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THE
SEVEN BOOKS
OF
PAULUS ÆGINETA.

TRANSLATED FROM THE GREEK

WITH

A COMMENTARY

EMBRACING A COMPLETE VIEW OF THE KNOWLEDGE

POSSESSED BY THE

GREEKS, ROMANS, AND ARABIANS

ON

ALL SUBJECTS CONNECTED WITH MEDICINE AND SURGERY.

BY FRANCIS ADAMS.

IN THREE VOLUMES.

VOL. III.

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ADVERTISEMENT TO THE THIRD VOLUME.

I THINK it necessary to say a few words in explanation of the reason why the reader will find in the Commentary contained in this, my concluding volume, some deviation from the plan upon which the Commentaries in the two preceding volumes were executed.

In the Advertisement to the First Volume it is stated that, by the advice of the Council of the Sydenham Society, I had restricted the history which I gave of professional opinions on the various subjects treated of in the course of my work to what is properly called the period of ancient literature, and to this rule it will accordingly be observed that I have generally adhered, except in a few instances, where a departure from it seemed to be demanded for the sake of illustration, or for some other special object. But in dealing with the subject-matter of the present volume, namely, the *Materia Medica* and Pharmacy of the ancients, it became apparent to me from the first that a different plan of proceeding was indispensable, otherwise the usefulness of the whole work to the ordinary reader would be very much impaired. It is well known how frequently the nomenclature of the sciences connected with these subjects has changed, and what differences of opinion have prevailed with regard to many of the substances used in the practice of medicine by the ancients. In order, therefore, to render the information contained in this and the preceding volumes of ready access for practical purposes, it appeared to me necessary to bring down the annotations to modern times, so that one might see at once what is the exact import of the ancient terms of art, and what the medicinal substances mentioned in the course of the work actually were, according to the nomen-

clature of the present age. Accordingly it will be found that the Commentary in this volume abounds in references to modern authorities, and contains a variety of materials collected, not only from the earlier herbalists and commentators on Dioscorides, Theophrastus, and other ancient authors, but likewise from recent writers on Botany, Mineralogy, and the *Materia Medica*, in illustration of the various articles which are treated of in this work. And I have much satisfaction in having it in my power to state that the plan now described has the authority and sanction of the Council, who gave it their entire approval. To Dr. Pereira I owe my grateful acknowledgment for much valuable advice and assistance received from him on this part of my work; but at the same time it is fair to him to state I have no right to make him in anywise responsible for opinions herein advanced which may turn out to be erroneous.

And now, having brought my laborious undertaking to a conclusion, I would embrace the present opportunity of returning my most sincere expression of thanks to the Council for the honour which they conferred upon me in selecting my work for publication, and for the very flattering terms in which they speak of the first volume in the Annual Report of their proceedings for 1845. I trust that whatever degree of merit they discovered in *it* will be found not to be wanting in the succeeding parts, and that, taken together, the three volumes will be acknowledged to constitute a more copious repertory of ancient opinions on professional subjects than is to be found elsewhere. If such be the judgment which the intelligent members of the Sydenham Society shall generally pronounce on my work, I shall certainly never regret the time and exertions which I have bestowed upon it.

τοιόν δ' ἀπέβη τόδε πρᾶγμα,

F. A.

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PAULUS ÆGINEA.

BOOK SEVENTH.



In this book, being the seventh and last of the whole work, we are to treat of the properties of all Medicines, both Simple and Compound, and more especially of those mentioned in the six preceding books.

SECT. I.—ON THE TEMPERAMENTS OF SUBSTANCES AS
INDICATED BY THEIR TASTES.

It is not safe to judge from the smell with regard to the temperament of sensible objects; for inodorous substances consist indeed of thick particles, but it is not clear whether they are of a hot or cold nature; and odorous substances, to a certain extent, consist of fine particles and are hot; but the degree of the tenuity of their parts, or of their hotness, is not indicated, because of the inequality of their substance. And still more impracticable is it to judge of them from their colours, for of every colour are found hot, cold, drying, and moistening substances. But in tasting, all parts of the bodies subjected to it come in contact with the tongue and excite the sense, so that thereby one may judge clearly of their powers in their temperaments. Astringents, then, contract, obstruct, condense, dispel, and incrassate; and, in addition to all these properties, they are of a cold and desiccative nature. That which is acid, cuts, divides, attenuates, removes obstructions, and cleanses

without heating ; but that which is acrid, resembles the acid in being attenuant and purging, but differs from it in this, that the acid is cold, and the acrid hot ; and, further, in this, that the acid repels, but the acrid attracts, discusses, breaks down, and is escharotic. In like manner, that which is bitter cleanses the pores, is detergent and attenuant, and cuts the thick humours without sensible heat. What is watery is cold, incrassate, condenses, contracts, obstructs, mortifies, and stupefies. But that which is salt contracts, braces, preserves as a pickle, dries, without decided heat or cold. What is sweet relaxes, concocts, softens, and rarefies : but what is oily humectates, softens, and relaxes.

SECT. II.—ON THE ORDER AND DEGREES OF THE TEMPERAMENTS.

A moderate medicine which is of the same temperament as that to which it is applied, so as neither to dry, moisten, cool, nor heat, must not be called either dry, moist, cold, or hot ; but whatever is drier, moister, hotter, or colder, is so called from its prevailing power. It will be sufficient for every useful purpose to make four ranks according to the prevailing temperament, calling that substance hot, according to the first rank, when it heats, indeed, but not manifestly, requiring reflection to demonstrate its existence : and in like manner with regard to cold, dry, and moist, when the prevailing temperament requires demonstration, and has no strong nor manifest virtue. Such things as are manifestly possessed of drying, moistening, heating or cooling properties, may be said to be of the second rank. Such things as have these properties to a strong, but not an extreme degree, may be said to be of the third rank. But such things as are naturally so hot as to form eschars and burn, are of the fourth. In like manner such things as are so cold as to occasion the death of a part are also of the fourth. But nothing is of so drying a nature as to be of the fourth rank, without burning, for that which dries in a great degree burns also ; such are misy, chalcitis, and quicklime. But a substance may be of the third rank of desiccants without being caustic, such as all those things which are strongly astringent, of which kind are the unripe juice of grapes, sumach, and alum.

COMMENTARY. The following is a list of the ancient authorities on the Materia Medica and Pharmacy: Hippocrates (pluries); Dioscorides (de Materia Medica); Celsus (v); Scribonius Largus (pluries); Marcellus Empiricus; Pliny (H. N. pluries); Rei Rusticæ Scriptores; Apuleius (de Herbis); Antonius Musa (de Herba Betonica); Macer Floridus; Galenus (de Simpl.; de Comp. Med. sec. loc.; de Comp. Med. sec. gen.); Aëtius (i and ii); Oribasius (Med. Collect. xi et seq.); Sextus Platonius (de Med. ex animal.); Zosimus Panopolita (de Zythorum confectione); Actuarius (Meth. Med.); Myrepsus (pluries); Psellus (de Lapidibus); Rhases (Contin. liber ult.; ad Mansor. iii); Avicenna (ii, et alibi); Serapion (de Simpl.; de Antidot.); Mesue (de Simpl.); Haly Abbas (Pract. ii and x); Averrhoes (Collig. v); Albengnefit (Libellus de Simpl. med. virt.); Geber (Chemia); Servitor (de Præpar. Med. i. e. xxviii Albucasis); Baitharis Præfatio ap. Casiri Biblioth. Arab. Hisp. p. 276; Ebn Baithar (Uebersetz von Sontheimer); Rei Rusticæ Scriptores Arabici ap. Casiri B. A. H.; Alchindus (Libellus de Med. compos. grad.)

Hippocrates, although he appears to have been familiarly acquainted with the properties of most of the vegetable substances of the Old World, still employed in the practice of medicine, has left no regular treatise on the Materia Medica and pharmacy of his time. Theophrastus has treated more fully and ingeniously of botany and vegetable physiology than any other Greek writer; but except in two or three instances he scarcely alludes to the medicinal powers of the articles which he describes. In short, Dioscorides is the first and great authority on the Materia Medica,—his contributions to which can never be too highly appreciated; for, as Alston justly remarks, the science in ancient times remained ever after in nearly the same state as he left it. The genius of Galen, it is true, shed a considerable degree of lustre over the subject by his philosophical theory regarding the general actions of medicines; but his descriptions of particular substances, and even his detail of their properties, are mostly borrowed from Dioscorides. The Greek authors, subsequent to his time, can scarcely be said to have added one single article to the list of medicinal substances described by him. Aëtius, however, although he

COMM. can advance no great claim to originality, has given, as we shall see presently, a remarkably lucid exposition of the Galenical principles of therapeutics. Of Pliny's great work, so replete with the most rare and curious information on almost every department of ancient literature, we feel reluctant to speak otherwise than in terms of unqualified eulogy, and yet candour obliges us to admit that on all medical subjects this writer is but a very indifferent authority. For, being evidently possessed of no practical acquaintance with professional matters, he appears to have been wholly incapable of discriminating real from pretended facts in medicine, and has accordingly jumbled important and useless matter together in many instances with very little judgment, nor can his opinions be much relied upon except when he copies closely from Dioscorides. The same objection cannot be made to his countryman Celsus; but the plan of his work being limited, the account which he gives of these matters is confined to a classification of simple substances, and a few formulæ for the formation of the more important pharmaceutical compounds. The Arabians added camphor, senna, musk, nux vomica, myrobalans, tamarinds, and a good many other articles to the *Materia Medica*; but, upon the whole, they transmitted the science to us in much the same shape as regards arrangement and general principles as they received it from their Grecian masters. At the same time it is impossible to take even a cursory view of the great work of Ebn Baithar, now fortunately rendered accessible to many European scholars by Dr. Sontheimer's translation of it into German, without being struck with the amazing industry, enterprise, and talent displayed by that wonderful people in this department of medical science. In this collection, more than 1400 medicinal and dietetical articles are described, many of them no doubt in nearly the same terms as they had been noticed by Dioscorides and Galen, but of original matter relative to substances then for the first time introduced into the practice of medicine, there is no lack; and it is only to be regretted that a proper key to these stores is still a desideratum which it is to be feared will not soon be supplied. Ebn Baithar's list of medicinal substances, however, is far more copious than

those of the other Arabians, who in general follow closely in the footsteps of the Greek authorities, and seldom supply anything very original of their own. For example, the *Materia Medica* of Rhases contains only 765 articles, and that of Avicenna only 747, which it is to be remarked, is a smaller number than is contained in the work of Dioscorides, wherein Alston states that he counted above 90 minerals, 700 plants, and 168 animal substances, making 958 in all. This is nearly triple the number of simples contained in the *Materia Medica* of the Edinburgh Dispensatory at the present day, which amount only to 341 articles; so that if this branch of medical science has received any material improvement in modern times, it must arise principally from our superior accuracy in estimating the virtues of the substances now in use, or in making more ingenious compositions of their elementary ingredients. At all events, it is quite clear that the Greek, Roman, and Arabian physicians were amply provided with medicines of every possible character, and there is no reason to suppose that they were in anywise behind us in the skilful management of them. It has been affirmed, indeed, in some late publications which we have seen, that the ancients had never classified the articles in the *Materia Medica* according to the nature of their actions; but this we need scarcely assure the reader is a very erroneous account of the matter: and in proof of this we could have wished, if our limits had permitted us, to have introduced here some of the classified lists of medicinal substances as given by the ancient authorities, and more especially those of Aëtius and Serapion.

Verum hæc ipse equidem, spatiis inclusus iniquis
Prætereo, atque aliis post me memoranda relinquo.

We have mentioned above that Aëtius's account of the general principles of the *Materia Medica* is particularly excellent, and we have now to add, that as it is sufficiently explicit to convey a distinct idea of the Galenical system, and is contained within moderate limits when compared with the full and lengthy exposition of it given by Galen himself, we shall give that of Aëtius entire, and confine our annotations almost solely to it in the present instance:—

“ On the Powers of Simple Medicines.

“ There are differences in the particular actions of medicines, arising from each of them being to a certain degree hot, or cold, or dry, or humid, or consisting of subtile or of gross particles, but the degree in which each of them is possessed of the above-mentioned properties cannot be truly and accurately determined. We have endeavoured, however, to define them in such a manner as will be sufficient for all practical purposes, laying it down that there is one class of medicines possessed of a similar temperament to our bodies, when they have received a certain principle of change and aliation from the heat in them, and that there is another which is of a hotter temperament than we. Of this temperament I have thought it right to make four orders, the first being imperceptible to the senses, and only to be inferred from reflection; the second being perceptible to the senses; the third strongly heating but not burning; and the fourth, or last, caustic. In like manner of frigorific or cooling things, the first order requires reflection to demonstrate its coldness: the second consists of such things as are perceptibly cold; the third is perceptibly cold, but does not occasion mortification; the fourth produces mortification. So it is in like manner with humectating and desiccant articles. Let such an order of degrees be laid down to render clearer the course of instruction, rose oil or the rose itself being placed in the first order of cooling things; the juice of roses in the second, and in the third and fourth those things which are extremely cold, such as cicuta, meconium, mandragora, and hyoscyamus. In regard to hot things, dill and fenugreek belong to the first order; those which are next to them, to the second; and so of the third and fourth, until we come to the caustic. In like manner, respecting moistening and desiccant medicines, beginning with those of a moderate degree, we may arrange them until we come to their extremes. Such knowledge is of no small importance for the purpose of medical instruction. One ought also to exercise the sense of taste, and remember the peculiar qualities of juices; as, for example, that such a substance when

applied to the tongue dries strongly, contracts, and roughens it to a considerable depth, such as unripe wild pears, cornels, and the like; every such thing that is intensely austere is called sour. Such things, as when applied to the tongue, do not constrict and contract it like astringents, but, on the contrary, appear to be detergent and cleansing, are called salt. Such things as are more detergent and also rougher in a painful degree, are called bitter. Those things which are biting and corrosive with a strong heat, are called acrid; and such as are biting without heat, are called acid, and these have the power of causing a fermentation when poured upon earth. Of those which lubricate, fill, remove asperities, and, as it were, erosions of the tongue, such as do so with sensible delight, are called sweet; but such as do this without sensible delight, are called fat. If, then, you wish to form a judgment of acrimony, you may learn to do so from garlic, onions, and the like, which are to be frequently tasted and long masticated, in order that the sensation thereby imparted may be fixed in the memory. But if you wish to acquire the perception of astringency, you may do so from galls, sumach, and the like; if of bitterness, from natron and bile; and if of sweetness, from rob and honey. Further, if you would wish to judge of such things as are devoid of all qualities, or of an intermediate quality as to taste, take water, and having tasted it, retain the perception in your memory; but see that it be the purest water, and that it contain none of the aforesaid qualities; neither sweetness, acidity, acrimony, nor bitterness; and, in addition, that it be neither very hot nor very cold. Proceeding from this, you may the more readily perceive the obscure taste of certain juices which I call moderately sweet, but which others call watery; such as the juice of green reeds and of grass, of wheat and of barley, and of moderately sweet things, as resembling what I have described to be of all other things the most devoid of qualities, I mean water, which is in an intermediate state between heat and cold, or inclines a little to cold. If being endowed with such a taste, it have not a liquid but a dry consistence, it must necessarily be terrene and desiccative without pungency. These things are called emplastick, such as starch, and most of the thoroughly-washed metals, as pompholyx, ceruse, calamine, Cimolian earth, Samian earth, and

the like. Some are not only terrene, but also watery in their nature; and some contain no little air in them: such are viscid and therefore emplastic. There are two kind of emplastic medicines, the one very terrene and dry, and the other altogether viscid, being composed of water, earth, and, for the most part, of air, such as sweet oil. The white of an egg is similar to oil, but more terrene. The cheesy part of milk is emplastic, and so also the fat of swine. The fat and suet of a bull and a buck-goat are acrid, and more terrene than that of swine. That of a goose or a cock is hotter and drier than that of swine; but of subtile parts, and by no means terrene. The fats then, if they have no acrimony, are emplastic, or obstruct of the pores, more especially if of a drier and more terrene nature, such as well-washed wax. Emplastic medicines then are of such a nature. But astringents are terrene, and with regard to the composition of their particles are thick; but in their qualities they are cold. Acids in composition are attenuating, but cold, like astringents. The terrene particles contained in the juices, which, when melted, contract and dry the humidity of the sentient parts of the tongue, if particularly rough, are called sour; but if less so, austere; and we properly call the temperament of such juices cold. But since they are unequally desiccative—for in this consists their asperity—they are likewise terrene; for every watery substance permeates the body evenly, and when removed it easily coalesces; but what is terrene when removed does not readily coalesce again. And the peculiarity of the sensation, if you will recollect the impression, will testify to the same effect; for the passage of acid juices, in the organs of sensation, appears quick; but that of sour, slow; and acids exert their actions more on the deep-seated parts, whereas sour substances act more superficially. When you wish to ascertain the action of a truly sour substance, if that which is made trial of appear at the same time sour and pungent, I would recommend you to lay that species aside, and to have recourse to something which is sour without being pungent, and neither acid, sweet, nor bitter, but as much as possible having no one quality or power mixed up with its astringency; for it is useless and foolish to make trial of such a medicine, as it cannot be ascertained whether it be by its astringency, or by

any of the qualities mixed with it, or by a combination of both, that the substance which is made trial of exerts its action. Therefore, chalcitis, misy, copperas, the flakes of copper, sori, and, in addition to them, the armeniacum pictorium (Armenian pigment), mercury, and other astringent substances which are also at the same time pungent, act by both their properties upon the bodies to which they are applied; but we are not thereby informed whether they burn by their astringency or by their acrimony; for such substances, when taken into the body, being composed of gross particles, and rather hot in their powers, having become ignited in the course of time, according to the change which they undergo in the body of the animal, ulcerate and burn the parts about the stomach like heated stones or irons; and owing to their weight they are incapable of being distributed over the body. It is better, therefore, after much observation, to look out for something that is purely astringent, and when you have found such a substance, make haste to try it in the manner you have formerly heard described; such as having tasted the flowers of the wild pomegranate, galls, or the flowers of the cultivated pomegranate, hypocistis, acacia, sumach, or the like, if the substance appear intensely sour, and it is manifest that it contains no other quality, you must prove the action of astringency from it. A sour substance then is terrene and cold, and its quality may necessarily be removed in three ways; either by being heated, or moistened, or by undergoing both these changes at the same time. If only heated, it will neither become more humid nor softer; but becoming harder it will have acquired sweetness, as is the case with acorns and chesnuts, as they are called. But if only moistened, and if the humidity is of a thick nature and watery, it becomes austere; for the astringent part being dissolved renders the juice austere, it being the property of a watery fluid to obtund the powers of every juice. If a subtile and airy fluid be super-added, it will become acid, for coldness being attenuating will render the former quality acid. When moistened and heated at the same time, if with a watery humidity, it will occasion a change to sweetness; but if with an airy, to fatness; for the fruits of such trees as appear sweet to us when ripened, are, when newly formed, sour and dry in their con-

sistence, each according to the nature of the tree which produced it; but in process of time, they become more humid or juicy; and some get acidity superadded to their sourness, which latter quality when they have laid aside they become again sweet as they arrive at maturity. Some do not acquire sweetness at all while upon the trees, but after a time, when separated from them. Some without the intermediate acidity pass from sourness to sweetness, as the fruit of the olive. All things are concocted by heat, which is of a twofold nature, the one proper and innate, and the other supplied from without by the sun. But, since being sour at first, they become sweet when ripe, their sweetness is occasioned by heat; but their acidity and sourness by cold. And it has already become obvious that as fruits being sour at first, in process of time become, some sweet, some acid, some austere, and some remain sour, that great variety will arise from a mixture of these qualities. Wherefore, the fruit of the ilex, the cornel, and other such things, are sour to the last, because they remain cold and dry as at the beginning, being only increased in size, but acquiring no other internal change. The fruits of the myrtle, the wild pear, and the oak are sweet and sour at the same time; but the fruit of Aminæan vines, wine, and such like things, are only austere. The fruit of the palm tree, and of wines, the Surrentine, and such as have sweetness joined to astringency, are at the same time austere and sweet. The Theræan wine, the Scybelitic, boiled must called rob, and other such like things, are only sweet. The fruit and juice of the olive in particular, but also of all other such things from which oil is formed, are fatty. And as a sour juice in process of time, becoming at first sweeter, and afterward turning more acrid and bitter, ends in becoming wholly bitter; so in like manner, a cold juice becomes at first more acid, and if wholly congealed it turns entirely acid; and such fruits as at gathering are filled with much humidity, and such as otherwise acquire much water, readily become acid from very slight causes. For if the unripe grape is acid, but the ripe sweet, and if all fruits are ripened by the solar heat, it is obvious that what is more imperfect and colder is acid; whereas, what is more perfect and hotter is sweet. When wine, therefore, from refrigeration becomes acid, it is clear that it returns

