii Hiſt. 248. *Tragopogon Hiſpan. Eſcorſonera aut Scorſonera*, J. B. 2. 24. 1060. Spaniſh Vipers Graſs.

The TRIBE.

All theſe are called *Pappeſcentes & Lacteſcentes* by Moriſon; *flore Natura pleno lacteſcentes* by Mr. Ray; *flore ſemifloſculoſo* by Tournefort. See the General Characters at *Cichoreum*, Decad. the 5th.

1. *Dandelion* has a perennial fibrous *Root*, long, ſmooth, ſinuated, tooth'd, or deeply nitch'd *Leaves*, almoſt to the mid-rib, ſpread forth on the Ground, amidſt which there ariſe one or more ſtreight naked hollow *Stalks*, about three or four Inches high, each ſupporting a large *yellow ſemifloſculous Flower*, contain'd in a ſtriated multifid *Empalement*, to which ſucceed ſo many oblong *Seeds* as there are *Semifloſcles*, each fix'd to the *Thalamus* at the one End, and endow'd with a *Pappo* or *Down* at the other, by which they are diſpers'd by the Wind; for upon ripening, the *Perianthium* becomes inverted, and the *Seeds* with their *Wings* forming a Globe, are blown off as they quit their Hold of the *Thalamus*. It flowers early in the Spring. The *Pedicle* is but ſhort at firſt Appearance of the *Flower*, and is ſtretcht forth by De-

grees until the Seeds are *ripe*. It grows in Paſtures and Way-ſides. The whole Plant abounds with a *Milky Juice*.

2. *Mouſe-ear* is a low creeping *Plant*, with a ſmall fibrous running *Root*, ſending forth ſeveral rough, or hairy whitiſh jointed *Branches*, ſpreading themſelves on the Ground, and ſending forth radical Fibres from the *Joints*. The round, hairy ſmall *Stalks*, ſupport *ſemifloſculous Flowers*, not ſo large as the former, more pale, to which ſucceed ſmall, oblong, pappous *Seeds*; the alternate *Leaves* on the Stalk are about one Inch long, half an Inch broad, and pointed, dark, green above, whitiſh below, with thick, ſtiff, long, brown Hairs, reſembling the Ears of a *Mouſe*. It *flowers* all the Summer, and is common in dry Paſtures.

VIII. *Hawkweed* has its Root running deeper, not ſo fibrous as that of *Dandelion*; the ſinuated *Leaves* blunter, the *Stalk* not hollow, tall and branched, the *Flower* the ſame, but not ſo big. The *Down* not ſo large, and ſofter. It grows in dry Paſtures

IX. *Common Lettice* has oblong, blunt, yellow green *Leaves*; the branched *Stalk* with ſharper pointed *Leaves*, bears ſmall, yellow *Flowers* on the Top. The *Calix* ſcaly; the ſhort whitiſh Seeds are lodg'd in a ſoft Pappo, or Down.

X. *Sow-Thiſtle* has a long, thick, whitiſh *Root*, ſtreight, hollow, angular, channeled *Stalk*, about two or three Foot high. The ſmooth, bottom *Leaves*, are nitch'd, like thoſe of *Dandelion*, that at the Extremity being largeſt. The alternate ones on the *Stalk* almoſt ſurround it, not being ſo much nitcht, but more pointed. The *Flowers* in tufts on the Top of the *Stalk*, are paler, leſs than thoſe of *Dandelion*, the *ſquamous Calix* more tubulous. The ſoft, white *Downs*, ſurround long flattiſh *Seeds*. It grows very frequent in Corn-Fields, upon Banks, and Way-ſides.

XI. *Spaniſh Vipers Graſs*, has a ſimple, *carnous Root*, about the Bigneſs of one's Thumb, rediſh without, and white within. The bottom *Leaves* are ſeveral Inches long, ſmooth and ſtiff, broad at the Baſe, and pointed. The ſmooth, round, branched *Stalk*, with alternate, more narrow graſſy pointed *Leaves*, without *Footſtalks*, ſtreight about two or three Foot high. The *Flowers* on the Top are yellow, large: *Calix*, *ſquamous*; the *Seeds* are long and pointed, lodg'd in a ſoft *Pappo*, or *Down*. It's Cultivated chiefly in Kitchen Gardens.

Virtues and Uſes.

There is ſcarce any *Botanick Family*, where the Correſpondence betwixt the *Characters* and *Virtues* is ſo general, as in the Plants of this *Tribe*. All of them have more or leſs a milky Juice. They are noted inoffenſive *Coolers*, allaying the Motion of the *Blood*, prevent too great a Diſpendium of *Spirits*, ſtrengthen the Stomach, and excite the Appetite in ſultry hot Weather; are chiefly *aperient* and *diuretick*, curbing the *Acrimony* and Heat of *Urine*. On which account *Dandelion* is called *Piſs-a-Bed*. They are chiefly Pot-Herbs, and ſeldom us'd in *Phyſick*. *Dandelion* is ſometimes blanch'd, and eat as a *Sallad* in the Spring. *Hawkweed* may ſerve for the ſame Uſes, but the *Leaves* are not ſo tender; the Uſe of all the Kind of *Lettices* in Sallads is well known. The tender Shoots of *Sow-Thiſtle* may ſerve for the ſame Purpoſes. As *Mouſe-ear* loves a rough, gravelly Soil, ſo its Particles are more terrene and rigid. Nor is its milky Juice in ſuch abundance. It's therefore eſteem'd *aſtringent*, having this cooling Quality more intenſe. It's look'd upon as a *Vulnerary*, and may be an Ingredient in *aſtringent Decoctions*, for *Looſeneſs*, *Vulnerary Potions*, *Lotions* to curb the *proud Fleſh* in *Wounds* and *Ulcers*. It gives the Name to the *Syr. de Piloſella*, the moſt potent *aſtringent Syrup* in the *Old Diſpenſatory*.

Scorzonera Roots have a very agreeable, ſweet Taſte, and is much us'd as a Pot-Root in *Holland* and *Flanders*. They keep them dry in ſome Shops, and they are preſcrib'd in *Diuretick* and *pectoral Decoctions*, and *Ptiſans* alſo, for the ordinary Drink in *malignant* and hot *Fevers*. *Lettice-Seeds* are one of the four *Cold Seeds* in the *London Diſpenſatory*.

XII. *Dictamnus albus ſive Fraxinella.*

Dictamnus vulgo ſive Fraxinella, C. B. 222. *Fraxinella*, Cluſ. Hiſt. 99. Tournef. Inſtit. 436. *Fraxinella Officinis Dictamnus*, J. B. 3. 32. 434. Raii Hiſt. 698. Moriſ. Hiſt. 3. 456. Baſtard Dittany.

The TRIBE.

This is one of Tournefort's *Flores polypetali anomali*, or what other Authors term *Multiſiliquæ Corniculatæ*.

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The Description.

It has a pretty, large, white, ſpreading *Root*. The large pinnated *Leaves* are like thoſe of the *Fraxinus*, or Aſh-Tree, from whence the Name. The pretty groſs, and ſtreight *Stalks*, ariſe one or two Foot high, with leſs alternate *Leaves*. The *Flowers* on the Top of the Stalks in *Spikes*, are large *Pentapetalous*, of a pale Red, or pure White, ariſing from a *Monophyllous Calix*, divided into five long, ſmall *Segments*; four of theſe *Petals* bend upwards, and one downwards, making the Appearance of a *bilabiated Flower*, with eight, nine, or ten long crooked *Stamina* in the middle. The *Fruit* conſiſts of ſeveral long *Seed-Veſſels*, bended like a Goat's Horn, burſting with an *Elaſticity* when ripe, and pouring out ſeveral large black *Seeds*. It is cultivated in Gardens.

Virtues and Uſes.

The *Roots* called *Rad. Dictam. alb.* in the Shops, are eſteem'd *Cephalick*, *Cordial*, and *Uterine*; they are alſo ſaid to kill the *Worms*. They are preſcrib'd in *cephalick*, *antipileptick*, and *hyſterical* Infuſions in *Wine* or *Ale*. They enter the *Syr. de Meliſſophyllo*, *de Piloſella*, *Species Confectionis Liberantis*.

XIII. *Digitalis* & *Gratiola.*

1. *Digitalis*, J. B. 20. 312. Tournef. Inſtit. 165. Hiſt. des Plantes 432. Raii Hiſt. 767. *fol. Aſpero*, C. B. 243. Moriſ. Hiſt. 2. 475. Fox-Gloves.

2. *Digitalis minima Gratiola dicta* Moriſ. Hiſt. Tournef. *Gratiola Centauroides*, C. B. 279. *Gratiola*, J. B. 3. 30. 435. Raii Hiſt. 1885. Hedge Hyſſop.

The TRIBE.

Theſe are plac'd among the *Monopetalæ Bicapſulares*, by Dr. Moriſon; *Diangiæ polyſpermæ*, by *Herman* and *Boerhave*; *Vaſculif. flore monopet. irregulari*, by Mr. *Ray*; and the *flores monopetali Anomali*, by *Tournfort*, who with *Moriſon*, makes *Gratiola* a Species of *Digitalis*. Mr. *Ray* objects that the one has *folia ex adverſa bina*; the other *alterna*, that the *Flowers* of the one are undivided at the Borders, the other ſtriated, and divided into ſome Segments. *Boerhave* obſerves, that the *Flowers* of *Gratiola* are *e foliorum alis*, and *Digitalis* are always *ſpicatim diſpoſita*. Theſe Circumſtances, together with the Difference in their *facies externa*, are enough at leaſt to let them enjoy their former

former Names, however they may be plac'd near to each other on account of their *bicapſular Fruit.* Alſo becauſe of their Correſpondence in the *Virtues.*

The Deſcription.

Fox-glove is a *biennial Plant*, from its long, large *Root*, diſperſing many *Fibres*; it ſends forth ſeveral long, large, ſomewhat rough pointed *Leaves*; the firſt Year upon long *Pedicles*, not unlike thoſe of *Conſolida maj.* a little hairy, and ſomewhat dented round the Edges. The ſtreight, unbranch'd, round, *flowering* Stem, with a rough Bark, adorned with leſs alternate Leaves, has its Flowers thick ſet on a Spike, and all tending to one Side, from a *monophyllous quinquifid Calix*, divided into long, large *Segments*, are large, *monopetalous*, compreſs'd with an oval Border, turgid in the Body, contracted at the Bottom, where 'tis perforated like the Mouth of a *Bottle*, in Shape not unlike a *Thimble*, of a reddiſh Colour, with the under Lip full of white Spots; the four *Stamina* ariſe from the inner Surface, and the *Pyramidal Embryon*, which penetrates the Bottom of the Flower, ſends forth a long *Stylus*, with a round *Button.* The *Embryon* becomes a roundiſh pointed, or conical *Fruit*, divided into two *Pouches*, and pouring out ſmall *Seeds*, after the Seeds are ripe, the whole *Plant* decays. It's frequent in dry Ground, at the Sides of Encloſures, and Garden-Walls made of Earth.

Hedge-Hyſſop is a low Plant, with creeping or running Roots, from whence proceed ſeveral four ſquare Stalks, adorn'd with oblong, oval Leaves, by Pairs like thoſe of *Hyſſop* at each Joint, from whence alſo proceed the ſmall, tubulous *Flower*, *quadrangular*, and divided into four *Segments* at the Border, of a pale Yellow, to which ſucceed a ſmall, oblong, or conical *bicapſular Fruit*, full of ſmall Seeds. It's cultivated in Gardens.

Virtues and Uſes.

I have join'd theſe here on account of their *Virtues*, as well as their *Notes*, for they are both violent, *Cathartick* and *Emetick*; and although *Gratiola* be reputed a potent *Melanogogum*, alſo a good *Hydragogue* for the *Jaundice*, and *Evacuation* of *ſerous Humours*, yet it's not to be us'd but with Caution, and good *Correctives.* There are ſome who alſo recommend it in *intermittent Fevers*, and the *Gout*; but it's beſt to have Recourſe to ſafer *Remedies* in ſuch Caſes. *Foxglove*, for external Application, is much recommended for the *Gout*, either by applying of the *contus'd Herb* to the affected Part, or making an Ointment of the *Flowers* by *Inſolation*, with *Hog's Lard*, and anointing the Part; alſo

for diſcuſſing of *ſcrophulous Tumors.* It's alſo an *Emetick*, by infuſing of the Leaves in any convenient *Liquor*, and drinking a few Spoonfuls of it, but its Operation is too violent.

XIV. *Dipſacus.*

1. *Dipſacus Sativus*, C. B. 185. Tournef. 466. J. B. 3. 25. 73. Raii Hiſt. 382. Synopſ. Stirp. Brit. 3. 191. Moriſ. Hiſt. 3. 158. *Manur'd Teaſel.*
2. *Dipſacus Sylv. apud eoſdem*, Hiſt. des Plants, 266. Wild Teaſel.

The TRIBE.

The *Garden* and *Wild Teaſel*, only differ by the *Squamæ* of the *Head*, being long, ſtreight, and more pointed. *Authors* differ in its Diſtribution. *Moriſon* makes both it and *Eringium*, of the *Capitatæ Spinoſæ ſed non pappoſæ.* Mr. *Ray* joins it with *Scabioſa*, and ſays it is one of the *Corymbiferis affines flore Anomalo. Tourneſort* places it among the *flores floſculoſi. Boerhave*, among the *Gymnomonoſpermæ non Squamoſæ.*

The Deſcription.

From an annual, fibrous *Root*, it ſends forth large, blunt, dark green *Leaves*, lying on the Ground, with ſeveral *Protuberances* and *Prickles* on the upper Part. The ſtreight jointed, and prickly, or *thorny Stalk.* The large pointed *Leaves* are ſo join'd together by Pairs, that they ſurround the *Stalk*, and form a *Pelvis* or Baſon betwixt them, which receives and contains the Rain; they are ſmooth within, and ſomewhat prickly on the Edges, with a long protuberant Rib, or *Coſta media*, prickly on the outſide on the Top of the *Stalk*, and each of theſe few Branches, there are ſeveral long, narrow pointed ſmall *Leaves* at the Baſe, of an oblong, or oval *Head*, conſiſting of a long Mid-rib, from whence proceed on each Side, ſmall, ſtiff, ſhort, ſharp pointed *Leaves*, ſerrated at the Edges, ſerving as a *Vagina* to each of the Floſcles, from whoſe Bottom ariſes the *quadrangular Embryo*, with a long *Stylus*, and a large *Button.* This is ſurrounded by a *tubulous quadrangular*, and *quadrifid Floſcle*, or *flouriſh*, with four long *Stamina* and *Apices*, ſtretcht without the *Floſcle*, to which ſucceed an oblong, ſquare *Seed:* All theſe are firmly united to the Mid-rib, and compoſe one *Head.* The manur'd *Teaſel* is ſown in the *Fields*, for the Uſe of the *Fullers* or *Cloth-Dreſſers*, on which Account it's called *Carduus Fullonum:* The *Wild Teaſel* is fre-

quent on the Sides of Ditches, and only differs from the other by being more or leſs prickly, or ſmooth, which ſeems to be the Effect of the Culture.

Virtues and Uſes.

The Decoction of the *Root* is recommended for *Rents* and *Clifts* in the *Fundament*, and for the *Fiſtula Ani*; being drank, it is ſaid to be good for a dry inveterate *Cough*. It is alſo commended for *ſcrophulous Tumors*.

XV. *Doronicum.*

Doronicum radice Scorpii, C. B. 184. Turnef. Inſtit. 487. Moriſ. Hiſt. 3. 126. Raii Hiſt. 275. Leopard's-Bane.

The TRIBE.

It's one of the *Flores Radiati* of *Tournef: Flore diſcoide Radiato ſemine pappoſo* of Mr. *Ray*; *Gymnomonoſpermæ diſcifloræ* by *Boerhave*; *Pappeſcentes non Lacteſcentes*, by Dr. *Morriſon*. *See* After Decad. III. p. 120.

The Deſcription.

It has a white, ſoft, carnous *Root*, ſomewhat jointed and incurvated like a *Scorpion*; a ſtreight, rough, ſtriated, or creſted *Stalk*, about one or two Foot high; ſmall, thick, roundiſh pointed hairy *Leaves*, green above, and whitiſh below, with two or three yellow, radiated *Leaves* on the upper Part, with duſkiſh ſmall Seeds, endow'd with a Pappo, or Down. It's cultivated in Gardens.

Virtues and Uſes.

It's eſteem'd a potent Hyſterick. The *Root* is a frequent Ingredient in Infuſions for Wine or Ale, in the *Menſtruorum obſtructio*, and other hyſterical Caſes; alſo for the Palpitation of the Heart, as to its Efficacy, for the biting of *Scorpions*, and poiſonons Quality, for which it's called *Wolf*, or *Leopard's-Bane*. Theſe are not much regarded now a-days.

Dracunculus, *Vid.* Abrotanum mas. *Decad.* I.

XVI. *Dra-*

XVI. *Dracuntium.*

Dracuntium Polyphyllon, Tournef. Inſtit. 160. C. B. 195. *maj. vulg.* J. B. 2. 19. 789. Raii Hiſt. 1201. *Arum Polyphyllon*, Moriſ. Hiſt. 3. 448. *Arum Polyphyllum Dracunculus & Serpentaria dictum caule maculoſo*, Hort. Lugd. Bat. 69. Great Dragons.

XVII. *Arum.*

Arum vulg. C. B. *maculatum & non maculatum*, C. B. Turnef. Inſtit. Hiſt. des Plants, 316. Moriſ. Hiſt. Raii Hiſt. 1203. Cuckow-pint, *or* Wake-Robin.

The TRIBE.

This *Genus* is variouſly Claſs'd by *Authors*. Mr. *Ray*, in his firſt Diſtribution, places it among the *Bulboſis affines*, in his *Methodus Emendata*, it's plac'd among the *Bacciferæ fructu magis ſparſo*, though it be *fructu aggregato*; but in the Synopſ. 3. it's plac'd among the *Bacciferæ in general*, as it is by *Moriſon*, who makes a juſt Diſtinction betwixt the *Plantæ Bacciferæ ſemper virentes*, as *Laurus Alexandrina*, &c. Decad. 4. and *foliis deciduis* in this Place, and his Followers, *Herman*, *Boerhave*, and all others, who Claſs by the Fruit. But *Rivini* and his Followers, *Tournefort* and *Knaut*, who Claſs by the Flower, diſpoſe of them otherwiſe. *Rivini* and *Knaut* call them *Monopetalous irregular*, and *Tournefort*, *Anomalous Flowers*. I here again obſerve, that however the *Bacciferous Plants* agree in their Fructification, there is not another *Botanical Tribe* which diſagrees ſo much in their other *Characters*, viz. *Facies externa*, *Root*, *Flower*, *Modus creſcendi*, as this does, as appears in comparing *Bryonia*, *Ruſcus*, *Polygonatum*, *Chriſtiphoriana*, &c. with this *Arum*. So neceſſary it is in a methodical Diſtribution, to place the *Characteriſtick* in one or two particular Parts of the *Plant*, and then to bring in the diſtinctive *Notes*, for the better conſtituting of each *Genus* and *Species*.

Tournefort, who is ſo ready on other Occaſions to make Innovations on Names, *Longo uſu recepta*, as has been elſewhere obſerv'd, continues theſe in two diſtinct *Genera*, though they agree in moſt of their eſſential *Notes*; their white, knobby, carnous, perennial *Root*, is the ſame; they have the ſame acrimonious *Taſte* while green; their *Flower* and *Fruit* exactly agree, ſo that theſe two differ in nothing but *ſecundum majus & minus*, which by an univerſally receiv'd Maxim, *Non variat ſpeciem*. Their *Flower* is elegantly delineated by *Rivini*,

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in the proper Magnitude, thus; 'tis plac'd on the Top of a proportionally groſs *Footſtalk*, extended into a *protuberant*, or oval, cavous *Petal*, every where ſurrounding and guarding the *Fructus Rudimentum*; within a little it becomes more contracted, and in its Aſcent is expanded into a concave, oblong, erect *Petal*, like a *Sheep* or *Rabbit's* Ear. The Pedicle is lengthned into an *Axis medius* in the Center, guarded by this *Petal*, whoſe Baſe is ſurrounded by ſeveral ſmall, ſubrotund Embryons, each having a ſmall Filament for the *Stylus*; above this is a Row of thick ſet *Stamina*, with their proper *Apices* dependent, and loaded with the *farina fœcundans*, or fill'd with a *limpid Juice*. Above theſe, is a third Row of *Filaments*, without *Apices*, alſo diſtilling this *limpid Juice*. This *Axis* in the Aſcent, forms the *proportionally, groſs Piſtillum*, ſmaller and ſolid at the Beginning, but afterwards diſtended into a cavous *Tube*, cylindrical, and blunt in *Arum*, more *conical* and *pointed* in *Dracuntium*. When this upper Attire, as Dr. *Grew* phraſes it, is decay'd, the ſubjacent *Embryons* ſwell into ſo many thick, round, *red Berries*, each containing one or two *rough Seeds*.

The Deſcription.

Dragons, from a proportionally large *knobby Root*, ſends forth a ſtreight, groſs, tunicated, or coated *Stalk*, compos'd of ſo many *Laminæ*, as there are to be *Footſtalks* to ſupport the *Leaves*, and roll'd up like a *Scrole* of Paper, or Parchment, of a grey *Colour*, ſpotted with reddiſh and purple *Streaks*, like the Skin of a *Serpent* or *Dragon*, from whence the Name, about two or three Foot high, divided into two or three groſs, green *Footſtalks*, each ſupporting a *digitated Leaf*, whole at the Center, and deep; divided into ſeveral ſmooth, light, green, oblong, pointed *Segments*; the *Flower* in the middle, upon a proper *Footſtalk*, is large about a Span, or near half a Foot long; the large expanded *Petal* is green without, and dark Purple within, as is alſo the large cavous *Piſtillum*, about three or four Inches long, broad, or roundiſh at the Baſe, tapering, ſomewhat bended and pointed. The *Embryons* become a large *Cluſter*, near to the Bigneſs of one's *Fiſt*, of thick ſet *red Berries*, about the Bigneſs of a round, or oval *Pea*, each containing one or two rough *Seeds*. It continues green in the Gardens all the Summer, the *Berries* ripen in the Autumn; the *Root* ſends forth new Knobs every Year, and every *Knob* has a proper unbranch'd Stalk.

Wake Robin has the *knobby Roots* not ſo large, about the Bigneſs of a *Walnut*. The *Leaves* ariſe each upon a proper *Pedicle*, ſtreight from the Root, large, broad, ſmooth, dark Green; in ſome *Species*, ſpotted with black, in others white *Spots*, and others plain, Spear pointed.

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The *flowering Footstalk* in the Center, is two or three Inches high, supporting a long, streight *Petal*, green without, like the former, but whitish within, proportionally less, together with the inner Attire, the *Pistillum*, streight, more cylindrical and blunt. The *Roots* of both have several gross, white *Fibres*, in the sessile Part, like those of the *bulbous Roots*. The *plain-leav'd* is only *indigenous*, and grows almost every where at the Foot of Hedges; in its Prime in *March*, pushes forth the *Flower*, in the latter End of *April*; when the Leaves decay: and in *June*, the *Berries* are ripe.

Virtues and Uses.

Both these have a tart, pricking *Taste* when green, which fades when dry, so that the dryed Roots are insipid, farinaceous, and fit for internal Use. They are endow'd with viscid *Particles*, fit to obtund acrimonious and sharp *Humors* in Diseases of the *Lungs*, and *Scurvy*. They are also recommended for the *Chlorosis* and *Cachexia* in *Women*, and for strengthning the *Viscera*. They are likewise esteem'd good in *intermittent* and *malignant Fevers*. *Fæcula Ari* enters *pectoral Powders*, *Pulv. Ari Comp.* is commended for the same *Diseases*; some use the *Fæcula* like a Starch, to dust the Face over with it, or they dissolve it among Milk, to take off Tan or Morphew. The distill'd Water of *Dracuntium* is very much us'd in these Parts, for Juleps and Cordials in the Small Pox, malignant, scarlet, and purple Fevers.

Dulcamara, *vid.* Amoris pomum, *Decad.* 1.

XVIII. *Ebulus & Sambucus.*

1. *Ebulus sive Sambucus Herbacea*, J. B. 15. 539. *Sambucus humilis sive Ebulus, fol. laciniato*, C. B. 456. Raii Hist. 611. Tournef. Instit. 606. Synops. Stirp. Brit. 3. 461. Hist. des Plants, 530. *Ebulus sive Sambucus Herbacea repens*, Hist. Oxon 3. 535. Dwarf Elder.

2. *Sambucus fructu in Umbella nigro*, C. B. *vulg.* J. B. Raii Hist. Tournef. &c. Common Elder.

The TRIBE.

These are Clas's'd by most Authors, among the *Baccifera flore summo fructui insidente*, and among the *Arbores flore Monopetalo cujus calix abit in baccam*, in *Tournefort's Dialect*. This is the only Instance among the *European Plants*, where the *Character* of the Plants agree, and their Texture disagrees. *Rivini* neglects *Quadrimembram illam divi-*

ſionem, as Mr. *Ray* calls it, *inter Arbores, Frutices, Suffrutices & Herbas*: The Difference between *Trees*, *Shrubs*, *Under-Shrubs*, and *Herbs*, for which Mr. *Ray* juſtly takes him up, chiefly upon this general Head, that the firſt three are not only Perennial in their Surface, with an hard Subſtance, but they are alſo *Gemmipare*; they have a *Gemma*, *Germen*, or *Bud* for the ſucceeding Year, form'd before the *Leaf* of the preſent Year falls off. Therefore *Malva Arborea*, and other *Woody Plants*, whoſe Surface, or *flowering Stem* continues alive for two or three Winters, and the *Leaves* on the Top often remain; but as there is no *Gemma* form'd for a ſucceeding Seaſon, though the Subſtance of the Stalk and Branches be hard and ligneous, yet they ſcarce come under the Denomination of *Trees*, *Shrubs*, or *Under-Shrubs*. But here the Caſe is quite different, one Species has all the Accidents of a *Tree*, the other only of an *Herb*, even to the periſhing of the *Annual Surface*, and yet no wiſe ſeparable from being of the ſame Genus. Though it be a great Misfortune to the *Botanick World*, That the firſt Part of the *Hiſtory Oxon.* treating of *Trees* and *Shrubs*, is *non edenda*, as the Publiſher of the third Volume informs us, yet he has thought fit to ſeparate *Ebulus* from *Sambucus*; becauſe, ſince we are to be depriv'd of the celebrated Dr. *Moriſon*'s Account of the one among the *Trees*, 'twas very convenient the other ſhould be brought into its proper Place among the *Herbs*. The general Character of both is, that they have *pinnated Leaves*, *monopetalous*, ſmall, white *Flowers*, diſpos'd into an *Umbel*, to each of which, a ſucculent *Berry* ſucceeds.

The Deſcription.

1. *Dwarf-Elder* has a long, white, *carnous*, *running Root*, not *fibrous*, about the Bigneſs of one's Finger, emitting ſtreight, cornered, marrowy, jointed Stalks, about two or three *Foot* high. From whoſe Joints ariſe the *Leaves* by Pairs, conſiſting of three or four Pair of *Pinnæ*, with an odd one at the Extremity, longer, and more pointed, but of an heavier Smell than the following. The *Flowers* in large *Tufts* or *Umbels*, are little, white, divided into five blunt *Segments*, with ſo many *Stamina*, ſupporting ſo many dark, or Iron-colour'd *Apices*. The *Petals* are perforated in the Center at the *Bottom*, in which the *Embryon* is lodg'd, which afterwards becomes a *Berry*, larger than that of the following, each containing two or three oblong *Seeds*, which when ripe, both *Stalks* and *Leaves* decay. It's frequent on the *Sides* of *Highways*, Rubbiſh of old Houſes, and *Church-Yards*.

2. *Common Elder*, from a white, *woody Root*, ſoon grows up into a *Tree*, of a middle Stature, much branch'd; the Branches are long, ſtreight

ſtreight jointed, woody, after the firſt Year, and fill'd with a very groſs Marrow, which according to the Age leſſens, and the ſurrounding *Wood* becomes thicker, very hard, and ſolid; ſo that when the *Tree* grows alone, the ſtreight *Trunk* has a very firm Wood, while the *Branches* ſeem to be very ſoft, and full of Marrow. The *pinnated Leaves* are broader and ſhorter than the former. The *Flowers* in *Umbels* after the ſame manner, but the *Berries* are *leſs*, and more *ſucculent*. It is frequent at the Sides of *Hedges* and *Ditches*, and is often us'd as a Fence to *Orchards* and *Gardens*, becauſe of its ſudden growing.

Virtues and Uſes.

Theſe are eſteem'd the moſt potent *Hydragogues* in the *Vegetable Part* of *Materia Medica*, not ſo much on account of their *Cathartick*, as of their *alterative Quality*: They conſiſt of *acrimonious* and *pungent Salts*, by which they moſt powerfully *reſerate Obſtructions*, and are effectual in ſuch *Diſtempers* as are caus'd by them; and therefore they prepare, and gently evacuate the *ſerous Humours* in the *Hydropſy*, *Anaſarca*, *Gout*, *Sciatica*, and *Rheumatiſms*, by opening the Pores in the *obſtructed Glands*, the *Joints*, and other Parts of the *Body*, affected with theſe and the like *Diſeaſes*, ſuch as *Scurvy*, *Jaundice*, &c. They are *diſcutient* and *reſolutive*, being externally apply'd to the Joints in the *Gout*, to *ſcrophulous*, *hydropſical*, and *anaſarcous Tumors*. *Dwarf Elder* is the moſt effectual, which may ſoon be perceiv'd, by the vehement, heavy Smell. Its *Roots* are us'd in *Decoctions*, *Fomentations*, and *Lotions* externally, as alſo the green *Leaves*. Some give the *Berries* to a certain Number, for a *Purgative* in *hydropſical Caſes*, by the Name of *Danewort-Berries*, from a traditional Conceit that this *Plant* ſprang up from the *Daniſh Blood*, which was ſpilt when they firſt deſcended into this Iſland. They vacuate *dropſical Humors*, but that ſhould not be done without Caution and *Correctives*, for their Acrimony may be noxious to ſuch weak *Stomachs*. The *Rad. Ebuli*, and *Cort. interior Sambuci*, may be effectually given with other *aperient* and *antidropſical Ingredients*, for *Infuſions* in *Wine* or *Ale*. The *Syr. Sambucinus*, and *e baccis Ebuli*, may be given in a *Syrup* in the like Caſes, where the Acrimony is much obtunded by the boiling. They make *Elder Wine*, either by *Fermentation*, or *Elder Brandy*, or *Wine*, by making a Tincture with the *Berries*. Alſo *Elder Vinegar*, or *Aleger*, by infuſing the bruiſed Berries in theſe acid Liquors. The tender Buds of *Elder* may be eat in a boil'd *Sallad*, to open the Body in *hydropſical Caſes*. The *Fl. Sambuci* are kept dry in the Shops, for *Fomentations*, *medicate Ingredients*, &c.

XIX. *Echium.*

XIX. *Echium.*

* *Echium vulg.* C. B. 154. Tournef. Inſtit. 137. Hiſt. des Plants, 75. J. B. 3. 33. 586. Raii Hiſt. 488. Synopſ. Strip. Brit. 3. 227. Hiſt. Oxon. 3. 440. *Vipers Bugloſs.*

The TRIBE.

This is one of the laſt *Aſperifoliæ* we ſhall meet with in the Catalogue. *Rivini* has ſeparated it from its *Congeners*, by the diſſimilar Parts of its *Flower*, which he calls *Flores irregulares*; and in this he's followed by Dr. *Knaut*, but how awkwardly, let *Rivini*'s own Words declare. *Cum igitur ratione ſeminum, & foliorum cum Borragine, &c. Eſt ratione florum non modo ab his quæ ſunt flore regulari ſed & pluribus aliis quæ flore irregulari gaudent manifeſte diſcrepat. Echioides ergo dicenda eſt potius ad cujus differentiam Bugloſſoides vocari poteſt quod igitur Fuchſio Echium, Caſp. B. Bugloſſum Sylveſtre minus dicitur.* What a Struggle is here, *conjungenda ſeparare.* Since there are two quite different Claſſes of *Gymnotetraſpermæ*, where the *Fruit*, *Habit* of the *Plant* and *Leaf*, are more to be regarded than the *Flower*. It's an open Violence done to a regular, methodical Diſtribution of Plants, to carry any from his own *Family*, on account of what is not at all material in in this Caſe: *Mentha*, *Pulegium*, *Thymus*, may as well be disjoin'd from the *Galeatæ* & *Labiatæ*, becauſe their *Flowers* are, *oris æqualibus*, as *Echium* can from the *Aſperifoliæ*, becauſe it's *oris inæqualibus*; whereas what is moſt material in theſe two, beſides the roughneſs and ſmoothneſs of the *Leaf*, is, that the one has always *folia alternatim*, and the other *conjugatim per intervalla diſpoſita*, as has been elſewhere obſerv'd, *Decad.* 4.

The Deſcription.

From a thick, brown, long, not very fibrous, perennial *Root*, the ſtreight, not much branch'd, rough, round *Stalk*, about the Bigneſs of a *Tobacco-Pipe*, ariſes about one Foot high, adorned with alternate, rough *Leaves*, without Footſtalks, about one Inch and a half broad, and two or three Inches long. The Top of the *Stalk* becomes a long *Spike*, ſomewhat bended at the Extremity, like a *Viper's Tail*, conſiſting of larger, ſeveral *Flowers* interſpers'd with leſſer *Leaves*, *monopetalous*, *tubulous*, or *cylindrical* at the Bottom, *Funnel-like*, bended a little like an Horn; it widens in the Aſcent, and is enlarg'd into two

Lips

Lips or Borders, the upper is erect and *bifid*, the lower divided into three *Segments*, like the *Lip-Flowers*; the five *Stamina* are also bended and *corniculated*. The *Empalement* is large, and divided into five long, small, or narrow *Segments*, the four rough *Seeds* are like a *Viper's-Head*, with others of that *Tribe*. It grows on sandy Banks, at the Foot of Rocks, stony Ground, and rugged highway Sides.

Virtues and Uses.

The Signature seems both to have given the *Name*, and been the Reason of assigning the reputed *Virtues* to this Plant, for because the *Seeds* resemble a *Vipers-Head*, and its Manner of growing a *Viper's-Tail*, *Dioscorides* will have it a most effectual Remedy against the Bite of a *Viper*. It's seldom prescrib'd in the Shops, but by the *Harmony* betwixt the *Characters* and *Virtues*, it would seem to serve for the same Uses as *Borrage* and *Bugloss*.

XX. *Elatine & Linaria.*

1. *Elatine fol. acuminato in basi auriculato flore luteo*, C. B. 253. *fœmina fol. angulosa*, J. B. 3. 29. 372. *altera sive Veronica fœmina*, Dod pempt. 42. *Linaria segetum nummulariæ fol. acuto & villoso fl. luteo*, Tournef. Instit. 170. Hist. des Plants, 110. *hirsuto fol. acuminato basi auriculato*, Morif. Hist. 2. 503. *Linaria Elatine dicta fol. acuminato*, Raii Hist. 733. *Sharp-pointed Fluellin.*

2. *Linaria vulg. fl. luteo*, Tournef Morif. Hist. C. B. 212. *Lutea vulg.* J. B. 3. 30. 456. Raii Hist. 752. Synopf. Stirp. Brit. 3. Hist. des Plants, 23. *Toad-Flax.*

The TRIBE.

These are variously plac'd, according to the different Methods: *Rivini* and *Tournefort Class* by the *Flower*; and they call them *anomalous*, or *irregular*, *monopetalous Flowers*. They are said to be *Flore calcari donato rictum experimente*, by Mr. *Ray* and others, i. e. *Heel*, or *Spur-Flowers*, with a gaping Mouth. *Morison*, who distinguishes by the Fruit, calls them *Monopetali Bicapsulares*. Mr. *Ray* and *Boerhave* say they are *Diangæ polyspermæ*. *Rivini* would have *Elatine* and *Cymbalaria*, *sive Linaria hederæ folio*, separated from *Linaria*, both on account of the *Modus crescendi*, different Figure of the Fruit, and Manner of its opening; but as I am of Opinion they differ but little in the *Virtues*, I continue to keep them together. They have a

monophyllous Calix, a long, hollow *Spur* behind, are dilated with a gaping Mouth, having a *Rictus* before, with two *Lips*, the *upper* erect, and the *lower* triply divided, like the *regular Lip-flowers*. They were unacquainted with the modern *Botanical* Notes and Characters, who place *Elatine* with *Veronica*.

The Deſcription.

1. *Fluellin* is a ſlender, low, creeping *Plant*, with infirm, ſlender, hairy *Stalks* and *Branches*. The alternate, hairy Leaves, upon ſhort *Footſtalks*, are hairy, broad and *auriculated* at the *Baſe*, ſharp at the Point. The *Flowers* at their Boſom upon long *Footſtalks*, like thoſe of *Veronica*, are much leſs than the following, with a yellow, upper, and purpliſh lower *Lip*, a blunter, *bicapſular Fruit* pouring out ſmall *Seeds*. It grows in *Corn-Fields* in ſeveral Places, and is to be obſerv'd after the Corn is cut down.

2. *Toad-Flax* has a white, very running fibrous *Root*, ſtreight, round, unbranch'd *Stalk*, thick beſet with long, narrow pointed, bluiſh, green, alternate *Leaves*, with many thick ſet yellow *Flowers*, poſſeſſing the upper Part, in Form of a Spike, to which ſucceed a proportionally, large, *bicapſular Fruit*. It grows frequent in Way-ſides, barren Meadows, and ſometimes Corn-Fields, and ſpreads very much by the Root.

Virtues and Uſes.

Fluellin is but little us'd in *Phyſick*; its Juice is recommended for *Cacoethes*, and *cancrous Ulcers*, and ſeems to partake of the ſame *Virtues* with *Toad-Flax*, which is eſteem'd a potent *Diuretick* and *Hydropick*, and may be an *Ingredient* in Preparations for that Purpoſe, with *Dwarf-Elder*; but the internal Uſe of both, by their too great Acrimony, which may be hurtful to the Stomach, is much ſuſpected. A *diſcutient Ointment* may be made of the *Juice* of both with *Hogs-lard*, or *Butter*, for the *hæmorrhoidal* and *goutiſh Pains*, and for diſcuſſing of *ſcrophulous* and *cancrous Tumors*.

Endivia, vid. *Cichoreum*, Decad. 5.

Enula Campana, vid. *After*, Decad. 3.

Epithymum, vid. *Cuſcuta*.

XXI. *Equi-*

XXI. *Equiſetum.*

Equiſetum arvenſe longioribus ſetis, C. B. 16. *minus terreſtre*, J. B. 3. 36. 719. Raii Hiſt. 128. Synopſ. Stirp. Brit. 380. Tournef. Inſtit. 532. Boerh. Ind. 106. Corn-Horſetail.

The TRIBE.

This Plant has been variouſly diſtributed by Authors. Mr. *Ray* places it among the *Plantæ ſemine minutiſſimo*, and Synopſ. 3. makes it *Cappillaribus affinis*. *Tournefort* and *Boerhave* more juſtly place it among the *Plantæ flore apetalo a fructu remoto*; but whether in *eadem Planta*, or *diverſis Plantis*, I have not been able to determine. Had Dr. *Charles Preſton*, as quoted by Mr. *Ray*, *Meth. Emend.* pag. 20. ſo well underſtood the Doctrine of the *Sexes* of *Plants*, as it has been lately improv'd, his curious Obſervations might have decided the Queſtion; for what he calls *Semina rotunda alba Muſci cujuſdam æmula e pediculo ſemiunciali, tenuiſſimo e foliorum geniculis exeunte ſuſtentata*, I take to be the one *Stamen* and *Apex* fill'd with the *farina fœcundans*, which ſupplies the *Flores apetali Maſculini* in other *Plants*, by which it may be *flore a fructu remoto in eadem Planta*, though *Tournefort* will have it to be *in diverſis Plantis*, which makes me conjecture it may be more fitly join'd with *Salicornia*, which the Synopſ. 3. brings in with *Lupulus* and *Mercurialis*; on which account I may call it *Equiſetum Maritimum nudum Ramoſum*; for though *Salicornia* be a more ſuitable Name, yet the Habit of the *Plant* brings it nearer to *Equiſetum* than any, for both are ἀφύλλοι, and *geniculati*; and as the *Stamina* and *Apices* proceed from all the Joints of the *Plant*, in the one *e quibuſdam velut ſquamis pixidatim geniculatis compoſiti ſub quibus ſemina occluduntur*, ſo the ſame Kind of *Stamina* and *Apices* proceed, and the ſecond are contain'd in the ſame manner *pixidatim ſub ſquamis* in the *Spike* of the other. Since therefore this is not a *Genuine Kali*, and cannot be properly called *Equiſetum*, becauſe of the Reſemblance to the Hairs of an Horſe-tail, it may well be reckon'd of the ſame Family, though not of the Name. The Reaſon of my Remarks in this Place is, becauſe I have examined *Salicornia*, and find it exactly to correſpond with *Tournefort*'s Delineation in his *Corollarly*; and ſince both *Equiſetum* and it have *Stamina e geniculis erumpentia*, I think they may go together.

The

The Deſcription.

It has a very much running and fibrous Root, the naked, *jointed*, and genicular Shoots, ariſe one or two Span high, with Heads like thoſe of *Aſparagus*, from whence the numerous Branches are afterwards puſh'd forth from the Joints of the middle *Stem*, at certain Intervals. Theſe *Joints* are ſo diſpos'd, that the uppermoſt, divided into certain equal Points, or Teeth, bending downwards, and covering the lower Articulation, the Joints of Stalk and Branches are diſpos'd after the ſame manner, and form a groſſer, beginning taper gradually, reſembling an *Horſetail*. The knobby Top of the *Stalk* is compos'd of ſeveral *Squamæ*, like a *Fir*, or *Pine Cone*, from whoſe Intervals proceed the *Stamen* and *Apex*, loaded with the *farina*; the Seeds are lodg'd under the *Squamæ*, as is obſerv'd. The whole *Plant* is hard and rough to the Touch. It grows in Corn-Fields, and barren Lee-Grounds, where it ſpreads very much by the running Root.

Virtues and Uſes.

It's eſteem'd a potent *Aſtringent*, internally given in *Infuſions*, and *externally* apply'd in *Fomentations* and *Lotions*, for *Hemorages*, and for *ſtopping the Blood* in *Sanies Wounds*. It's alſo commended for *Ulcers* in the *Kidneys*, and *fluor-albus*.

Salicornia, which may be admitted for the *Kali offic.* becauſe of the Difference of the Soil, which often alters the *Virtue* of *Plants* of the ſame *Characters*, is a ſucculent Plant, of a ſaltiſh Taſte, and eſteem'd an excellent Pickle. It's ſubſtituted for *Samphire*, and paſſes for that Name in *Holland* in *Lincolnſhire*, and is either eat in a *boil'd Sallad* when young and tender, with Butter, like the *Atriplices*, or it is us'd as the moſt common Pickle in the Country when it is older; but then the *Stalk and Branches*, ſurrounded by the ſucculent Joints, become very hard, woody, and unjointed. It grows in great Plenty all round the Sea-Coaſts in that *Country*, eſpecially about the *Holbeach-Waſh*; they are ſaid to be two *Species*, Annual and Perennial, but I rather believe the *Perennial* is the Seedling, which aroſe in the Autumn, and continues lower and more branch'd, being curb'd by the Cold of the ſucceeding Winter.

Erigerum, vid. *Senecio.*

XXII. *Eruca.*

XXII. *Eruca.*

Eruca latifolia alba ſativa, C. B. 98. Tournef. Inſtit. 227. *ſativa annua flore albo ſtriato*, J. B. 2. 19. 150. Moriſ. Hiſt. 2. 228. Raii Hiſt. 806. Rocket.

XXIII. *Eryſimum.*

Eryſimum vulg. C. B. 100. Tournef. Inſtit. Hiſt. des Plants, 19. Moriſ. Hiſt. 2. 218. *Tragi floſculis luteis juxta muros proveniens*, J. B. 2. 21. 863. *Eryſimum Irio.* Tabern. Icon. 448. *Eruca ſiliqua cauli appreſſa Eryſimum dicta*, Raii Hiſt. 810. Synopſ. Stirp. Brit. 3. 498. Hedge Muſtard.

The TRIBE.

Though theſe be reckoned two *Genera*, under different Titles, yet they reſemble each other in the *Characteriſtick*, though not in the *diſtinctive Notes*, and agree with the Generality of the *Claſs* in their *Virtues*. They are among the *Flores Cruciformes ſiliqua brevi bivalvi* of *Tournefort*, and *Tetrapetalæ ſiliculoſæ*, by moſt other Authors. Both are *Annuals* with *jagged Leaves*, and long, ſmall *Pods*.

The Deſcription.

Rocket is chiefly cultivated in *Gardens*, with an hard, fibrous *Root*, tall, ſtreight branched Stalk, large *Leaves*, pretty much jagged, white, thin ſet *Flowers*, with ſmall, ſtreight, *bicapſular Pods*, pouring out ſmall, round, hot taſted *Seeds*.