again to the same juice from which it was formed, I mean that of the unripe grape. But vinegar differs thus far in power from the juice of the unripe grape, that the vinegar has acquired a certain degree of acrimony from the putrefactive heat ("fermentation?"); but the juice of the unripe grape has no acquired heat, and therefore none of the acrimony of vinegar; wherefore, vinegar is more attenuating than the juice of the unripe grape, as the sensation bears testimony to the truth of what has been said; but the acrimony of the vinegar is not sufficient to overcome the coldness arising from its acidity; it serves, however, to make it more penetrating; for inasmuch as heat is more penetrating than cold, so does the acrimony of vinegar the more readily pass the pores of sensible bodies, and thus acrimony takes the lead, but coldness follows at no great interval. And it is this mixed and almost indescribable sensation which prevents us from calling vinegar simply cold; for we perceive in it a certain fiery acrimony. But the coldness, from the accompanying acidity, straightway obtunds and extinguishes the acrimony, and therefore there is a much greater sensation from the coldness than from the heat; for some persons by drinking oxycrate in the summer season are sensibly cooled, and remain free from thirst. But since thirst arises from two distinct causes, either from a deficiency of moisture or an excess of heat, that arising from dryness is not cured, but that occasioned by heat is removed by it; for vinegar by itself does not moisten, but is decidedly refrigerant. Thirst, therefore, arising from a hot intemperament, or from a hot and dry one, is not to be cured by drinking vinegar; but when humidity and heat meet together, the proper cure of such a kind of thirst is vinegar; but otherwise in the case of those who are thirsty in ardent fevers and all other hot diseases, and in those during summer and hot weather, their state is a compound of heat and dryness, so that the proper cure for it is a composition of vinegar and water; for the vinegar is decidedly refrigerant, and by its tenuity readily diffusible, and the water, in addition to its property of cooling, is the most moistening of all substances, for nothing is more moistening than water. But as an external application for heat of the hypochondrium, the juice of unripe grapes is preferable to vinegar, because it has no violent and offensive

coldness, nor any pungent heat mixed with it; for in such affections persons require to be soothed without violence by an application which will not induce externally any pungent acrimony. The juice of the unripe grape, then, is not only acid but sour; for, as mentioned before, almost all the fruits of trees are at first sour to the taste; and not only are acids cold, but so also are sour and austere things. And if any one will taste quinces, myrtles, or medlars, he will perceive clearly that there is one sensation from acids, and another from sour and austere things; for sour things seem to propel inwards the part which they touch, everywhere equally squeezing, constricting, and contracting, as it were; but the austere seem to penetrate deeply, and to induce a rough and unequable sensation, so that by drying they expel the humidity of the parts of sensation. Thus, between sour and austere juices, there is a certain peculiar difference of sensation not easily to be described, but which everybody must understand from what has been said. Every sour substance, then, when free from all other qualities, I have upon trial always found to be cold; but every sweet substance is hot, and does not greatly exceed the heat in us; and as we are delighted, more especially if we are cold, with the touch of warm water, until it expand the parts congealed by the cold, and as it heats us, and does not dissolve nor break the continuity of the parts, it is very pleasant and useful; so all sweet food is hot, and yet it is not possessed of such a degree of heat as to be unpleasant, but remains within the limits of those things which expand, soften, and are demulcent: for all nutritive food is allied to, and agrees with, the whole substance of the bodies which it nourishes; it requires, therefore, to be moderately hot, so as to agree with the bodies which are nourished; and hence one kind of food and medicine does not agree with all men; for according to his peculiar substance and affection is every one delighted and benefited. And such being the nature of things those kinds of food which are less sweet are less hot, and their heat is proportionate to their sweetness; but these things, when they get to an immoderate degree of heat, are no longer sweet, but appear bitter, such as honey which is old and much boiled, and so also with all other sweet things; for such things as without boiling or preparation are allied to the

temperaments of the bodies which they nourish, appear already sweet; but all such as are not allied appear unsavoury until prepared, for those which are hot require to be corrected by cold, and those which are sufficiently cold by the mixture of calefacient food and by heat. In like manner such things as are terrene and drier than proper, are to be corrected by humidity; and those things which are humid and watery, by drying; that which is sweet therefore, in addition to being more or less hot, is necessarily more or less humid. But when this bitterness arises from being over-roasted, as in lime and ashes, it is necessarily rendered dry and hot. For this reason every bitter thing is of such a nature as to prove detergent, and is calculated to break down and to cut viscid and thick humours, and such are ashes and natron; but that bitter sap is dry and terrene, may be collected from the circumstance, that bitter things are of all others the least prone to putrefaction, and do not engender worms nor other animals such as are usually formed in roots, herbs, and fruits when they become putrid; for we see that such animals and putrefactions take place in humid bodies. Those things which are intensely bitter (I call those things such which have no other manifest quality) are uneatable, not only by men, but by almost all animals, because every living creature is more or less humid, and bitter things are dry in like manner as ashes and cinders. As, therefore, that which is truly sweet is nutritive, and that which is purely bitter innutritive, so those things which are intermediate are nutritive indeed, but less so than the sweet. The salt juice is allied to the bitter, for both are terrene and hot; but they differ from one another perceptibly in this, that the bitter is more attenuated and wrought by the heat and dryness; and thus, too, of salts, such as are hard, denser, and more terrene (as are almost all the fossils), are less calefacient and attenuating; but such as are brittle and porous are at the same time more attenuating and hotter; and some of them are bitterish, being intermediate between the hard salts and aphronitrum; and if you will warm any saltish thing to a great degree it will straightway become bitter. Thus, the water of the Lake Asphaltitis, which they call the Dead Sea, being contained within a hollow and hot place, and overheated by the sun, becomes bitter, and for this reason it becomes more

bitter in summer than in winter. And if you will draw some of it, and put it into a hollow vessel in a place exposed to the sun during the summer season it will straightway become more bitter than it generally is. For no animals appear to be found in such water, neither plants; and although the rivers which fall into it contain many large fishes, more especially the river near Jericho called Jordan, none of the fishes pass the mouth of the river, and if you will catch some and throw them into the Lake, you will see that they die immediately, and hence it is called the Dead Lake or Sea. Thus, that which is intensely bitter is inimical to all plants and animals, and is of a parched and dry nature, becoming like soot from roasting. Having, therefore, settled the powers of bitter juices, and said that they are cutting, detergent, attenuant, and decidedly hot, to such a degree only as not to burn, we shall next proceed to the acrid; and first we may say of them that they are truly hot, then corrosive, caustic, escharotic, and of a dissolvent nature, when applied externally to the skin; but when taken internally, those which, in their whole substance are adverse to certain animals, are all septic and destructive to them, as the cantharis and buprestis are to men. But such as are distinguished only by excess of their heating powers, if thicker and terrene, as arsenic, sandarach, and the like, we call ulcerative of the internal parts; but if they consist of subtile parts, such as the common seeds, carrot, anise, and the like, they are diuretic, diaphoretic, and, in a word, cutting and discutient; and some are also useful in expectorations from the chest and menstrual discharges. But acrid juices would seem to differ from bitter, not only in possessing strong heat, but also in this, that all bitter things are not only hot but of a dry temperament like ashes, while in such acrid substances as are not bitter, there is often much humidity mixed, and therefore we use no few acrid things as articles of food. But since enough has been said respecting all the juices, it still remains to treat of the vapours. Most of the vapours, then, affect us similarly to the juices; for all acids, and likewise vinegar itself, move the senses of smell and taste in like manner; and acrid things, as garlic, onions, and the like, are pungent and offensive to the smell, no less than to the taste; so that, without tasting certain things, such as dung, we are confident that we know its

quality, and therefore at once we abstain from them, because we repose confidence in the sense of smell. And of fragrant things, such as have become putrid and offend the smell, we straightway throw away, and do not attempt to taste; and in short, with regard to almost all things, the smell and taste are found to agree; and we refer each of them to two classes, calling the most of those substances which have smell, odorous, and fetid, and considering the odorous analogous to sweet things, and the fetid to such as are not sweet to the tongue, it would appear that from bodies which have no smell there is but little emitted, or at least that it is disproportionate to their bulk, as is the case with salt and sour things in particular; for the substance of sour things is of a dense and cold nature, so that it is natural that what is emitted from them should be small in quantity, thick, and terrene in its parts, so as not to reach the brain in respiration. Hence it is not safe to judge of their temperament from the smell as it is from the taste: for we know that things which are inodorous consist of thick particles, but it is not apparent how they are as to heat and cold; and that fragrant things consist of subtile particles, and are hot in their nature; but it is not shown by the smell but by the taste what is the degree of their tenuity and heat. The inequality of their substance is the cause why fragrant things give no certain indication of temperament; and therefore it is not safe to judge of all the qualities of the rose from its smell; but in taste all the parts of the bodies which are tasted fall equably upon the tongue, and each excites a sensation agreeably to its nature, namely, the sour part in it which is terrene consists of thick particles and is cold; the bitter, which consists of subtile parts and is hot; and third, the watery, which is necessarily cold. It is not safe then, as has been said, to form a judgment of all the powers of simple substances from the smell; but it is still more impracticable to estimate simple medicines from their colours; for hot, cold, dry, and humid substances are found of every colour. And yet from the colour of every kind of seeds, roots, or juices it is possible to derive a certain indication of their temperament. For example, onions, squills, and wine, the whiter they are, are the less hot; but such as are of a yellowish and intermediate colour are hotter. And wheat, vetches, and kidney-

beans, and chick-peas, the root of iris, that of kingspear, and many others, are similarly affected. In each genus, for the most part, such things as are gold coloured, red, and of a bright yellow, are hotter than the white, so that if any conjecture can be formed therefrom of the powers of medicines, it is so far well. It is best then, as has been often said and demonstrated, to determine the powers of each by exact experiment, for by this you cannot be deceived; but before ascertaining their powers by experiment, the taste will give many indications, in which it will be assisted in a small degree by the smell." (*Præfatio in Aetium.*)

For a fuller account of the subject, the reader is referred to the first five books of Galen's work 'On the Powers of Simples;' to the first tractate of the Second Book of Avicenna; and to the introductory part of Serapion's work 'On Simples.' A useful abstract of the ancient opinions is given in the small tract of Albengnefit. The nature of the tastes is ingeniously discussed in the 'Timæus' of Plato, and by Theophrastus (*de Causis Plantarum*, vi.) Alkhendi's theory of the action of compound medicines appears to be ingenious; but it is complex and difficult to explain, being founded upon the principles of geometrical properties and musical harmony. The 'Chemia' of Geber contains a very interesting abstract of the knowledge possessed by the ancients regarding the recondite nature of substances, that is to say, on alchemy, but supplies little or no information on the *Materia Medica* or Pharmacy.

Before concluding our present commentary, it may be proper to remark, as tending to show the importance of the Galenical theory of the action of medicines in the literature of medicine, that not only was it generally adopted by most of the Greek and Arabian authorities subsequent to Galen, but it prevails in the works of all our old herbalists, as, for example, Gerrard, Parkinson, Culpeper, and of the other writers on the *Materia Medica*, down to the days of Quincy. We may also take the present opportunity to state that in the works of the ancient authorities, we have detected a few traces of the singular doctrine of signatures, as it has been called, but that with the exception of Geber, who can scarcely be held to be a medical writer, we have

found no allusion to alchemy *or* astral influence, as having any-thing to do with the operation of medicines. The first ancient writer who notices alchemy, we believe, is Firmicus (iii.) Though the Arabians were much given to this superstitious conceit, it would appear from what we have mentioned that their medical authorities had kept their minds free from the contamination of it. } COMM.

SECT. III.—ON THE POWERS OF SIMPLES INDIVIDUALLY.

COMMENTARY. The part of our task upon which we are now entering is at once so arduous and important, that we cannot but feel diffident of our abilities to execute it properly. We may venture, however, to assure the reader that we have spared no pains as far as lay in our power to unravel the intricacies with which this department of ancient science is involved, and that, with this intention, upon every article we have carefully compared the descriptions of the ancient authors, and have likewise availed ourselves of the learned labours of modern commentators on Theophrastus, Pliny, and Dioscorides. We may mention that those we have generally reposed most confidence in are Matthioli, Dodonæus, Harduin, Stackhouse, Schneider, Sprengel, and Sibthorp. It will also be seen that we have paid a good deal of attention to the works of our English herbalists, the study of whose works we consider highly important, as reflecting much light on the ancient literature of this subject. We have further culled freely from a variety of other sources. As our limits prevent us from entering into the discussion of controverted points, we are under the necessity of merely giving the result of our own investigations in each case. Those who wish to see the commentator's opinions more fully on these matters are referred to the Appendix to Dunbar's 'Greek Lexicon,' which was written exclusively by him. } COMM.

Ἀβρότονον,

Abrotonum, *Southernwood*, warms and dries in the third degree, being of a discutient and cutting nature, for it is possessed of a very small degree of sourness, and if rubbed with oil over the whole body, it cures periodical rigors. But it is prejudicial to the stomach; and the burnt being more desiccative than the unburnt, cures alopecia, along with some of the finer oils.

COMM.

COMMENTARY. Dioscorides and most of the subsequent authorities, with the exception of Paulus, describe two species, the mas. and the femina. The one without doubt is the *Artemisia Abrotanum*; the other probably the *Santolina Chamæcyparissus*. The use of southernwood is as ancient as Hippocrates, but Galen is the ancient author who has treated of its faculties most elaborately. He recommends it strongly both externally in fomentations, and internally as an anthelmintic. For the latter purpose it is praised by the natural historian Ælian (H. A. ix, 33), and by most of the medical authorities on the *Materia Medica*, both ancient and modern. As an application in ophthalmy, along with the pulp of a roasted quince, it is highly spoken of by Galen and the others. Galen says, that friction with the oil of southernwood is useful in intermittents, and this character of it is confirmed by all the authorities down to recent times. Avicenna joins Dioscorides in praising it as an emmenagogue, and says, that it produces abortion. (ii, 266.) Aëtius is fuller than the others on the virtues of the lixivial ashes of southernwood, recommending them particularly in diseases of the anus and in alopecia. Celsus ranks it among the cleansing medicines (v, 5.) Pliny makes mention of a vinous tincture (xiv, 19.) See also Dioscorides (v, 49.) Macer Floridus, a comparatively modern authority, joins the more ancient authorities in commending it as an antidote to narcotic poisons. He also says, that a vinous tincture of it is useful in sea-sickness. Serapion, after quoting freely from Dioscorides and Galen, under this head adds, upon "an unknown authority," that, when boiled with oil and rubbed over the stomach, it cures coldness of the same. (De Simpl. 317.) In the modern Greek Pharmacopœia (Athens, 1837), the two species of wormwood are described by the names of *Artemisia Abrotonum* and *Artemisia contra*. See further Pereira (M. M. 1856.)

Ἀγάλλοχον,

Agallochum, is an Indian wood resembling the thyia, of an aromatic nature. When chewed it contributes to the fragrance of the mouth. It is also a perfume. Its root, when drunk to the amount of a drachm weight, cures waterbrash and loss of tone in the stomach, and agrees with hepatic, dysenteric, and pleuritic complaints.

COMMENTARY. It is probably the lignum aloes or *Aloexylon Agallochum*, Lour., although there has been considerable difference of opinion on this point. See Gerarde's 'Herbal' and the commentators on Dioscorides and Mesue. Our author's description of it is taken from Dioscorides (i, 21.) The Arabian authorities and Simeon Seth describe several varieties of it; the most excellent of which is said to be the Indian. At all times it has been much used in India as a perfume. See in particular Avicenna, who gives an elaborate dissertation on the different kinds of agallochum or xylaloe, found in India, and the modes of preparing it (ii, 2, 733.) See also Serapion (De Simpl. 197); Ebn Baithar (ii, 224); and Rhases (Cont. l. ult. i, 27.) It does not occur in the Hippocratic treatises, nor in the works of Celsus. Although not retained in our Dispensatory, it is still kept in the shops of the apothecaries, and has the reputation of being cordial and alexiterial. See Gray (Suppl. to Pharmacop. p. 91.)

Ἄγαρικόν,

Agaricum, *Agaric*, is a root or an excrescence from the trunk of a tree, of a porous consistence, and composed of aerial and terrene particles. It is of a discutient nature, cuts thick humours, and clears away obstructions, of the viscera particularly.

COMMENTARY. It appears to have been the same as the *Boletus ignarius* (*touchwood* or *spunk*), which is still retained in our modern Dispensatories. It is a fungous excrescence which grows on the trunk of the oak, larch, cherry, and plum. Dioscorides and most of the ancient authorities speak highly of it as a styptic. Dioscorides also commends it in stomach complaints, but Aëtius maintains that it is prejudicial to the stomach. Galen calls it cathartic, and speaks highly of its virtues in the cure of jaundice and other hepatic affections. (De Simpl. v.) For the Arabians, see Avicenna (ii, 2); Serapion (De Simpl. 78); Rhases (Contin. l. ult. i, 28.) They recommend it in jaundice, like Galen, and in complaints of the lungs, melancholy, protracted fevers, and in other cases. It is now seldom used, being found to act harshly both as an emetic and a cathartic. We have treated of the poisonous agarici in another place (v, 64.) The *Boletus Laricis* occurs in the modern Greek Pharmacopœia. (Athens, 1837.)

Ἀγήραρον,

Ageratum, *Maudlin*, is possessed of discutient and slightly anti-inflammatory powers.

COMM. COMMENTARY. Our modern herbalists are generally agreed that this is our *maudlin*, that is to say, the *Achillea Ageratum*, and the commentators on Mesue hold that it is his eupatorium. From Dioscorides down to modern times it has been commended as a diuretic medicine and an emollient of the uterus. Dioscorides, however, seems to say that it is heating, whereas Galen represents it as mildly anti-inflammatory. Perhaps there is some error in the text of the former. (iv, 59.) We do not find it in the works of Hippocrates, nor in those of Celsus, nor have we found it treated of by any of the Arabians, except Ebn Baithar, who merely gives extracts from Dioscorides and Galen (ii, 57.)

Ἄγνος ἢ λύγος,

Vitex, the *Chaste-tree*, heats and dries in the third rank. It consists of fine particles and dispels flatulence, whence it is believed to contribute to chastity, not only when eaten and drunk, but also when strewed under one. Its seed also, when drunk, acts as a deobstruent of the liver and spleen. When toasted it is less flatulent and more distributable.

COMM. COMMENTARY. The anaphrodisiacal powers of the *Vitex Agnus Castus*, or chaste-tree, are noticed by most of the medical authorities, and by Ælian (H. A. ix, 36.) But modern authorities question its claims to this character. Until lately, however, it held a place in our Pharmacopœia. Our author abridges Dioscorides (1, 134), and Galen (De Simpl.) For the Arabians, see particularly Avicenna (ii, 2, 43), and Rhases (Cont. l. ult. 31.) It occurs in the works of Hippocrates.

Ἄγρωστις,

Gramen, *Grass*, that of Parnassus is particularly useful; it is desiccative, moderately cooling, consists of fine particles, and is somewhat sour; it, therefore, is an agglutinant of bloody wounds, and its decoction is lithontriptic.

COMM. COMMENTARY. Dioscorides treats separately of the agrostis, which probably is our couch-grass, or *Triticum repens*, and of the agrostis in Parnasso, which has been very doubtfully referred

to the *Parnassia palustris*. (iv, 30.) Our author would appear to have confounded these two articles together, and to have applied to the latter the characters which Dioscorides gives to the other. The modern herbalists agree with the ancients in commending the couch-grass as being diuretic and lithon-
 triptic. None of the commentators or herbalists have given a satisfactory account of the esculent grass of Galen. The Arabians treat of the grasses very confusedly. See in particular Avicenna (ii, 2, 704); Rhases (Contin. l. ult. iii, 50); Serapion (c. 119.) In the modern Greek Pharmacopœia the *Triticum repens* stands for the ἀ. (p. 72.) Apuleius says “Græci agrostem Latini gramen appellat.”

COMM.

Ἄγχουσαι,

Anchusæ, *Alkanet*; there are four varieties, all of which are not possessed of the same powers. For that which is called onoclea has a root which is astringent and somewhat bitter; whence it is useful in splenitic and nephritic cases. It is a suitable remedy for erysipelas when applied with polenta. The leaves are less cooling and desiccative than the root, and, therefore, they are also drunk for diarrhœa. The lycapsos being more astringent, agrees in like manner with erysipelas. The onochilos (or alcibiadios) being possessed of stronger medicinal properties than these, is beneficial for the bites of vipers, when applied as a cataplasm, as an amulet, and when eaten. The fourth variety being smaller than the others, has scarcely got a name: but being more bitter than the alcibiadios, it is applicable in cases of the broad lumbricus when taken in a draught to the extent of an acetabulum.

COMMENTARY. The first species is either the *Anchusa tinctoria* L., or the *Lithospermum tinctorium*; the lycapsos, the *Echium italicum* L.; the alcibiadios, the *Echium diffusum*, and the fourth species the *Lithospermum fruticosum*. There is considerable difficulty, however, in determining the alkanets of the ancients. Our author, in his account of them, follows Galen, who, in his turn, copies from Dioscorides. Avicenna, Rhases, and Haly Abbas borrow all they say of them from Dioscorides and Galen. The only one of these substances that is retained in our modern Pharmacopœias is the *Anchusa tinctoria*, and it is used only for colouring. The medicinal virtues of the

COMM.

COMM. *Lithospermum*, or of any species of *Echium*, are scarcely recognized. Indeed, as the *Anchusa tinctoria* is retained in the modern Greek Pharmacopœia, and as it is there stated to be a common plant in Greece, we need have no hesitation in admitting it to be the common anchusa of the ancients.

**Ἀδάρκη*,

Adarce is a sort of froth of salt water, collecting about rubbish and weeds. It is very acrid, and heating almost to burning when applied externally with other things; for it cannot be taken internally.

COMM. COMMENTARY. The description of this substance given by Dioscorides, Galen, and the other authorities is substantially the same as our author's, from which all we can gather is that it was a saline concretion formed about reeds and herbs in salt lakes. But even Matthioli confesses that he never could satisfy himself that he had found the substance in question, and no modern authority on the *Materia Medica* has treated of it. Dioscorides compares it to the *alcyonium*, from which we think it probable that the adarce may have been applied to some species of this zoophyte. See *Alcyonium*. Dioscorides recommends it for the cure of lepra and sciatica (v, 136.) The Arabians borrow from him under this head. See in particular Avicenna (ii, 2, 17); Serapion (c, 378.) It is not mentioned by Celsus.

**Ἀδίαντρον*,

Adiantum, *Maiden-hair*, is desiccative, attenuant, and moderately discutient; and with regard to heat and cold, it holds an intermediate place. It, therefore, cures alopecia, discusses swellings, proves lithontriptic when taken in a draught, dries up expectorations from the lungs, and stops defluxions of the belly.

COMM. COMMENTARY. Theophrastus says that it derives its name from its property of not being wet in rain. He adds, that it promotes the growth of the hair. (H. P. vii, 13.) Nicander says the same of it. (Ther. 846.) According to Apuleius, it is the same as the *callitrichon*, *polytrichon*, and *aspnenon*. There can be no doubt that it is the *A. Capillus Veneris* L. Dioscorides describes another species by the name of *τριχόμαρες*, which

Sprengel and Schneider agree in referring it to the *Asplenium Trichomanes* L. Stackhouse agrees with them respecting both these species. The syrup of capillaire, which still holds its place in the shops as a favorite domestic medicine, is prepared from the *Adiantum*. COMM.

Αἴζων,

Sempervivum, *Wall-pepper* (or *House-leek*?), of which there are two varieties. It cools in the third degree, is moderately desiccative and astringent, and is applicable for erysipelas, herpes, and inflammations from a defluxion.

COMMENTARY. Our author, copying from Galen and Aëtius, describes two species which seem to be the *Sempervivum arbo-reum* and *Sedum rupestre*. Dr. Lindley, however, refers the latter to *S. ochroleucum*. Dioscorides has a third species, which may be referred to the *Sedum stellatum*. The greater house-leek is praised by Dioscorides as an application for headache, for the bites of venomous spiders, diarrhœa, and dysentery; as an anthelmintic when drunk with wine; for stopping the fluor of women in a pessary, and as an application to the eyes in ophthalmia (iv, 88, 89.) Macer Floridus commends it in menorrhagia. He calls it *acidula*. Serapion, Avicenna, Rhases, and Haly Abbas merely copy from the Greeks. Even Ebn Baithar has nothing original under this head. These plants, although not retained in our Dispensatory, are still allowed to possess medicinal properties. See Lindley (Veg. Kingd. 345.) It is still retained in some of the foreign Dispensatories, and is held to be refrigerant and astringent. COMM.

Ἄετωνυχον,

Ætonychon will be treated of under the head of *Stones*.

Ἄθηρά,

Pulticula, *Pap*, is a kind of puls fit for being supped, which is prepared from ground spelt or from any corn, and agrees with children. It answers also for cataplasms.

COMMENTARY. Dioscorides gives the same account of it. It is the *Puls fritilla* of Pliny. Matthioli says it is called *bouillie* in French, i. e. *pap*. Hesychius speaks of its being prepared from wheat, and Pliny from rice. COMM.

Ἄγιλωψ,

Ægilops, *Cockle*, is possessed of discutient powers, whence it cures indurated inflammations and *ægilops* (fistula lachrymalis.)

COMM. COMMENTARY. There is great difficulty in determining the grasses of the ancients. This may be seen by consulting the 'Herbal' of Gerarde on this subject. The present article was probably the *Ægilops ovata*. Dioscorides gives nearly the same account of it as our author, who copies Galen. He further mentions that the juice of it, mixed up with flour and dried, was laid up for use (iv, 136.) The Arabians borrow closely from Dioscorides. See in particular Avicenna (ii, 2, 211), and Serapion (c. 25.)

Ἄγιειρος,

Populus nigra, *the Black Poplar*; it is heating in the first degree, moderately desiccative, and consists of fine particles. Its leaves, when applied with vinegar, remove gouty pains; but the resin of it being hotter than the leaves, is mixed with restorative ointments and emollient plasters. But its fruit, when drunk with vinegar, is beneficial to epileptics.

COMM. COMMENTARY. There can be no doubt that it is the *Populus nigra*. Our author and all the other authorities, both Greek and Arabian, copy closely from Dioscorides (i, 110.) We will have occasion to treat of its gum or resin afterwards. See Karabe. Celsus does not mention the black poplar. The *ἀίγειρος κρητικὴ* of Hippocrates was no doubt a variety of *Populus nigra*. For the Arabians, consult in particular Avicenna (ii, 2, 333, 340, 364); Serapion (c. 266); and Rhases (Cont. l. ult. i, 165.)

Ἄιδοῖον,

Testiculus, *the testicle* of a stag, when dried and triturated with wine and drunk, is a remedy to those who have been bitten by vipers. It is also mixed with compound medicines.

COMM. COMMENTARY. Sextus Platonicus in like manner recommends the privy parts of a stag as an antidote for poisons. All copy from Dioscorides (ii, 46.)

Ἄιθάλη and λίγνυς will be treated under Δ.

Ἄιθιοπία,

Salvia Æthiopsis, *Ethiopian Sage*, has leaves like the petty-mullein; and the decoction of its root, when drunk, relieves ischiatic and pleuritic diseases, hæmoptysis, and asperity of the trachea, when taken with honey.

COMMENTARY. It may be set down as being the *Salvia* COMM.
Æthiopsis, to which our English herbalist Gerarde gives the English name of mullein of Æthiopia. Neither Galen nor Aëtius has treated of it. Our author has borrowed from Dioscorides (iv, 193.) We do not find it in the *Materia Medica* of the Arabians, with the exception of Ebn Baithar, who merely gives an extract from Dioscorides under this head.

Ἄιμα,

Sanguis, *Blood*; no kind of it is of a cold nature, but that of swine is liquid and less hot, being very like the human in temperament. That of common pigeons, the wood pigeons, and the turtle, being of a moderate temperament, if injected hot, removes extravasated blood about the eyes from a blow; and when poured upon the dura mater, in cases of trephining, it is anti-inflammatory. That of the owl, when drunk with wine or water, relieves dyspnœa. The blood of bats, it is said, is a preservative to the breasts of virgins, and, if rubbed in, it keeps the hair from growing; and in like manner also that of frogs, and the blood of the chamæleon and the dog-tick. But Galen, having made trial of all these remedies, says that they disappointed him. But that of goats, owing to its dryness, if drunk with milk, is beneficial in cases of dropsy, and breaks down stones in the kidneys. That of domestic fowls stops hemorrhages of the membranes of the brain, and that of lambs cures epilepsies. The recently coagulated blood of kids, if drunk with an equal quantity of vinegar, to the amount of half a hemina, cures vomiting of blood from the chest. The blood of bears, of wild goats, of buck goats, and of bulls, is said to ripen apostemes. That of the land crocodile produces acuteness of vision. The blood of stallions is mixed with septic medicines. The antidote from bloods is given for deadly poisons, and contains the blood of the duck, of the stag, and of the goose.

COMM. COMMENTARY. Our author abridges this article from Galen.
 See also in particular Serapion (De Simpl. ex Animalibus.)

Ἰρις,

Lolium, *Darnel*, is heating and drying, almost in the third degree, being equal in power to the iris.

COMM. COMMENTARY. This, which is the *Zizanien* of the Arabians, may be set down as the *Lolium temulentum*. Dioscorides gives the fullest account of its medicinal faculties; he recommends it along with radishes and salt as an application to gangrenous and spreading sores, and with sulphur and vinegar for lichen and lepra; when boiled with pigeon's dung and linseed in wine for discussing strumous and indolent tumours; for ischiatic disease boiled with mulse and applied as a cataplasm; and used in a fumigation with myrrh, saffron, and frankincense, he says it promotes conception (ii, 122.) Aëtius says, it is more acrid but less attenuant than iris. We have not been able to find it noticed in the works of Hippocrates nor in those of Celsus. The Arabians merely copy Dioscorides and Galen. See Serapion (c. 70); and Avicenna (ii, 2, 658.) Our old English herbalists repeat the ancient characters of this plant.

Ἀκαλλίς

is the fruit of a shrub growing in Egypt, the decoction of which is an ingredient in the Collyria, for promoting acuteness of vision.

COMM. COMMENTARY. Galen and Aëtius have not treated of this article. Our author copies from Dioscorides, who, under the name of ἀκακαλίς, describes it as an Egyptian plant, resembling the myrica (i, 118.) We may therefore conjecture, with considerable probability, that it is merely some species or variety of the tamarix. It does not appear that it is treated of by the Arabians, nor have we found it in the works of Hippocrates or Celsus.

Ἀκακία,

Acacia is of the third order of desiccants, and of the first of cooling medicines; but if washed, of the second. It is sour and terrene.

COMMENTARY. Dioscorides describes the acacia as being a thorny tree or shrub, not erect, having a white flower and fruit like lupine, inclosed in pods, from which is expressed the juice that is afterwards dried in the shade (i, 133.) It was much disputed among the older commentators on Dioscorides whether or not this description applies to the *Acacia vera*; but since the time of Prosper Alpinus, it has been generally decided in the affirmative by all scholars, with the exception of Dierbach, who contends in favour of the *A. Senegal*, without any good reason, as far as we can see. This gum was used medicinally by the authors of the Hippocratic collection, who prescribe it as an astringent in hemorrhages, for which purpose it is also recommended by Celsus (v. 1.) Serapion and the others merely copy from Dioscorides and Galen. See in particular Avicenna (ii, 2, 3.)

Ἄκαλύφη,

Urtica, the *Nettle*; the fruit and leaves are composed of fine particles, and are desiccative without pungency; they dispel and cleanse swellings, loosen the bowels, are moderately flatulent, and therefore incite to venery.

COMMENTARY. This article is either the *Urtica dioica*, or the *pilulifera*; or both species were comprehended under it. In the modern Greek Pharmacopœia, the *pilulifera* stands first (p. 164.) Galen, like our author, calls it aphrodisiacal. Macer Floridus recommends it strongly as being calefacient and stimulant. Both Dioscorides and Galen agree in commending it as an expectorant when the chest is loaded with thick humours. The Arabians treat of it at considerable length. See Avicenna (ii, 2, 714); Serapion (c. 150); Rhases (Cont. l. ult.; 152.)

Ἄκανθος,

Acanthus, *Bears-breech* (called also *Melamphyllon* and *Pæderos*), has discutient and desiccative powers.

COMMENTARY. It is the plant which our English herbalists describe by the name of *Bears-breech*, now called the *Acanthus mollis* by botanists. Dioscorides recommends it as being diuretic, and astringent of the bowels (iii, 17.) Our author follows Galen. Whether “*gummi acanthinum*” of

COMM. Celsus (v, 2) belong to this place, or not rather to the acacia, as Milligan suggests, we cannot determine for certain. Modern authorities have confirmed the characters which the ancients ascribed to it. (See Rutty, M. M. p. 70); Gray (Suppl. to Pharmacop. p. 45.)

Ἀκάνθιον,

Acanthium, is composed of fine particles, and has heating powers, therefore it is a remedy for convulsions.

COMM. COMMENTARY. Gerrard and our other herbalists delineate and describe this plant under the name of the cotton-thistle, meaning either the *Onopordon acanthium* or *O. Illyricum*, cotton-thistle. Dioscorides affirms that it is of service to persons affected with tetanus, and upon his authority all the others, both ancient and modern, ascribe virtues to it in this case. The reader may be amused by comparing what Gerarde and Culpeper have written of it with the ancient descriptions of Dioscorides and Pliny. The cotton-thistle was long used as a potherb. See Beckmann (History of Inventions, under ΑΡΤΙΣΗΟΚΕ); and Loudon (Encycl. of Garden. p. 736.)

Ἄκανθα λευκή,

Spina alba, the *White-thorn*. Its root is desiccative and moderately astringent, therefore it relieves stomachic complaints, hæmoptysis, and toothache; but its seed, consisting of fine particles, and being of a hot nature, when drunk relieves convulsions. *Acantha Ægyptia*, or *Arabica*, the *Egyptian* or *Arabic thorn*, is possessed of very astringent and desiccative powers. Whence it restrains a flow of blood and other discharges.

COMM. COMMENTARY. Respecting the two thistles here described, we may refer the former, with Sibthorp, to the *Cirsium Acarna*, and the latter, or Arabian, to the *Onopordon acanthium*. All the authorities follow Dioscorides in giving its characters. (iii, 12.) See Avicenna (ii, 2, 671-3); Serapion (c. 130); Averrhoes (Collig. v, 42); Rhases (Cont. l. ult. i, 670.)

Ἄκινος,

Acinus; it resembles basil, and is moderately astringent, therefore it restrains alvine and uterine discharges, when

taken in a draught ; and when applied as a cataplasm, is of use for erysipelas and phygethlon.

COMMENTARY. Our old herbalists describe it under the name of wild basil, meaning perhaps the *Ocimum pilosum*, and there seems little reason to question their authority in this instance. Neither Galen nor Serapion has described it. Indeed we are not aware that any of the Arabians has described it except Ebn Baithar (ii, 254) ; neither have we found it in the Hippocratic collection, nor in the works of Celsus. COMM.

Ακόνητον or Παρδαλιαγχέρις,

Aconitum, *Wolfsbane*, is possessed of septic and deleterious properties ; it is, therefore, not to be taken internally, but externally it may be applied to flesh requiring erosion. The lycoctonon, being possessed of the same properties as the former, is particularly fatal to wolves, as the other is to panthers.

COMMENTARY. The two species of aconite described by Dioscorides (iv, 77), and the other authorities, are generally supposed to be the *Doronicum Pardalianches* and the *Aconitum Napellus*. In the modern Greek Pharmacopœia, the *Neomontanum* is substituted for the former of these. The κάμμαρον of Hippocrates would seem to be the latter. It has been already treated of among the poisonous substances in the Fifth Book (§ 45.) It was used only as an anodyne, and principally in complaints of the eyes. Avicenna in treating of the aconites, borrows closely from Dioscorides (ii, 2, 361, 676.) He says of the lycoctonon, that it is not administered either internally or externally. Rhases says of the aconite, that it was used to relieve pains of the eyes. (Cont. l. ult. i, 20.) COMM.

Ἄκορον,

Acorum, *Sweet Flag*, heats and dries in the third degree. We use its root for a diuretic, and for scirrhus of the spleen. It also attenuates a thickened cornea.

COMMENTARY. It appears indisputably to be the *Acorus pseudacorus*, as even Gerarde the old herbalist has clearly stated, and not the *Acorus verus*, as Dr. Hill and others have maintained. All the ancient authorities ascribe much the COMM.

COMM. same virtues to it as our author. See particularly Dioscorides (i, 2); Avicenna (ii, 2, 45); Rhases (Cont. l. ult. 21); Serapion (c. 269.) In the modern Greek Pharmacopœia it is identified with the κάλαμος ἀρωματικός (p. 32.)

Ἄκροίδες,

Locustæ, *Grasshoppers*, in fumigations relieve dysuria, especially of women. The wingless grasshopper, when drunk in wine, relieves the bite of scorpions.

COMM. COMMENTARY. It is quite certain that the Ἄκροίς of the Greeks, and the *Locusta* of the Romans was a species of locust or grasshopper. See Harduin (ad Plin. H. N. xi, 35.) Without doubt, then, it was the *Gryllus migratorius* L. The wingless locusta mentioned by our author is the insect in its larvous state. Our author copies from, and abridges, Dioscorides (ii, 56); and Avicenna does the same (ii, 2, 388.) Celsus treats of the locusta only as an article of food (ii, 28.) In this way, as is well known, the locusts were much used by the ancients. They are not noticed, however, either as an article of food or of medicine in the modern Greek Pharmacopœia.

Ἄκτη μεγάλη,

Sambucus, the *Elder-tree*, and Χαμαιάκτη, *Sambucus humilis* vel *Ebulus*, *Dwarf-elder*, are possessed of desiccative, moderately discutient and agglutinative powers. When eaten or drunk they occasion a discharge of water from the bowels.

COMM. COMMENTARY. The two species of elder, namely, the *Sambucus nigra* and *Ebulus*, are much commended by the ancients for the cure of dropsy. As Dioscorides states, the elder is hydragogue, but disagrees with the stomach. He further recommends a hip-bath made of water in which elder has been boiled, for obstructions and hardness of the uterus (iv, 161.) Galen and the other Greek authorities treat of it in general terms like Paulus. The Arabians in treating of it generally borrow from Dioscorides and Galen. See particularly Serapion (c. 284.) It appears to be the *acte* of Rhases (Cont. l. ult. i, 23); and is the *aktha* of Ebn Baithar, according to his German translator, Dr. Sontheimer, in which opinion we fully agree with him. The *Sambucus* of Avicenna (ii, 2, 611) is

not the elder, but the jasmine. We have not been able to detect the other in his Book on the Mat. Med., but can scarcely suppose that he has entirely overlooked it. COMM.

“ΑΛΕΣ,

Sales, *Salts*, have desiccant and astringent powers. Wherefore they consume whatever humours are in the body, and also contract by their astringency. Whence they form pickles, and preserve substances from putrefaction. Roasted salts are more discutient.

COMMENTARY. For an account of the factitious salts of the ancients, see in particular Pliny (H. N. xxxi, 39.) Sprengel remarks that the ἄλος ἄχνη, or *spuma maris*, is merely the skum or down of salt, which sticks to rocks in such situations as salt is usually formed in. The ἄλος ἄνθος, or *flos salis*, he adds, is a very different substance, being a native, impure carbonate of soda; containing also magnesia, lime, and some terrene admixture, to which it owes its colour. When deprived of its carbonic acid it becomes caustic, and was then called ἄφρος νίτρον by the ancients (v. ἀφρόνιτρον.) The *sal ammoniac* of the Greeks was a native fossil salt, and considerably different from ours. Geoffroy seems to agree with Salmasius, that it was the *sal gem*. Dr. Hill also maintains that it was only a peculiar form of the *sal gem*. See also Jameson's 'Mineral.' (iii, 15.) In fact, from Dioscorides' description of the ammoniac salt, nobody can avoid seeing that it was merely a variety of the common fossil salt. He treats of the medicinal faculties of the salts at so great length that we dare not venture to copy his account of them. It is literally translated by Pliny (xxxii, 45.) He recommends them internally by the mouth and in clysters, and externally in fomentations, baths, and fumigations. Serapion quotes the whole of Dioscorides' chapter on Salts without supplying much additional information of his own. He describes minutely the process of roasting salts in an earthen vessel, and covering them up with coals, and thus applying heat to them. The *sal ammoniac* he describes, from Arabian authorities, as being a white red salt, extracted from hard clear stones, and being saltish, with much pungency (c. 409.) We never could altogether satisfy ourselves whether or not this be the same as the *sal*

COMM. ammoniac of the Greeks. Rhases (Cont. l. ult. 600) and Avicenna (ii, 2, 608) are brief and indistinct in describing the sal ammoniac, but probably refer to the true sal ammoniac. Ebn Baithar minutely describes several kinds of it. Pliny also has a description of a factitious salt, which it would appear could be nothing else than our sal ammoniac. (N. H. xxxvi, 45.) Still, however, we need have no hesitation in setting down the ammoniac salt of the Greek medical authors as being a variety of the sal gem. This is the conclusion which Beckmann arrives at regarding it: he holds, however, that Geber and Avicenna were certainly acquainted with our ammoniac salt. (History of Inventions.)

Ἄλθαια ἢ Ἐβίσκος,

Althæa or Ebiscus, *Marsh-mallows*, is a species of wild mallows. It is discutient, relaxant, anti-inflammatory, soothing, and ripens tumours (phymata). But the root and seed have all the other properties in a more intense degree, and are also detergent of aphos. The seed is lithontriptic.