Hedge Muſtard differs from it by the more branched and ſhorter Stalk; the *Leaves* jagged, and dented in a peculiar manner. The ſmall, yellow, tetrapetalous *Flowers* are thick ſet in a *Spike*, to which ſucceed the ſmall, round, *bivalve Pods*, aſcending ſtreight, and cloſely leaning to the Sides of the upper Part of the *Stalk* and *Branches*, by which it's diſtinguiſh'd from its *Congeners*. It grows on Way-ſides, on dry Banks, and the Sides of *Cottages* with Mud-Walls.

Virtues and Uſes.

The *Seeds* of moſt of this *tetrapetalous Claſs*, are chiefly us'd, and, as has been obſerv'd, very much agree in their *Virtues*, being of an hot Taſte, and potent *Diureticks* and *Antiſcorbuticks*. *Garden Rocket* is not much us'd in *Phyſick*, and but ſeldom in *Sallads*, becauſe of its diſagreeable *hot Taſte*. *Eruca Lutea ſive Barberea*, is often ſubſtituted for it. They either mix it with *Becabunga Naſturtium aquat.* &c. and infuſe it in *Diet-Drinks*, to be taken in a Morning in the Spring Seaſon. The *Juice* is clarify'd, and drank alone in a Morning, as we have obſerv'd at *Cardamine*.

Hedge Muſtard is eſteem'd a *potent Diuretick*, and *Pectoral*, by reſerating of *Obſtructions*; *attenuating* and *inciding* the tough *Phlegm* that oppreſſes the *Lungs*. The *Syrupus* de *Eryſimo*, is eſteem'd a good *Pectoral*.

XXIV. *Eryngium.*

Eryngium vulg. C. B. 386. J. B. 32. 586. Tournef. Inſtit. 327. Hiſt. des Plants, 78. Moriſ. Hiſt. 3. 169. Raii Hiſt. 384. Synopſ. Stirp. Brit. 3. 222. Sea-Holly.

The TRIBE.

This is variouſly diſtributed by *Authors*. *Moriſon* places it among the *Capitatæ non ſpinoſæ*. Mr. *Ray*, Synopſ. 2. makes it one of the *Plantæ flore diſcoide compoſito*. In *Meth. Emendat.* it is one of the *Corymbiferis affines*. *Boerhave* makes it one of the *Gymnomonoſpermæ Capitatæ*; but *Tournefort* is poſitive it's one of the *Umbelliferæ floribus in Capitulum congeſtis*; and in this he's followed by *Synopſ.* 3. where 'tis remov'd from *Dipſacus*, its wonted Companion, and join'd to *Bupleurum* and *Sanicula*, by the Title of *Umbelliferæ foliis integris*. Indeed, if to have two *Seeds* ſucceeding a ſmall, *pentapetalous Flower*, be a *Signum infallibile* of an *umbelliferous Plant*, without regard to the Diſpoſition of the *Flower*, or making a Difference betwixt a *divided* and *undivided Leaf*, *Eryngium* comes properly in with that *Claſs*, which *Boerhave* alſo acknowledges; for though he ſays it's *Gymnomonoſpermos*, yet he denies not, but *Ovarium conſtat duobus ſeminibus*.

The

The Deſcription.

It has a long, ſimple, *parenchymatous*, very much running *Root*, and deſcending deep in the Ground. The *Leaves* hard, ſtiff, full of Veins, narrow at the Bottom, becoming gradually broader, nitcht in ſeveral Places, and prickly, terminating blunt; the obliquely, aſcending, ſhort *Stalks*, adorned with leſs alternate *Leaves*, without Footſtalk, and prickly at the Edges, are ſmooth and *channel'd*. The determinated *Stalk* and *Branches*, ſupport round, ſomewhat prickly *Heads* or *Globes*, conſiſting of ſeveral green *Squamæ*, ſurrounding ſmall, *pentapetalous*, blue *Flowers*, each contain'd in a *little tubulous*, *quinquifid Calix*, all gathered together in a *Tuft*, furniſh'd at the Bottom with ſmall, green *prickly Leaves*; to each Flower ſucceed two, ſometimes *winged*, at other Times plain Seeds. The *Maritime Species* is preferr'd, whoſe *Leaves* are much larger, ſmooth, *whitiſh*, and much more reſembling the *Ilex aculeata*, or *Holly*, from whence the Name. Its *Roots* are more carnous, run very deep in the fine Sand on the Sea-Shore, of an agreeable, delicious, liquoriſh Taſte. " The common *Sea-Holly* grows in rocky, craggy Ground, " but rarely on a Rock, as you deſcend to the Ferry from *Plymouth* " to *Cornwall*, obſerv'd by Mr. *Thornton*; not far from *Daventry* " in *Northamptonſhire*, beſide the old *Roman* Way, called *Watling-* " *Street*, near a Village called *Brookhat*, by Mr. *Lawſon*, on the " Shore called *Friar-Gooſe*, near *Newcaſtle-upon-Tyne*." The *Sea-Holly* grows in fine Sand, on ſhallow Sea-Coaſts: I obſerv'd it at *Yarmouth*. It alſo grows plentifully at the Light-Houſe belonging to *Dundee*, ſituated at the Mouth of the River *Tay*, as you paſs from thence to the *Caſtle* of *Broughty* in *Scotland*.

Virtues and Uſes.

The *Root* is very comforting and nouriſhing; it's eſteem'd *Diuretick* and *Aperient*, may be drank in *Ptiſans*, with the *Radices 5 Aperientes*, in *Coughs* and *Conſumptions*, and *hectick Fevers*; alſo in the *Jaundice*, and *Menſium obſtructio*. It's alſo eſteem'd effectual for provoking of *Venery*, the dry, *candy'd Roots*, are preſcrib'd for that Purpoſe. It enters *Elect. Diaſatyrion*, in the old *Diſpenſatory*.

Eryſimum, vid. *Eruca*.

XXV. *Eſula ſive Tithymalus major; & minor, ſive Pithyuſa; & Eſula Cataputia dicta.*

1. *Eſula major offic.* Boerh. Ind. 256. *Tithymalus magnus multicaulis, ſive Eſula major,* J. B. 3. 34. 671. Raii Hiſt. 864. *Tithymalus paluſtris fruticoſus,* C. B. 292. Tournef. Inſtit. 87. *Eſula maj.* Dod pempt. 274. Hiſt. Oxon, 3. 34. *Shrub-Spurge.*

2. *Eſula minor offic. Tithymalus foliis Pini ſorte Dioſcoridis Pithyuſa,* C. B. 292. Tournef. Inſtit. 86. *Cypariſſe ſimilis Pithyuſa multis,* J. B. 3. 34. 665 Moriſ. Hiſt. 3. 887. Raii Hiſt. 867. Small Spurge.

3. *Eſula Cataputia dictus offic. Tithymalus Latif. Cataputia dictus,* Tournef. *Lathyris maj.* C. B. ſive, *Cataputia minor,* J. B. 3. App. 880. Raii Hiſt. 86. *major annus Glaucophyllus,* Moriſ. Hiſt. 3. 337; Garden Spurge.

The TRIBE.

Plants of this *Claſs,* paſſing under ſeveral Denominations in the Diſpenſatory, as *Cataputia, Eſula, Tithymalus,* &c. I chooſe to treat of them in this Place, for *Ricinus* being *Cataputia major offic.* has not the ſame Notes, ſo that I muſt have disjoyn'd it from what is more frequently called *Cataputia:* And though all the *Eſulæ* are *Tithymali,* yet *Eſula* being a more frequent Name in the Shops, I chooſe to treat of theſe at *Eſula,* and not at *Tithymalus. Moriſon* joins them together into one Sect called *Plantæ tricoccæ purgatrices,* and firſt diſtributes into *Lacteſcentes & non Lacteſcentes.* The *Lacteſcentes* come in here, and the *non Lacteſcentes,* viz. *Ricinus,* ſhall be treated of in its proper Place. The firſt, according to that Author, is plac'd among the *perennes Capſula verrucoſa.* The ſecond, is one of the *perennes foliis deciduis, Capſula ſeminali lævi.* Mr. *Ray* places them among the *Fl. tetrapetalo anomalo. Boerhave* calls them, *Triangiæ tricoccæ.* Their general Character is, that they have a *fibrous Root,* whether Annual or Perennial, undivided, ſimple, pointed *Leaves,* ſome broader, others more narrow, plentifully endow'd with a *milky Juice.* When they break forth into the *Flower,* they have four or five ſmall *Leaves* of a *Perianthium,* which ſoon fall back and decay; theſe ſupport two pointed *Leaves* for the *Calix,* and a *tetrapetaloid Flower,* or deeply divided *Monopetalous* one, according to *Tournefort,* into four green, or herby *Segments.* From the Middle ariſe ſeveral *Stamina,* with their *Apices,* which ſurround a long,

a long, round *Stylus*, to which hangs the *Embryo* of a three Square, or ſix Square *Fruit*, divided into three Pouches, after which it becomes *tripartite*, with three *Buttons*, each of the *Pouches* has one proportionally big *Seed*, poured out at the longitudinal Opening.

The Deſcription.

The firſt ariſes with a ſtreight, round, tough, ſometimes woody *Stalk*, two or three Foot high, beſet with alternate, and inordinate, long, narrow, ungreen blunt *Leaves*; the upper Part of the *Stalk* becomes reddiſh, and ſends forth numerous ſmall *Branches*, diſpos'd into Umbels of *Flowers*, each endow'd with broad, roundiſh, crenated *Leaves*. The *Flowers* proportionally large, as above the *tricapſular Fruit*, rough, wart-like, each containing *three Seeds*. The *Root* is ſometimes very groſs, running deep into the Ground, and diſpers'd into many *Fibres*. It's cultivated in Gardens.

The ſecond has a ſtreight, round *Stalk*, not much branch'd, about one Foot high, the alternate, thick-ſet narrow *Leaves*, like thoſe of *Toad-Flax*. The *Flowers* are diſpos'd alſo into Umbels. The *Root* is not ſo groſs, but running forth many new Shoots in the Spring. It alſo grows in Gardens. The Fruit is ſmooth, and the *Leaves* drop in the Autumn.

The third ariſes yearly from the *Seed*, with two long, narrow *Seed-leaves*; the *Stalk* is ſtreight, and not much *branch'd*, round, and groſs, about three or four Feet high; the alternate, bluiſh, green *Leaves*, are two or three Inches long, tapering, and pointed, ſo diſpos'd, as to be exactly oppoſite to each other, in the Aſcent forming a Croſs. The *Flowers* upon the Top of the determinate *Stalk* and *Branches*, proportionally large, are not puſh'd forth till the ſecond Year. It grows in *Gardens*, where it ſpontaneouſly propagates it ſelf by the hardy *Seeds*, which lying in the Ground, endure the Winter Hardſhips.

Virtues and Uſes.

All theſe, under whatever Denomination, partake of that ſame *Emetick* and *Cathartick* Quality, and need to be well macerated and corrected with Vinegar, before they can be fit for internal Uſe: They plentifully evacuate ſerous and *hydropick* Humors. The *Roots*

prepared, enter *Pilulæ fœtidæ*, and *Mechoacannæ*. *Granæ Tigliæ, ſive Tilia*, about the Bigneſs of *Ciceræ rubræ*, are Seeds of ſome Species of *Tithymals*. I have ſeen *hydropick Pills* made up of *Gutta Gamba*, *Aloes*, and them with ſuitable *Aromaticks*; they work upwards and downwards, but ſhould only be given at beginning of an *Anaſarca*, and *Hydropſia*, when ſuch Purgatives may be given, but it muſt be to robuſt Bodies, and naturally ſtrong Conſtitutions. The *milky Juice* is ſo *Corroſive* and *Acrimonious*, that being apply'd to the *Warts* in any Part of the Body, it kills them, and makes them dye away.

XXVI. *Eupatorium Avicennæ.*

Eupatorium Cannabinum, C. B. 320. Tournef. Inſtit. 455. Hiſt. des Plants, 193. *adulterinum*, J. B. 2. 24. 1065. *vulg. fol. trifido.* Moriſ. Hiſt. 3. 37. *cannabinum ſive mas*, Raii. Hiſt. 293. Hemp-like Agrimony.

The TRIBE.

It's one of *Tournefort's floſculous Flowers*, ſeparated by Mr. *Ray* from the *Corymbiferæ nudæ*, by its being *Papeſcent*, and not *Lacteſcent*; and from the *Capitatæ*, by the Smallneſs of the Head, tho' the *Flowers* be compound.

The Deſcription.

From an hard, *woody Root* above, ſoon diſpers'd into many white, ſmall, hard *Fibres*, there ariſe ſeveral reddiſh, ſtrong, hairy *Stalks*, not much branch'd, about two or three Foot high; the numerous *Leaves* ariſe by Pairs, three and three united at the Center, like thoſe of *Hemp*, from whence it has the Name, oblong pointed, and ſerrated. The *Flowers* in Tufts, or Umbels, are reddiſh, five or ſix together, endow'd with ſeveral long, forked *Thrumbs*, to which ſucceed ſeveral oblong, downy *Seeds*. It grows in moiſt and ſhady Places, and along Ditch-ſides.

Virtues and Uſes.

It's eſteem'd *Attenuating* and *Aperient*, reſerating of *Obſtructions*, and good in *intermittent Fevers*. The *Roots* are ſaid to be *Cathartick*,

tick, both above and below. The *Flowers* are reckoned very *Vulnerary*. Some give the *Infuſion* of the *Leaves* by way of Tea, to be drunk by *hydropſical Perſons*. After the *Paracentheſis* is perform'd, they make clarified Whey with it, and Fumitory, and give it plentifully to thoſe who are troubled with the *Green-Sickneſs*, and with the *Itch*. It's not much us'd in the Shops.

Eupatorium Veterum, vid. *Agrimonia*.

Eupatorium Meſues, vid. *Ageratum*.

XXVII. *Euphraſia*.

Euphraſia offic. C. B. 233. Tournef. Inſtit. 174. Hiſt. des Plants, 194. *Euphraſia*, J. B. 3. 30. 432. Raii Hiſt. 17. Moriſ. Hiſt. 3. 430.

The TRIBE.

This is one of *Tournefort's anomalous Tribe*, becauſe it has a *Lip-Flower*, with thoſe of that Claſs, and a *bicapſular Fruit*, being one of *Boerhave's Diangiæ Polyſpermæ*, and *fructu ſicco flore irregulari* of Mr. *Ray*.

The Deſcription.

It's a low, annual, ſtreight Plant, much branch'd at the Top, about a Span high, with an hard, white, ſimple *Root*. The *Stalk* is adorn'd with numerous ſmall, roundiſh, ſerrated *Leaves* by Pairs, without *Footſtalks*; the ſmall *Flowers* ariſing ſingle from the Boſom of the *Leaves*, in a *quadrifid Empalement*, are two lipp'd, white, pleaſantly variegated with purple Lines; the *lower Lip* divided into three bifid *Segments*, with a yellow Spot in the middle; the *upper Lip* being alſo *bifid*, is erect, bending back, endow'd with ſeveral yellow *Stamina*, and each *Flower* ſucceeds an oblong, flat, *bicapſular Seed-Veſſel*, containing ſeveral oblong, Aſh-coloured *Seeds*. It grows in Heaths, dry Paſtures, and mooriſh Places; the *bright Flowers* are conſpicuous at a great Diſtance, from whence it's called *Eyebright*.

Virtues

Virtues and Uſes.

This is, by the unanimous Conſent of all Authors, eſteem'd a moſt potent *Opthalmick*, on which account, the *Aq. Euphraſiæ* is kept in the Shops, and is the moſt frequent *Menſtruum* for *Collyriums*. The *Powder* of the dry'd *Herb* is often mix'd with other *Opthalmick Powders*; but whether this is becauſe of the *Signature*, or its *darting* the *EYE*, by its firſt Appearance, I ſhall not determine; though both the *Greek* Name, *Euphraſia*, and the *Engliſh* Name *Eyebright*, ſeem to import ſo much.

F I N I S.

PHARMACO-BOTANOLOGIA:

OR,

An Alphabetical and Classical

DISSERTATION

ON ALL THE

British Indigenous and Garden Plants

OF THE

New *London* DISPENSATORY.

In Which

Their GENERA, SPECIES, *Characteristick and Distinctive* NOTES are Methodically described; the *Botanical* TERMS of ART explain'd; their *Virtues*, *Uses*, and *Shop-Preparations* declared, from proper Observation.

DECAD VII.

By *PATRICK BLAIR*, M.D. and F.R.S.

Miseri mortales qui Naturam ejusque Artificium abdunt, ubique diligentia Patens, & Amplissimos solis Radios Nubecula obfuscant. Barth. Epist. ad Lyserum.

LONDON:

Printed for G. STRAHAN, at the *Golden Ball*, over-against the *Royal Exchange* in *Cornhill*; and Sold by W. and J. INNYS, at the West End of St. *Paul's* Churchyard; and W. MEARS, at the *Lamb* without *Temple-Bar*. M.DCC.XXVIII.

The PLANTS of the Seventh DECAD.

THE

THE PREFACE TO THE Seventh DECAD.

I *Intimated in the* Preface *to* Decad IV. *that tho' the moſt conſiderable* Claſſes *of* Plants *and* Terms of Art *be explained in the preceding Numbers; yet I ſhould find means to enrich the following, with what would prove both Uſeful and Diverting.*

Accordingly Decad V. *expoſes to View a Set of the moſt uſeful* Plants *in the* Materia Medica, *on account of their Virtues. The* VIth *ſets forth* Crocus, *or the* true Engliſh Saffron, *with all its advantages, declares in full the general* Notes *of that* Claſs, *and concludes with ſuch a collection of* Tournefort's *Monopetalous, Anomalous* Flowers, *as the Alphabet could admit of.*

This VIIth *affords a good Variety of uſeful matter relating to moſt of the* Plants *contained therein.* Faba *has ſcarce neglected any thing by which the* Leguminous Plants *may be diſtinguiſhed from all others. The ſuperficial Treatment of* Ficus *by ſome who lately pretended to greater Exactneſs, the accurate Account of it by ſome eminent Foreigners, and the obſervations I have been able to make, have occaſion'd my being more particular on that Subject. The ingenious Mr.* Philip Miller, *in his* Dictionary, *has writ ſo fully on ſeveral other particulars belonging to* Figs, *that I need only refer the Reader for farther ſatisfaction to that valuable Treatiſe. One thing I muſt add; that he quotes Mr.* Geoffroy *for aſſigning Hermaphrodite* Flowers *to* Ficus, *which confirms what both* Boerhaave *and I have obſerved, but makes againſt* Pontedera *and Mr.* Geoffroy *himſelf. For the one denies the* Sexes *of* Plants, *which this confirms: and the other will have the* Seminal Plant *to be contain'd in each Grain of the* Farina; *which the Structure of the Style*

will

will not admit of. For it's upper part is bended like a Hook to refuse entrance, as it were, to the Farina.

Filipendula, from the Singularity of it's Notes, is variously distributed by several Authors; it's use in Physick is not great. Next follows the Fœniculum with it's officinal Brethren. I have so fully declared the general Characters of the Umbelliferæ at Ammi, Decad II. that I left nothing of moment to be added, but that these have their Leaves cut into fine Capillaceous Segments, called Fœniculaceous from Fennel itself. I have said but little concerning the Filices, having given a general Idea of the Capillares, Decad I. I have not recommended their Virtues with much earnestness, what has been deliver'd concerning them being only traditional. Genista and Glycyrriza continue the Class of Leguminous Plants; I have been at some Pains in giving an account of the Culture of Glycyrriza (because of it's being so noted a Shop Root, and of such eminent Virtues,) not so much from my own Experience as from good Authorities. I have been since inform'd, a natural, light, sandy Soil is fittest for it. I confess I am not fond of what they call rich Dung. I think it should be well rotted and rendred light by being well mixt with other soft, kindly Moulds. The throwing of fresh Dung into the bottom of the Trench, if deep, cannot be amiss, because it becomes a Fotus at such a Distance, especially in the Winter; and it's active Parts will be much spent before the Roots can reach it. Sand undoubtedly is a great means to make the Root spread far. We may observe in Eryngium Maritimum how far it spreads, and how deep it runs in the Sand on the Sea Coast. Fragaria is universally allow'd to have naked Seeds: the Pulp of the Fruit not enclosing the Seeds as in Berries; Frangula might have been omitted, only on account of the inner Rind having been esteeem'd good for the Jaundice: tho' perhaps for no better Reason than it's being of a yellow Colour. Fraxinus is so noted for it's medicinal and mechanical Uses, especially the latter, that it well deserves Room here. Rivinus is at such pains about the Difference betwixt Capsular and Naked-Seeds; sometimes to please his own Humour, and sometimes the Dictates of others, that I thought fit to discourse a little on that Head at Fumaria.

Though Gentiana stand alone in this Decad, as to the Tribe, yet it is a most conspicuous Plant in the Gardens, and of great value on account of it's eminent Virtues. The Gerania appear here more on account of their botanical Distributions, than their medicinal Uses; for it's only a regard to the Ancientss that still keeps them in the Catalogue. The manner of Nourishment, ever-green Leaf, and time of Flowering and Fructification have made me join Viscum to Hedera Arborea, I could have much enlarged my Discourse on that Plant, but I was afraid of being accounted too tedious.

PHARMACO-

PHARMACO-BOTANOLOGIA;

OR, A

TREATISE

OF

DISPENSATORY PLANTS,

Alphabetically and Claſſically diſpoſed.

DECAD VII.

I. FABA.

1. 

ABA C. B. 335. *Cyamos Leguminoſa*, J. B. 2, 13, 179. Tournef. Inſtit. 391. Raij Hiſt. 909. *major, ſive Bona maj.* Dod. Moriſ. Hiſt. 2, 83. *Garden Bean.* Rivini Icon. Plant. irr. tet.

2. *Faba minor, ſive equina*, C. B. Tournef. Inſtit. Moriſ. Hiſt. Raij Hiſt. Synopſ. Stirp. Brit. 3, 323. Rivini Icon. *Common Field Beans, or Horſe-Beans.*

The *Tribe.*

I have given ſuch a general Idea of the *Plants*, which regularly conſtitute this *Claſs* at *Anonis*, *Decad* III. *pag.* 303. that I need only add

what has been there omitted, and that the *Botanick Student* may come to a thorough Knowledge of its ſeveral *Notes* and *Characters*. There are not many *Tribes* among the *European Vegetables*, that appear ſo well to be of the ſame Tribe and Family, as theſe of this *Claſs*; for if we conſider them as to their *Seed Leaf*, there is a great reſemblance betwixt them, according to their ſeveral Diſtributions. *The Habit of the whole Plant*, at the firſt View, ſhews what its Kindred and Relations are; the *Flower*, of whatever number of *Petals* it conſiſts, has ſtill the ſame or very near the ſame Appearance; for whether they be *monopetalous*, doubly or triply divided, whether *bipetalous*, *tripetalous*, or *tetrapetalous*, they can ſoon be known to be genuine *papilionaceous Flowers*, and as ſoon diſtinguiſhed from any of a *baſtard Race*. 2. Their *Fruit* is as infallible as any of the other *Notes*; they are conſtantly *ſiliquous* or *ſiliculous*, not one *gymnoſpermous* Seed to be ſeen among them, naked Seeds properly ſo called are utterly unknown to any of this Family; and as to the *Seeds* themſelves, the *Finis ultimus* of all *Plants*, as *Ammannus* the true Diſciple of Dr. *Moriſon* expreſſes it, they are for the moſt part *Reniformia*, and if they vary, as ſometimes they do, into *Rotunda*, *Quadrata*, &c. yet there is ſtill in this Variation what ſhews them to be of the *genuine Race* of the *Papilionacei*. 1. To deſcend to the particular conſideration of each of theſe *Parts*. The *primum Principium* of all *Plants* is certainly the Point of the *Radicle*, which at the firſt Formation of the *Embryo*, was only a Continuation of Sap-Veſſels, or a Production of paralele *Fibres*, from the Pedicle paſſing along the inſide of the *Hinge* (as it were) the moſt artfully contriv'd Joints of a *bivalve Pod*, like thoſe of the moſt curious Snuff-Boxes, and do at certain Diſtances emit *Cotyledones*, like the *Secundine* of the *Uterus* of a *Cow*; from whence proceed two kinds of nutritive *Fibres*, the one for the *common Tegument* to all the Parts which compoſe the *Seed*, and the other to the proper parts which conſtitute the *Seed* itſelf: So that after the outer Coat of the *Embryo* is form'd, and the *Sap* has been ſo plentifully diſtributed, as to fill up its inner Subſtance, which in time becomes firm and ſolid, then as the *Fœtus* in *Utero* makes towards the *Portus*, the *Cotyledon* and the *Eye* of the *Seed* naturally take leave of each other; and what was then the *ultimus finis* of the *Mother-Plant*, now becomes the *primum principium* of its Progeny. I have inſiſted more on this at *Faba*, becauſe this is the very Example produc'd by two contending Parties, to maintain two quite oppoſite and different Sentiments. Dr. *Grew*, to whoſe everlaſting Memory be it ſaid, was the firſt who gave Intimation of the Sexes of *Plants*, as of *Animals*; In giving the Idea of the

Structure

Structure of a *Bean*, demonſtrates an Hole he diſcovered at the beginning of the *Eye* of this *Seed*, at which the Point of the *Radicle* is lodg'd. Mr. *Morland* pretends to have firſt diſcovered this Hole, which he calls a *manifeſt Perforation*, and ſays Dr. *Grew* fail'd when he pretended the 'Impregnation of *Plants* was by *Effluvia*; whereas each Grain of the *Fa-* 'rina fœcundans, containing a *ſeminal Plant*, (this Perforation being always 'towards the Piſtillum, as he pretends) 'tis by this that the Grain of the 'Farina MUST enter, and ſo being already the wrapt up *ſeminal Plant*, it afterwards becomes the *Semen*, and at laſt the *Plant* itſelf. I have fully diſcourſed on this Subject elſewhere, and ſhewn the Fallacy of the Opinion, that I only name it here, and take notice, that the Place where they ſay the *ſeminal Plant* is lodg'd, is only the Situation of the Point of the *Radicle* to a new *Plant*, which I am willing ſhould be called the *Punctum Vitæ* from whence the future *Plant* derives its Origin; this being the *primum principium*. And as all *Seeds* of the ſame *Claſs* have conſtantly the ſame Figure; ſo 'tis my humble Opinion, nothing can more certainly determine the ſeveral Families to which each *Plant* belongs, than an exact obſervance of the *Seed-Leaves* of each *Genus*. But as I deſign that for a ſeparate Diſcourſe, leaſt I ſhould digreſs too far I omit it here, with this general Remark, wherever the *Seed-Leaf* of a *papilionaceous Plant* is narrowly obſerv'd, it may ſoon be determin'd whether it belong to ſuch a Family or not.

2. The Habit of the *Plant*. There are no Trees, nor Under-ſhrubs, and but few Shrubs of this Claſs, belonging to the *Diſpenſatory*. The *Herbs* are with *Stalks erect*, or infirm, and theſe with or without *Capreoli* or *Climbers*, every one of them ſmooth and of a peculiar green Colour. The *Leaves* are very ſeldom ſingle, always alternate, ſometimes *bifoil*, more frequently *trifoil* or *pinnated*; the *Pinnæ* are by Pairs, or alternate on the mid-rib with *Capreoli*, or with an *Impair* at the Extremity.

3. The *Flowers*; ſometimes *bipetalous*, frequently *tripetalous*, and not always *tetrapetalous*; ſometimes the *vexillum* is proportionably larger, ſometimes the *Carina*, and ſometimes either *vexillum* or *Carina* by their Largeneſs ſupply the Defect of the *Alæ*. *Rivinus*, who lays holds on every Opportunity to reprehend Dr. *Moriſon*, tho' not always with equal Succeſs, takes notice of his Account of theſe Flowers; thus, *Legumina——florem habent papilionis volantis formam aliquatenus referentem, tribus partibus conſtantem quarum major ſurſum erecta*, vexillum *nobis dicetur, binæ alæ ſunto laterales ſeu labiales amplectentes* roſtrum *parvum ſurſum tendens* QUOD EST RUDIMENTUM SILIQUAE FUTURAE. Had he ſaid *in quo includitur rudimentum*, it had been better; and 'tis highly probable

bable he meant ſo, and that this Expreſſion is rather *per incuriam*, than *per ignorantiam*; for 'tis ſcarce to be imagin'd ſo acute a *Botaniſt* would miſtake ſo conſpicuous and florid a Part to be the *Rudimentum ſiliquæ*, and not examine whether there is any ſuch thing within it, and *Rivini*'s taking notice that the ſame is repeated, only ſhews the mean Opinion he has of the *Author*; to ſay no more, I confeſs *alterum ei inferius Carinatum, tum ſtamina, tum ſiliquæ rudimentum protegens, & occultans* is better. But there ſtill wants more to be ſaid, which I think I am the firſt who have remark'd it, *viz.* That this *Fructus Rudimentum* is always *vagina cartiliginea fimbriata incluſum*. *Tournefort* indeed has this Piſtillum with its Stylus, pull'd out from the including Vagina, delineated at *Flos papylionaceus*, *Tab.* 209. and at *Lathyrus*, *Tab.* 116. but no where do I find it named until I mentioned it at the abovenamed *Anonis*, *Decad* III. tho' it be of ſuch moment to this *Flower* that it ſhould not be paſs'd in ſilence. Upon Examination I find it to be the ſeveral flat, broad, white, hard, cartilaginous *Stamina*, ſo united as wholly to ſurround the *Fructus Rudimentum* even to the Extremity, or its Articulation with the Stylus which is alſo ſolid and cartilaginous bended upwards according to the Form of the *Carina*. This *Vagina* terminates into the ſeveral *Stamina*, forming a *Fimbria*, or Fringe, with the ſmall yellow *Apices* reſembling the tufted Fringes lately in faſhion. They never exceed the Length of the *Embryo ſiliquæ*, ſo that the ſolid Stylus, as it were, naturally turns away from them; and this, were there no other Argument, is enough to confute the opinion of thoſe who will needs have the Grains of the *Farina* to enter the Piſtillum. The Number of the Apices I take to be indefinite, I propoſed 8 at *Anonis*. On ſecond Examination I do not take them to exceed 4 or 5, and chiefly plac'd at the lower part of the Siliqua. The Uſe of this Vagina is obvious to guard the tender *Embryo*, 'till 'tis capable to reſiſt the Injuries of the Air; 2*d*. To preſerve the parſimonious *Farina* from being loſt, to which the cavous *Carina* contributes; for no ſooner is the Duſt ſhed than it partly falls into the Boſom as well as Bottom of the *Carina* without, as betwixt the *Vagina* and *Embryo* within, in both which Places it meets the *melleus Liquor*, ſaid to be in *Pontedera's Receptaculum*, where it plentifully bedews this *Duſt*, and thus both contribute to the Impregnation of the *Embryones Seminis* by the Effluvia.

4. The Fruit is either *ſiliquous* or *ſiliculous*, peculiar to this and the *tetrapetalæ cruciformes*. If therefore there be any *Flower*, however it be *papilionaceous*, yet if it is ſucceeded by a *gymnoſpermous* or *capſular Fruit*, 'tis none of this *Claſs*, for they are all *enangioſpermæ*, whether *monoſpermæ*, *diſpermæ*,

dyſpermæ, or *polyſpermæ*. The difference I take to be betwixt *Capſula* and *Siliqua*, is, that *Siliqua* is always *bivalvis*, with a longitudinal Opening, but a *Capſula* is not always *bivalvis* and opens variouſly; ſo that a *Capſula* may be bivalve or not, but a *Siliqua* muſt be bivalve. Some Objections be made againſt this general Rule, but upon Examination they may be ſoon removed, as *Burſa paſtoris* and *Thlapſi* cannot properly be called *bivalve*, becauſe their *Siliquæ* open equally on both ſides; whereas the *bivalves* for the moſt part open before, and keep ſhut at the back part, but their longitudinal Opening is ſufficient, and beſide moſt of the *Siliquæ* of the *Flores cruciformes* are *diangiæ*, and their Eye is always lateral, but never towards the Stylus, yet they are differently adherent to the *Placenta*, from the *papilionaceous Siliquæ* which are always *unicapſular*, and frequently open longitudinally with regard to the Pedicle, *v. g.* in the *Medica*'s, tho' in the contorted Fruit the Seeds ſeem to lie horizontally, but when you begin to unfold it, you'll find the two thin tranſparent Sides diſpoſing of the *Seeds* longitudinally. Authors make ſeveral other Diſtributions of theſe *Genera*, according to the Figure and Situation of the *Siliquæ*, as the *erectis*, *propendentibus*, &c. but it would be too tedious to enumerate them here.

Laſtly, the *Finis ultimus*, the Seed, which I have obſerv'd are, generally ſpeaking, *reniformia*, if they are *oblonga*, *rotunda*, *quadrata*, or if the Eye be ſituated at an End or in the Middle it matters not, there is ſufficient in all of them to demonſtrate that they are of this Claſs. Therefore *Rivini* is at too much pains to violate and break in upon the Rules and Dictates of Nature, by a confus'd heaping up a Maſs of Plants which cannot come in with theſe to bring all together with his *Flores tetrapetalæ irregulares*, but of this more hereafter. The *general Character* then of this *Faba* is, that 'tis an Annual *Plant*, with a ſtrait Stalk, pinnated Leaves, alternately on the mid Rib, erect, *papilionaceous* Flowers and Pods, big oblong Kidney Seeds, with the Eye at one End.

The *Deſcription.*

Tho' the *major* and *minor* ſpecifically differ, yet one Deſcription ſhall ſerve for both. From a thick round *Seed-Leaf*, ſeldom to be ſeen above Ground, the *Plume* firſt appears, which ſoon mounts to form the *flowering Stem*, which ariſes with a ſtrait ſtriated, rather *quadrangular*, *Stalk*, 2, 3, 4, or 5 Foot high in the firſt; not exceeding 2 or 3

Foot; in the ſecond, the alternate *pinnated* Leaves large broad blunt in the firſt Extremity; narrow, more pointed, and leſs in the ſecond, are 4 or 5 in Number on the Midrib. The *papilionaceous Flowers*, with a ſubrotund large white *Vexillum*, two clapt in Wings, not unlike thoſe of a *Magpie*, with a large oval black Spot appearing on each ſide in the middle, guarding the *Carina*, or Body of the *Fly*, which involves the *Embryo fructus* with its *Vagina* and *Apices*. They are diſpoſed in *Racemi*, on ſhort common Pedicles ariſing from the boſom of the Leaves at the lower part of the Stalks, at the upper they are thick ſet round the Stalk, many of them drop the remaining *Embryons* which ſwell to a *Pod*, are thick, ſpongy, broad, flat, and large, containing 4 or 5 large flat broad *Seeds*, with a long oblique Eye at one End, in the firſt proportionally leſs, thick, round, with an oblong ſmaller Eye in the ſecond. The firſt are planted in Gardens, theſe eſteemed the beſt of a dull white or red Colour, paſs by the name of *Windſor-Beans*; I ſuppoſe they were firſt imported from *Turkey*, for I have ſeen thoſe called ſo of the ſame Bigneſs and Shape, and of a much clearer white and brighter ſcarlet, the whole being full and firm, without being dry'd, or wound up within an empty Huſk; ſo that I ſuſpect theſe now ſo common are the other degenerated by a colder Climate, and coarſer Soil. The other is often ſown in the Fields.

Virtues and *Uſes.*

The *Leguminous Plants* as they are diſtinguiſhable in their *Notes*, ſo in their *Virtues*, among which there is a great Harmony. They are called *Legumina* from *lego* to gather. Moſt Quadrupeds, who partake of *Vegetables* for their Food, delighting much in them, where they meet with them in the Fields, they affording an agreeable Taſte whether in Graſs or Hay, and are very fatning. What Service *Trefoils*, *Saintfoins*, *Tares*, *Vetches*, do to Horſes is well known. *Beans* and *Peaſe* are chiefly uſed for Food to Men. *Garden Beans* boil'd and eat with *Bacon*, is known to be the moſt common Diſh for all Palates, Ranks, and Degrees of Perſons in *England* during the Seaſon. They ſometimes make Bread of the common *Bean* mix'd with *Peaſe*, and give it to the Labourers at courſe Work, and they find it very ſtrengthning. *Bean-Flowers* are eſteem'd potent *Coſmeticks*, for waſhing and cleaning the *Face* and *Hands*; they diſtil the Water for that purpoſe. *Bean-Meal* is alſo fit for the ſame. *Farina Fabarum* is *digeſtive*, *reſolutive*, and *diſcutient*,

diſcutient, 'tis made into *Cataplaſms* with *Farina Fænugræci*, *Hordei*, *Lini*, &c. for hard, indurated, *ſcrophulous Tumors*, either to diſſolve, diſcuſs, or bring them to Suppuration.

I hope the following Experiment I made ſeveral Years ago, will not be an impertinent Digreſſion. Being to wait on a Nobleman upon his Return to a Seat in which he had not liv'd for two Years before, they ſhew'd me a Box of a duſkiſh brown Powder, which upon opening afforded a Smell as ſtrong as that of Spirit of *Sal Armoniac*. It had lain in a neglected Garret, and they call'd to mind it muſt be *Bean-Meal* they had us'd ſome time ago for their Hands and Face. I deſir'd to have it home to make the *Chymical Analyſis*; it weigh'd about 2 *lb.* I put it into a ſmall *Alembick*, and by a gentle Fire procur'd 2 *dr.* of ſolid *volatile Salt* and near to 1 *oz.* of Phlegm. I removed the *Capital*, put the *Salt* into a Phial, and having empty'd the Phlegm, I augmented the Fire and procur'd half an Ounce of a ſtrong black *fetid Oil*, like *Ol. C. C.* The Salt had a volatile Smell but *fetid*, different from its former Scent and approaching nearer to the Smell of a *Bean*. This being the only ſolid Volatile Salt I ever ſaw procured by Sublimation from Vegetables, I am of Opinion it might rather be the nitrous Particles of the Air admitted into ſo *porous* a *Body* during that ſpace of Time; but whether this had attenuated and ſubtiliſed the Salts themſelves, or whether the natural fix'd Salt in the Meal ſtill remain'd I am uncertain, for the remaining *Black magma* was in ſo ſmall Quantity that it was not worth while to burn it, and to endeavour to procure a *Lixivium*. Being deſirous to know the difference betwixt the *bitter corymbiferous* and the *ſweetiſh Pea-Bloom Taſte*, and whether any of it depends upon the Quantity of the fix'd Salts in them, I have been at pains to make the Lixivial Salts of ſeveral Genera of Plants, in order to gueſs as near as I could the Proportion they did bear to one another; as *Abſinthium*, *Artemiſia*, *Anonis*, *Carduus B.* *Centaur. min. e ſtipitibus Fabarum*, *Geniſtæ*, &c. *Abſinthium* bore the largeſt Proportion, *Faba* the next, *Artemiſia*, *Anonis* the ſame, and *Centaurium minus* larger than *Card. B.* By which I conclude, that the Quantity of Salts in *Abſinthium*, &c. depends upon the Firmneſs of their woody Stalks, and that the looſe Texture of *Carduus* is the Reaſon why it bears a ſmaller Proportion than *Centaurium minus*, whoſe Stalks are proportionally more firm; ſo that the difference in Taſte muſt depend upon the different Modification of the terrene Particles with theſe Salts. The Uſe of the Field-Beans is for Food to Horſes, feeding of Hogs, and there are who make Meal of it, being mixt with

with Peaſe, Wheat, Rye, which proves very ſtrengthening to robuſt Labourers, as is obſerv'd.

II. *Ficus.*

Ficus communis, C. B. 471. *Ficus*, J. B. 1. 1. 173. Raij Hiſt. 1431. Tournef. Inſtit. 662. Boer. Ind. 2. 258. Pontederæ Antholog. 227. T. xi. Malpig. Anat. Plant. 67. T. 47. *The Fig-Tree.*

The *Tribe.*

Proper Obſervation, and where that is wanting good Authority, with ſuitable Remarks, being what I propoſed upon my firſt enterpriſing this Treatiſe, do all naturally meet upon diſcourſing on this noted Vegetable. A modern Alphabetical Deſcriber of the *Diſpenſatory Plants*, who pretends " he has not only conſulted the *Botanick* Authors " of greateſt Note but had recourſe to moſt of the Simples themſelves " in their natural Production; " has ſo ſuperficially ſkimm'd the Deſcription of this ſo uſeful a Plant, that he ſays, " it has no viſible " *Flowers*, they are ſuppoſed to be in the *Fruit:* " Whereas moſt *Botanick* Authors ſince *Cordus*'s Days could have aſſured him this is no bare Suppoſition but a real Truth. Being therefore unwilling ſo noted a *Fruit* ſhould paſs without a more exact Examination; I have choſen to exceed the ordinary Bounds, and inform the *Engliſh* Readers what *Latin* Authors have deliver'd on this Subject; adding my own Obſervations, that they may have Recourſe to the Gardens of the Curious, and ſatisfy themſelves of the Truth of what has been deliver'd; and make what farther Improvements upon ſtricter Examination they ſhall think fit. I need ſay nothing of its *Tribe*, ſince *unanimo omnium Authorum conſenſu, eſt* PLANTA *ſui Generis.*

The *Deſcription.*

By its uſual Stature, Groſſneſs of its Pith and Marrow, tho' not by the Texture of the Wood, it much reſembles *Sambucus*, or the *Elder-Tree*; and by the knotty Joints of the Branches it is not unlike the *Morus*, or *Mulberry*. As to the Timber, that of *Ficus* is looſe and ſpongy, and

and that of *Sambucus* firm and ſolid when of any Years ſtanding: The Root is more tough and firm ſpreading far in the Ground ſending many Fibres. The Trunk is often bended and crooked, the Bark ſmooth, the Branches much contorted, the Shoots groſs, the Leaves much larger than thoſe of the *Vine*, dark green for the moſt part *pentagonal*. The *Fruit* appears here and there inordinately on the *Branches* on ſhort Pedicles; the whole Tree abounds with a viſcid bitteriſh milky Juice.

I begin what farther Accounts I am to give from Authorities and add my Obſervations. *Pontedera* in order of time ſhould be laſt, but I quote him firſt, as being more particular. He mentions 3 Genera, *Ficus Sativa*, *Caprificus*, and *Erynoſyce*; he diſtinguiſhes them as to their production into *Annua*, *Bifera*, and ſome *Trifera*, i. e. puſhing forth *Embryons* once twice or thrice a Year.

Ficus Sativa has *apetalous* (rather *monopetalous*) *Flowers*, in ſmall oblong multifid *Calices* thick ſet and very numerous, occupying the inner Surface of the *Cavity* of the *Fruit:* And tending from the Circumference to the Center; whoſe *Embryons* have a *Tuba* but no *Stamina* or *Apices*.

Caprifici, or *Groſſi*; The wild or Goats-Fig have no Embryons nor *Tuba*: *Stamina* they have and *Apices*, but never ripen.

Erynoſyce have *Stamina*, *Apices*, alſo Embryons, but drop before they are ripe. Theſe of them he calls *Serotina* have neither *Stamina* nor *Apices*, only the *Ungues Squamoſæ* like the manur'd *Fig*. When they are at a certain Degree of Ripeneſs, they are eatable and of a ſweet Taſte. He looks on them as a kind of *Mongrels* betwixt *Ficus Sativa* and *Caprificus*.

Pag. 170. we have his account of the *Ficaria inſecta*; and *pag.* 175. he gives his opinion of the *Caprificatio*. *Tournefort* in his *Voyages* to the *Levant*, had brought him into this Diſquiſition, and his great Endeavours to withſtand what has been advanc'd concerning the Sexes of Plants, has made him inſiſt more largely on it: *Tournefort* informs us, that where the Figs are cultivated in greateſt plenty in *Greece*, the ripening of their Figs very much depends on the greater or leſs abundance of a certain Inſect, which terebrates into the very Center of the *Figs*, and by the Admiſſion of the Sun's Rays the whole fruit is diſpoſed to ripen the ſooner; therefore Care is taken when they are ſcarce, to have them convey'd from theſe *Caprifici*, wild or Goat Figs, to the *Sativi*. *Pontedera*, to elude the force of ſuch an Argument goes about to prove, that however they feed on the *Sativi* as well as *Caprifici*, yet they are no wiſe neceſſary. He informs us that *Ariſtotle*, *Theophraſtus*, *Pliny*, and moſt of the *celebrated Ancients*, have declared this *Caprificatio*

was a Practice in their days. And altho' he says we have no farther Account of this *Caprificatio* since that Time, yet he acknowledges such Insects are still to be observ'd in *Italy*; whether the same Spcies or not he is uncertain.

The account he gives of these *Culices* seems as if he design'd to afford the most potent Arguments in favour of what I contend for. He says, they are only to be observed in such Fruits as have *Stamina* and *Apices*, viz. *Caprifici* and *Erynosyce*; That there they nestle, lay their Eggs, are hatched and fed, and when capable carry away a great Abundance of the Farina, from the Apices upon their *Legs*. He adds, however it may be in *Greece*, they are never to be seen on the *Ficus Sativa* in *Italy*. Then he takes upon him to prove, however they may be necessary in the one Place, they are no wise necessary in the other. On this Account he uses several Arguments, too long to be repeated, and concludes, *Quapropter concludendum Caprificationem in Græcia, ob externas Causas esse necessariam nequaquam ob Ficus naturam cum alibi poma coquantur non Caprificata.*

But I leave him, and go on to consider what others have said. I begin with *Malpighi, pag.* 67. T. 27. no. 172. where the Reader will find an admirable Contexture of the Fibres of the *Parenchyma*, with the Situation and Origin of the *Embryons*, whom he may consult.