COMM. COMMENTARY. This must either be the *Lavatera arborea* or *Althæa officinalis*. Dioscorides is much fuller than our author in enumerating its properties, but upon the whole they agree very well as to its general character. Besides the cases in which our author recommends it, Dioscorides speaks highly of the decoction of it when drunk with wine in dysuria, the grievous pains of calculus, dysentery, and other acute affections. He also advises the mouth to be rinsed with it in cases of toothache (iii, 153.) It would be useless to go over the other authorities, who supply no new views. Even our modern herbalists all agree in repeating the praises of the marsh-mallow as delivered by Dioscorides. For the Arabians, see Avicenna (ii, 2, 72); Serapion (c. 76); Rhases (Cont. l. ult. i, 26); Averrhoes (Collig. v, 42.) This genus of the *Malvaceæ* does not seem to be noticed either by Hippocrates or Celsus. The *Althæa officinalis* occurs in the modern Greek Pharmacopœia, published at Athens in 1837.

Ἁλιμον,

Halimon consists of heterogeneous particles, being saltish and sub-astringent. But the greater part of it is of a hot

temperament, with an undigested sap. It therefore promotes the formation of milk and semen.

COMMENTARY. Our author abridges the characters of this substance, which probably is the *Atriplex Halimus*, from Galen or Dioscorides (i, 126.) It is the sea-purslane of our English herbalists. For the Arabians, see particularly Avicenna (ii, 2, 470.) COMM.

Ἀλκία,

Alcæa, *Vervain-mallow*, is a species of wild mallows. When drunk with wine it removes dysenteries and gnawing pains of the belly, more particularly its root.

COMMENTARY. All the authorities agree in giving this article, which evidently is the *Malva Alcæa*, *Vervain-mallow*, the general characters of the mallow. See particularly Dioscorides (iii, 154.) It does not occur in the works either of Hippocrates or Celsus, nor, as far as we know, in those of the Arabians. COMM.

Ἀλκυονία,

Alcyonia; they are detergent and discutient of all matters, being possessed of an acrid quality; but the kind called mile-sium (it is vermiform and purple) is the best: wherefore, when burnt, it cures alopecia, and cleanses lichen and alphas. That which has a smooth surface is most acrid, proving not only detergent, but likewise excoriating; but that which resembles unwashed wool is the weakest of all.

COMMENTARY. For an account of the alcyonia, see Aristot. (Hist. Anim. ix, 15); Pliny (N. H. x, 47, and xxxii, 27.) According to Sprengel, the A. consisted of the bones of fishes which the kingfishers had swallowed and vomited up. The term, however, was also applied to a kind of zoophytes, five species of which are described by Dioscorides and Pliny. The 1st species is the *Alcyonium cotoneum*, Pall.; the 2d, the *A. papillosum*; the 3d, the *A. palmatum*; the 4th, the *Spongia stuposa*, Ellis, or *Spongia panicea*, Pall.; and the 5th, the *A. aurantium*, Pall. (Mat. Med. v, 135.) Geoffroy says that the alcyonia "are of a substance much like gum tragacanth, and when mixed in broth of warm milk they swell and make a rich soup." The zoophytes called alcyonia are a kind of spongy substances, containing a sort of living jelly in their interior. Our author abridges Dioscorides' account of the COMM.

COMM. *alcyonia*, as likewise do Avicenna (ii, 2, 605) and Rhases (Cont. l. ult. i, 1, 677.) Celsus prescribes it several times as a corrosive, caustic, and cleansing medicine. (v, 6, 7, 18.) We believe it does not occur in the Hippocratic treatises.

Ἄλμη,

Muria, *Brine*; that which is unmixed with other matter has properties like salts, only weaker from the mixture with water. But the brine of pickled fish and of pickled olives is possessed of very detergent powers, and therefore is injected in ischiatic and dysenteric complaints.

COMM. COMMENTARY. Regarding the nature of this article, there can be no doubt. Galen recommends the brine from pickled fish as a wash for putrid ulcers both of the mouth and rectum. Dioscorides, in addition, recommends it for such cases as sea-water is useful in, when poured upon the part. (v, 126.)

Ἄλόν,

Aloe, *Aloes*, is heating in the first degree, and desiccative in the third. It is stomachic, detergent, discutient, and eccoprotic. When washed it is less detergent, but more stomachic; it is anti-inflammatory, and promotes the cicatrization of ulcers, especially those about the anus and pudendum.

COMM. COMMENTARY. Dioscorides is the first author who gives a distinct account of this important article. He describes two varieties of the juice (gum-resin), namely, the arenaceous and the hepatic. He says that it closes up the mouths of veins in hemorrhoids; but, according to Avicenna and Mesue, it produces the contrary effect. Hence, says Mesue, it is hurtful in hemorrhoids and affections of the fundament. (De Simpl. i.) Galen properly remarks that it is at the same time stomachic and eccoprotic. Didymus mentions the hepatic aloe (Geopon. vi, 6), as do several of the medical authorities. It is marked by Dr. Pereira as being the *Aloe hepatica vera* and *Aloe indica* (Ph. Ed.), being the liver-coloured socotorine aloe. That is to say, the hepatic is merely a variety of the socotorine aloe. See also Dr. Royle (M. M. 598.) Isidorus says of aloes: "In India et Arabia gignitur, arbor odoris suavissimi et summi." (Orig.) Averrhoes says it is an excellent purgative which evacuates the stomach and liver. He commends it as an application to

apostemes. (Collig. v, 42.) Aloe was used in stimulant applications to ill-conditioned sores. See Aëtius. Avicenna forbids us to administer it during the prevalence of severe cold. (ii, 2, 64.) It was used in eye-washes (Cels. vi), as it is by the native doctors in India to this day. (Ainslie's Mat. Ind. i, 10.) The aloe is not found in the *Materia Medica* of Hippocrates. COMM.

Ἄλως ἄνθος,

Flos salis, *the Flower of Salt*, is a humid medicine, consisting of more subtile particles than burnt salts, and is moderately acrid and discutient.

Ἄλως ἄχνη,

Spuma maris; this is a frothy efflorescence of salts, but consists of more subtile particles than salts, and discusses more, but contracts less.

COMMENTARY. (Ἄλως ἄνθος and Ἄλως ἄχνη, see Ἄλες.) COMM.

Ἄλσίνη, or Μυός οὖς,

Alsine, or *Auricula muris*, *Chickweed*, has powers like the pellitory of the wall, namely, cold and diluent. Wherefore it is applicable to hot inflammations.

COMMENTARY. This has been generally set down as the *Stellaria media*, but doubtfully. Dioscorides describes it as a *Myosotis*. (ii, 214.) See also Pliny (H. N. xxvii, 8), and Avicenna (ii, 2, 18.) COMM.

Our old herbalists give a confused account of the chickweed. In fact, this is one of the articles in the *Materia Medica* of the ancients which we must set down as *lost*, from our inability to determine what it was. It seems to have been looked upon by the Arabians as an important article. See Avicenna (ii, 2, 18); Rhases (Contin. l. ult. i, 99.) Like our author, they copy closely from Dioscorides. We have not detected it in the works either of Hippocrates or Celsus. It does not occur in the modern Greek *Pharmacopœia*.

Ἄλυπον,

Alypon; the seed of it purges black bile downwards when taken in the same quantity as dodder of thyme, with salts and vinegar; but it occasions slight ulceration of the intestines.

COMM. COMMENTARY. Many of the older commentators supposed this to be the plant which produces turbit, but we shall have occasion to discuss this question when treating of the additions to the *Materia Medica* made by the Arabians. What this article really was is very uncertain. Pliny and all the medical authorities mention its purgative powers. See in particular Dioscorides (iv, 177), from whom our author evidently copies.

Ἄλυσσον,

Alysson, *Madwort*, is so called because it is of use to those who have been bitten by mad dogs. Being possessed of discutient, detergent, and desiccative powers, it removes obstructions of the kidneys, and cleanses ephelis.

COMM. COMMENTARY. It was supposed by the earlier herbalists and commentators that the A. of Galen is a different substance from that of Dioscorides. The former (which is also our author's) is a species of horehound, to which the herbalists give the distinctive name of Galen's madwort. It is the *Marrubium Alyssum*. That of Dioscorides has been conjectured to have been some species of *Veronica*, but, in fact, there is no certainty on this point, and we must own our inability to perceive the difference between it and the A. of Galen. Dioscorides recommends his plant in ephelis and hydrophobia. (iii, 95.) See also Avicenna (ii, 2, 26.)

Ἄλωπηξ,

Vulpes, *the Fox*; the whole animal, if boiled alive or dead, renders the oil discutient, when it attracts the deep-seated fluids to the surface. Wherefore, when arthritic patients are put into a hip-bath of this oil for a considerable time it removes the complaint entirely, if at its commencement, and moderates it if protracted.

COMM. COMMENTARY. Galen and Serapion give nearly the same account of the medicinal properties of the *Canis vulpes* as our author.

Ἀμάρακος,

Amaracus, *Marjoram*; it is calefacient in the third degree, and desiccative in the second.

COMM. COMMENTARY. That it was some species of marjoram appears quite certain from the ancient descriptions of it; but,

otherwise, it cannot be satisfactorily determined. Most probably, it was the same as the *sampsuchus*, namely, the *Origanum Marjorana*. Dioscorides strongly recommends the ointment as an emmenagogue, and for various other purposes. (i, 78.) For the Arabians, see Avicenna (ii, 2, 466); Serapion (c. 286); Rhases (Cont. l. ult. i, 439.)

COMM.

Ἀμάραντον,

Amarantum, *Amaranth*, is attenuant and incisive, and therefore when taken with wine it promotes the menstrual discharge, and dissolves coagulated blood when taken with wine and honey. It dries up all defluxions, and is bad for the stomach.

COMMENTARY. The old herbalists describe a plant under the English name of Flower-gentle, which they represent to be this article, but it cannot be satisfactorily determined. Our author borrows from Galen and Aëtius his account of its medicinal properties, which certainly appears rather contradictory. How a plant, which they represent as being of a drying nature, should at the same time act as an emmenagogue, does not well appear. Our English herbalist Gerarde sagaciously remarks that it has probably got the character of stopping bleeding solely from its ears being red, as if, forsooth, all red things must act in this way; although, as he adds, Galen had laid it down as a rule (Simpl. 2, 4) that no inference with regard to the virtues of substances can be drawn from their colours. But see under *helicrysus*, which Dioscorides holds to be the same plant.

COMM.

Ἀμβροσία,

Ambrosia; when applied as a cataplasm it has astringent and repellent powers.

COMMENTARY. *Ambrosia*, as Pliny remarks (H. N. xxvii, 11), is a vague name which has been applied to various plants. Our old herbalists describe a plant under the English name of Oak of Cappadocia, which they represent as the *A.* of Dioscorides. He gives it the same medicinal character as our author (iii.) Galen and Aëtius do the same. It probably is the *Ambrosia maritima*, a plant not yet wholly unknown to the shops. See Gray (Suppl. to Pharmacop. p. 70.) We have not found it described by any of the Arabians except Ebn Baithar (i, 80.)

COMM.

*Αμμι,

Ammi, *Bishop's Weed*, is of the third order of calefacients and desiccants, being composed of subtile particles, discutient and diuretic; but the seed of it is particularly useful.

COMM. COMMENTARY. The *Ammi copticum*, or *Bishop's weed*, has long held a place in the *Materia Medica*, and yet it is now scarcely recognized. See *Dioscorides* (iii, 63); *Galen* (*De Simpl.* v); *Avicenna* (ii, 2, 60); *Serapion* (c. 297.) It is now ranked as one of the four lesser hot seeds, and is held to be attenuant, aperient, and carminative. In a word, all the authorities, ancient and modern, agree in giving it the characters bestowed upon it by *Dioscorides* and *Galen*.

*Αμίαντον,

Lapis Amiantus, is formed in *Cyprus*, being like stone-alum, and is so called because when put into the fire it is not burnt. Some use it in desiccative depilatories.

COMM. COMMENTARY. This is generally confounded with the *Alumen plumosum*, with which it is compared by *Dioscorides*, but it is in fact a different substance, being a variety of asbestos. *Dioscorides* does not mention any medicinal properties of which it is possessed, but states that garments were made out of it, which resisted the force of fire. (*M. M.* v, 155.) See also *Pliny* (*H. N.* xix, 4.)

*Αμμος,

Arena, *Sand*; that on the sea-shore is sufficiently desiccative. Wherefore when heated by the sun it dries up all humid bodies which have been buried in it; and when roasted it forms a dry fomentation instead of millet or salts.

COMM. COMMENTARY. *The Sand of the Sea-shore*. We have often had occasion, in the course of this work, to mention the use of heated sand as a dry fomentation.

*Αμμωνιακὸν θυμίαμα,

Ammoniacum thymiama, *Ammoniac Perfume*, is a juice of intense emollient powers, so as to dissolve scirrhus tumours and tofi.

COMM. COMMENTARY. *Dioscorides* describes the ammoniac as being the juice of a *Ferula* growing near *Cyrene*, and mentions after-

wards that an inferior kind is also obtained from a tree of the reed tribe in Lybia, near Ammon. The reed which produces the better kind is now called the *Ferula tingitana*. Whether the inferior kind be the commercial ammoniacum of the present day, which is procured from the *Dorema ammoniacum*, does not appear certain. Dr. Hill holds that the ancients were acquainted with the two kinds which we have. In the modern Greek Pharmacopœia it is questioned whether it is the product of the *Heracleum gummiferum*, or *Ferula orientalis*. The *thymiama*, or *suffimentum*, was the finest kind of ammoniac, and was so called from being used in religious rites. Dioscorides recommends ammoniac for many medicinal purposes, both internally and externally; as for loosening the bowels when taken in a draught; for asthma and other affections of the chest when given as a linctus with honey; for indurations of the spleen and liver when applied in the form of a cataplasm; and for nebulæ of the cornea. (iii, 88.) Galen gives nearly the same characters of it. Serapion quotes Dioscorides and Galen, and adds a few other particulars of not much importance from Arabian authorities, such as that it is diuretic and emmenagogue, and expels humours from the body. (c. 268.) Rhases, Avicenna, Ebn Baithar, and Haly Abbas supply no additional information of any interest under this head. Averrhoes commends it as a medicine which softens and dissolves hard tumours. (Collig. v, 42.)

Ἀμόργη,

Amurca, the Lees of Oil, is of the second order of intensely calefacient, and desiccative medicines. By these means it cures ulcers in dry bodies, but increases and exasperates those in others.

COMMENTARY. The *amurca*, as Dioscorides states, is the sediment of strained oil. Celsus mentions it often as a strong external application, in which form it is greatly commended by Dioscorides in various affections. He says it is an article in collyria and plasters. He also speaks of its being used as an injection into the rectum, the urethra, and the vagina, in diseases of these parts.

Ἄμπελόπρασον,

Ampeloprasum, *Vine-leek*, being a species of wild leek, is most acrid and hot according to the last degree: hence it proves deleterious. It is incisive, deobstruent, and hurtful to the stomach.

COMM. COMMENTARY. The *Allium Ampeloprasum* L. is recommended by Dioscorides as being more powerfully calefacient and emmenagogue than the leek (*Allium Porrum*); and when given in food, beneficial to persons stung by venomous animals. Our author follows Galen.

Ἄμπελος ἀγρία,

Vitis sylvestris, *the Wild Vine*; its grapes and tops are possessed of detergent powers, but have also some astringency. The powers of the *cultivated vine* are like those of the wild, but weaker. The shoots of the *white vine* (called also bryonia and psilothrum) are eaten as stomachics, and prove diuretic. The root is detergent, attenuant, and moderately hot. Wherefore it melts down the spleen when drunk or applied externally as a cataplasm with figs; and it cures itch and leprosy. The black vine, also called bryony, is like the aforementioned, only weaker.

COMM. COMMENTARY. The wild vine is evidently the *Tamus communis*; the white the *Bryonia dioica*; and the black the *Bryonia alba*. Gerarde, our old herbalist, says that the reason why the bryony and the wild vine are confounded together, is that Pliny could not sufficiently expound them (xxiii, 1), and made them all one, in which error are all the Arabians. Dioscorides treats of them at considerable length, and more especially of the white, which he commends in the strongest terms, as an application to malignant and ill-conditioned sores. (iv, 180.) He and Oribasius take notice of its purgative powers. Our modern herbalists and older writers on the *Materia Medica*, all treat of the bryonies in the same terms as the ancient authorities. See *Bryonia*.

Ἄμυγδαλα,

Amygdalæ, *Almonds*; the bitter are possessed of powers which are attenuant and deobstruent of deep-seated viscid and

thick humours, and detergent of those lodged in the skin. The wood has the same powers. The sweet are moderately hot.

COMMENTARY. Respecting this article there can be no difference of opinion. Plutarch and many of the ancient authorities take notice of the powers of almonds in resisting intoxication. Dioscorides states that a cataplasm formed from almonds, with vinegar or rose oil, and applied to the forehead or temples relieves headache. Taken internally, he says, they are laxative, soporific, and diuretic. (i, 186.) Serapion gives nearly the same account of them. (c. 82.) Dioscorides greatly commends almond oil as a demulcent in various complaints, such as pains, inflammation, and displacement of the uterus, also in headache and earache, in nephritic, calculous, and other diseases. (i, 38.) Avicenna gives it the same character, and otherwise enlarges very fully in recapitulating the virtues of almonds. As an article of food, he says, bitter almonds are stomachic, and sweet almonds are fattening. He recommends them as an application to herpes and other diseases of the skin. Bitter almonds he speaks highly of in obstructions of the kidneys. Altogether the account which he gives of this article is most interesting. (ii, 257.) See also Rhases (Cont. l. ult. i, 45); Averrhoes (Collig. v, 42.) The latter recommends them as powerful deobstruents of the liver.

COMM.

Ἄμυλον,

Amylum, *Starch*, is formed from clean wheat moistened with water during the heat of the dog-days, which water is to be poured off five times in the day. When it becomes very soft, it is to be strained and the water poured off, and the bran separated; and it is to be dried quickly in the sun before it become sour. Its powers are moderately cooling, desiccant, and emollient of acrid humours.

COMMENTARY. Our author's account of the mode of preparing starch is mostly taken from Dioscorides (ii, 123.) Pliny describes the process in nearly the same terms. He says, it may be prepared from wheat or spelt. (H. N. xxviii, 17.) He calls it astringent, and recommends it in hæmoptysis. Serapion also recommends it in this complaint. (c. 29.) Celsus

COMM.

COMM. ranks it among the "res boni succi." (ii, 20.) It is mentioned by Hippocrates, who recommends it as an application to the mouth of the womb. (De Mulieb. ii.)

Ἄμωμον,

Amomum; its powers are like those of the sweet-flag; but the former is the drier, and the latter more digestive.

COMM. COMMENTARY. For the general literature of this subject, we would beg to refer to what we have said in the Appendix to the Greek Lexicon. Notwithstanding all the illustration which it has received, it must be admitted that now we have no practical acquaintance with the article in question, unless we agree with Dr. Pereira in setting it down as the *Amomum Cardamomum*. This opinion, however, which had been previously started by Feæus (Flor. Virg. xvi, 199), is controverted by the learned Sprengel. (ad Dioscor. i, 14.) But still if the cardamom be not exactly the amomum of the ancients, there can be no doubt that these two substances must have been very similar to one another. Dioscorides treats more fully of this article than Galen, Aëtius, Oribasius, or our author, describing it as being calefacient, astringent, desiccative, soporific, and anodyne when applied in a plaster to the forehead, and stating that it ripens and discusses boils and meliceris, proves useful to persons stung by scorpions, in a cataplasm with basil; relieves gouty persons, soothes inflammations of the eyes, and those in the bowels, with raisins; that it is useful in female complaints, in the form of a hip-bath, and that the decoction of it is fitting in cases of nephritis, hepatitis, and gout. (i, 14.) Serapion quotes the descriptions of it given by Dioscorides and Galen, and adds, upon the authority of Humaim, the son of Isaac, that it is possessed of inebriating and soporific powers. (c. 279.) Avicenna's account of it is made up from Dioscorides, Galen, and Serapion (ii, 251.) Haly Abbas recommends the decoction of it (*hamama*) in diseases of the liver and kidneys. Celsus includes both the amomum and cardamomum (which, by the way, seems decidedly to prove that they were not *exactly* the same thing) among the ingredients of an emollient plaster (*malagma*) which he describes, and which he recommends as an excellent application

to abscesses, and various schirrous tumours. (v, 18, 7.) It does not occur, we believe, in the *Materia Medica* of Hippocrates; at least we have failed to detect it while writing this article. COMM.

Ἄναγαλλίς,

Anagallis, *Pimpernel*; both kinds are of sufficiently detergent powers, having some hottish and attractive properties, so that they extract thorns; and the juice of it purges by the nose.

COMMENTARY. These two well-known plants, namely, the *Anagallis arvensis* and *cærulea*, are included in all the ancient lists of medicinal herbs, and were only of late excluded from our British Pharmacopœias. All the authorities, ancient and modern, give them the same characters as Dioscorides, to whom our author is principally indebted. (ii, 209.) He says they are useful in diseases of the kidneys and liver. (l. c.) The *anagallis* does not occur in the works of Celsus. For the Arabians, see Serapion (c. 155); Avicenna (ii, 2, 32.) They all copy from Dioscorides and Galen. Even Ebn Baithar supplies nothing of much consequence. (i, 90.) COMM.

Ἄναγυρος,

Anagyris, *Stinking-bean Trefoil*; is a strong-scented and acrid shrub of hot and discutient powers, but the seed consists of more subtile particles, and is emetic.