Tournefort has accurately delineated the *Fig* of several Bignesses, but has chosen a Figure too ripe for his Patern; for he only exhibits apart the *Embryo Seminis* surrounded by the *Capsula*, which was contain'd within the *Petal* and *Calix*, at the bottom of the Flower.

But the accurate *Boerhaave* affords greater Satisfaction; for he declares they are *Monopetalous Hermaphrodite Flowers*, which, with what I am now to advance, I hope will *serve* to clear the Truth.

This *Fruit*, by the several Sections I have made on it, both longitudinal and transverse, and in its different Magnitudes, convinces me it has hitherto been examin'd but when it was near to a full Ripeness; whereas its known a Flower ought to be look'd into, from the Swelling of the *Bud* to the total Expansion. Having taken this Method I made the following Remarks.

Whereas all other *Trees*, Shrubs, and *Undershrubs*, do, before throwing off the annual Surface for that Year, form three *Germina* or *Buds*, that for the *Leaf*, the *Flower*, and the Shoot; so this *Ficus* only forms two, because the Fruit and Flowers are the same; so that its very natural for *Ficus Sativa* to be *Bifera*, because where the Flower-bud in other Trees is form'd, here is the Formation of the Fruit itself. And

whereas

whereas there is a gradual Proceſſion from the Flower to the Fruit in other *Trees*; here *Flower* and *Fruit* go hand in hand and make an equal Progreſs towards Perfection. Again after the *Summer Setting* Time is paſt, when the *Autumnal Shooting* Time begins, when not only both Shoots and Leaves are puſh'd forth, for that ſame Year; here Proviſion is alſo made for the Autumnal Fruit of that ſame as well as for the three *Autumnal Shoots* for the next Year: ſo that ſo long as the *Autumn* continues to be ſeaſonable, this *Fruit* is capable to be brought to Perfection; but if Froſts or unſeaſonable Weather happens, the ſecond Crop muſt fail, and this dropping of the Autumnal *Fruit*, may be as much owing to the Decay of the *Leaves* as want of Strength in the *Fruit*, for the *Fruit* being of a thick ſucculent Subſtance might endure ſomewhat of itſelf; but when depriv'd of the uſual Defence by the *Leaves*, which upon the firſt Storm drop off, there being now nothing to defend them, they muſt alſo decay, ſo that its well there be one Crop of *Figs* in *England*, whereas the *bifera* are truly ſo in *France*, *Spain*, *Italy*, and other hot Climates, from whence they are imported.

My Obſervation on the Progreſs of the Fig itſelf is: The Fruit-Bud begins to be extended into a ſhort groſs Pedicle, on the Top of which is a ſmall Tubercle ſeparated from it by an Articulation: This Tubercle gradually encreaſes from a narrow Beginning to a turbinated *Fruit* in faſhion of a *Pear*, with ſeveral longitudinal protuberant Lines, well expreſs'd by *Tournefort*, until it terminate in an *Umbilicus* or *Navel*, like that of Apples, Pears, or other Pomiferæ, with a *Roſaceous Flower*; upon opening one of them, longitudinally, while the Flowers are in their full Perfection, there is externally to be obſerv'd a ſolid compact Subſtance, one or two Lines thick; next to that is a Subſtance not ſo compact but looſe, making the Appearance of parallel Fibres or Lines from the Circumference to the Center; the third Row conſiſts of oblong tubulous Flowers on the Top of moſt minute Tubercles, and deriving their Origin from this ſecond Series of Fibres; ſo that being open'd longitudinally there is the Reſemblance of a Kidney, externally is the compact glandulous Subſtance for percolating the Urinary Particles in the Kidneys, and attenuating the Nutritive Particles for forming of the minute Flowers and Embryons in the Figs; the ſecond Row are ſo many excretory Ducts for the Urine and Tubuli to convey the attenuated nutritive Juice to the *Fig Flowers*, for this lacteal Juice is at firſt ſo groſs, the Embryons and Flowers are ſo minute they could never have been form'd without ſome ſuch wonderful Contrivance to attenuate the Matter of which they are form'd within

within ſo ſmall a Bounds, neither does this gainſay *Malpighi*'s admirable Contexture of Fibres, which may be interwoven with theſe parallel tranſverſe Fibres, and which tend directly to the Baſis of the Flowers. This Cavity is for the moſt part triangular, and ſometimes oval and pointed, *i. e.* the Flowers begin at a point towards the Pedicle, a Row of Flowers on each Side poſſeſs the Surface of the Cavity till they come near to the Baſe parallel to each other, like ſo many Keys of an Organ or Spinette. As they draw near to the Umbilicus or Navel, this Cavity either becomes flat with another Row of Flowers making a Triangle, or both Rows from the Sides meet in a Point at the Navel, as they did at the Pedicle; each of the Flowers are expanded at their Border like a Trumpet, and divided into 4 or 5 pointed Segments, being, generally ſpeaking, as *Boerhaave* has with *Monſ. Geoffroy* well obſerv'd, Hermaphrodite Flowers; for beſide the Embryon with its crooked *Tuba*, I have taken out ſeveral proportionally large *Apices* from ſome Flowers, in others I have ſeen the *Stamina* ariſing from the inner Surface of the ſingle Petal, which ſhews that *Stamina* and *Apices* are deſtinated to each of them, tho' the Minuteneſs of the Flower does not allow them to arrive at their full Bigneſs, as we ſee in *Lithoſpermum* tho' it be Gymnotetraſpermos, yet ſeldom do above two ripe Seeds ſucceed to each Flower; alſo in *Verbena*, its oblong tubulous Calix ſeldom has room for above two ripe Seeds to each Lip-Flower, and very often theſe abort alſo; Yet none will deny but both theſe Plants ſhould have four Seeds contain'd in each Seed-Veſſel. From what is ſaid if I may be allow'd to account for what another repreſents to be Fact, if according to *Pontedera*, the *Ficus Sativa* in *Greece*, has only female Embryons; here the *Caprificatio* of the Ancients and *Tournefort* muſt be neceſſary in order Impregnation. But in *Italy*, where both Hemaphrodite and Male Flowers are intermixt in the ſame Fruit, there is no ſuch Neceſſity of this *Caprificatio*, there being Farina enough in each Cavity to anſwer the Deſign. *Pontedera* indeed ſeems to deny any Male or Hermaphrodite Flowers to the *Italian Ficus Sativa*, but when he allows his *Erynoſyce* to have them, and that where they are, he confeſſes they have both a delicious Taſte, and that they often come to Perfection, its plain the *Apices* muſt be aſſiſting in the one and why not in the other, and this is farther confirm'd when he ſays this Inſect neſtles chiefly in the *Caprifici* where the Male Flowers abound, and that when they fly abroad they carry a great Quantity of this Male Duſt along with them, which 'tis preſumable is depoſited either upon the *Sativa* or *Erynoſyce*; for tho' they do

no

not neſtle in, yet they may feed on them; and in Retribution beſtow this prolifick *Materies* to further their productive Quality. And there is nothing more certain, than that, according to the Climate or Seaſon, the male Flowers more or leſs abound as we ſee in moſt of the pomiferous and pruniferous Trees, with Roſaceous Flowers, as Apples, Apricots, &c. ſo that tho' *Ficus Sativa* have only female Embryons in *Greece*, it may have Hermaphrodite Flowers in *Italy*. By what is ſaid, it appears the Vegetation and Maturation of this *Fruit*, is perform'd after a quite different Manner, from all others. I have elſewhere remark'd that a ſmall *Pedicle*, which only tranſmits a crude, raw, undigeſted Juice, is capable to nouriſh the moſt delicate *Flowers*, and the moſt delicious *Fruits*, by means of the *Vaſa præparantia*, and the frequent reiterated Circulation of the Sap in them; by which theſe Particles are at length ſo attenuated as to form the moſt refined Subſtances in the whole Plant. I have alſo taken notice, that the groſſer Particles ſtill occupy the Circumference when the nearer it approaches to the Center, there is the moſt ſubtilized and duly prepar'd Subſtance, ſuch as the prepar'd male and female Parts for Generation. Thus we ſee a *Tulip*, the *flowering* Bud is at firſt of an *herbaceous* Colour, as the aſcending and deſcending Sap is more attenuated the nearer it approaches to the *florid Colour*; upon the Expanſion, the inner Surface of the *Petals* firſt ſhew the Elegancy and exquiſite Refinedneſs, whether in the Stripes or not which in a very little time manifeſt themſelves over all the Subſtance of the *Petals*. When the *florid* Part is paſt, the ſame Juice being both more attenuated as it is confin'd to aſcend in a direct Line at the Center, and being impregnated by the male Effluvia, as we ſee in teeming and conceiving Women, firſt ſwells the *Ovarium* or *Seed-Veſſel*, then forms the adventitious Subſtances of *Placenta* and *Cotyledons*, then encreaſes the outer Integument of the *Ovum* and the moſt ſubtile Parts; laſt of all paſs by the perforation to the Point of the Radicle, and by degrees form the *Seed-Leaves* and *Plume*, the *primum Principium* of the *Plant*. In the Vegetation of the Fig, on the contrary, the *Center*, which in all other Flowers and Fruits contains the moſt ſubtile Parts, is only an empty *Cavity*; the Circumference, as in other caſes, is compos'd of the *groſſeſt Subſtance*, where after repeated Circulations betwixt it and the Pedicle, and from thence to the Body of the Plant, and ſo on as in other Fruits, as the Particles are attenuated they are receiv'd into the Orifices of the *Tubuli*; which compoſe the ſecond Row, or more looſe Texture of the *Parenchyma*; being thus *percolated as by the Glands* of the *Kidneys*, after a ſhort Progreſs

they meet with yet more ſubtile *Strainers*, *viz.* the Calices of the minute *Floſculi*, that from thence may be form'd the *monopetalous Petalculi*, (as it were) with their moſt minute *Embryon* and *male Apparatus*. I have choſen this Way of Reaſoning to given a clearer Idea of the Circulation of the *Sap*, and to ſhew that the moſt ſubtile Subſtances can only be found by the continual Influx and Reflux of the Sap, thro' appropriated Veſſels, as the only mean to ſubtiliſe and refine ſuch Particles as compoſe the Flowers and Fruits of Plants. And being thus engag'd, let me add another Thought concerning the Maturation of this *Fruit*; we have ſeen what *Tournefort* and *Pontedera* would make of the *Caprificatio*, I am of opinion 'tis ſerviceable another Way, *viz.* by being aſſiſting at the Perſpiration of ſuperfluous Particles. The Analogy betwixt Plants and Animals is now paſt doubt, and in nothing more does it appear than in the Tranſpiration, where when the circulating Fluid comes by its Quantity to exceed the Capacity of the Veſſels in which 'tis contain'd, Proviſion is made of Pores throughout all the external habit of the Body, whether of Plants or Animals, thro' which what Particles are ſuperfluous may freely paſs into the open Air; whereas were they ſtill retrain'd there would anſwer what is called a *Plethora*, by which theſe Fluids would be ready to ſtagnate, make a Diſruption of the containing Veſſels, and in a Word to put all the Animal and Vegetable Œconomy into diſorder and confuſion; ſo that the uſe of theſe Inſects in *Greece*, may be more neceſſary than in *Italy*; for in the one the ſcorching Heat may ſo corrugate the Pores, that without the aſſiſtance of theſe Perforations or Terebrations to open the Pores, or make new Orifices, the Circulation could not be duly perform'd, nor the Fruit brought to a deſireable Maturity; I purpoſely omit here the conſideration of the Air, or its effect on Plants, that being a Subject of another nature, I may hereafter take an Opportunity to diſcourſe of it at more Length; ſomething may be expected from me in this Place, concerning the manner of Curing and Managing of them abroad when they are to be exported; but as that is a Practice not like to take place here in *England*, where what they ripen is only for preſent eating; as I can deliver nothing concerning it from proper knowledge, ſo I have not thought it neceſſary to make great Enquiry about what can be of no Uſe with us. What elſe remains to be diſcourſed on as to the manner of Propagation, Culture, and Management of the *Fig-Tree*, with the variety of Species cultivated here in *England*, the *Ingenious Mr. Miller* has ſo largely diſcourſed on theſe Particulars in his *Gardiners Dictionary* that I recommend it to the Reader's Peruſal.

Virtues

Virtues and *Uſes.*

We ſee the moſt valuable temporal Bleſſings the Children of *Iſreal* enjoy'd in the Land of Promiſe, were the Product of their Corn, Wheat eſpecially, the Vine, the Fig-Tree, and the Olive; and the Deprivation of them was one of God's heavieſt Judgments. "The bringing a "Famine on the Land, when the Fig-Tree did not bloſſom, and the "Labour of the Olive fail'd; neither was there any Fruit in the "Vine." Our Saviour pointed out a favourable approaching Seaſon by the Fig-Tree puſhing forth her Buds, and he choſe to ſatisfie his Hunger by the eating of Figs; as Almighty God in the Old Teſtament appointed the Performance of a Cure, by the ordinary means of a Cataplaſm of Figs apply'd to *Hezekiah*'s peſtilential Boil: ſo our Saviour propos'd a Salutiferous *Balſam* of *Wine* and *Oil* fit to be made uſe of in the new, which paſſing by the name of the *Samaritan Balſam* is in great Eſteem among the Inhabitants of thoſe hotter Regions to this Day. There is not any Simple that with ſo little Preparation can be brought to anſwer the deſign as *Figs* are. Being taken out of the Veſſel in which they are imported, and eat, they immediately become our *Food*, being *nouriſhing*, *ſtrengthening*, and *reſtorative:* They are agreeable to moſt of *Palates*, and ſeldom offenſive to the weakeſt Stomachs; by their balſamick Particles they *obtund* the *Acrimony* of the Blood, which renders them, and whatever Preparations are made of them, ſo effectual in *hectick* and *conſumptive* Caſes; a Glaſs of Wine, Sack, or a little Brandy with a few Figs, taken in a Morning upon a Journey, or before any ſuitable Exerciſe, proves an excellent *Stomachick* and ready to create an Appetite. *Pectoral Ptiſans*, *Infuſions*, *Decoctions*, *Strengthening Broths*, *Gellies*, *Electuaries*, and *Linctus*'s of the *Pulp*, have all of them Figs for a principal Ingredient; in a word, whatever be the Diſtemper or Diſorder in the Breaſt; as *Aſthma*, *Phyſis*, *Febris Hectica*, *Tabes*, or that has any other Tendency to a *Conſumption*, *Figs* are always effectually uſed.

Externally, they are proper Ingredients in *Emollient*, *Diſcutient*, and *Suppurating Cataplaſms*, with *roaſted Onions Ung. Baſil. Dialtheæ* with or without the *Farinæ*, and mix'd with other *emollient* and *diſcutient* Ingredients *ad libitum*, in *Bubo's*, *Carbuncles*, *ſchirrous ſcrophulous* and *cancrous Tumors*, *indurated Glands* in the *Axilla Parotides*; either roaſted and apply'd hot alone or mix'd as above, are effectual alſo to the *Anus*, in caſe of what they call the blind *Hemorroids*, when there is hazard of Suppuration

In

In ſwelling of the *Uvula*, *Quincey*, tumify'd Tonſils, ſore Throat, and Sharpneſs of Humours in them, with roaſted Figs, or a Gargariſm of them is good.

Filipendula.

Filipendula vulg. an Molon Plinij. C. B. 163. Tournef. Inſtit. 293. Hiſt. des Plantes 441. *Filipendula* J. B. 3. 27. 189. Raij Hiſt. 623. Synopſ. Stirp. Brit. 3. 259. Moriſ. Hiſt. 3. 322. Dropwort.

The *Tribe.*

'Tis plac'd among the *Umbelliferæ improprie dictæ* by *Moriſon* and *Bobart*, for which they are reprimanded by other Botaniſts; becauſe the umbelliferous Plants of late times are not eſtem'd ſuch as have a proper Pedicle belonging to each *Flower*, ſeveral of which proceed from the ſame Origin at the Extremity of the common Pedicle; but ſuch as have two *Seeds* ſucceeding to each *Flower*; however as theſe *Flowers* being gathered together into *Umbells* or *Tufts*, firſt diſtinguiſh'd them by the name of *Umbelliferæ*, and as Dr. *Moriſon* was ſenſible this Plant departed from that general Rule, becauſe ſeveral *Seeds* ſucceed to one *Flower*, it was not without Reaſon he call'd them *Impropriæ*. 'Tis among *Tournefort's Flores Roſacei* a moſt complex Claſs, where only the Petals being in *orbem poſiti*, brings them together without any other mark of diſtinction. Mr. *Ray* takes Notice that ſome objected againſt his calling theſe *Flowers Flores Staminei*, which would ſeem to confound them with thoſe of another Claſs, and he has prudently altered the Word into *Staminoſi*, he otherwiſe brings it in with the *Semina nuda polyſpermæ*; *Herman* and *Boerhaave* make it alſo *Gymnopolyſpermos.*

The *Deſcription.*

It has numerous partly knobby, partly fibrous Roots, blackiſh without and white within, proceeding from a groſs Head, and hanging down like ſo many *Thrumbs*, to which adhere ſeveral oblong or round *Tubercles*, about the bigneſs of Olives. The long, narrow, dark green, pinnated *Leaves*, with Segments much larger than theſe of *Milfoil*, are diſpos'd

diſpos'd upon a Midrib like thoſe of *Agrimony*, or *Argentina*, with a ſhorter betwixt two longer denticulated *Pinnæ* lie flat on the Ground. The naked ſtreight round ſtriated Stalk, ariſes the ſecond Year ſomewhat branched at the upper Part, one Span or one Foot high. The numerous *odoriferous Flowers*, reddiſh without, and white within, are *hexapetalous*, proceeding from a *monophyllous* denticulated *Calix*, divided into forty Segments, bending downwards, with numerous Stamina, ſurrounding a groſs round Piſtillum, like a *Tun* or *Barrel*, compos'd of Sixteen or Seventeen *Embryons* plac'd edge-wiſe, which afterwards become ſo many *flat Seeds*. It grows in dry Banks, Meadows, and Paſtures.

Virtues and *Uſes.*

It is of no great Uſe in Phyſick; ſome alledge it is diuretick; others recommend it for the *Fluor albus*; it is alſo ſaid to be good in *Hernia*'s and for *ſcrophulous Tumors*, *per ſignaturam*, becauſe of the knobby *Root*, and there are who preſcribe it in medicate Infuſions, in Wine or Ale on that account. To me the Roots ſeem to be potent Aſtringents, ſo that their external Uſe is in repelling of *ſcrophulous* Tumors and *Hernia*'s; but internal Aſtringents can be of no great Uſe in ſuch caſes.

Filix. IV.

1. *Filix mas non ramoſa dentata* C. B. 358. Tournef. Inſtit. 536. Hiſt. des Plantes 473. *Mas dicta ſive non ramoſa* J. B. 2. 37. 337. Raij Hiſt. 143. Moriſ. Hiſt. 3. 578. *Male Fern.*

2. *Filix ramoſa pinnulis obtuſis non dentatis* C. B. Tournef. Raij Hiſt. *ramoſa repens vulgatiſſima.* Moriſ. *ramoſa prior Trago ſive ramoſa repens* J. B. *Female Fern* or *Brakes.*

3. *Filix ramoſa non dentata florida* C. B. Raij Hiſt. 151. *Oſmunda Regalis vulg. & paluſtr.* Tournef. *Regalis ſive Filix florida* Park. 1038. *Filix Botrytes ſive Major, pinnulis non dentatis ex adverſo naſcentibus* Moriſ. Hiſt. 3. 593. *Oſmund Royal* or *Flowering Fern.*

The *Tribe.*

Theſe may be called *Capillares majores* in Contra-diſtinction to the *Adianta* Decad I. They are ſaid to be *flore fructuque carentes*, by *Tournefort*, tho' none delineated their *Fruit* more accurately than himſelf. They are juſtly ſaid to be *Seminibus minutiſſimis* by Mr. *Ray*, the firſt two are called *Epiphylloſpermæ*, tho' the third be ſaid to be florid, yet the other Species too are ſo as much as it. *Tournefort* has examined the Fruit or *Capſules* of all of them with great Accuracy, but I ſuſpect it has been when the double Rows of them on the Back of the Leaf, began to turn blackiſh, or when the Capſules were ripe; for who will attentively behold the Back of a *polypod Leaf* early in the Summer, they may obſerve even with the naked Eye, the yellow Apices of the *Flowers*, preceeding the Fruit, which are faded when theſe parts begin to turn *duſkiſh* or black; ſo that I have no boubt but theſe Capillares are endow'd with regular *Flowers* alſo, tho' by their Minuteneſs have not yet been fully diſcovered. All of them have a ſtreight round tough ſmooth Coſta Media, or Midrib, ariſing from the Root, and mounting to the Extremity naked for ſome Length, and then ſending forth other ſmaller *pinnated Leaves* on each Side, theſe below larger and longer, leſſning and ſhortening by degrees as they aſcend. They are alſo divided into *Ramoſæ* and not *Ramoſæ*, the Ramoſæ have other lateral Coſtæ, which proceed on each ſide from the perpendicular one. The *non Ramoſæ* are without any of theſe Branchings off, the *Filices* and *Filiculæ* or Adianta are alſo diſtinguiſhed according to the Thickneſs of their *Pinnæ*, and manner of their Dentations.

The *Deſcription.*

1. The firſt is *unbranched* with *long dented Pinnulæ*, the Root hard black intricate with few Fibres: It is one of the *Epiphilloſpermæ.*

2. The ſecond has large pinnated *Leaves* ſending Branchings forth on every Side but not much indented; the hard black tough Root is not ſo intricated as the former, but reaching ſtreight and deep in the Ground, is ſeldom to be trac'd to its other extremity, but breaks by ſtrong pulling, without any radical Fibers (a thing not uſual) when it has penetrated very deep it runs far below Ground, and all round never

ver can be rooted out. Cut this Root tranſverſely and there appear the form'd Root and Branches, as it were of an *Oak-Tree*, tho' 'tis probable this may be the ſame which *Loeſelius* has obſerv'd in the *Oſmunda Regalis*, when he ſays *Radix rotunda diſſecta geminæ Aquilæ figuram format.* So that what the *Germans* eſteem for a *double Eagle*, we look upon as an *Oak*; the Truth is this, only the Sap-Veſſels aſcending and deſcending in the Root, ſtill obſerving the ſame Situation as we ſee the Blood-Veſſels do in the Animal Body.

3. The third is a large elegant ſtately *Plant*, one of the unbranch'd *pinnated Leaves*, light green, ſmooth, and no wiſe dented in the Edges; ariſes three or four foot high, among theſe there are other Leaves of the ſame Heighth with three or four Branchings on the Top, endow'd with ſhort Pinnulæ curled or ſhriveled up, full of the *Capſulæ* or *Seed Veſſels* with the former, but otherwiſe diſpos'd; the Root of this and the firſt are very intricated, but the ſecond ſimple as is ſaid. The *firſt* grows in Woods, moſſy and ſhady Places, on Bank-ſides, and near to the Roots of Trees. The ſecond very frequent on barren Places, and is a Plague by its ſpreading every where. The third grows at the ſides of Lakes, and other watry Places but not very frequent. 'Tis well known by the *London* Herboriſers, to grow in a Bog at the Back-ſide of *Woolwich*, near the Warren.

Virtues and *Uſes.*

I dare pretend to deliver nothing certain concerning the Virtues of theſe *Plants.* The ſmall *Capillaries*, their Congeners, 'tis probable may be good Abſorbents for correcting of Acrimony in hectick Caſes; but the Texture of theſe larger Plants may be more ſtrict, and the Particles too groſs for ſuch Uſes; as we ſee Pullets, Veal, Lambs, Pigs, Goſlings, eat more tender than the ſame Animals when at full Age and much larger. So Plants of the ſame Virtues, are not of ſo good Digeſtion, when the Differences in Bigneſs is ſuch as between the *Adiantha* and *Filices.* I am not very fond of a traditional handing down what Antiquity has inform'd us, unleſs the manner of the Operation can in ſome meaſure be accounted for. One ſays the *Radix Feminæ* is a ſecret againſt Worms; that may well be by its Particles being rigid and ſcabrous; but I know not who can truſt to the *Filixmas*, being the cauſe of Barrenneſs; the *Rad. Oſmundæ regalis* may be good in the Rickets, *&c.* as a ſubaſtringent Strengthner, but as there are other

Simples

Simples on whoſe Operation we may more fully rely, ſuch obſcure Remedies may be let alone. Certain it is that they all very much abound with a fix'd Salt, eſpecially the Femina, which they pull up in the Seaſon and burn it, ſelling the Aſhes at a good Price to thoſe who are employ'd in the whitening and bleaching of Linnen-Cloth in *Scotland*, it being thought preferable to that of Pot-Aſhes, whoſe *Salts* being too acrimonious are often ſuſpected to rot or burn the *Cloth*, in the Lee, like that of Quick-Lime.

V. *Fœniculum.*

1. *Fœniculum dulce* C. B. 147. Moriſ. Umb. 3. Raij Hiſt. 458. *Dulce & majorj ſemine albo* J. B. 3. p. 2. 274. Tournef. Inſtit. 311. Hiſt. Oxon. 3. 270. *Fœniculum ſive Marathrum vulg. dulce* Lob. Icones 775. Sweet Fennel.

2. *Fœniculum vulg. minus acriori & nigriori ſeminei* J. B. Tournef. Ra i Hiſt. *vulg. Italicum ſem. oblongo guſtu acuto* C. B. *ſive Marathrum vulg.* Lob. Icon. Moriſ. Umb. Hiſt. Oxon 3. Common Fennel.

3. *Fœniculum perenne capillaceo fol. odore medicato* Tournef. *Meum foliis Anethi.* C. B .143. *Athamanticum* Moriſ. Umb. *vulg. tenuifol.* Hiſt. Oxon. 3. 270. Raij Hiſt. 432. *Radix urſina* J. B. 3. 2. 27. 11. Spignel, by ſome called Scots Gentian.

4. *Fœniculum orientale Cuminum dictum* Tournef. *Cuminum* Moriſ. Umb. 4. Hiſt. Oxon. 3. 271. *ſemine longiore* C. B. 141. *Cyminum ſive Cuminum ſativum* Raij Hiſt. 433. J. B. 2. 3. 27. 31. *Cuminum Dioſcoridis* Lob. Icon. 742. Cumin.

5. *Crithmum marinumſive Fœniculum marinum minus* B. P. 281. Tournef. Inſtit. 317. Moriſ. Umb. 20. Hiſt. Oxon. 3. 289. Raij Hiſt. 457. *multis ſive Fœniculum marinum* J. B. 3. 2. 27. 174. Rock Sampire.

6. *Peucedanum Italicum* C. B. 149. Tournef. Inſtit. 318. Moriſ. Umb. 36. Hiſt. Oxon. 3. 312. J. B. 3. 2. 27. 36. Raij Hiſt. 416. *Sow* or *Hogs Fennel.*

The *Tribe.*

I have diſcours'd ſo fully, Decad II. on the Notes and Characters which conſtitute the *umbelliferous Plants*, in the modern Acceptation, that I need only deſire the Reader to conſider what is advanc'd there, and

and proceed to give the diſtinctive Notes of the Plants, join'd together in this Place, chiefly on account of their *foliorum diviſura*. They have all *Folia multifariam ſive tenuiſſime diviſa*, called ſometimes, becauſe of the tenuious and fine Texture of their *Segments*, *Capillacea*; and becauſe of the *Fœniculum*, which introduces the reſt, *Fœniculacea*; they are not always the ſame by their *Umbels* and *Colour* of the *Petals*; but correſpond pretty much by their *Seed*, which are *Semina oblonga, craſſiuſcula, gibboſa, ſtriata.*

The *Deſcription.*

1. Sweet Fennel, has an annual fibrous, not very carnous Root; two narrow oblong *Seed-Leaves*, the *Flowering* Stem ſoon mounts, cloath'd with very fine *odoriferous*, dark green *Leaves*, cut into very fine ſmall Segments; the *Umbels* on the Top, large, and flat; the *Petals* yellow and crumbled in. The *Seeds* are oblong pointed gibbous on the one, and plain on the other, ſweet ſcented and white. It is ſown in Gardens, but not for common Uſe, Sweet Fennel-Seeds being chiefly imported.

2. Common Fennel, has a perennial carnous Root, puſhing forth the *flowering Stem*, the ſecond Year when the *Root* becomes hard and wooddy, being covered with a ſafe carnous Bark. The fine cut Leaves, like the former, and vary into a reddiſh, dark green Umbels, the ſame *Seeds* not ſo white, nor ſweet ſcented. It is often planted in Gardens. I have ſeen it grow wild, but do ſuſpect it to be an *Ejectamentum*, being uſually near Houſes and Gardens. The Root endures ſeveral Years, but that which produces the flowering Stem periſhes annually, as I have obſerved, in diſcourſing on *Cinara* and other perennial Roots.

3. *Meum*, eſteem'd a *Fœniculum* by *Tournefort*, only agrees with it in the fine Texture of the Leaf, for the perennial Root differs both in Texture and Taſte, it being blackiſh without, not ſo large, propagating by ſeveral portions at the Top, endow'd with large *Barbulæ*, or *Beards*, amidſt of which the crumbled up *Germina* of the Leaves, ariſe in the Spring, with dark green, much thicker ſet, and ſhorter *Pinnæ*: the flowering Stem not above one foot high, whereas the former ariſes two three or four Feet. The Umbels of the Flowers white, the ſtriated Seeds not ſo large and darker. It grows in ſeveral mountainous Places in the *Highlands* of *Scotland*, and in the *Oechal*

Hills in *Fife*, being there commonly called Gentian or Baldmony.

4. *Cuminum* is a low Annual Plant, with the ſmall Segments very much diſpers'd, very little Umbels of Flowers, not above four or five together, to which ſucceed ſo many Pairs of oblong pointed ſtriated high ſcented Seeds. It is ſown in the Gardens of the curious but not plentifully.

5. *Rock Sampire*, ſo called to diſtinguiſh it from *Kali Geniculatum*, commonly called *Sampire*, in *Holland* in *Lincolnſhire*, has a thick *Root* jointed above and fibrous *below*; it is of a much lower Stature than that of *Fœniculum vulg.* to which it otherwiſe has ſome Reſemblance. The *Leaves* are tripply divided into thick, groſs, ſucculent, ſharp *pointed*, and ſometimes prickly *Segments* upon *Foot-ſtalks*, the *Umbels* are yellow, the Seeds are pretty groſs, flattiſh, and ſtriated. It grows frequent on Rocks on the Sea-Coaſt, and is otherwiſe called Sea-Fennel, with a ſaltiſh aromatick Taſte. It is called *Sampire*, from the *French* and *Italian* Words, *Saint Piere*, as if they meant St. *Peter's Herb*; *S. Pauli* ſays it is not otherwiſe known in *Denmark*, than by the Pickle imported from *Spain*, and other Parts; and to be had at the Tables of the richer ſort of People, both there and in *Germany*.

It is of no *medicinal* Uſe, but by it's *aromatick* and ſaltiſh Taſte, it proves agreeable to the Palate in Pickles, and comfortable to the *Stomach*.

6. *Peucedonum*, or *Hogs-Fennel*, is a low Plant with very narrow tripartite Segments, a large Umbel, yellow Petals, and broad, flat, tough Seeds. It is alſo ſown in Gardens.

Virtues and *Uſes.*

The *Seeds* of *Sweet-Fennel* is, chiefly uſed, of an agreeable Taſte and Smell, they are great Carminative Diſcuſſers of Wind, and eaſing the griping of the Guts, whether in Clyſters, or taken at the Mouth; their chief Uſe is to correct the Acrimony and Flatulencies in ſeveral Purgatives, as Senna, *&c.* they are often an Ingredient in ſtomachick and medicate Infuſions in Wine or Ale, alſo in carminative and digeſtive Powders. The Bark of the Root of Common Fennel, is one of the opening Roots in the *Shops* for *Ptiſans*, Broaths, *&c.* The Seeds are alſo uſed, but not ſo often as the other *Spignel* Roots, are of great Demand in ſome Places, where the Inhabitants infuſe them in Ale, and eſteem them good Stomachicks: They are frequently preſcrib'd in

medicate

medicate Infuſions, they are diſcutient and hyſterical. There is ſuch an Affinity betwixt them and *Rad. Leviſtici* in the Taſte, and *Barbulæ* that ſurround the upper Part of the Root, that were it not for the *Folia majuſcula lobata* of the latter, and that the whole Plant is much bigger, I ſhould chuſe to claſs them together; and as to the medicinal Virtues, they are much the ſame.

4. *Cumin-Seeds* are moſt potent Carminatives, chiefly of uſe in Fomentations, the Taſte not being always agreeable. They uſe to ſtrow dead Corps with them in hot Weather. They are a chief Ingredient in Drinks for Horſes.

5. *Hog-Fennel* is eſteem'd a good Carminative with the reſt, *deobſtricent* and aperient, provoking the Menſes, but it is not much uſed in Phyſick.

VI. *Fœnugræcum.*

Fœnugræcum Sativum, C. B. 348. Tournef. Inſtit. 409. Moriſ. Hiſt. 2. 166. Raij Hiſt. 54. J. B. 2. 17. 363. *Fenugreek.*

The *Tribe.*

This is one of the Papilionaceæ Siliquoſæ, with a bended Pod; and hard corner'd, or Kidney Seeds.

The *Deſcription.*

The *Seed Leaf* of this Plant is long, ſmooth, narrow, and bended. The flowering *Stalk* ariſes ſtrait, about one or one and a half Foot high, adorn'd with alternate, trifoil, oblong, blunt *Leaves.* The *papilionaceous* white Flowers, leſs than thoſe of *Peaſe*, ariſe from the Boſom of the *Leaves*, to which ſucceed long, ſlender, horn-like Pods, containing ſeveral very hard corner'd *Seeds.* The annual Root is hard and wooddy. It is ſown in the *Gardens* of the Curious, but it's chiefly imported in Quantities from *Germany* for Uſe.

Virtues

Virtues and *Uſes.*

The Seeds are ſo hard that they will not be pounded in a Mortar, but muſt be grinded in a Mill: They are *emollient*, *diſcutient*, and *digeſtive*, chiefly us'd for *Cataplaſms* with *Farina ſeminis lini fabarum Fl. Meliloti*, &c. for diſcuſſing or maturating of hard indurated Tumours. It is alſo an Ingredient in *Mucilages*, for *Ol. de Mucilaginibus Empl. de Mucilag. Diachylon magnum.* It is alſo us'd in emollient Clyſters. Farriers make much uſe of it in Drinks for the Cold in Horſes.

VII. *Fragaria.*

Fragaria, C. B. 8. 320. Tournef. Inſtit. 295. Raij Hiſt. 609. Moriſ. Hiſt. 2. 186. *Ferens Fragaria rubra*, J. B. 3. 17. 394. *Fragaria* vel *Fraga*, Dod. pempt. 672. *Strawberry.*

The *Tribe.*

Tournefort places this among his *Roſaceous Flowers.* It is one of the *Gymnopolyſpermæ* with *Herman* and *Boerhaave.* *Moriſon* makes it one of the *Trifolia Pentapetala*, and Mr. *Ray Semine nudo Polyſpermos.*

The *Deſcription.*

It has an hard wooddy Root, ſeveral infirm Stalks running along the Ground, emitting frequently and alternately trifoliated, light green, nervous, denticulated, oblong, broad pointed *Leaves*, three proceeding from the ſame Origin upon long Pedicles. The Capreols, or Climbers, run alſo along the Ground, catching hold of what is next them. The round Stalks are jointed, emitting radical Fibres, by which 'tis propagated, and ſpreads all over the Ground. The *Flowers* in Cluſters, with or without common *Pedicles*, are white *pentapetalous roſaceous* from a *monophyllous Calyx* divided into ten *Segments*, by which it correſponds with the *Pentaphylla*, ſurrounding many *Stamina* and *Apices*, in the Center of which is the groſs round *Embryo fructus*, which afterwards becomes an oval or round eſculent *Berry*, ſome white, others red,

red, larger or leſs according to the Species or Culture. They grow frequently in Woods and ſhady Places: They increaſe in Bigneſs by Culture; but thoſe call'd the *Virginia Strawberries* have been imported, and are preferr'd to any other Species.

The Leaves of Strawberries are cooling and *ſubaſtringent*, good in *Gargariſms* for ſore Throats. They are alſo us'd with *Sorrel*, *Violet Leaves*, *Agrimony*, and *Fumitory*, for *Clarify'd Whey* in the Summer. The eſculent Fruit at the Tables is well known; a Gelly may be made of them, ſerving for the ſame Uſes as *Raſps*, *Currants*, *Barberries*, &c.

VIII. *Frangula.*

Frangula. Dod. pempt. 784. Tournef. Inſtit. 612. Boer. Ind. 11. 231. *Alnus nigra Baccifera*, C. B. 248. J. B. 1. 560. Raij Hiſt. 1604. Black-Berry bearing Alder.

The *Tribe.*

This is one of *Tournefort*'s Trees or Shrubs with a *roſaceous Flower*, and juſtly plac'd among the *Baccifer*æ by Mr. *Ray*, tho' he continues the Name *Alnus*, out of a due Regard, I ſuppoſe, to the *Bauhini.*

The *Deſcription.*

'Tis rather a *Shrub* than a *Tree*, ſeldom aſcending with one *Trunk* (which I take peculiar to the Denomination of a *Tree*) but ſending forth ſeveral ſmall Twigs from the Root, with a ſmooth duſkiſh outer Bark; but a yellow inner Rind, giving a Saffron Tincture. The broad pointed nervous Leaves reſemble thoſe of *Alder*. The ſmall white Flowers in Tufts, or a Spike from a *monophyllous quinquifid Calyx*, are *pentapetalous roſaceous*, the *Petala* ariſing from the Interſtices betwixt the Segments of the Empalement, ſurrounding twenty five Stamina and Apices. The Piſtillum becomes a round ſucculent black Berry, each containg two ſmall flat *Seeds*. It grows in the ſhady Woods, as in *Thorny-Holm* in *Whinfield-Foreſt*, *Weſtmorland*; in the Woods about *Hamſtead*, and in the *Hedge* between *Dunſtable* and *St. Albans*, near *Kerby-Bridge*.

Virtues and *Uſes.*

The *Cortex interior* is in uſe ; it abounds with an acrimonious yellow *Juice.* It is ſaid to be good in the *Dropſy* and *Jaundice* (I ſuppoſe becauſe of the Signature) by evacuating of ſerous Humours and reſerating Obſtructions ; but the internal Uſe of ſuch acrid Medicines are not always to be recommended. 'Tis probable the early Obſervers of this, not being a true Alder becauſe of the different *Flower* and *Fruit*, might have impos'd the Name of *Frangula* on it, from *frango*, becauſe of the *Fragility* of its Twigs and Branches, which conſiſting of a white Wood, it is of ſo looſe and brittle a Texture, that rather than bend, as other green Twigs do, the firſt and ſecond Year it will readily break.

Fraxinella, vide *Dictaminus.*

IX. *Fraxinus.*

Fraxinus excelſior Flore petaloide mas, Boerhaave Ind. 2. 171. *Excelſior*, C. B. 8. 416. *Fraxinus vulg.* J. B. 1. 174. Tournef. Inſtit. 577. Raij Hiſt. 1702. *The* Aſh-Tree.

The *Tribe.*

'Tis a high Tree with apetalous *Flowers*, ſometimes ſeparated, and at other conjoin'd with the Embryon of the *Fruit.*

The *Deſcription.*

This is a tall ſtrait *Tree*, whoſe *Roots* ſpread far in the Ground, endowed with a ſmooth aſh-colour'd *Bark.* The *pinnated Leaves* ariſe by Pairs from the Branches, conſiſting of four, five, or ſix oppoſite dark green, oval, or pointed *Pinnæ :* The Cluſters, or Racemi, of *petaloid Flowers*, with a double Stylus, appear in the Spring in ſome of the Species, while the oblong *flat Embryo* is to be ſeen in others, with a bifid Tuba. This afterwards becomes a Fruit like a Bird's Tongue,

Tongue, cover'd with a Capſula of the ſame Figure. 'Tis indigenous, growing naturally in Woods and Coppices, where it's not nice as to the Soil, deriving its Nouriſhment often from the Top of Craggs with ſhallow Earth, and from the Clifts of the hardeſt Rocks; but it is frequently planted out where it grows to be a tall, ſtrait, beautiful Tree.

Virtues and *Uſes.*

'Tis of a hard, white, tough, ſolid Wood, fit for various Kinds of mechanical Uſes. The *Cortex interior* is look'd upon as a great aperient Reſerater of Obſtructions, and Diureticks; and is preſcrib'd with *Cort. Tamariſci, Capparum, Sambuci, Berberorum* in *hydropical* Caſes; alſo in the *Jaundice* and other Diſtempers, where Deobſtruents are requir'd. It is infus'd in medicate Ale or Wine, and drank as they uſe to do Diet Drinks. The *Lingua avis*, or Fruit, may be alſo preſcrib'd in the aforeſaid Caſes: It is more penetrating and ſubtile than the Bark.

IX. *Fumariæ.*

Fumaria offic. & Dioſcoridis, C. B. 143. Tournef. Inſtit. 422. Raij Hiſt. 405. *vulg.* J. B. 3. 26. 201. *Fumaria vulg. Latif. ſiliquis curtis non bivalvibus.* Moriſ. Hiſt. 2. 261. *Common Fumitory.*

The *Tribe.*

This is claſs'd by *Tournefort* among the *polypetalous anomalous Flowers.* I have given an Idea of theſe *Flores anomali*, Decad VI. This is *floribus tetrapetalis difformibus*; but not *regularly papilionaceis*, becauſe the *Siliquæ* are not *bivalves.* Mr. *Ray* at firſt plac'd them among the *Umbelliferæ*, becauſe *Flores ſunt Umbellatarum modo diſpoſiti*; and in *Synopſ.* 3. it is ſtill continued as next to the *Umbelliferæ*, tho' I know not for what reaſon, unleſs it be for a more eaſy Tranſition from 4 to 5 in the Number of the *Petals. Rivini* makes it the firſt of his *Flores irregulares Tetrapetalæ*; a ſtrange Medley when 'tis own'd by all that the regular *tetrapetalous Plants*, whether *Petalis planis*, or *diſſimilibus*, have either a *ſiliquous*, or

ſiliculous

ſiliculous Fruit. Here is a doubt he cannot well reſolve, *viz.* Whether all the *Fumaria's* ſhould be eſteem'd *ſiliculous*, or *gymnoſpermous*; himſelf propoſes it thus, *Primum ſibi locum vendicat Fumaria, ſcil. inter plantas quæ ſunt flore tetrapetalo, & ſiliculis breviſſimis nimirum florem ejus quatuor petalis accuratius jamjam deſcripſit Johannes Bauhinus aſt circa ſemina dubium oriri poſſit, cum a Cælſapino atque Moriſono ſemen dicatur contineri inter parva veluti Capſula ſeu Vaſcula rotunda; quod tamen Raio nudum eſt, & ſane pleriſque nudum videbitur ideo quia ſuum ſponte vix exuit involucrum quamquam ſatis maturum decidebat. Quemadmodum vero melilotus minima fructu Renali nigro, non dicitur ſemina geſtare nuda quamvis eodem modo ſuum cum integumento dimittat ſemen, ita & hoc in loco non aberrat qui rigoſius Fumariam examinaturus illam innumerabit ſiliculoſis quæ ſingula ſemina, ſingulis incluſis ſiliculis geſtant.* *Boerhaave* being appriſed of this, plainly places it among the *Plantæ Siliquoſæ*, and ſays it is *Papilionaceo ſimili flore*; and methinks the Editor of the third Edition of Mr. *Ray's Synopſis*, who has ſo much taken upon him to alter his celebrated *Author's* Diſtributions and Names in other Caſes, ſhould have at leaſt given *Fumaria* another Place than among the *Semina nuda ſollitaria*; for, 1. Moſt of the *Fumaria's* are *capſular* or *ſiliculous*, except this common one; why then ſhould it be ſeparated from its Congeners? becauſe it is *Seminibus nudis.* 2. *Moriſon* calls them *Siliquoſæ bivalves & aliæ variæ ſiliquis floribus autem inter ſe conformes*; ſo that he would not ſeparate thoſe of the ſame *Genus* for ſuch a minute Circumſtance. 3. If this is allow'd, a regular and *methodical Diſtribution* of *Plants* muſt go into Confuſion. Are there not many *Siliculæ* among the *Flores cruciformes*, which may be as well call'd *Capſulæ*, if Liberty were given to that Claſs to enjoy both. 4. Would not many *Melilotes Trifoilæ*, &c. among the *Papilionacee* be eſteem'd *Seminibus nudis*, if this were granted. 5. This would ſerve very well for *Rivini's* Purpoſe, which moſt of they who intend for Method reject, *viz.* That it matters not what the Fructification be, provided the Flowers agree in their regular or irregular Shape, and number of the Petals. But, 6. Mr. *Ray* himſelf owns, that all the *Malvæ* are *Enangioſpermæ*, contrary to his firſt Opinion of their being *Gymnoſpermæ*, becauſe *e communi matre totus decidit fructus.*

Boerhaave has given ſuch acurate Diſſection of this Flower, that I hope a Tranſlation of it will not be amiſs. The Leaves are *plurifarium diviſa*, as in the *Umbelliferæ*; the ſmall *Calyx* is in ſome Species plac'd below the *Calcar*, or Spur; in others 'tis wholly wanting. By a narrow Inſpection into the *Flower*, it appears ſo far to be *tetrapetalous*, that

that the lower *Petalon* is ſtretch'd forth from the Extremity of the Pedicle, but the upper tending backwards into a hollow Spur, the fore-part is erect like a *Galea*, or *Helmet*; to this the *Calyx* and Spur adheres. The third and fourth being lateral, they form a very ſharp *Vagina*, cover'd by the other two *Petala*.