COMMENTARY. Dioscorides and Pliny recommend the *Anagyris fetida* for promoting the pains of labour, and the expulsion of the placenta after delivery. It is curious to remark that our old herbalists ascribe the same virtues to it. It was therefore to our forefathers in the profession what the ergot of rye is to the present generation; being, according to Galen, an acrid, diaphoretic, and heating substance, its action must, in many respects, have resembled the ergot. With the exception of Oribasius, who merely copies Dioscorides, we are not aware of any ancient writer that treats of it, with the exception of Ebn Baithar, and he also merely copies the descriptions of it given by Dioscorides and Galen. Though excluded from our Dispensatory, this article is not wholly unknown to the shops. See Gray (Suppl. to Pharm. 93.) COMM.

Ἀνδροάχνη,

Portulaca, *Purslain*, is cooling in the third degree, but humectates in the second; and by these powers it relieves heat of the stomach when applied to the abdomen, and dispels defluxions. By its viscosity it smooths the teeth when set on edge by acids; and by its astringency it relieves dysentery and hemorrhages.

COMM. COMMENTARY. Aëtius, like our author, describes the purslane (*Portulaca oleracea*) as a cooling and sub-astringent herb. Both he and our author copy from Galen, who writes earnestly in commendation of this plant, which retained its place in our English Dispensatories down to a late date. Dioscorides likewise writes fully on its virtues, recommending it as a cooling and astringent medicine, externally, in pains of the head, inflammations of the eyes &c., and internally, for inflammations of the bowels, intestinal worms, hæmoptysis, hemorrhoids, and various other cases. (ii, 150.) Celsus also calls it an astringent and cooling herb. (ii.) For the Arabians, see Serapion (c. 349); Avicenna (ii, 2, 534); Rhases (Cont. l. ult. i, 563); Averrhoes (Collig. v, 42.) They treat of it in nearly the same terms as the Greeks.

Ἀνδροόσαιμον,

Androsæmum, *Tutsan*, or *Park-leaves*, (or St. John's wort?); there are two varieties of it, the one of which is called ascyrron and ascyroides, being a species of hypericon, but the other is named dionysias. Their fruit is purgative, but their leaves more desiccant.

COMM. COMMENTARY. Our Tutsan or Park-leaves has been generally set down as this plant, but Sibthorp, who viewed the plants of classic lands on the spot, inclines to the *Hypericum ciliatum*. The truth of the matter we believe to be that as the *Hypericum* is a numerous genus, and the species have a close resemblance to one another, they were often confounded together by the older authorities. Both Culpeper the herbalist and Ruttly have expressed their wonder that so important an article as the *androsæmum* should have been lost sight of in recent times. Pliny, and all the medical authorities, recommend it strongly as an application to burns and ulcers, and

ascribe cholagogue powers to it when administered internally. COMM.
 See Dioscorides (iii, 163); Galen (De Simpl. v); Aëtius (i);
 Oribasius (Med. Coll. xiii); Ebn Baithar (ii, 579); Rhases
 (Cont. l. ult. i, 59.) The last two merely give extracts from
 Dioscorides and Galen.

Ἀνδρόσακες,

Androsaces, is a bitter and acrid herb, discutient and desiccative. It and its fruit, when drunk, are diuretic.

COMMENTARY. This is a Syrian plant, which, although COMM.
 both Matthiolus and Gerarde pretend to give figures of it,
 has never been satisfactorily determined. Serapion and Avicenna
 have completely omitted treating of it, and Rhases
 merely says of the *androsaces*, by which he probably meant
 the *androsaces*, that it is decidedly heating with moderate
 astringency. (Cont. l. ult.) Our author seems to copy from
 Dioscorides (iii, 140.)

Ἀνεμώνη,

Anemone, *Wind-flower*; all the varieties of it have powers
 which are acrid, detergent, epispastic, and open the mouths of
 vessels: whence they increase phlegm, remove leprosy when
 applied, and attract milk.

COMMENTARY. The wind-flowers, so celebrated in ancient COMM.
 poetry, being a numerous genus, there has been some difficulty
 in determining exactly the species described by Dioscorides.
 He mentions two, the cultivated and the wild, and divides
 each into two varieties, according to the difference of colour
 in their flowers. The former may be set down as the *A.*
coronaria, and the other as the *A. nemorosa*. The latter only
 is indigenous in this country, but the other is commonly cul-
 tivated in gardens. He recommends them principally as
 external applications, as for foul ulcers, in collyria for inflam-
 mation of the eyes, and in pessaries to promote menstruation.
 (ii, 207.) Galen and the succeeding authorities follow him.
 The anemone is not to be found in Celsus. For the Arabians,
 see Avicenna (ii, 2, 655); Serapion (c. 72); Rhases (Cont.
 l. ult. iii, 48); Ebn Baithar (ii, 100.) They do little more than
 copy from Dioscorides. The *A. pratensis* occurs in the modern
 Greek Pharmacopœia (132.)

* *Ανηθον,*

Anethum, *Dill*; it warms in the second degree intensely, and dries in nearly the same degree. When boiled in oil it is diaphoretic, anodyne, and soporific; and concocts crude swellings. But when burnt it becomes of the third order of heating and drying medicines, and is useful when sprinkled upon foul ulcers. But the green is more humid, and less hot and digestive.

COMM. COMMENTARY. Our author condenses and abridges the account of the dill (*Anethum graveolens*) given by Galen. Dioscorides, in his usual empirical style, recommends it for various purposes, such as promoting the flow of milk, stopping slight vomiting, opening the bowels, increasing the urine, proving useful to hysterical women in a hip-bath, and so forth. (iii, 60.) The Arabians as usual copy from both. See Avicenna (ii, 2, 69.)

* *Ανθυλλις,*

Anthyllis; there are two varieties, both of which are desiccant applications to ulcers; but that resembling the ground-pine consists of more subtile particles, so as to be beneficial in epileptic cases. It is also more detergent.

COMM. COMMENTARY. The former species, which Dioscorides describes and recommends for the cure of wounds, we would willingly refer to the *Anthyllis vulneraria*, but the predominance of authority is against it, and in favour of the *Cressa cretica*. The other is probably the *Ajuga Iva*. Avicenna joins Dioscorides in commending it as a vulnerary herb (ii, 2, 744), for which virtue the anthyllis was long celebrated, as its scientific name implies.

* *Ανησον,*

Anisum, *Anise*; the seed is particularly acrid, eating, and drying in the third degree. Hence it is diuretic and dispels flatus.

COMM. COMMENTARY. Serapion and Avicenna, like the Greek authorities, call the *Pimpinella anisum* diuretic and emmenagogue. It is now reckoned the first of the four hot seeds, the other three being carui, cumin, and fennel.

Ἀντίρρινον or Ἀνάροδρον,

Antirrinon, or Anarrinon, *Snapdragon*, has properties resembling those of the bubonium, but weaker, whence you may learn its properties.

COMMENTARY. Galen writes of this article, *Antirrinum* COMM.
Orontium, or Calfsnout, as being of no use in medicine. (De }
Simpl. v.) Dioscorides, also, mentions it only as an amulet
and external application. (iv, 131.) It is scarcely noticed by
the other authorities. According to Pliny, it is emmenagogue.
Serapion has omitted it.

Ἄνωσις or Ὠνωσις,

Anonis, or Ononis, *Rest-harrow*, has heating powers, especially in its root. Its juice, when drunk with wine, promotes the secretion of urine, is lithontriptic, breaks eschars, and soothes pains of the teeth.

COMMENTARY. Our author abridges his account of the COMM.
Ononis antiquorum from Galen. All in fact borrow from }
Dioscorides, who further mentions of it, that it was sometimes
used as a pickle. (iii, 18.) It would appear to be the *Onobes*
of Rhases (Cont. i, 520), who gives the characters of it from
Galen. Serapion and Avicenna have omitted it. Modern au-
thorities enumerate it among the five aperient roots. It is
only of late years that it has been expelled from our Pharma-
copœias. Even yet it is not wholly unknown to our apothecaries.
See Gray (Suppl. to Pharmacop. p. 94.) Two species
of the *Anonis*, the *antiquorum* and *spinosa*, occur in the modern
Greek Pharmacopœia (p. 119.)

Ἀπαρίνη,

Lappa, *Cleavers* (which some call *philanthropon*, others *omphalocarpon*), is moderately detergent and desiccative; it also consists of subtile particles.

COMMENTARY. All the herbalists and best commentators COMM.
agree that it is the *Galium aparine*. (See Gerarde, Sprengel, }
and others.) According to Dioscorides a decoction of its
leaves is useful to persons bitten by phalangia and vipers, when
drunk with wine; an injection of the same into the ears
cures earache; and when mixed up with axunge it dis-
cusses scrofulous tumours. Galen and the subsequent autho-

COMM. rities seem to attach less importance to it. (iii, 94.) We cannot find it in Serapion, Rhases, Avicenna, nor Haly Abbas; but it is treated of by all our older herbalists, and has found a place in many modern pharmacopœias. It is not contained, however, in the modern Greek Pharmacopœia.

Ἄπιον,

Pyrum, *the Pear*, is unequal as to temperament, consisting partly of terrene and partly of watery matter. When eaten, therefore, it is stomachic, and quenches thirst. When applied as a cataplasm it dries and cools moderately.

COMM. COMMENTARY. Our author copies the characters of the *Pyrus communis* from Galen and Aëtius. We have treated of it as an article of food in the First Book. Both Dioscorides and Pliny make mention of perry. Dioscorides says, that pears prove prejudicial to hungry persons when eaten. (i, 167.)

Ἀπόκυνον or Κυνοκράμβη,

Brassica canina, *Dog's-bane*; it is also called cynomoron, because it proves quickly fatal to dogs. But it is also deleterious to men, being very fetid and hot, without being desiccant. Hence, when applied externally as a cataplasm it is discutient.

COMM. COMMENTARY. Our author borrows his account of this article very closely from Galen. It is clearly a poison rather than a medicine. In fact, it is classed by Schulze among the ancient poisons. (Toxicol. veterum.) Orfila also treats of it among the acrid poisons (p. 82, Eng. ed.) It seems doubtful whether it be the *Periploca Græca*, as we formerly stated it to be (II, 242); the *Cynanchus erectus*, as Sprengel supposes; or one of the species of *Apocynum*. Having no practical acquaintance with these herbs, we cannot pretend to give any decided opinion on the subject.

Ἀπόχυμα,

Apochyma, is the old pitch scraped from ships. It is solvent, desiccant, and discutient of tumours.

COMM. COMMENTARY. Dioscorides calls it also Ζωπίσσα. It consists, as he explains, of the wax and pitch of ships which had been macerated in salt water. Pliny says of it, "Zopissam eradi navibus diximus cera marino sale maceratâ. Optima hæc

a tirocinio navium. Additur autem in malagmata ad discutiendas collectiones." (H. N. xxiv, 26.) COMM.

Ἄραχνη,

Aranea, the Spider, when softened into a plaster, and applied to the forehead and temples, is said by Dioscorides to remove the periodical attacks of tertians. Its web, when applied, stops hemorrhage, and preserves superficial sores from inflammation.

COMMENTARY. Dioscorides describes two species, which probably are the *Aranea retiaria*, and the *Aranea domestica*. Serapion gives the same account of their medicinal properties. They appear to have been principally used externally, as an anti-inflammatory application. COMM.

Ἄρξεμῶνη,

Argemone, Prickly Poppy, is possessed of detergent and discutient powers.

COMMENTARY. Of the two species described by Dioscorides, the former, which is the *Papaver argemone*, is recommended by him in nebulæ and albugo of the eye, and its leaves as a soothing cataplasm for inflammations. The other, which may be the *Geum urbanum*, or avens, he also recommends principally as an external application in sores and affections of the eyes; but adds of it, that when drunk with wine it is useful in the case of persons stung by venomous animals. (ii, 208.) Galen and the succeeding authorities treat of it more cursorily; and the Arabians would seem not to treat of it at all, with the exception of Ebn Baithar, who merely gives translations of what Dioscorides and Galen had written of it. (i, 28.) COMM.

Ἄρισαρον,

Arisarum, Friar's Cowl, is smaller than the wakerobin, but much more acrid; and has a root of the size of an olive.

COMMENTARY. Our herbalists give the name of Friar's Cowl to this plant, which even they admit to be possessed of insignificant powers. It is the aris of Pliny. (H. N. xxiv, 16.) Its botanical name is *Arum arisaron*. Dioscorides calls it an acrid medicine, and recommends it solely in collyria. (ii, 198.) The Arabians appear to have confounded it with the arum, under COMM.

COMM. the name of Luf. See Avicenna (ii, 2, 132); and Ebn Baithar (ii, 449.)

Ἀριστολογία,

Aristolochia, *Birthwort*; all kinds of it are hot, consist of subtile particles, and are detergent, bitter and subacid; and are most useful remedies. The round consists of more subtile particles, and is every way more drastic. The clematitis is fragrant but weaker. The long is, in other respects, intermediate between these, but no less hot than the round.

COMM. COMMENTARY. Three species of the Birthwort, the *Aristolochia longa*, *rotunda*, and *clematis*, have been described by the authorities from Dioscorides downwards. The first two still retain their places in our Pharmacopœias, but are seldom used. Dioscorides recommends them, especially as uterine medicines, for promoting menstruation, the lochial discharge, and the expulsion of the fœtus. He also says it is useful in affections of the chest, the spleen, and in other diseases. (iii, 4, 5.) The toxicologists from Nicander downwards recommend the birthwort as an antidote to poisons. See also Theophr. (H. P. ix, 15); and Apuleius (De Herbis.) Mesue describes it as being phlegmagogue, cholagogue, and emmenagogue. He also recommends it in a fumigation along with arsenic for asthma. (De Simpl. ii, 27.) Avicenna treats of it at great length, recommending it strongly as an uterine and alexipharmic medicine. (ii, 2, 49.) See also Rhases (Cont. l. ult. i, 77); Averrhoes (Collig. v, 42); Serapion (c. 171); Ebn Baithar, *pluries*. Pliny describes a fourth species under the name of *Pistolochia*. Modern authorities confirm the birthwort's character as to its being powerfully emmenagogue. See Quincy, Lewis, Pereira, and the other writers on the *Materia Medica*.

Ἰουκευθος,

Juniperus, *the Juniper*, heats and dries in the third degree. The fruit is equally calefacient, but desiccant only in the first degree.

COMM. COMMENTARY. Dioscorides describes two species of it, the major and the minor, which probably are to be referred to the *Juniperus macrocarpa*, Sibth., and the *J. oxycedrus*. He calls them acrid, diuretic, and calefacient, and further recommends them in diseases of the chest, in the hysterical convulsion, and

as being alexipharmic. (i, 103.) The other authorities, both Greek and Arabian, copy closely under this head from him. See in particular Avicenna (ii, 2, 359); and Ebn Baithar (ii, 189.) The vernix is a resinous gum, which is procured from the juniper; it is called *Sandarax* by the Arabians, and is to be carefully distinguished from the sandaracha or sulphuret of arsenic. They recommend it in hæmoptysis. See Serapion, Rhases, and Avicenna. Of the juniper, see further under *Κίδροσ*, and appendix under Sandaracha. COMM.

**Ἀρκιον*,

Arcium (called also Prosopites); its leaves are like those of the colocynth, but larger and harder. It is discutient and desiccant, and has some stypticity. Wherefore, its leaves cure old sores.

COMMENTARY. The ancient descriptions of this plant seem to point to the burdock, which, however, owing to a confusion of names, has been called the *Arctium lappa*. Dioscorides recommends it internally in diseases of the chest, and externally as a cataplasm to old ulcers. (iv, 105.) This is the same as the second arctium of Galen, who recommends it in the same cases as Dioscorides. Apuleius, like Dioscorides, says it is useful in cases of strangury. Our old herbalists treat of the virtues of the burdock in the same terms as the Greek and Roman authorities. The Arabians, as far as we can discover, do not treat either of the arcion or the arctium, with the exception of Ebn Baithar, who merely gives extracts from Dioscorides and Galen, and seems puzzled to distinguish the two plants from one another. (i, 25.) In the modern Greek Dispensatory both the *Arctium bardana* and the *A. lappa* are set down as corresponding to the *ἄρκιον*. COMM.

**Ἀρκτιον*,

Arctium, *Lappa*, is like the verbascum; its roots are tender, white, and sweet: it consists of subtile particles, and is possessed of desiccant and moderately detergent powers.

COMMENTARY. This, which is treated of under the same name by Dioscorides (iii, 104), and is the former arctium of Galen, is probably the *Verbascum sanguineum*. The description of it given by Galen, at all events, points to some species of COMM.

COMM. the mullein. Both the authorities we have mentioned recommend it as an application to burns and chilblains.

Ἄρμενιακόν,

Armeniacum, has detergent properties with a little acrimony, and a small degree of astringency. It is therefore mixed up with ophthalmic medicines, and promotes the growth of the hairs of the eyelids.

COMM. COMMENTARY. We shall not enter into the discussion of disputed points respecting this article, further than to state our own opinion, that in all probability it was a native ore of carbonate of copper; but which of the species or sub-species described by modern mineralists the armenium was, we cannot venture to decide. See Cleaveland's Mineralogy (p. 570, &c.) Dioscorides, who treats of it under the name of armenium, (v, 105), compares it to chrysocola, which it is well ascertained is that species of native carbonate of copper now described under the names of copper green and mountain green. He merely recommends it as a cosmetic when applied to the eyelashes. Serapion confounds this substance with the Lapis armeniacus, (c. 404); but Avicenna accurately distinguishes between them. (ii, 2, 56, 415.)

Ἄρνάβω,

Arnabo, is one of the aromatics. Hence it is mostly mixed up with ointments, being possessed of hot and dry powers in the third degree, like cassia and carpesium. Hence Posidonius says, that it may be used instead of cinnamon when it is not at hand.

COMM. COMMENTARY. This article, which is treated of only by Aëtius (xvi, 113), besides our author, has never been accurately determined. It has been supposed to be the zerumbeth, of which we will have occasion to treat more fully in another place. See the Appendix.

Ἄρνόχλωσσον,

Plantago, *Plantain*, both cools and dries in the second degree, being composed of a watery and a terrene substance, and having a little astringency; therefore it agrees with malignant ulcers, defluxions, and mortifications; by the symmetry

of its temperament it stops hemorrhages, and agrees with most of them. For it is desiccant without being stimulant, and cooling without being narcotic.

COMMENTARY. The greater plantain of Dioscorides was probably the *Plantago major*, which, in all ages down to the present times, has been so celebrated as a vulnerary herb. Our author's account of its virtues is taken either from Dioscorides or Galen, for, in the present instance, there is scarcely a shade of difference in opinion between these two authorities. The lesser plantain of Dioscorides is either the *lanceolata* or *maritima*, probably the former. (ii, 152.) See Macer Floridus. Avicenna and Serapion copy word for word from Dioscorides and Galen. None of the plantains are mentioned by Hippocrates. Celsus places the "plantago" in the list of substances which are both astringent and cooling. (ii, 33.) None of the species of plantago here described occur in the modern Greek Pharmacopœia. COMM.

Ἄρου,

Arum, *Wakerobin*, is of the first order in heating and drying, being formed of a terrene substance that is hot and detergent. Its roots are hotter. But the dracunculus is stronger.

COMMENTARY. We have all along assumed, with our older herbalists, that this is the wakerobin or cuckow-pent, namely, the *Arum maculatum* L. Pliny and Mesue are the only ancient authors who have noticed its purgative powers. Our author's account of its faculties is much the same as that given by Dioscorides, Galen, and Oribasius, and its ancient character has been amply confirmed by modern authority. The Arabians treat of it fully, but rather confusedly, under the name of *Luf*. See Avicenna (ii, 2, 432); Serapion (c. 43); Ebn Baithar (ii, 246.) Even at the present day it is not wholly excluded from the *Materia Medica*. See Pereira (M. M. p. 811.) We have treated of its congener, the dragon herb, as an article of food, in another place. See Book I, 114. COMM.

Ἄρσενικόν,

Arsenic, is possessed of caustic powers. It is used also for depilatories, but if the application be allowed to remain long

it affects the skin itself. When burnt its particles become attenuated.

COMM. COMMENTARY. There can be no hesitation in deciding that this is the yellow sulphuret of arsenic, commonly called orpiment, the latter term being a corruption of auripigmentum, the Latin name of it. See Celsus (v, 5.) The ancients used this mineral very freely as an external application, and internally by the mouth, in clysters, and in fumigations. Avicenna recommends arsenic with the gum of pine, in the form of a pill, for asthma. He also speaks highly of a potion containing arsenic and honeyed water. He particularly commends arsenic as an application to herpes esthiomenos of the nose. (ii, 2, 48.) Cælius Aurelianus recommends an injection containing arsenic for ascarides. (Tard. Pass. iv, 7.) It was freely used in injections for the cure of chronic dysentery. (See Book iii.) Serapion speaks favorably of it in complaints of the eyes. (§ 381.) Servitor says, that sublimed arsenic is a septic and pungent medicine, which removes the fungous flesh of ulcers, and is a depilatory. He describes minutely the process of subliming and whitening it. Avicenna likewise makes mention of white arsenic. Geber also treats of sublimed arsenic, by which it is clear he meant the factitious oxide with which we are now familiar. (iii, 29.)