The ſhort *Embryon* with a long Tube and Button, is wholly cover'd by this *Vagina*, to which the *Stamina* are ſo firmly adherent, and which is ſo pellucid, that the *Apex ovarii* and the two *Teſticuli* ſhine thro' it. This *Ovarium* becomes a ſhort *unicapſular Silicula*, containing only one Seed.

The *Deſcription.*

'Tis an annual Plant, with two long, narrow, blueiſh Seed-Leaves. The *flowering Stem* ariſes much bended and branched about one Foot high; the blueiſh *Leaves* are irregularly *pinnated* and divided into ſeveral ſhort Segments, like the *umbelliferous Plants*; the ſmall *Flowers* whitiſh above, and purpliſh below, diſpos'd at the upper Part of the *Stalk* into *Racemi*, or Tufts, *monopetalous*, *anomalous*; to each of which ſucceeds a ſhort Pod, containing a ſmall round Seed. It grows very common in arable Ground among the Corn, alſo in the digged Ground in Gardens.

Virtues and *Uſes.*

'Tis of a bitteriſh Taſte and cooling Nature, fit for curbing the acrimonious Salts in the Blood, and allaying the Heat in ſuch as are inclin'd to the *Scurvy*, and other cutaneous Eruptions. 'Tis drank in *Clarify'd Whey* with *Fragaria*, &c. as is obſerv'd. The contus'd Herb and Juice may be an Ingredient in Dyet-Drinks in the Spring. The *Shop Preparations* are the *diſtill'd Water* and *Syrups*.

G.

X. *Galega.*

Galega vulg. fl. cæruleis, C. B. 352. Tournef. Inſtit. 398. J. B. 217. 342. Moriſ. Hiſt. 291. Raij Hiſt. 911. *Goats Rue.*

The *Tribe.*

This is a regular *Leguminous* Plant, with regard to its ſtrait *Stalk*, *pinnated Leaves*, *papilionaceous Flowers*, *ſiliquous Pod*, and *Kidney-Seeds.*

The *Deſcription.*

It has a *perennial Root*, frequent, branched, ſtrait *Stalks*, about one or two Foot high; alternate, oblong, narrow, pinnated *Leaves*, with equal Borders, conſiſting of five or ſix Pair of *Pinnæ*, with an odd one. The *Racemi* of pale, whitiſh, blue, pea-bloom *Flowers*, leſs than thoſe of *Peaſe*, ariſe upon long Pedicles from the Boſom of the *Leaf*, or Top the *Stalks*, thick ſet in erect Tufts, to which ſucceed long, round, erect, cylindrical *Pods*, containing oblong *Kidney-Seeds.* 'Tis planted in Gardens.

Virtues and *Uſes.*

'Tis eſteem'd Alexipharmick, and good in peſtilential Diſtempers; I look upon it to partake of the ſame Virtues with its Congeners. Its chief Uſe in the Shops is, that it enters the *Aq. Lactis Alexiterra.*

Gallium Luteum, vide *Aparine*, Decad III.

XI. *Geniſta.*

Geniſta anguloſa trifolia, J. B. 1. 388. *Anguloſa & Scoparia*, C. B. 395. Raij Hiſt. 1723. *Cytiſo-Geniſta Scoparia vulg. flore luteo.* Tournef. Inſtit. 649. Boer. Ind. 2. 27. *Common Broom.*

The *Tribe.*

This is another *papilionaceous* Shrub, which *Tournefort* ſeparates from the other *Geniſta*, becauſe all of them have one ſingle *Leaf* proceeding alternatively from the *Stalk*, by which it partakes with the *Cytiſi*, whoſe *Leaves* are *trifoliated.*

The *Deſcription.*

It has an hard, tough, wooddy *Root*, deſcending deep in the Ground. Its numerous ſtrait wooddy *Stalks* from the Root, riſe three or four Foot high with erect Branchings, of a dark green Bark, emitting alternately ſmall, dark green, pointed Leaves, three from the ſame Origin. The numerous, large, *papilionaceous*, yellow *Flowers* poſſeſs the upper Part of the *Stalk* and *Branches*; to which ſucceed ſeveral long *Pods*, flat at firſt, but afterwards ſwell'd and tumid, depending, hairy, and often bended like an S, containing ſeveral brown, hard, ſmooth *Kidney-Seeds*, which, when ripe, burſt the Pod, and flow out with an Elaſticity. It is indigenous in many Places, and Care is taken to cultivate it in others for various Uſes (*See* Decad III. *p.* 142.) when diſcourſing on the Improvement of barren Ground, I direct the ſowing of Broom, and rooting it up after three Years; and then taking three Crops of Oats from the ſame Ground, and ſo by Turns three Years after three Years, the Ground will be vaſtly improved, and the *Broom*, as well as the *Oats*, will ſufficiently quit the Coſt, and turn to a good Account to the Owner or Farmer.

Virtues

Virtues and *Uſes.*

Moſt of the *papilionaceous Plants* have a peculiar *ſweet* or *farinaceous* agreeable Taſte: that of *Broom* is much ſtronger, and the Scent higher, but ſcarce to be expreſs'd by Words. It is a potent *Aperient* and *Deobſtruent*, *reſerating* of *Obſtructions*, and *evacuating* of ſerous *Humours* by *Urine* in *icterical* and *hydropical* Caſes; alſo provokes the *Menſtrua*, an Infuſion of *Flores Geniſtæ*, is an effectual Remedy in ſuch Caſes. It is alſo preſcrib'd in medicate Infuſions in Wine or Ale with other *Aperients*, for the ſame Purpoſes as are *Cineres Geniſtæ*. The *Flores Geniſtæ* are employ'd in Fomentations to *anaſarcous* Legs, for *hydropical Swellings*; a *Fotus* may be made of the *Sumitates* and *Flores Geniſtæ*, to which may be added the *Lixivia* of the *Cineres*, in which the *anaſarcous* Perſon may be *bath'd* after a due Regimen. Then the Skin is to be rubb'd dry, and a potent Sudorifick given to the Patient to ſweat when in Bed. *Sal Geniſtæ* is alſo a good *Aperient*, and *preſcrib'd* in ſuch Caſes. The tender *Buds* of the *Flowers* are pickled and ſold inſtead of Capers, by the Name of *German Capers*.

The mechanical Uſes of Broom are, that they make good *Beſoms* for cleaning of *Floors*, by the Toughneſs of their numerous and ſmall Twigs, on which account all coarſe Subſtances made of *Birch*, *Heath*, &c. are call'd *Brooms*. They alſo uſe it for *thatching* of *Houſes* in ſome Places, as they do with common Reed in others, which will continue for many Years; but the chief Uſe they make of it, where Fewel or Firing is ſcarce, is for baking of *Bread* in the *Oven*, boiling of the Worts at brewing, and drying of Malt in the Kiln; for which Purpoſes alſo the *Geniſta Spinoſa major*, or *common Furze*, by ſome called *Whinſe*, and by others *Gorſe*, is employ'd.

XII. *Gentiana.*

Gentiana major lutea, C. B. 187. *vulg. Ellebori albi facie*, J. B. 3. 31. 520. Tournef. Inſtit. 80. Raij Hiſt. 716. Moriſ. Hiſt. 3. 484. Boer. Ind. 1. 405. *Gentian.*

The

The *Tribe.*

'Tis one of *Tournefort's monopetalous Bellflowers*, *Planta polyſperma ſeminibus compreſſis*, by *Moriſon*; *vaſculiferous*, with a *monopetalous Flower*, by Mr. *Ray*; and *Monangiopolyſpermos*, by *Boerhaave.*

The *Deſcription.*

It has a thick, groſs, tough, ſpongy, yellow, parenchymatous, intenſely bitter *Root*, divided below into ſeveral large Portions, from whence ariſe in the Spring ſeveral *yellow*, *green*, large, ſtiff, ſmooth *Leaves*, diſtinguiſhed by three Nerves like thoſe of Plantain; from whoſe Middle ariſe the ſmooth, unbranched, jointed Stalks, adorn'd with a Pair of leſs and more acuminated *Leaves* ſurrounding them at each Joint. They being three or four Foot high from their upper Part, ariſe the yellow *monopetalous Bellflowers*, divided into ſeveral Segments, proceeding from a long tubulous *monophyllous Calyx*, to which ſucceeds an *unicapſular*, oval, pointed, *bivalvæ Fruit*, containing ſeveral compreſs'd round *Seeds*. It is cultivated in the Gardens of the Curious; but the great Quantity of the *Roots* us'd in the Shops are imported, it being ſaid to be indigenous in the mountanous Parts of the *Alps*.

Virtues and *Uſes.*

The Adage always holds good, *Omnia amara Stomacho grata*. There is not a more intenſe Bitter in the Shops than *Gentian Roots*, nor any that better anſwers the Deſigns for which 'tis preſcrib'd. I have in *Miſcel. Obſerv.* diſtinguiſhed betwixt the *Gentian* and *Corymbiferous Bitters*. *Centaur. minus* may be added to the firſt, while *Chamemelum*, tho' it be *Flore radiato*, may well be added to *Abſynthium* of the ſecond. And if *Cort. Aurant.* with ſeveral appropriated *Stomachicks*, *Vermifuges*, and *Febrifuges*, are added, convenient Ingredients may be prepar'd, either for *Tinctures* or *Infuſions* in Water, Wine, or Ale, for aſſiſting the Digeſtion in a weak Appetite, reſtoring it when vitiated, and recovering of it when loſt; and not only to prevent aguiſh and

intermittent *Diſtempers*, to ſhorten their Period when thus ſeiz'd, but to remove them altogether, and to prevent a Relapſe by the conſtant uſe of them, either in a Climate where the Inhabitants are moſt ſubjected to ſuch Diſeaſes, or a Seaſon when they are moſt frequent: And whatever may pretended to be done by ſome *Specificks*, however ſuch may infallibly remove the Paroxiſms for ſome time, yet they are ſeldom known to extirpate the Diſtemper. Nay, ſuch is the Inconveniency that attends that Method, if once a Courſe of them is begun, the Patient is condemn'd to a conſtant Continuance in the Seaſon, otherwiſe the Diſtemper is ready to return. If they are frequently us'd, they become ineffectual; and if any other Method is follow'd, all that was pretended to be done, by ſuch *Specificks*, muſt firſt be undone, and the *Patient* in the *interim* is in greater Hazard of a Relapſe than ever. *Rad. Gentianæ* may be either given in *Powder* or *Electuaries*, or the above *Infuſions*, but the laſt is preferable; for however fixt it be in its Nature, as all *Bitters* are, yet it is communicative to any Liquor, and liquid *Bitters* are the moſt eaſy to be taken. The *Extr. Gentianæ* is a good Medicine, but Extracts and Pills do not ſo ſoon diſſolve in weak *Stomachs*. It enters *Infuſ. Amar. Aq. Gentian. comp.* but ſuch intenſe Bitters ſeldom communicate their Virtue by Diſtillation.

XIII. *Geranium.*

1. *Geranium Columbinum fol. Rotundo multum Serrato*, J. B. 3. 30. 473. *fol. malvæ rotundo*, C. B. 418. Tournef. Inſtit. 260. Raij Hiſt. 1055. *fol. malvæ rotund. maj.* Moriſ. Hiſt. 511. *Doves-foot, Crane-bill.*

2. *Geranium Cicutæ fol. Moſchat.* C. B. Tournef. Moriſ. Ray. *ad Myrrhidem accedente*, J. B. *Muſked Cranes-bill.*

3. *Geranium Moſchatum viride*, C. B. Tournef. Raij, Moriſ. *Robertianum Murale*, J. B. *Herb Robert.*

The *Tribe.*

This *Genus* is one of *Tournefort*'s *roſaceous Flowers*, *Pentapetalæ Pentacapſulares* of *Moriſon*, *Pentapetalæ Enangioſpermæ* of Mr. *Ray*, and *Pentacoccæ* of *Boerhaave*. There is a vaſt Variety in the *Figure* of the Leaves of this *Genus*, the Number of the *Petals* and *Seed Veſſels* is determinate. But *Rivinus* can never wholly bring them in among his

irregular

irregular Flowers, which is a great Objection againſt ſuch a *Diſtribution*. And they who would have *Fumaria* and *Malva* to be *gymnoſpermæ*, ſhould look upon *Geranium* to be ſo likewiſe, *quia è communi matre imo poſt plenam maturitatem totus decidit*; yet *Rivinus* himſelf muſt acknowledge this *Genus* to be *Enangiomonoſpermos*. The general *Character* then of this *Genus* is, that they have *pentapetalous Flowers*, a *pentaphillous Calix*, five ſhort *Stamina* with the *Apices*, a *quinquifid Stylus*, a *candated Fruit* like a *Cranes-bill*, five *capſular Seeds* adherent to an *axis medius*, which when ripe ſtart from it with an *Elaſticity*, twiſting their *Tails* like a *Serpent*.

The *Deſcription*.

1. *Doves-foot Cranes-bill* has a long, ſtrait, not very fibrous, *Root*; ſeveral round, more or leſs, deeply divided *Leaves*, upon longer or ſhorter *hairy Foot Stalks*, lying in a *Circle* on the Ground. The ſlender jointed *Stalks*, with leſs or more divided *Leaves*, ariſe in the middle, and ſupport the little reddiſh *Flowers* two and two for the moſt part together. It grows frequently on Banks and Way-ſides.

2. *Muſked Cranes-bill* is an annual *Plant*, with ſeveral pinnated *Leaves* in a Circle alſo: The *Pinnæ* long, roundiſh, and deeply ſerrated, and ſomewhat hairy; the *Flowers* more numerous in *Tufts* or *longer Pedicles*. Its ſweet Scent, and by being more *luxuriant*, makes it only diſtinguiſhable from *Geranium Cicutæ folio inodorum*; but the *Roſtrum* of the Fruit is longer. 'Tis ſown in Gardens, where it is eaſily propagated by the *Seed*, which upon the firſt ripening, quits its hold with an *Elaſticity*, twiſts its *Serpents Tail*, where the Head, by its Gravity, firſt touches the Ground, and by the Point of the *Radicle* at the *Extremity*, it, in a very little, ſprings forth, and the *Seed Leaves* extend themſelves.

3. *Herb Robert* differs by the Bigneſs of the *Plant*, length of the reddiſh *Stalk* and *Pedicles*, and Diviſion of the *Leaf*, either like that of *Chervil*, or ſome of the *ſiliculæ pinnulis raris*, but of a different green. The *Stalks* are jointed, and the Leaves proceed by Pairs, from whoſe *Boſom* on long *Pedicles* are plac'd larger, reddiſh *Flowers*, two and two or more together. It grows on Hedges and ſhady Places.

Virtues

Virtues and *Uſes.*

They are all eſteem'd *vulnerary ſubaſtringent*, and fit for *Decoctions* inwardly, and *Fomentations* outwardly; but not much in uſe, ſave the laſt, which is look'd upon as a Specifick in the *Kings-Evil* and *Scrophulous Tumors*, drank in Decoctions, or the *contus'd* Herb and *Juice* apply'd outwardly in *Fomentations.*

Glaſtum, vide *Iſatis.*

XIV. *Glycyrhiza.*

Glycyrhiza ſiliquoſa Germanica, C. B. 352. Tournef. 333. Moriſ. Hiſt. 289. *radice repente vulg. Germanica*, J. B. 2. 17. 328. *Common Liquorice.*

The *Tribe.*

This, becauſe of its extraordinary Virtues, is one of the moſt conſpicuous of the *papilionaceous Tribe*, with a ſtrait *Stalk*, *pinnated Leaves*, erect *Flowers* and Pods, a deeply running *Root* and *Kidney Seeds.*

The *Deſcription.*

Its Root runs very deep, and ſpreads as far below (if of any Years Growth) as the Vine Branches do above Ground; on which account they are compar'd to the *Sarmenta Vitis* when digg'd up; theſe intricate and numerous Branchings are long, round, and flexile, like the *Rods* or Branchings of the *Corylus*, or *Hazel Tree*; ſometimes three or four Foot long, and about the Bigneſs of ones Thumb. The *Aſparagi*, or new Shoots, ariſe every Spring, and aſcend with a *ſtrait Stalk* three or four Foot high, with alternate *pinnated Leaves*, conſiſting of ſix or ſeven Pair of green blunt *Pinnæ*, with an odd one. The *Racemi* of erect *Flowers*, like thoſe of *Galega*, ariſe from the upper Part of the *Stalk* and Boſom of the *Leaves* (but ſeldom in *England*, for which it is by ſome eſteem'd barren) to which ſucceed ſtrait, round, *cylindrical Pods*,

Pods, full of *Kidney-ſeeds*; 'tis eaſy to account for this Barrenneſs with us, when we conſider that the Sap is chiefly imployed in the propagation of the *Root* below ground, we may ſoon perceive the Reaſon why ſo ſlow in the *Fructification*; *Crocus Autumnalis*, in the preceeding Decad, by its ſpeedy ſetting forth its Off-ſets, when the *Flower* is blown, never ripens the *Fruit* with us; *Vinca pervinca*, by its ſpreading all over the Surface of the Ground, and ſending forth ſo many *Flowers* in the Seaſon, never produces the Pods with us, unleſs its Roots be curb'd in a Pot, and its Tendrils, ſo ſoon as they appear, remov'd, only the flowering Stem left remaining, though I am credibly inform'd it often produces the *Fruit* in *France*. We ſee the *Potato*, which propagates vaſtly by the *Root*; however, it may *Flower*, yet it ſeldom produces, and more rarely ripens its *Apples*. Many ſuch inſtances may be given to ſhew, that when the *Sap* is more plentifully beſtow'd either on the *Root* or *Branches* of a *Plant*; the *Fructification*, is thereby either retarded or wholly prevented. Dr. *Moriſon* informs us, that Liquorice does not at all thrive ſo well in *Spain*, becauſe of the great Heat, but 'tis probable it may *flower* and produce *Pods* and *Seeds* more plentifully there; for he farther obſerves, that if it do produce the *Pods* in *France*, the *Seeds* contain'd are only hungry, and pin'd, and no wiſe productive; and that in *England* 'tis but very rare that either *Flower* or *Fruit* is to be ſeen, tho' the *Stalks* ariſe high and ſtrong, and become wooddy towards *September*, but they are ſo tender, that upon the firſt Froſt they wither and die.

Dr. *Moriſon* informs us, it grows naturally in *Agro Narbonenſi prope Lateram oppidum*. 'Tis ſo uſeful a *Root*, that 'tis proper I ſhould inſiſt a little more on the Place where, and the Manner how, 'tis cultivated. There are four *Vegetable* Subſtances, which being at firſt Strangers, and tranſmitted from other Countries, are now become the *Glory* of the *Engliſh Nation*; *Lupulus Hops*, of which more hereafter; *Crocus*, whereof at large in the preceeding Decad; the *Potato*, at firſt brought from *Virginia* to *England*, and at firſt more generally cultivated in *Ireland*, and not ſo much known here until the *Revolution*, when the Troubles of that *Kingdom* ſent ſeveral *Iriſh* Families hither, who propagated it in *England* with ſuch ſucceſs, that 'tis now generally ſold in moſt of the country Markets.