Ἄρτεμισία,

Artemisia, *Mugwort*; both varieties are heating in the second degree, and desiccant in the first. They are composed of subtile particles, so that they break down stones in the kidneys, and suit with fumigations of the womb.

COMM. COMMENTARY. The three species of the artemisia described by Dioscorides are probably the *arborescens*, *spicata*, and *campestris*. He recommends the artemisia strongly as an emmenagogue, when given internally, in the form of a hipbath, and as an injection into the vagina. He also makes it to be lithontriptic. (iii, 107, 118.) The same characters are given it by Galen and by Avicenna, whose *berengfef* it appears to be. (c. 83.) Aëtius and most of the authorities describe only the first two species of the artemisia. Serapion and Avicenna describe under this head an oriental species, which, it is probable, was the *Artemisia Judaica*. Honain (ap-

Avicennam), also describes the *A. Indica*. The famous *Moxa* COMM.
 is prepared from the lanugo or downy substance which adheres
 to the under surface of the leaf of the artemisia. See Barrow's
 'Travels in China,' Woodville, Miller, and Pereira. That the
 artemisia long retained the character which Dioscorides gave
 it, of possessing powerful virtues as an emmenagogue and a
 lithontriptic, is evident from what is said of it in the work of
 Macer Floridus. Except as furnishing the moxa, (and it is now
 believed to be got from a particular species, the *A. moxa*) the
 species of artemisia here treated of are now wholly discarded
 from the practice of medicine.

Ἄροτος,

Panis, *Bread*; in a cataplasm it is more discutient than can
 be accounted for from the properties of wheat, owing to its
 containing salt and leaven. For the leaven is attractive of
 the deep-seated humours.

COMMENTARY. We have given some account of the kinds COMM.
 of bread used by the ancients in the 78th sect. of the First
 Book. Oribasius gives an excellent description of the mode
 of preparing the bread poultice and its uses. He directs us
 to dissolve the bread in water until it acquires the consistence
 of gruel, and then, having added oil or butter to it, to boil it
 to the proper consistence. He adds, that it is the best of all
 applications with which he was acquainted for promoting sup-
 puration. His account of the different kinds of cataplasms
 is most ample and interesting. (Med. Collect.)

Ἄσαρον,

Asarum, *Asarabacca*, has the same powers as the sweet flag,
 but more intense.

COMMENTARY. This plant, which is certainly the *Asarum* COMM.
Europæum, or common Asarabacca, is said by Dioscorides to
 be diuretic, heating, and emetic, answering well with dropsi-
 cal cases and chronic sciatica and promoting menstruation; its
 roots drunk with mulse to the amount of six drachms, he says,
 purge like white hellebore. (i, 9.) Galen seems to have over-
 looked the importance of this article, for he is nearly as brief
 as our author in treating of it; and Aëtius and Oribasius follow
 him. Serapion, Rhases, and Avicenna recommend it in the

COMM. same cases as Dioscorides, and also in obstructions of the liver and spleen, and as a stimulant ingredient in collyria. Modern authorities confirm the character of this medicinal article given it by Dioscorides. See Lewis (Mat. Med. i, 178); Ruttj (Mat. Med. 43); Gray (Suppl. to Pharmacop. p. 38.) Although not excluded from our Dispensatories, less attention is now bestowed on the asarabacca than it would seem to deserve. See Royle (M. M. p. 548.) Ipecacuanha has nearly superseded it as an emetic in this country. The asarum is still retained in the modern Greek Pharmacopœia (p. 22.)

Ἄσβόλη,

Fuligo, *the Soot* which painters use. It is taken from glassworks, and is possessed of discutient and acrid powers, so as to burn and occasion putrefaction. It cures burns, with rose-cerate.

COMM. COMMENTARY. Dioscorides and some of the other authorities mention the *Fuligo*, or *soot* of glassworks, in nearly the same terms as Paulus.

Ἄσκαλαβώτης,

Stellio, *the Swift*; this animal is useless for all other purposes, but they say that it is a good application to persons bitten by a scorpion. It is mixed also with venereal excitants.

COMM. COMMENTARY. We have treated of this reptile in the Fifth Book. It is the spotted lizard, *Lacerta stellio* L. Its aphrodisiacal faculty is alluded to by our author in another place. (B. III, 58.)

Ἄσκληπιάς,

Asclepias, *Swallow-wort*, being hot and dry as to its powers, and consisting of subtile particles, agrees well with tormina when drunk with wine, and in the form of a cataplasm it is a good application to the bites of venomous animals, and malignant ulcers in the uterus and breasts.

COMM. COMMENTARY. There appears little reason to doubt that it is the *Asclepias vincetoxicum*, or *Swallow-wort*. Our author borrows its medicinal characters from Dioscorides. (iii, 96.) Galen candidly admits, that he had no experience of it as a medicine. Pliny, like Dioscorides and our author, recommends it for the cure of tormina and the bites of serpents.

(H. N. xxvii, 18.) Until lately it held a place in our modern Dispensatories, with the characters given it by the ancients. See Quincy (p. 59); Ruty (Mat. Med. p. 44); Gray (Suppl. to Pharmacop. p. 57.) COMM.

Ἄσκυρρον is treated of under Androsæmon.

COMMENTARY. We have stated under ἀνδρόσαιμον the difficulty there is in distinguishing the different species of *Hypericum* described by the ancients. We cannot pretend to decide whether the present article be the *androsæmum* or the *perforatum*. Dioscorides recommends the ascyrron as an emmenagogue, in sciatica, and as an application to burns. (iii, 163.) The Arabians treat of it only as being identical either with the hypericum or the androsæmum. See Rhases (Cont. l. ult. i, 59); Avicenna (ii, 2. 354.) COMM.

Ἀσπάλαθος,

Aspalathus, *Rose-wood*, is composed of heterogeneous ingredients, having acrid and astringent powers, and hence it is desiccant. On this account it is useful for mortifications and defluxions.

COMMENTARY. We must not enter into the discussion regarding this article; suffice to say, that we have now arrived at the conclusion that it was either the *Lignum rhodium*, or a substance so near to it in qualities, that the latter came to be substituted for it. We need scarcely say, that there is great difference of opinion among the botanical authorities what tree or shrub it is which produces the *Lignum rhodium*. Upon the whole the predominance of evidence is in favour of some species of *Cytisus*. Dioscorides recommends the aspalathus when boiled in wine as a gargle in aphthæ, as an injection in spreading and impure ulcers of the genital organs (*chancres*?), in dysuria, flatulence, and other complaints. (i, 19.) Now it will be observed that the distilled oil of *Lignum rhodium* has been recommended in similar cases by modern authorities. See Moses Charras (Royal Pharmacopœia, Chemical, iii, 1, 24.) The Arabians give the aspalathus the same characters as the Greeks. See Avicenna (ii, 2, 206); Rhases (Cont. l. ult. i, 251.) The aspalathus of Celsus (v, 24) COMM.

COMM. was, no doubt, the same as that of Dioscorides. It is probably the *μέλαινα ρίζα* of Hippocrates.

Ἀσπάραγος,

Asparagus, the Rock Asparagus, or Myacanthinus, is detergent, but of a middle temperament as to heat and cold; it is deobstruent of the kidneys and liver, especially its roots and seed. It also cures toothache.

COMM. COMMENTARY. See Book I, 75. The medicinal asparagus of the ancients would appear to have been different from our garden asparagus, from the description of its root given by Dioscorides (ii, 151), and yet there seems to have been very little difference between them in properties, since both are used for the same culinary and medicinal purposes; the ancient, we suppose, must have been the *A. acutifolius*. From Dioscorides down to the present time, the asparagus has been celebrated as being possessed of deobstruent and diuretic powers, and hence it has been given in jaundice, nephritis, and many other diseases of a like kind. Celsus recommends it as a pickle in affections of the spleen. (iv, 9.) It occurs in the Hippocratic collection, and is fully treated of by the Arabians. See Avicenna (ii, 2, 603); Rhases (Cont. l. ult. i, 667.) Symeon Seth, after repeating from Galen that the asparagus acts upon the kidneys and imparts its odour to it, remarks that this need not surprise us, since, by holding a certain herb of a red colour in the hands, the urine is reddened. What herb he alludes to cannot be exactly ascertained. (V. Not. Bogdani.) At all events it is clear from this that the ancients believed in absorption by the cuticle. The Arabians held that it is antiseptic. Casiri (Bibl. Hist. Arab. 337.) The wild asparagus was called *Corruda* (Cato de R. R.)

Ἀσπλήνιον,

Asplenium, Spleenwort, or Ceterach, has the properties of a substance which consists of subtile particles, but is not hot. It therefore breaks down stones and dissolves indurated spleens.

COMM. COMMENTARY. The spleenwort, or *Asplenium ceterach*, held a place in the *Materia Medica* from the earliest times down to a very recent period. Dioscorides commends it in diseases of the

spleen (whence it derives its name), in strangury, jaundice, and calculus. Galen briefly assigns it the same character, which is repeated by Aëtius and Oribasius, as well as by our author, and also by Avicenna (630.) We cannot find it mentioned by Serapion or Rhases. It held a place in our Dispensatory in the time of Lewis. (*Materia Medica* A.D. 1791.)

Ἄσταφίς,

Uva passa, the Raisin; the cultivated is possessed of digestive, astringent, and slightly discutient powers; the wild is possessed of strongly acrid, so as to be strongly phlegmagogue and detergent.

COMMENTARY. Dioscorides treats much more fully of the medicinal powers of raisins than Galen and our author, recommending them in affections of the windpipe, chest, kidneys, and bladder; for dysentery when eaten with their stones by themselves, or when fried along with millet flour, barley-meal, and eggs; in masticatories with pepper; in inflammation of the testicles, when applied in a cataplasm with the flour of beans and cumin; for epinyctis, carbuncle, fevers, putrid and gangrenous sores about the joints, without their stones, when pounded with rue; for gout in a cataplasm with opoponax, and for the removal of loose nails. (v, 4.) Avicenna and Rhases briefly quote Dioscorides, and supply nothing additional. They hold, like the Greeks, that in particular cases raisins prove injurious to the urinary organs. Symeon Seth mentions that the Egyptians prepared a very sweet wine from raisins and honey. (*De Alimentis*.)

Ἄσθηρ Ἀττικὸς,

Aster atticus, Starwort, is also called bubonium, because it is believed to cure buboes, not only when applied for this purpose but even when appended as a periapt. It is possessed of mixed powers, being discutient and cooling.

COMMENTARY. Our author's account of the starwort, *Aster amyllus*, is taken from Galen, who in his turn copies from Dioscorides. In the common editions of Dioscorides there is a passage under this head (which although quoted by Serapion (§ 96), is scarcely considered genuine by Sprengel, seeing it is not alluded to by Galen or Pliny), in which the *Aster atticus*

COMM. is recommended for ardour of the stomach, inflammations of the eyes, buboes, and quinsies. The Arabians in treating of the *Aster atticus* copy from Dioscorides. — See in particular Avicenna (ii, 2, 357); Serapion (De Simpl. 96); Rhases (Contin. l. ult. i, 95.) It is not found in the works of Celsus. It held a place in our modern Dispensatory down to a late date. See Quincy (116.)

Ἄστρογάλος,

Astragalus, *Wild Liquorice*, is a small shrub, having astringent roots, and is desiccative in no contemptible degree. It promotes the cicatrization of old ulcers, and when drunk with wine stops the discharges of the bowels. It is mostly produced in Phæneum of Arcadia.

COMM. COMMENTARY. That the astragalus belongs to the vetch tribe can admit of no doubt, but the particular genus and species have never been determined. All the authorities, both ancient and modern, recommend it as an astringent both externally and internally. We cannot find it in the works either of Hippocrates or Celsus. Our author manifestly borrows from Dioscorides. (iv, 62.) The Arabians do not appear to treat of it.

Ἄσφαλτος,

Bitumen; it is desiccant and calefacient in the second degree: it is therefore agglutinative of fresh wounds.

COMM. COMMENTARY. The asphaltus, or *Bitumen judaicum*, held a place in the *Materia Medica* from the days of Hippocrates down to a very recent period. It got the name of Jew's pitch, from its having been principally procured from Judæa, where it is found floating on the surface of the Dead Sea, or *Lacus Asphaltites*. Some commentators have been puzzled by Dioscorides representing the colour of the finest asphaltus as purplish, but it is to be borne in mind that the ancients applied this term not to a scarlet red but to any rich dark-blue colour, such as that of the sea. All the authorities, ancient and modern, represent it as being emollient, discutient, and emmenagogue. Serapion gives a very interesting account of it. (§ 177.) See also Avicenna (ii, 2, 114); Rhases (Cont. l. ult. i, 88); also Celsus (v, 6.)

Ἄσφοδελος,

Asphodelus, *Kingspear*; its root is possessed of detergent and discutient powers. When burnt its ashes become more calefacient, desiccative, and attenuate. It therefore cures alopecia.

COMMENTARY. All the ancient authorities, including Hippocrates and Celsus, treat of the *Asphodelus ramosus*, or Kingspear, and in general are agreed in recommending it internally as being emmenagogue and diuretic, and externally as an application to alopecia or *porrigo decalvans*. The author who treats of it most elaborately is Dioscorides, who recommends it for the purposes we have mentioned, and as an alexipharmic, as a cure for toothache, and many other cases. (ii, 199.) Our author follows Galen. For the Arabians, see Avicenna (ii, 273); Serapion (c. 221); Rhases (Cont. l. ult. i, 26.) They all copy from Dioscorides and Galen. It was sometimes used as a culinary herb. See Vol. I, p. 118. Our old herbalists repeat its ancient characters as a medicine. See Gerard (i, 70.) It has been discarded from the Pharmacopœia for some time past.

COMM.

Ἄτρακτυλις,

Atractylis, *Wild Cnicus*, or *Distaff-thistle*; it is of the thorny tribe, being possessed of desiccative and moderately heating powers.

COMMENTARY. In another place (Vol. I, p. 113) we have treated of the atractylis as a culinary herb, agreeing with Sprengel in referring it to the *Carlina lanata*. The commentators on Dioscorides, however, are greatly at variance with regard to it; most of the old herbalists agree with Belon and Fuchsius in holding it to be the *Carduus benedictus*, or blessed thistle. See Gerard's Herbal (ii, 489.) We cannot help remarking, however, that the virtues of the *Carduus benedictus* as given by Quincy (English Dispensatory, i, 2) by no means agree with those assigned to the atractylis by Dioscorides; he holds it to be alexipharmical. (iii, 97.) Our author copies from Galen. The Arabians supply no additional information. See in particular Avicenna (ii, 2, 159.)

COMM.

Ἄτρίπλεξ,

Atriplex, *Orache*, moistens in the second degree and cools

in the first. It therefore opens the belly. Its fruit is possessed of detergent powers, whence it is useful in jaundice and obstructions of the liver.

COMM. COMMENTARY. We have treated of the orach (*Atriplex Hortensis*) as a culinary herb in Book I, § 74. It is still used as an article of food on the Continent. Our author copies from Dioscorides (ii, 145), whose account of it is amplified and explained by Galen. (De Simpl. v.) It is briefly treated of in like terms by Avicenna (ii, 2, 174); Serapion (c. 146); Rhases (Cont. l. ult. i, 97.) Rhases, after quoting what Dioscorides and Paulus say of it, adds on his own authority that he had known the seed of it prove powerfully emetic and laxative.

Ἀφάκη,

Aphace, *Wild Vetch*, is possessed of astringent powers like the lentil; but when eaten it is more difficult to digest than the lentil, and is more strongly desiccative, with a moderate degree of heating properties.

COMM. COMMENTARY. This is clearly a species of *Vicia*, but whether the *bithynica*, *lutea*, or *hybrida* cannot be satisfactorily determined. It is treated of by our older herbalists, who agree with the ancients in assigning to it astringent powers. The Arabian authorities would appear to have overlooked it. Our author is indebted to Dioscorides (ii, 177) and Galen (De Simpl. v.)

Ἀφρόνιτρον,

Aphronitrum is possessed of discutient and detergent powers, so as not only to cleanse those parts which are foul, but also to cure pruritus. But when drunk it is bad for the stomach.

Ἀφρόδες νίτρον,

Spuma nitri; it has powers like those of natron, but its substance is more attenuate, and therefore it is smooth like flour.

COMM. COMMENTARY. As Dr. Coray's account of the *Nitrum*, *Aphronitrum*, and *Spuma nitri* of the ancients is of high authority, we are induced to give it in his own language literally translated. "The nitrum of the ancients was not that substance which modern chemists call by the name (nitre or nitrate of potass),

being a composition of nitric acid and a vegetable alkali, but that which is called natron, being a native combination of carbonic acid and an alkali (natron or native carbonate of soda.) And they called the harder and more stony lumps nitrum or litrum, and the more spongy and softer aphronitrum or aphrolitrum; and spuma nitri or litri, the superficial efflorescence of the nitrum and floury part, which was easily scraped off." (Ad Xenoc. et Galen. de Al. ex Aquat.)—From this account it appears that the firmer and harder lumps of the native carbonate of soda were called nitrum; the softer and more spongy pieces aphronitrum, and those kinds which had a bright florid appearance externally and readily crumbled down into a powder, the spuma nitri. Dioscorides gives a more lengthy account of its medicinal properties than either Galen or our author, not only recommending it externally as a stimulant and discutient application to various cutaneous diseases and the bites of mad dogs, but also internally as an antidote to poisonous mushrooms, buprestis, bull's blood, &c. (v, 129.) Serapion has a very interesting chapter on nitrum and aphronitrum, but it is in a great measure made up from Dioscorides and Galen (c. 411.) For a further account of the ancient nitrum, see under *Litrum* in this section. We may just mention in this place that the aphronitrum would appear to have been merely *Afrum nitrum*, that is to say, a variety of the nitrum or natron found in Africa.

'Αχρᾶς,

Pyrum silvestre, the Wild Pear; its properties are like those of the common pear, but more intense. It therefore agglutinates large wounds.

COMMENTARY. Dioscorides mentions that it is a species of wild pear. He recommends it as an antidote to mushrooms. (i, 168.) Serapion and Mesue give it the same character.

'Αψύθιον,

Absinthium, Wormwood; it is heating in the first degree, but drying in the third, being possessed at the same time of astringent, bitter, and acrid qualities. It therefore evacuates bilious humours in the stomach by the bowels and by urine. But in collections of phlegm it is of no service, owing to its

astringency. The juice of it is much hotter than the herb itself.

COMM.

COMMENTARY. Dioscorides also describes two other species, the one being clearly the *Artemisia maritima*, and the other not the *santonica*, although it bears that name, but rather the *palmata*, according to the best modern commentators. Dioscorides recommends the true wormwood (*Artemisia abrotanum*) in a great many cases, both externally and internally; as being diuretic and preventing surfeit when taken beforehand, relieving flatulence of the stomach and bowels; proving emmenagogue in a potion or pessary, removing the feeling of suffocation induced by mushrooms, when drunk with vinegar, and when with wine counteracting the poisonous effects of ixia and hemlock, the bites of the shrew mouse and sea dragon; its vapour removing toothache, and a cataplasm the intense pains of ophthalmia; as suiting in dropsical affections and diseases of the spleen, and in many other cases. He mentions a wine of wormwood made by the people about Propontis and Thrace, which they used for the aforesaid purposes in the absence of fever. (iii, 23.) Pliny enumerates fully the many medicinal properties which were ascribed to it. (H. N. xxvii, 28.) Galen says that it is less attenuant but as desiccative as southernwood. Apuleius calls it anthelmintic. The Arabians recommend it with the same intention. Casiri (Bibl. H. A. 336.) All the authorities hold that it is cholagogue. See in particular Avicenna (ii, 2, 2), who is very full in describing the medicinal properties of wormwood, recommending it in infusion, in decoction, in the form of syrup, and in wine. See also Serapion (c. 14); Averrhoes (Collig. v, 42); Rhases (Cont. l. ult. i, 9.) The last of these, after giving the opinions of Dioscorides, Galen, Ruffus, Pythagoras, and Oribasius, quotes Musy (Mesue?) as saying of it that it is stomachic, a whetter of the appetite, useful in jaundice, quinsy, inflammation of the eye and ear, hardness of the liver, spleen, and womb, and in dropsy. One of Serapion's Arabian authorities commends it as a deobstruent, and in cases of jaundice. It occurs in the list of medicinal substances used both by Hippocrates and Celsus. The latter recommends it as being both stomachic and diuretic. Although its use as a febrifuge has been superseded by a more popular medicine of the same class, we need scarcely remark that it still holds a

place in our Dispensatories. The modern Greek Pharmacopœia COMM. contains the two species which are described by the names of *Artemisia Absinthium* and *Artemisia contra*. The latter is the santonicum, its name being an abbreviation of *contra vermes*. See Lindley (Veg. Kingd. 705.)

Βάλανος Μυροψικη,

Glans unguentaria, *Nut Ben*; its inner and, as it were, fleshy parts have detergent and incisive powers along with astringency: and therefore when drunk with honeyed water, to the amount of a drachm weight, it occasions vomiting and loosens the lower belly. But when taken with oxycrate it is of use for obstructions of the viscera. It proves detergent in affections of the skin when rubbed in with vinegar. Its bark is very astringent.

COMMENTARY. There can be no dispute that this is the COMM. ben nut, the term ben being derived from the Arabians. The tree from which it is procured is said to be the *Hyperanthera moringa* Vahl. See Ainslie (Mat. Med. i, 197.) It is further called *Myrobalanum*, but the coincidence of name must not lead the reader to identify it with the myrobalans of the Arabians, of which we shall have occasion to give some account in another place. Pliny gives an interesting account of it, representing the Arabian as being the best oil in quality, and the Troglodytic or Ethiopian, as the worst. (H. N. xii, 47.) Being principally used in unguents, it has often got the name of glans unguentaria. Dioscorides writes fully of its medicinal properties, recommending it in particular inwardly, as an emetic and purgative, and externally, as an application to various cutaneous diseases, such as psora and leprosy (iv, 157.) Celsus recommends it in several places as an ingredient in emollient ointments, more especially for indurations of the spleen (iv, 9; v, 18, 4.) The Arabians, especially Avicenna and Serapion, treat of it at great length, but in nearly the same terms as Dioscorides and Galen. Of late years nut ben has been excluded from our Dispensatories; but our older authorities in modern times confirm the characters of it given above from Dioscorides, that is to say, that it acts both as an emetic and a purge, but in the latter capacity slowly and with pain. See Hill (Mat. Med. 4, 94); Ruttly (Mat. Med. p. 52.)

Βάκχαρις,

Baccharis, *Spikenard*, is a fragrant herb, like cinnamon, used for garlands. It is acrid; and its root when boiled is deobstruent, diuretic, and emmenagogue. But its leaves being astringent are beneficial in fluxes.

COMM. COMMENTARY. Regarding this much disputed article, the predominance of authority, as we think, is in favour of its being some species of *Conyza*. Old Gerard gives it the English names of ploughman's spikenard and cinnamon-root, and repeats the characters of it given by the ancient authorities. It has been long since expelled from our Dispensatories. Galen, in his Commentary on the *Glossa Hippocratica*, mentions that the name is applied both to a herb and a Lydian ointment. It does not occur in the works of Celsus nor in those of the Arabians. Our author draws his characters of it from Dioscorides, who recommends it, among other purposes, as being emmenagogue and promoting parturition (iii, 44.)

Βαλάνστιον,

Balaustium, *the Flower of the Wild Pomegranate*; it is powerfully astringent, having also desiccant and cold powers. It heals superficial sores, and stops defluxions.

COMM. COMMENTARY. *Balaustine*, or the *Flower of the double Wild Pomegranate*, is an astringent medicine much used by the ancient physicians. Dioscorides recommends it principally as an anthelmintic to kill the broad ascaris, by which he meant the tænia. (See ii, 147.) Galen writes very elaborately on this article, contending that it is a good example of a plant possessed of an astringent quality, and stating that it was in general use with this intention externally in intertrigo and other ulcers, and internally in cases of hæmoptysis, dysentery, and in all defluxions from the stomach or womb. The Arabians give a similar account of it, and further recommend balaustine as a whetter of the appetite, and a restorative from the ill effects of intoxication, and a medicine calculated to stop vomiting. See in particular Serapion (129), and Avicenna (ii, 2, 109.) Although modern authority is not wanting to confirm what the ancients have stated regarding the efficacy of balaustine as an astringent in diarrhœa, dysentery, and menorrhagia, it has been excluded of late

years from our British Dispensatories. Our continental brethren still make use of it. The modern Greek Pharmacopœia does not retain the leaves. COMM.

Βάλαμον,

Balsamum, *Balsam-tree*; that part of it which is like its wood is desiccant and heating in the second degree. It is also composed of subtile particles, but the juice of it is much more so. Its fruit is possessed of similar powers, but its particles are less subtile.

COMMENTARY. This clearly is the *Balsamum Gileadense*, or Balm of Gilead, being procured, as Dr. Peireira states, from the *Balsamo-dendron Gileadense*, a middling-sized tree growing in Arabia. He says, it is rarely or never employed by Europeans; but is adapted to the same cases as the terebinthinates. The Asiatics use it for its odoriferous as well as its medicinal properties. Dioscorides certainly writes strongly in its favour, recommending it as a detergent application to sores and complaints of the eyes, and internally as an emmenagogue and diuretic, and as an antidote to poisons and venomous animals. Galen treats of it much more reservedly (i, 18.) The balsam occurs in Celsus's list of articles which concoct and promote suppuration (v, 3.) The Arabians fully coincide with the character of it given by Dioscorides. See in particular Serapion (c. 160); Avicenna (ii, 2, 81.) Though this article has almost ceased to be employed in the practice of the scientific physician, it was the instrument by which one of the most successful pieces of empiricism was perpetrated in the beginning of this century. We allude to Dr. Solomon's celebrated Balm of Gilead. COMM.

Βαλωρή,

Balote, by some called *Black Horehound*; it is possessed of acrid and detergent powers; therefore, when applied with salts, it relieves the bite of mad dogs.

COMMENTARY There appears little reason to doubt that this is the *Ballote nigra*, or stinking horehound of our herbalists. Our author's account of it is abridged from Dioscorides. It is not treated of by Galen, Aëtius, nor COMM.

COMM. Oribasius, neither is it found in Celsus. Avicenna and Ebn Baithar we believe are the only Arabians who notice it, and they copy from Dioscorides (ii, 2, 553, and i, 166.)

Βάτος,

Rubus, *the Bramble*; its shrubby part is moderately astringent and desiccant, and therefore agglutinates wounds and stops defluxions. The root, in addition to its astringency, is attenuate in no small degree. It therefore breaks down renal calculi. Its ripe fruit is hotter, and has a moderate astringency. It is therefore edible; but the unripe is sour and powerfully desiccant, more especially if dried. In like manner also the flower.

COMM. COMMENTARY. The first species of bramble described by Dioscorides is probably that well-known one the *Rubus fruticosus*, the other is the *Rubus Idæus*, or raspberry bush. The B. Ἰδαῖος of Dioscorides was supposed by Ruellius and others to be the *Fragaria* or *Strawberry*, but with this supposition we cannot agree. Strawberries are not noticed by any Greek writer, but are first mentioned by Ovid (Met. i, 104); and then by Pliny (H. N. xxv, 62.) The μύρον βατώδεις, of which mention is occasionally made by our author, was the fruit of the bramble, being so called, according to Eustathius, from its resemblance to mulberries. (Ad Iliad. xiii, 121.) Our author abridges Galen, who is at great pains in defining the powers of the batos, which he makes out to be moderately astringent and desiccative; and hence he pronounces it to be useful in dysentery, fluxes of the bowels, atony, hæmoptysis, and in calculus as a lithontriptic. Dioscorides indulges in a still more lengthened exposition of its virtues, recommending the decoction of it as an astringent in looseness of the bowels, and in fluor albus, as an antidote to the sting of the serpent Prester; its leaves when chewed, to strengthen the gums and cure the aphthæ of children, and externally, for the cure of herpes, achor, proclentia oculi, and many other diseases (iii, 36.) It is briefly alluded to by Celsus in treating of lientery (iv, 16.) The Arabians, as usual, copy from Dioscorides and Galen. See Serapion (De Simpl. 124); Avicenna (ii, 2, 572.) The rubi held their place and ancient characters in our Dispensatories

down to a late date. See Quincy (p. 94.) Even yet several of the rubi are still kept in the shops for medicinal purposes. See Gray (Suppl. to Pharmacop. p. 89.)

Βαρβάχιον,

Ranunculus, *Crowsfoot*, consists of four varieties, all of which are possessed of powerfully heating and desiccant powers, and also of acrid and caustic, so as to occasion ulceration with pain; but when moderately used, it proves only detergent of the skin. The dried root is a sternutatory.

COMMENTARY. According to Sprengel, the first species is the *Ranunculus Asiaticus*; the second, the *R. lanuginosus*; the third, the *R. muricatus*; and the fourth, the *R. aquatilis*. Galen recommends it as a powerful escharotic, and our author evidently copies from him. Dioscorides gives a similar account of the ranunculi, recommending them for the removal of leprous nails, psora, stigmata, and other tumours, as a fomentation to chilblains, and as an application to remove toothache. The Arabians treat of the ranunculi in the same terms as the Greeks, copying their medicinal characters from Dioscorides and Galen. See Avicenna (ii, 2, 368), and Ebn Baithar (ii, 343.) Neither of them gives anything original of his own, nor from any Arabian authority. The ranunculi, we need scarcely mention, have now been discarded by the regular practitioner; but yet several of them are still kept in the shops, and have the reputation of being excellent vesicants. Gray (Suppl. to Pharmacop. p. 122.) In like manner old Culpeper affirms that the crowsfoot is an effectual and a much safer blister than cantharides (p. 59.) The modern Greek Pharmacopœia does not contain it.

Βάρραχοι,

Ranæ, *Frogs*; they are eaten when made into a soup for the bites of venomous animals; when burnt, their ashes become very desiccant; and stop hemorrhages, and cure alopecia, along with liquid pitch.

COMMENTARY. Dioscorides, Galen, and Serapion recommend them in the cases mentioned by our author. The species with which they must have been most familiar is the green frog. We have stated in another place that the

COMM. Greeks and Romans did not use the frog as an article of food. (Vol. I, 166.)

Βδέλλιον,

Bdellium; both the Scythian and Arabian are possessed of powers which prove emollient of indurated tumours, more especially the recent. The Arabian is also diuretic, lithontriptic, and digestive.

COMM. COMMENTARY. Dioscorides, as Dr. Ainslie remarks (Mat. Ind. i, 30), has sufficiently well described this article; and yet he adds afterwards, it is a lamentable fact that the actual tree from which bdellium is got has not hitherto been clearly ascertained by botanists. He rejects the conjecture of Sprengel, although supported by the high authority of Kæmpfer and Rumphius that it is procured from the *Borassus flabelliformis*, and also that of Matthioli, who maintained that it is procured from the *dwarf palm*, or *Chamærops humilis*. Upon the whole, the opinion of Virey, founded on the authority of Forskael, that it is got from some species of *Amyris*, seems to be the most probable. Dr. Pereira gives the following account of this article: "The term *Bdellium* is applied to two gummy resinous substances. One of these is Indian bdellium, or false myrrh, the bdellium of Scripture, which is obtained from *Amyris* (*Balsamodendron?*) *Commiphora*. See further Royle (Hindoos Med. p. 90.) The other kind is called *African Bdellium*, and is obtained from the *Heudelotia Africana*." (Mat. Med. 1634.) On the *Bdellium*, see further what we have said in the Appendix to Dunbar's Greek Lexicon. The ancients would appear to have been well acquainted with both these kinds of bdellium; at all events they were acquainted with the Indian, for Dioscorides has described it. He represents the bdellium to be calefacient, emollient, and dissolvent, and recommends it for dissolving hard tumours, for promoting menstruation in pessaries, and fumigations, and as an emetic, diuretic, and expectorant (i, 80.) The Arabians were evidently still more familiar with the bdellium than their Grecian masters; but have supplied little or no additional information respecting it. See in particular Serapion (De Simpl. 117), and Avicenna (ii, 2, 112.) Celsus recommends it frequently as an ingredient in external applications. As far as we have been able to discover, it does not occur in the works of Hippocrates.

ΒΕΤΤΟΝΙΚΗ,

Bettonica, *Bettony*, is a herb having slender branches like those of the pennyroyal, but still more slender, and is possessed of scarcely any quality to the taste. It grows mostly in rocky situations, and is used for the composition of nephritic medicines. There is among the Romans another herb called bettonica, to which Dioscorides gives the name of cestrum; but others name it psychrotrophon, because it delights in cold situations, having no resemblance to the aforementioned, except its medicinal powers. In addition to its action as a diuretic, it is useful for many other purposes; for its root in particular, when drunk with hydromel, occasions vomiting, and the leaves open the bowels.

COMMENTARY. Dr. Alston says, "There is a Libellus COMM. (De Betonica) attributed commonly to Augustus's physician, Antonius Musa, by some to L. Apuleius, of which there are said to be very ancient MMS." We have seen the work mentioned by Alston. It is published *Tiguri*, A.D. 1537, with notes by Humelbergius. It is a small work, occupying scarcely four leaves in octavo. The author commences with a dedication to Augustus, in which he informs the emperor that the betony is useful for forty-seven complaints, which he proceeds to enumerate, after giving a short description of the herb. He says of it, "Cestron vocatur, etiam psychrotrophon, siquidem frigidis reperitur in locis, radicibus tenuibus, thyrsu tenui ultra cubitum quadrangulo, foliis quercui similibus, boni odoris, semine in summitate thyrsi spicato, modo thymbrae." The following are some of the cases in which he recommends it: For fractures of the head, as an external application; for pains of the eyes in a fomentation; for pains in the teeth, boiled in old wine or vinegar; for consumption and difficulty of breathing; for complaints of the liver, spleen, and kidneys; as a purgative when given to the amount of four drachms in eight cyathi of hydromel; for calculus; for dropsy; to prevent intoxication; as an antidote to poisons and the bites of venomous reptiles and mad dogs; for gout, &c. Many different opinions, as stated by Sprengel, have been entertained respecting this herb. Perhaps, as he suggests, it may have been the *Rumex Hydrolapathum* or *Aquaticus*. The κιστρον of Dioscorides he thinks is the *B. alopecurus*. But for the gene-

COMM. ral literature of this subject, we must refer to our discussion on it in the Appendix to Dunbar's Greek Lexicon. The betony held a place in the *Materia Medica* down to a very late period. Both Dioscorides and Pliny recommend it in hæmoptysis and purulent affections of the chest, and it enters as an ingredient into several of Myrepsus's antidotes for dysentery and cæliac affection. Celsus mentions it only in one place, where he says of it, that it is an useful application to the stings of venomous snakes (v, 27, 10.) For the Arabians, see in particular Serapion (322), and Avernhoes (Coll. v, 42.) Our old herbalists and other modern authorities who treat of betony, praise it as a vulnerary herb, and as being possessed of diuretic and emmenagogue faculties.

Βηχίον,

Tussilago, *Coltsfoot*, it is also called *Bechicon*; it is so named from its proving useful for coughs, and orthopnœa in fumigations; and it is composed of a hot and watery substance.

COMM. COMMENTARY. It is the *Tussilago Farfara*, or *Coltsfoot*. Both Dioscorides and Galen recommend it in fumigations for the cure of coughs, and this reputation it has retained down to the present day. Though now expelled from our Dispensatories, a patent medicine, prepared from coltsfoot, is still in considerable celebrity. It is retained in the modern Greek Pharmacopœia (p. 67.)

Βλίτον,

Blitum, *Blite*, is an esculent potherb, which is humid and cold in the second degree.

COMM. COMMENTARY. The blite, or *Amaranthus Blitum*, has been long celebrated as a culinary and medicinal herb. (See vol. i, 114.) Galen and Dioscorides, like our author, treat of its medicinal powers in very brief terms. For the Arabians, see Avicenna (ii, 2, 518); Serapion (*De Simpl.* 148); Avernhoes (*Collig.* v, 41); Rhases (*Cont. l. ult. i*, 128); Ebn Baithar (i, 154.) These Arabian authorities commend it strongly as an application in diseases of the skin, and in phthiriasis, and also in alopecia and apostemes. Archigenes, as quoted by Rhases, says, the blite is more laxative than the mallow. It is treated of by our older herbalists; but has long since ceased to occupy a place in our Dispensatories.

Βολβός,

Bulbus; the esculent is possessed of a certain degree of bitterness, and at the same time of astringency, and is desiccative and agglutinative of wounds, and also detergent. The emetic is hotter in its properties.

COMMENTARY. We have mentioned in the First Book that COMM. Harduin considers the esculent bulbus to have been a species of onion, but that Sprengel refers it to the *Muscari comosum*. In addition to the reasons there mentioned for preferring the conjecture of Harduin, we have to add the account of it given by the Scholiast on Theocritus: βολβός εἶδος βοτάνης ὁμοίας κρομμύφ Κολλικῶ. (Idyll. xiv.) There is also a good deal of uncertainty with regard to the emetic bulbus; but the predominance of authority is in favour of its being the *Hyacinthus comosus*. The fact of the matter, however, we believe to be that various plants having bulbous roots are possessed of emetic powers, and that the name emetic bulbus was often applied in a loose manner. Dioscorides merely says of its medicinal properties, that when eaten by itself, and when its decoction is drunk, it cures diseases of the bladder and produces vomiting (ii, 200, 201.) Galen and the succeeding authorities, like our author, treat very succinctly of it. The Arabians, also, merely copy from Dioscorides and Galen. See particularly Avicenna (ii, 2, 85); Serapion (c. 355.)

Βότρυς,

Botrys, *Goosefoot*; some call it Ambrosia, and others Mugwort. It is a plant sufficiently fragrant, and when drunk with wine cures orthopnœa.

COMMENTARY. There seems no reason to doubt that this COMM. is the plant described by our old herbalists under the name of Oak of Jerusalem. It has now got the scientific name of *Chenopodium Botrys*. It is briefly recommended in orthopnœa by Dioscorides (iii, 120), and Pliny (N. H. xxvii, 31.) It is not noticed by Galen, Aëtius, Oribasius, Celsus, nor we believe by any of the Arabians, with the exception of Ebn Baithar, yet it held a place in our English Dispensatory as late as the time of Quincy.

Βουβώνιον,

Bubonium, has been described under Aster Atticus.

Βούγλωσσον,

Buglossum, *Bugloss*, is humid and hot in its temperament. Hence when added to wines it is said to produce hilarity.

COMM. COMMENTARY. The Borage, or *Anchusa Buglossum*, long held a place in the *Materia Medica*. From Dioscorides down to Boerhaave, it had the reputation of being a good cordial. See Dioscorides (iv, 126); Avicenna (ii, 2, 375.) We believe it is not met with in the works either of Hippocrates or Celsus.

Βούνειον,

Bunium (or Arctium), *Rape*; it is hot, diuretic, and emmenagogue; and the Pseudobunium in like manner.

COMM. COMMENTARY. We treated of this article, which, notwithstanding the disagreement of the commentators and herbalists, we are willing to believe to be the *Bunium Bulbocastanum*, or Earth-nut, as a culinary herb in the First Book. The pseudobunium may be the *Pimpinella tenuis*. Dioscorides represents it to be diuretic, calefacient, possessing powers to promote the lochial discharge, and useful in affections of the spleen; kidneys, and bladder (iv, 122.) Galen and the other authorities give the same account of it as our author. It long held a place in our modern Dispensatories.

Βούπρηστις,

Buprestis, *Burncow*, is an insect resembling the Cantharis, and may therefore be prepared like it.

COMM. COMMENTARY. Whatever doubts others may have entertained respecting the *Buprestis* of the ancients, we are well satisfied that it was the *Meloe vesicatoria*. We have treated fully of it as a poison in the Fifth Book § 31. Occasional mention of it is made in the Hippocratic treatises. (De Mulieb. i, et alibi.)

Βούτυρον,

Butyrum, *Butter*, is possessed of digestive and moderately discutient properties when applied to soft bodies; it is therefore of use for buboes and parotis; it attenuates the gums, more especially of children during the time of dentition, and in a linctus it concocts humours lodged in the chest.