Dr. *Moriſon* alſo informs us of this Liquorice; *Radix ejus magno cum quæſtu & fœnore ſerebatur in Anglia, ubi maximam copiam vili pretio nunc exponunt venalem nullis radicibus Glycyrrhizæ in tota Europa proventibus poſtponendam.* Mr. *Ray* alſo informs us, it is planted in *Pon-*

tefract in *Yorkſhire*, and *Workſop* in *Nottinghamſhire*. *Glycyrrhiza autem Anglica præcipuè æſtmationis & ex tranſmarinis regionibus advectæ præfertur.* He alſo informs us 'tis planted in ſeveral places in *Germany*; which makes me admire why ſuch Quantities of what they call *Spaniſh Juice*, ſhould be yearly imported, when we may be as well ſerv'd within ourſelves; certainly we could make the Extract of Liquorice better at home than in *Spain*; for that hot Climate cannot produce ſuch a ſucculent *Root*, as to yield ſuch a quantity of an *Extract*. If 'tis alledg'd 'tis evaporated by the Heat of the Sun, Fire is for the moſt part ſo plentifully with us, that there is no great odds betwixt a Natural and an Artificial Heat. And whereas what is called *Spaniſh-Juice*, is ſometimes of great demand here, and too great a plenty of *Planted-Liquorice* would bring down the Market; the making of this *Extract* would keep up the Price of the one, and not ſuffer the other to be ſold at too extravagant a Rate. For the Culture of ſo uſeful a Plant, which ſhould come naturally in here, I can ſay but little from proper Experience; but as the Report from expert Gardeners in ſuch caſes, is much to be rely'd on. They adviſe a deep, light, mellow Ground; if not naturally ſo, it muſt be made ſo by Art; for whatever is light and porous ſuffers the Shoots to ſpread as deep and as far as they are inclin'd: Whereas an hard ſtiff Ground, inclining to Clay, is ready to cruſh them. 'Tis therefore adviſable to trench the Ground at leaſt 3, but rather 4 or 5 Foot deep. Lay a good Quantity of freſh Horſe-Dung in the Bottom, other old rotten and mouldy Dung, or Manure, above it. Laſt of all, the natural Ground digg'd out of the Trench, with which 'tis to be fill'd up. Let this be done in the beginning of *September*; and let it thus remain all the Winter: open your trenched Ground again in the beginning of *Feburary* next, then mix altogether very well, by turning it over, again and again, with the Spade, then throw in a good deal of Manure, or freſh Dung, into the Trench, now digg'd 4 or 5 Foot deep as before, next to that throw on the new mix'd Earth taken out of the Trench, until it is level with the Surface of the reſt of the Ground; and becauſe the freſh Dung in the Bottom will conſume, and the Earth above will in time be more compact, and ſink in the Surface; there may be ſome Barrows full of freſh, kindly, mellow, ſoft Mould, well ſifted, and freed from any gravelly Sand, Clods, or the like, laid on, till 'tis one Foot or two above the ordinary Surface of the adjacent Ground: being thus prepar'd, you are immediately, *i. e.* in the Months of *Feburary* or *March*, to take the beſt *Crown-Sets* or Heads cut of from the Top off the Roots, from another Plantation,

and

and plant them in Rows by a line at a Foot diſtance, with a ſetting Stick, making the Hole as big as will eaſily admit of the Set, without bruiſing or cruſhing any part of it; for whereas if the Set is cut off with a keen Knife, the Sap-Veſſels being no wiſe injur'd, the *radical Fibres* will ſoon ſtrike forth with great Freedom; but if they are bruiſed, or their ſides cruſhed together, the Sap will be diverted, and the new Shoots much hindred in their Germination; cover the Sets ſo ſoon as they are put in, and let them be gently watred every Day, for that light open Ground, will require a good Deal of Moiſture before it all will be well ſoaked. But care is to be taken it receive not too much Water, for that will ſower the Ground, and vitiate the nutritive Juice, eſpecially when the Shoots are yet but weak and tender. I do not adviſe any freſh unmix'd Dung to touch the Sets themſelves, for as that is ready to heat at firſt, and then to ſower in a ſhort Time, 'tis more proper old rotten Dung, mix'd with new Earth, be plac'd nearer the *Roots*, and that the hot Dung be at a diſtance below, that the gradual Steam of the one, may refreſh the other. They who carry the Liquorice Roots to any remote place for Sale, lay them among moiſt Sand to keep them from drying, and loſing of their Weight; ſuch a Method is proper to convey the Sets, in order to make a Plantation at any diſtance. If the *Crown-Sets* are not to be had, the Runners from the maſter *Roots* are the next beſt, which I have ſometimes put into the Ground for a Tryal, by cutting off from the Rods the Carriers bring about to be ſold; but a few Sets ſeldom thrive, becauſe ſuch pains is not taken to keep the Ground in ſuch order, as when a Plantation is deſign'd. But if any have a mind to plant a good Quantity of Ground, without any conſiderable Charge, and only a gradual Expence: Let ſuch determine the Quantity they are to employ, and divide it into 3 equal Parts; let one third be ſo ordered and prepar'd, as above, the firſt Year, and planted with the beſt of Crown-Sets, which may be plac'd thicker than is directed. Let the ſecond Parcel be prepar'd and planted next Year with drawing as many as will ſerve from the firſt Bed; and ſo on with the remaining Ground, the third Year, which may be planted out with the Crown and Off-Sets of the other two. The fourth Year, raiſe all the Roots of the firſt Bed, or Beds, and now you begin to reap the Profit, when the charge of the former Plantations will be countervail'd, and a conſiderable Ballance come in, and then you may either employ that Ground to other Purpoſes, or, by refreſhing with Dung and freſh Mould, it may ſerve for the ſame Uſe again. 'Tis true we are inform'd it improveriſhes the Ground very

very much, which ſeems very probable, but a kindly Mould, ſuch as it muſt needs be, cannot fail to be as good as that which never was improv'd for ſuch a Deſign. Be that as it will, after once you begin to reap the Profit in this fourth year, a perpetual Advantage yearly happens, by raiſing of one Spot of Ground, and planting another in its ſtead: nor will the Charge be diſcernable, when put in Ballance with the Profit; nor need there be any Suſpicion of damning the Markets by too great a Quantity, ſo long as there is ſuch a Demand for *Engliſh* Liquorice abroad.

Virtues and *Uſes.*

The Fig for a Fruit, and Liquorice for a Root, are the two moſt potent Pectorals we have, of the vegetable *Materia Medica.* Their delicious Taſte renders them agreeable almoſt to every Palate, and ſuch is their Texture of Particles, that they obviate almoſt every Symptom of the Diſeaſes of the Breaſt. Liquorice in what they call a dry Cough, when the Matter is ſo thin that it cannot be expectorated, obtunds the keen and acrimonious Salts, by its balſamick Particles, that the Tickling is thereby much reliev'd, which is alſo the effect of Figs. When the morbifick Matter is ſo tough and thick, that there is an *Infarctio pulmonum*, a *Dyſpnæa*, or ſhortneſs of Breathing, that the *Catarrhous Humor* cannot be expell'd by Expectoration, Preparations of *Liquorice* do ſo attenuate and looſen it, that the force of the Muſcles and Air, do more eaſily fetch it up at the Exſpiration. In a Word, there's ſcarce any Diſtemper incident to the *Breaſt* or *Lungs*, but more or leſs of *Liquorice* may be an Ingredient; 'tis preſcrib'd in moſt of *pectoral Infuſions*, *Ptiſan's*, *Decoctions*, *Syrups*, *Loochs*, or *Linctus*, *Electuaries*, *Powders*, *Trochiſces*, *Tablets*, *Extracts*, and *Pills.* For beſide that which they call *Spaniſh-Juice*, or *Sugar* of *Liquorice*, which when not adulterated is a fine Medicine; there are ſeveral Compoſitions they call *Extractum Liquoritiæ* in the *Shops*, where a ſtrong Decoction of Liquorice is the Baſe, and when evapourated to an Hony or Syrup Conſiſtence, they ſtrow in ſeveral pectoral Powders, *ad libitum Medici*, and bring it up to a dry Form. The following Extemporary Electuary is often perſcrib'd to the poorer Sort, *Pulv. Liquoritiæ*, 1 *Oz. Helenii Ireos Florentin.* 1 *Oz. Fl. Sulph.* 2 *Gr. Ol. Aniſi* 2 *gutt. Mellis communis*, 4 *Oz. m. f. Elect. Lambendum cum baculo Liquiritiæ. Simon Pauli* pretends, as a Secret, that 'tis effectual in *Lue Venerea*; whereas the uſe of it in that Caſe is, to add a little

a little *Liquorice* and Raisins towards the latter end of boiling a Decoction of *Guaiacum* &c. to remove the Acrimony of the *Taste* in these woods, which is ready to affect the Throat; and indeed Liquorice itself requires to be us'd while green, in Ptisans and Decoctions, for if dry or boil'd any time, it has also an Acrimony, which affects the *Throat*, and instead of allaying is ready to raise the uneasy Symptome of the *Tickling* itself.

Gnaphalium Montanum, vide *Abrotanum* Decad I.

Gramen Caninum, vide *Hordeum*.

Gratiola, vide *Digitalis*.

XV. *Grossularia.*

This is a Shrub so well known, because of its Berry, which first comes in Season, when the green Geese begin to be eatable, therefore because 'tis frequently us'd as a Sauce to them, 'tis called the Gooseberry, and its being more frequently made use of in the Kitchin at the Table than in the Shops, where 'tis scarse ever imploy'd as a Medicine. I need say no more of it.

H.

XVI. *Hedera Arborea.*

Hedera Arborea C. B. 305. Tournef. Instit. 612. *communis major* J. B. 2. 111. Raij Hist. 1505. *Tree Ivy.*

XVII. *Viscum.*

Viscum baccis albis C. B. 413. Tournef. Instit. 609. Raij Hist. 1583. *Misletoe.*

The *Tribe.*

I design'd at first to have treated each of these Plants in his proper place; but when I consider their manner of growing, the Texture of their *Wood*, Resemblance in the *Leaf*, time of *Flowering*, with their *Fructification.* I have chosen to bring both together in this Place, because of their being so near of *Kin.* 'Tis true, the one is *Flore fructui contiguo*, the other a *Fructu remoto*, but, *cæteris paribus*, that need not hinder them from being join'd together. I have explain'd what is meant by a *parasitical Plant* at *Cuscuta*; what is here further remarkable is, that the Berries of *Hedera* being committed to the Ground will spring forth, and the Plant will lay grovelling on the Ground, until it meet with a Stone or Brick Wall, Shrub or Tree of whatever Genus, then it will readily grasp it, and with *Cuscuta* emit its small short *Clavi* or *Cirri*, little short Points or *Nails* which it insinuates betwixt the Fibres of the *Tree*, or Joints of the *Stones* and Bricks, from whence it derives its Nourishment, and from thence forth it becomes indifferent whether it partake of the Earth any more. I have indeed observ'd in the Species *Foliis variegatis*, that it is only nourished by the Earth, and tho' it readily climbs a Wall by leaning to it, and catching hold of what can be assisting to it in climbing; yet it does not emit its *Cirri*, as the other; *Viscum*, on the contrary, disdains to receive any kind of Nourishment from the *Earth*; for if you commit its Seeds to the Ground, they will rot, but it springs forth from the Mother-Tree itself, and having once taken Root, it no wise concerns itself with the Tree any more, by climbing or sending forth its Cirri, or little Nails, to suck nourishment from any other Part of it; but, like other Plants it receives its nourishment by the *Root:* Its manner of Propagation remain'd a Mystery for several Ages, and strange were the Conjectures, even of the most learned, about it. But of late that expert Gardener Mr. *Thomas Fairchild* at *Hoxton*, has so taught the Method of planting it, that the Manner of its Progagation, is now plainly demonstrable: but of this more hereafter.

Their general Character then is, that they are *Parasitical ever-green bacciferous Shrubs.* The one with a *rosaceous Flower* on the Top of the Embryon, the other with a monopetalous one, distinct from the Fruit; to both which succeed a round succulent Berry; the flowering Time of both is late in the Autumn, and their ripe Fruit about Christmas, or early in the Spring.

The

The *Deſcription.*

Tree or *Shurb-Ivy* conſiſts of many ſmall, hard, wooddy, irregular Twigs and Branches, emitting *radical* Fibres fix'd into the Subſtance of whatever it climbs on. The Leaves are various, according to the Diverſity of its Situation. If it lays on the Ground, or leans to a dry Bank they are ſtiff, ſmooth, angular, and cornered, of a *cæſious* or *blueiſh*, (with a certain Variegation in the) Colour not unlike thoſe of *Arthanita* or *Cyclamen*, at which time they always remain in a barren State, which made moſt of Authors diſtinguiſh betwixt *Hedera Arborea Sterilis*, and *Baicifera*; but from proper Obſervation, if this *Hedera* is remov'd from the Ground where it ſeldom emits radical Fibres, unleſs at the *Roots* of *Trees*, and is planted by a Wall or Tree where it may mount, then the faſhion of the *Leaf* changes: for they now become ſubrotund at the Baſe and pointed, of a ſhining dark, green; towards the latter Seaſon they begin to form their *Corymbi*, emitting ſeveral proper, from one common Pedicle or foot Stalk, each of which ſupport an hexapetalous roſaceous Flower on the Top of the *Embryon*, with ſix Stamina and Apices. This Embryon afterwards becomes a round *Berry*; firſt green, then black, full of *Seeds*, compreſs'd on the one Side, and convex on the other. Its place of growing is too well known over moſt of the Hedges, Woods, and Plantations in *England*, where care is not taken to prevent its graſping round the Shrubs and Trees, ſucking up their Nouriſhment and ſtarving them.

Miſletoe. 'Tis much to be admir'd why the inadverted opinion of the *Ancients*, that this Shrub was chiefly propagated by the Birds greedily ſwallowing of the *Berry*, and that after the Pulp was diſſolv'd in the *Gizzard*, they evacuated the Seeds by the *Anus* upon the neighbouring *Trees* in the Woods, ſhould be ſo generally receiv'd, even to this Day; that the moſt eminent *Botanick Authors*, even *Tournefort* himſelf, ſeem to be of this Mind; not conſidering the Prevalence of the Digeſtion in Birds, that if Stones and the hardeſt Metals have been diſſolv'd by the powerful Compreſſion of the thick, ſtrong, muſcular, Subſtance of their Gizzard; can we ſuppoſe the Seeds of Miſletoe could eſcape. The moſt probable way therefore is, that there being a certain Bird which paſſes by the name of the *Miſletoe-Thruſh*, which chiefly haunts thoſe Trees where the Miſletoe grows in the Winter and ſtormy Seaſon, when the Food for all kinds of Birds is ſcarce and rare, they greedily

greedily ſnatch up this *Berry*, which being ſucculent and full of a *viſcid Juice*, ſo ſhuts their Beak until they get rid of it, that they are forced to fly to an adjacent Tree where they dart in the Beak ſo deep, and with ſuch force, that they leave the Berry and Seed behind them, where it remains until it again ſpring forth. This conſideration made the ingenious Mr. *Fairchild* think of artfully planting the Seeds on convenient *Trees*; the moſt proper are the *Crab*, the *Pear-Tree*, the *Hawthorn*, the *Oak*. It makes a far greater Progreſs in the two firſt than in the two laſt, where the *Leaves* are ſmaller, of a darker Green, the joints ſhorter, and the Growth much ſlower: His Method is, he makes a longitudinal Inciſion, not deep in the Bark, and places the *Seeds* in it at certain Diſtances; or he pares off a little of the *Cuticle*, or outer *Rind*, and then fixes the Berry, Seed and all, to which it adheres by its glutinous Subſtance; but in both Caſes care is to be taken to preſerve them from the *Birds*, who will readily take them away and deprive the Expectation, unleſs a ſmall Net or peice of thin Lawn be plac'd to cover it. The *Seeds* are compreſs'd, or flat on both Sides, hard, black, *Heart like*, broad at the Baſe, with two obtuſe Angles, terminating in a white Point, which is the Point of the Radicle, even before it begin to germinate or be ſtretch'd forth. The Seed being hard-preſs'd by its flat Side to the place prepar'd for it in the Tree, or it being plac'd edge-wiſe in the Gap, or Slit cut in the Back on purpoſe, with the conical Part or Point of the Radicle inmoſt; if it lie flat on the *Bark* in a few Days, is to be obſerv'd that this Point ſtretches itſelf and becomes round, and very ſharp Pointed, like a Pin; in a few Days more it begins to bend inward like an Hook, when it inſinuates itſelf betwixt the Fibres of the *Bark*, when in a ſhort time if ſends forth its radical Fibers all round like the Root of a ſeedling plant, after being firſt committed to the Ground; which done it ſends forth two ſmall, oblong, blunt, ſmooth, ſhining, *Seed-Leaves*, the *Plume* ariſes ſharp in the Middle, and after near half an Inch in length, it is ſtretch'd forth into another pair of *Leaves*, much larger than the former. Thus far during the Spring Shooting time: In the Autumn it prepares the Buds, and then begins to ſend forth two new Stolones from the Center of the firſt pair of *Leaves*, where the Joint is form'd; This ſecond or firſt pair of *Shoots*, being about one Inch long, againſt the next Spring, ſend forth another pair of *Leaves* on the Top of each, which are now near their ordinary Bigneſs, *viz.* an Inch and an half long, and half an Inch broad, blunt, dark green, ſtiff, and ſhining. Thus from one Trunk, not above one, or one an and half Inch long, and ſel-

dom

dom exceeding the groſſneſs of one's *Thumb*, is the Plant variouſly branched out. On the Top of each Joint is one pair of *Leaves*, from betwixt the joining of theſe two Leaves do ariſe 2, 3, or 4 new *Shoots* for next Year, which again terminate in ſo many pairs of *Leaves*, form ſo many new *Joints*, and ſend forth ſo many new Shoots againſt next Year; ſo that counting from the firſt Trunk, the age of the *Plant* is ſoon known, the latter *Joints* encreaſe in Length and the firſt Joints in *Groſſneſs*, for 'tis the Age that cauſes the Groſſneſs which yearly encreaſes in Bigneſs, according to the ſeveral Setting-times; and 'tis the quantity of the Sap, with the repeated Circulations, which add new Vigour to it, that ſtretches forth the younger Shoots to the greater Length. The *Bark* is ſmooth, the Wood is firm, ſolid, and ponderous; the new *Shoots* green and more flexible the firſt Year. After 3 or 4 Years the Flowers begin to be puſh'd forth in *Auguſt*, and are in their full Vigour in *September*, 3 and 3 together from the Boſom of the *Leaves monopetalous*; deeply divided into 4 *blunt Segments*, without *Stamina* or *Apices*; the outſide is green repreſenting the *Calyx*, where the Segments are every where larger; on the inſide is a narrow Margin, or Border, making as it were a diſtinction betwixt the *Calyx* and *Petalon*, which is ſo firmly adherent to it, that they cannot be ſeparated. The inſide of theſe florid Segments is yellow, beſpread as it were with *Flower* of *Brimſtone*, which upon narrow Inſpection are ſo many *Globules* or *Apices*, fill'd with the *Farina Fecundans*, which when ripe becomes *blackiſh*, upon which they immediatly quit their Hold, and fly away to impregnate the *Female Embryons*. *Tournefort* ſays, theſe *Embryons* are upon different Branches ariſing from the ſame *Root*, and all other upon Branches from different *Roots*. *Boerhaave* alſo ſays, 'tis *Flore a Fructu remoto*; but I am of the mind 'tis *in diverſis Plantis*: For not to mention the great Quantity of *Viſcum* brought into the *London* Markets about *Chriſtmas*, all which are of the *Bacciferous Species*, which perhaps may be for the greater Ornament; that in Mr. *Fairchild*'s *Garden* planted by himſelf, which did not *Flower* till after 7 Years, has yearly produc'd *Flowers* but no *Embryons*. So that 'tis probable 2 Seeds from the ſame Berry, have ſpring forth ſo near to each other on the Tree, that ſcarce any diſtinction can be made of them at the *Root*. The Berries are diſpos'd after the ſame Manner 3 and 3 together, oval, at firſt ſurrounded by four thick, yellowiſh *Leaves*, which ſoon fall off as they encreaſe, until they become about the Bigneſs of *Bay Berries*, of a ſhining Silver Colour, fill'd with a viſcid Juice in which the Seeds are lodg'd. As theſe Flowers beſpread with the Farina, and being carried away by the

leaſt Wind, when 'tis ripe, give a good Idea of the manner of *Impregnation* of the *Embryons* at a diſtance; ſo the inſertion of the *radical* Fibres into the body of the *Trees* on which it grows, confirms what I have advanc'd, *Botanick Eſſays*, p. 340, and 384. 'That the difference of the various 'Species of *Plants*, *ubicunque terrarum*, depends upon the ſeveral con-'figurations of the Pores, which only admit of Particles of ſuch and 'ſuch a Figure, but deny admittance to any other; or if they do en-'ter, they muſt be molded, and faſhioned according to the Pore.' The ſeveral kinds of *Graftings* are ſufficient proofs of this, where the Fruit always partakes of the nature of the *Cion* and never of the *Stock*, and this *Viſcum* very much confirms it. For whether the *Mother-Tree* be *Oak*, *Hawthorn*, *Apple*, *Pear*, &c. *Miſletoe* is ſtill the ſame, either with regard to the active Principles it contains, or its eminent Virtues. 'Tis indeed obſervable the harder the Wood of the *Tree* is, the more ſlow the Growth of the *Viſcum*, and the ſmaller the Plant; but that depends upon the Tenuoſity of the Fibres, which does not allow the nutritive Particles of the *Viſcum* to be percolated or ſtrain'd out in ſuch an abundance as the *Plant* requires. I could inſiſt longer on this Subject; and give an account of the intricate *Radification*, ſo to call it, of this *Plant*, in the ſeveral *Trees* on which it grows, and the various Rami-fications of the *radical Fibres*, with their Inoſculation with the Fibres themſelves of the *Mother-Tree*. But as ſuch a diſcovery is the effect of the laborious Endeavours of the acurate Dr. *James Douglas*, far be it from me to rob him of the Glory, due to him for ſo much Pains, and ſo great Induſtry as he uſes on this and the like Occaſions.

Virtues and *Uſes.*

There is but little to be ſaid concerning the Virtues of *Tree-Ivy*. The *Leaves* are frequently apply'd to Iſſues to curb the proud Fleſh, and allay the *Inflamation* round the Orifice, and ſome make ſmall *Globules* of the Wood to be put into the Orifice inſtead of *Peaſe*; by which it ſeems to be ſubaſtringent and *detergent*, which ſeems to be the more probable becauſe its Juice is ſometimes uſed to remove the Morphew and *Tettars* in the Face and Hands.

Viſcum of any manner of vegetable Subſtance, would appear at firſt View to be the leaſt aſſiſting in the removing of thoſe Maladies, for which 'tis recommended; but when the traditional Virtues, aſſign'd to it by the Ancients, come to correſpond with modern Experience, and

and when the ſame is confirm'd by the Examination of its *Principles*, and by the frequent Experiments and various Preparations in making of its Chemical Analyſis, by the abovenam'd Dr. *Douglas*, there remains no Room for to doubt of its being an effectual Remedy in all thoſe Caſes for which 'tis recommended, *viz.* that 'tis good in *Epileptick Caſes*, both to Old and Young, eſpecially the latter; alſo in *Paralytick Caſes* and other nervine Affections. It may alſo be an effectual Uterine, as all other *nervine Medicines* are: It enters the *Pulv. ad Guttetam*, uſually given to ſucking *Children* about the 6th Month, when upon what they call the *breeding* of their Teeth, they are often ſubject to Conuvlſion Fits. There are who adviſe to pull it at ſuch a time of the *Moon*'s Age, uſe ſuch and ſuch Circumſtances in the *drying* of it; give ſo many doſes before the Full-Moon, and as many at the Change, pretending thereby that it operates like a Charm, or as the Moon directs. I care not to amuſe the Reader with ſuch Trifles, I am of opinion that given in Subſtance, is preferable to the giving of it either in *Tincture* or *Infuſion*; being well aſſur'd, a great many *Medicines* are more effectual, when the *Stomach* is ſuffered to ſeparate its more uſeful Parts, than when 'tis done before Hand, by any *Chymical* or *Pharmaceutical* Preparation whatever. Though I am not averſe from its being imploy'd in *Tinctures*, *Medicate Infuſions* in Wine or Ale, where it may be aſſiſting to other Medicines of the ſame nature. Therefore whatever Sir. *J. C.* may pretend, there can be no ſuch Dependance on his account of the efficacy of Miſletoe in Epileptick Caſes, as Dr. *Douglas* can aſſure us from the various Experiments he has made; when he ſhall allow his curious Diſſertation on the Subject to come abroad. 'Tis of the Juice of the Berry they make the Bird-Lime ſo uſeful for catching of Birds of the Hedge.

I once deſign'd to have given my Thoughts on this diverſity of Principles and Virtues in *Viſcum* from the *Mother-Trees* on which it grows; *v. g.* how it ſhould come to paſs, that a Plant of a different Species from another Plant, by which 'tis only nouriſhed, as that an *Oak*, all whoſe parts are potent Aſtringents, and whoſe Particles are of ſo fixed a Nature, ſhould afford Nouriſhment to another *Plant*, all whoſe principles are moſt active and volatile. But as I have explain'd myſelf fully as to that when treating on the Nouriſhment of Plants, *Botanick Eſſays*, No. V. p. 331. *&c.* I omit it here leaſt I ſhould be thought to croud theſe Papers with too many Digreſſions extrinſick from the Subject.

Hedera terreſtris, vide *Calamintha*, Decad IV.

FINIS.

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