COMM. COMMENTARY. Though it certainly be true, as stated by Beckmann (*History of Inventions*), that the Greeks and Romans

made very little use of butter as an article of food compared with the moderns, it is equally clear that they were well acquainted with various kinds of it, and their medicinal virtues. If, as he and Michaelis suppose, the Hebrew word, which, in the Septuagint Scripture, is rendered *boutyron*, signifies cream, or sour thick milk, the first mention of butter which occurs in ancient literature is in the following passage of Hippocrates: "These people (the Scythians) pour the milk of their mares into wooden vessels, cause it to be violently stirred or shaken by their blind slaves, and separate the part which arises to the surface, as they consider it more valuable and more delicious than that which is collected below it." (De Aere, Aquis, etc.) The *Hippace* is also described in another of the Hippocratic treatises (De Morbis, iv.) Beckmann quotes a passage of the poet Anaxandrides, preserved by Athenæus (iv, 131, ed. Casaubon), to prove that butter is of Thracian origin. We having thus described the origin of butter, shall now give a description of its medicinal uses from the works of the medical authorities. In the Hippocratic treatises butter is several times mentioned as an external medicine. (De Natura Mulierum, v; De Morbis Mulierum, ii, 5.) But Dioscorides is the first author who gives a distinct account of its medicinal properties. Butter, he says, is possessed of emollient and oily powers, whence it loosens the bowels when drunk in large quantity, and is useful in the treatment of poisoning by deadly substances in the absence of oil; when mixed with honey, and rubbed in, it is useful for painful dentition, pruritus of the gums in children, and aphthæ; when rubbed in externally it preserves the body plump and free from watery pustules (psudracia); it is beneficial for inflammations and hardness of the womb, when not fetid or old; for dysentery and ulceration of the colon, in a clyster; it is mixed advantageously with suppurative applications, and more especially in wounds of the nerves, membranes of the brain, the bladder, and neck; it fills up, cleanses, incarnates, and proves useful as an application in cases of persons bitten by the asp. Fresh butter in cookery is used instead of oil, and in cakes instead of suet. His chapter on butter concludes with directions for preparing the sort of butter, which he represents as being desiccative and astringent in ophthalmic applications, and capable of stopping defluxions

COMM. and cicatrizing ulcers. (ii, 81.) Pliny's account of milk being mostly taken from Dioscorides, we shall not dwell upon it. He is original, however, in stating that most butter is got from cow's milk. (H. N. xxviii, 35.) Celsus merely enumerates butter among the articles which incarnate and fill up sores. (v, 14.) Galen states that butter is contained in greatest quantity in the milk of cows, and hence it derives its name. That it has concoctive powers with a small portion of discutient, and is of intermediate powers with regard to softness and hardness of the body, by which he means that it has no powers to discuss preternatural tumours of very hard bodies, but that it concocts and discusses soft inflammations, such as parotis, bubo, boils in the mouth, and many others of a like nature. He recommends it also in dentition and inflammatory affections of the mouth in children. He also mentions it as a useful expectorant in pleurisy and pneumonia, both when drunk and in the form of a linctus. (De Simpl. ix.) Aëtius copies the description which he gives of butter from Galen. (ii, 104.) Oribasius borrows from Dioscorides. (xv, 2.) Rhases quotes Dioscorides, Galen, Oribasius, and Paulus, and gives nothing of his own. (l. ult. 133.) Avicenna also recommends butter in exactly the same cases as Dioscorides and Galen. (ii, 2, 110.) Serapion literally translates Dioscorides and Galen. (De Simpl. 457.)

Βούφθαλμον,

Bupthalmum, *Oxeye*, has a flower like that of the camomile, but much larger and more acrid. It is therefore discutient, so as to cure indurations when mixed with cerate.

COMM. COMMENTARY. The old herbalists were much puzzled what to make of the *Bupthalmum*, some contending for its being *Helleborus niger*, some a species of *Consiligo*, some a *Chrysanthemum*, and so forth. See Gerard (Herbal) and Sprengel (Ad Dioscor.) It would seem likely that it is the *Anthemis Valentina*. Our author borrows all that was worth copying in the chapter of Dioscorides (iii, 146.) Galen expresses himself respecting it in nearly the same terms as Dioscorides. For the Arabians, see Avicenna (ii, 2, 97.) It is not mentioned in the Hippocratic collection.

Βεράθυς,

Sabina, *Savin*, being like the Cypress, it is heating and desiccative in the third degree; and consisting of subtile particles, it is possessed of subtilizing and discutient powers if drunk. It is applied to mortifications like the Cypress.

COMMENTARY. The two species of savine described by Dioscorides are probably the *Sabina cypressifolia* and *tamariscifolia*. He recommends it principally as an external application to spreading sores and carbuncles. He says it produces bloody water and abortion when drunk in wine, and when applied externally, or in the form of fumigation. (i, 104.) All the ancient authorities, including Macer Floridus (but his works, we are well aware, are not generally reputed genuine), hold it to be an uterine medicine. Its medicinal and deleterious powers are given in like manner by the Arabians. See in particular Avicenna (ii, 2, 6); Serapion (c. 255); Ebn Baithar (i, 5.) Apuleius praises it strongly in jaundice. We need scarcely mention that savin still retains its place in our Dispensatory, being, according to Pereira, "the most certain and powerful emmenagogue of the whole *Materia Medica*." With regard to its action on the animal economy, "it operates," according to Sundelin, as quoted by Pereira, "as a specific excitant and irritant on the kidneys, and yet more obviously on the uterus." All this shows how correctly the ancient authorities had judged of its powers.

Βρεταννική,

Bretannica, *Water-dock*, is possessed of astringent and agglutinative powers, and in appearance resembles the Wild-dock. The juice of it cures mortifications in the mouth.

COMMENTARY. It would not be worth while, even if this were the proper place, to touch upon the lengthened controversy which has prevailed among the old herbalists and botanical authorities with regard to this plant. Whoever would wish to investigate the subject may consult Professor Munting's elaborate work 'De Vera Herba Britannica,' (Amst. 1698,) and Sprengel's 'Annotations on Dioscorides' (iv, 2.) Suffice it to say, that, in all probability, the plant in question was some species of water-dock. All the authorities who treat of it give

COMM. it much the same character as our author. See particularly Avicenna (ii, 2, 102); Serapion (c. 222.) It held a place in our English Dispensatory as late as Quincy, who represents it ("the hydrolopathum, supposed to be the Britannica of the the ancients") as a specific for scurvy.

Βρόμος,

Avena, *Oats*, has powers resembling those of barley. It is desiccative, and moderately discutient without pungency. It has also some astringency, whence it cures diarrhœas.

COMM. COMMENTARY. It is not well ascertained whether this be an *Avena* or *Secale*. The chapter of Dioscorides under this head is probably spurious. Our author abridges Galen. It is not treated of by Celsus nor the Arabians.

Βρύον,

Bryum; the sea-bryum or lichen is cooling and astringent, and is therefore useful when applied as a cataplasm to hot inflammations; that kind which is called *splanchnon*, being found on oaks, white poplars, and pitch-trees, is at the same time discutient and moderately emollient, more especially that upon cedars.

COMM. COMMENTARY. It appears evident that it is a species of *Lichen* or *Usnea*, but what species is not clear. The term *usnea* is borrowed from the Arabian authors. Our author copies closely from Galen. Dioscorides recommends it as an astringent principally in affections of the womb, in the form of a hip-bath or fumigation. Avicenna (ii, 2, 713) and Serapion (c. 247) briefly notice several species of *usnea* without appearing to identify it with the bryon of the Greeks. Rhases, however, is quite aware of their identity. (Contin. l. ult. i, 753.) Avicenna says it is emmenagogue, and procures the delivery of the fœtus either dead or alive. He adds that, in a dose of 10 drs. it acts as a deadly poison. Serapion recommends it principally as being diuretic and emmenagogue. Several species of the genera *lichen* and *usnea* are still to be found in the shops, and have the reputation of being powerful astringents. See Gray (Suppl. to the Pharmacop. pp. 11, 12.)

Βρυωνία,

Bryonia, *Bryony*; the White Vine is so named.

COMMENTARY. See under ἄμπελος. Mesue recommends COMM.
 it as a phlegmagogue, deobstruent, and diuretic medicine; for epilepsy, vertigo, coldness of the nerves, coughs, asthmas, especially in a linctus, in pleurisy, and as an external application to hard aspostemes, inflammations of the spleen, in the form of a plaster, with figs and wine; for the removal of whitlow, spiculæ of bones, thorns, and the like. In a draught, he says, it proves emmenagogue and procures abortion. He also commends it as a cosmetic in diseases of the face. Both internally and externally he praises it in scrofula. He adds further, that it is useful in the cure of persons who have been bitten by venomous animals. In a word, no ancient author has bestowed so flattering an eulogium upon bryony as Mesue (De Simplicibus.) We need scarcely say that bryony (*Bryonia dioica* or *alba*) is now regarded in the light of a poison rather than a medicine. See Orfila (Toxicol. Gen. i, 679), and Christison on Poisons (p. 445, First edition.)

Γάλα,

Lac, *Milk*; every sort of milk consists of three substances, a cheesy, a serous, and a fatty part, which last is contained in greatest abundance in the cow's milk, and from it butter is formed. Whey is possessed of detergent properties, and hence it loosens the belly if separated by boiling. The cheesy and thick part is more compact, and on that account blunts acrid humours. When milk is boiled either by hot pebbles or any other way, it is an excellent remedy for dysenteries and other acrid defluxions on the bowels. The whole contents of milk are suitable applications for acrid humours of the eye, and all other acrimonies. The milk of a woman is of the best regulated temperament; after which the goat's, and then that of the ass and sheep; and last of all the milk of cows.

COMMENTARY. We have treated of the properties of milk so fully in the First Book that we need not enlarge on the subject in this place. Our author's account of it is abridged from Galen. Dioscorides, Galen, Celsus, Serapion, and most of the authorities, recommend milk as a remedy when acrid substances, such as cantharides or arsenic, have been swallowed. COMM.

COMM. Dioscorides says whey is beneficial in cases of melancholy, epilepsy; lepra, elephantiasis, and exanthemata in all parts of the body. He recommends new milk as a gargle in all ulcerations of the mouth, and in defluxions on the bowels with ulceration and tenesmus. He says, the milk of sheep, cows, or goats stops them, when boiled with pebbles, and injected either by itself or with ptisan, or the decoction of chondrus; it is also injected, he adds, in ulcerations of the womb. A woman's milk, he says, when sucked from the breast, relieves erosion of the stomach and phthisis; it suits the cure of those who have drunk of the sea-hare, and is otherwise useful as an application to the eyes, and to the gout. All kinds of milk, he adds, are inapplicable in diseased spleen, diseased liver, vertigo, epilepsy, all nervous affections, fevers, and headaches, unless when the schiston is given to move the bowels. What the schiston was we have explained in the First Book (§ 88.) All the other authorities, whether Greek or Arabian, in treating of milk, follow Dioscorides and Galen. See in particular Serapion (De Simpl. 457.) Celsus entertained nearly the same views, with regard to milk, as the Greek authorities. Thus he recommends it in phthisis, and as an antidote to various poisons, but condemns it in headaches and acute fevers. Hippocrates prescribes milk in various instances, and seems to have been very partial to the use of it. He recommends the schiston, prepared with pebbles, in affections of the bowels. (Epidem. vii.)

Γαλη,

Mustella, *the Weasel*; when burnt, its ashes are discutient. Wherefore when rubbed in along with vinegar it relieves gout and rheumatism; when prepared and dried it answers with epilepsies.

COMM. COMMENTARY. According to Sprengel, the Γαλη is a species of mustella, but neither the *M. communis*, called *weasel* in English, nor the *M. Furo*, or *Ferret*. Our author's description of its medicinal virtues is taken from Dioscorides.

Γάλιον,

Galium, *Yellow Ladies' Bedstraw*, or *Cheese Rennet*; it derives its name of Galium from its coagulating milk. It resembles

the cleavers, and is desiccative and subacid. The flower of it suits with hemorrhages and burns.

COMMENTARY. The very name, *Galium verum*, now generally given to the yellow bed-straw, implies that it is generally admitted to be the galium of the ancients. Dioscorides, besides assigning to it the virtues enumerated by our author, states, that it is aphrodisiacal (iv, 94.) It was principally celebrated, however, as a styptic, and this character it continued to hold as long as it obtained a place in the Dispensatory. See Quincy. For the Arabians, see Avicenna (ii, 2, 317); Rhases (Cont. l. ult. i, 327); Ebn Baithar (ii, 229.) They all merely copy from Dioscorides and Galen. We have not been able to find it in the works of either Hippocrates or Celsus.

Γαλίωψις,

Galiopsis (called also Galiobdolon), is like the nettle, but smoother and fetid, and acts as a discutient and emollient application to indurated tumours. It also agrees with spreading ulcers in the form of a cataplasm.

COMMENTARY. Our old herbalists generally held the galiopsis of Dioscorides to be a species of *Lamium*. (See Gerard and Parkinson.) But whether it be that or a species of figwort (the *Scrofularia peregrina*) cannot be positively determined. Ruttly says the *Lamium maximum* of C. Bauhin has all the marks which Dioscorides gives to the galiopsis. It was used only externally in applications to foul ulcers, and this character secured it a place in our Dispensatory until recent times. See particularly Dioscorides (iv, 94.) Few of the other authorities have noticed it.

Γάρου,

Garum, *Brine of Pickled Fish*, is powerfully calefacient and desiccative, and is therefore used as an external application to putrid ulcers, and is administered as an injection in dysentery and ischiatic diseases.

COMMENTARY. "Garum est exquisiti liquoris genus, intestinis piscium cæterisque quæ abjicienda sunt sale maceratis." Rendtorpi Notæ ap. Fabricii Bibl. Gr. iv, 333; Geopon. xx, 46; Pliny (H. N. xxxi, 43); Athenæus (Deipnos. ii); Apicius (c. vii.) Coray defines it, "the juice or brine of

COMM. pickled fishes." (Ad Xenocrat. Fragment.) Sauce prepared by macerating the intestines of the tunny was particularly esteemed. Cælius Aurelianus praises that from the silurus. (Tard. Pass. ii, 1.) Dioscorides recommends the sauce of pickled fishes as a cataplasm to persons bitten by dogs, and as an injection in dysentery and sciatica (ii, 34.) All the other authorities that treat of it give it the same character. See Aëtius (ii); Avicenna (ii, 2, 486); Serapion (c. 184.) It occurs in the works of Celsus (ii, 21), and also frequently in those of Hippocrates. Foës gives a learned dissertation on this article in 'Œconom. Hippocrat.'

Γεντιανή,

Gentiana, *Gentian*; the root is sufficiently efficacious in subtilising and cleansing, and as a detergent and deobstruent medicine.

COMM. COMMENTARY. Dioscorides states that the gentian (*Gentiana lutea*?) has a heating and astringent faculty; that it is a remedy in cases of persons bitten by venomous animals, with pepper and rue; that it is useful in hepatic and stomachic affections; that it procures abortion when applied in a collyrium; that it is a vulnerary herb, and is used for many ulcers and other cutaneous affections. (iii, 3.) Galen justly remarks that it owes its attenuant and deobstruent powers to its being intensely bitter. (De Simpl. v.) Apuleius, like Dioscorides, recommends it as an application for the bites of serpents. Hence it always obtained a place in the Theriac. See Celsus (v, 23.) Serapion says it is the best of all remedies in cases of hydrophobia, and this character it has obtained in modern times. Avicenna gives a very circumstantial account of it, enumerating all its virtues as stated by the Greek authorities, namely, its abstergent, attenuant, deobstruent, diuretic, and emmenagogue powers, and recommends it particularly as an application to parts stung by venomous animals. (ii, 2, 281.) Ebn Baithar gives very interesting extracts from Arabian authorities on this head. (i, 260.) It is found in the Hippocratic collection. In the modern Greek Pharmacopœia it is stated that the *G. lutea* grows in the Alps of Switzerland. This would seem to imply that it is not a native of Greece.

Γεράκιον,

Geranium, *Cranebill*; that species, the leaves of which resemble those of the *Anemone*, and has edible roots, when drunk with wine to the amount of a drachm, removes inflation of the uterus. The other species is of no use in medicine.

COMMENTARY. Dioscorides and the other ancient authorities describe only two species of the *Geranium*, the former of which would certainly seem to be the *tuberosum*, and the other the *rotundifolium*. They were not acquainted with the *Geranium Robertianum*. Dioscorides merely says of the geranium that when drunk in wine, to the amount of a drachm, it cures inflation of the womb (iii, 121.) Few of the other authorities notice it. See Ebn Baithar (i, 10.) The geraniums held a place in our English Dispensatory until a recent period. See Quincy (p. 88.)

COMM.

Γῆ,

Terra, *Earth*; all kinds are desiccants; that which is un-mixed with any other substance is also free of pungency; but if any fiery quality is mixed with it, it lays the same aside when washed. The fatty part, then, of wrought earth is an useful application to all organs that require drying; they use therefore the clay of *Egyptian earth* to dropsical and splenic affections, and to soft swellings, with manifest advantage. Of medicinal earths, the *Lemnia rubrica*, or *Sigillum*, as it is called, in addition to its being moderately desiccative and astringent, proves an antidote to deleterious medicines, cures malignant ulcers with wine or vinegar, stops all kinds of hemorrhage, and removes dysentery and spreading ulcers of the intestines, the gut being first washed out by an injection of honied water, and then of brine. The *Rubrica Sinopica*, or *vermilion*, being stronger than the Lemnian, is used as an ingredient in plasters, and when drunk it kills worms. The *Samian* is much more emollient than the Lemnian, as being glutinous and viscid. It is to be used then in all cases in which emollients are indicated; but it also cures spitting of blood from whatever part it proceed. The *Selenusian* and the *Chian* are more detergent, and are therefore used by some women in the cleansing applications to their faces. It also produces the incarnation and cicatrization of ulcers, more especially of burns. The unwashed

Cimolian is possessed of mixed powers, being refrigerant and discutient; but the washed is more cooling, and cures burns with oxycrate. The *Terra Ampelitis* (it is the kind of earth which is rubbed upon vines to destroy the worms which breed in them) is powerfully desiccant and discutient, but not without pungency. The *Cretan* is full of air and detergent, without pungency. The *Eretrian* is decidedly astringent, but when burnt and washed it is desiccant without pungency; but the cineritious is preferable. The *Pnigitis* has powers resembling the Cimolian, but is black. The *Armenian*, called also *Bole*, is powerfully desiccative, and therefore agrees excellently with dysenteric cases, fluxes of the belly, spitting of blood, consumption, dyspnœa from humidity, humid ulcers, and pestilential affections. It is drunk with a thin diluted wine, or, if fever be present, with water. The *Alanabolus* is possessed of similar powers to the Armenian. *Ochre* is discutient and septic in its powers; it therefore restrains the fungous flesh of ulcers, and fills hollow ones when mixed with cerate.

COMM.

COMMENTARY. We shall now give a brief explanation of the medicinal earths of the ancients, and for a fuller account of them we would beg to refer to the Appendix to Dunbar's 'English and Greek Lexicon,' to Hill's 'Annotations on Theophrastus on Stones,' and to Sprengel's 'Notes on Dioscorides.' Of the ancient writers, Dioscorides and Galen give the fullest account of them. The Arabians, also, especially Rhases, Avicenna, and Serapion, treat of them in the most ample manner, but supply little additional information. Geoffroy says of the *Lemnian earth*, that it is "a fat, viscid, slippery clay, of a pale red colour." The Lemnian ruddle ($\mu\lambda\tau\omicron\varsigma$) was the red Armenian bole, consisting of silex, alumine, oxyd of iron, &c. The Lemnium Sigillum was the Lemnian earth, made into cakes and stamped with a seal, as a guarantee of its purity. The *Cretan earth* is white chalk. The *Samian earth*, as Sprengel states, appears to have been pure argil; Kidd supposes it to have been pipeclay. The kind called aster was globose and thick. The *Chian*, *Selenusian*, and *Pnigitid earths*, are also argils, more or less pure. The Sinopic ruddle was a compact kind of ochre or marl, nearly resembling the Lemnian earth. Pliny ranks the *Cimolian earth* among the chalks or clays (cretæ.) Sprengel and Kidd sup-

pose it an argil. The purple Cimolian earth of the ancients ^{COMM.} was our steatitis or *soap-rock*. From Dioscorides's account of the *Melian earth*, it appears to have consisted principally of alum, and was different from the *Terra Melia* of Theophrastus. The *Ampelites* would seem to have been a bituminous earth, formed from stone-coal, probably resembling cannel coal. The *Armenian earth*, as Matthiolus remarks, was different from the *Armenian bole* now brought from the East. The ancient is described to be a very dry clay, having the appearance of stone, and very triturable, like lime. It was much celebrated as a remedy for the plague. See Galen, Aëtius, and Serapion. It was introduced into practice by Galen. It is clear, as Dr. Hill remarks, that it was the *yellow Armenian bole* which Galen used; the red being first used by the Arabians. Dr. Hill found it an excellent astringent and absorbent. The *Eretrian earth* was an impure argil, of a snow-white colour. Geber makes frequent mention of *magnesia*.

Γήρας ὄφραως,

Senecta Serpentis, the Slough of a Serpent, is decidedly desiccative: when boiled with vinegar it, therefore, cures toothache. That of the asp, when triturated with honey and rubbed in, sharpens the powers of vision.

COMMENTARY. Galen and Serapion likewise recommend ^{COMM.} the skin of a snake, when boiled in wine or vinegar, as a remedy for earache and toothache. See also Haly Abbas (Pract. ii, 49, 530.) Dioscorides gives nearly the same account of it, only he recommends the cast skin of the viper as an ophthalmic remedy. (ii, 19.) The serpent's slough is still used medicinally in the East. See Ainslie (*Materia Medica*, ii, 291.)

Γῆς ἔντερα,

Vermes terreni, *Earthworms*, when pounded and applied to wounded nerves, have immediately the most wonderful effects.

COMMENTARY. Dioscorides says that earthworms, pounded ^{COMM.} and applied, agglutinate divided nerves, and stop tertians; that, when boiled with the grease of a goose, they cure affections of the ears when injected; that, in like manner, when boiled in oil and injected into the opposite ear, they relieve

COMM. toothache ; and that they promote the flow of urine when pounded and drunk in wine. (ii, 72.) Galen commends earthworms as being diuretic when drunk in must. He mentions further, that, according to the report of certain physicians, earthworms have been given internally and applied externally without burning or boiling. Of all the ancient authorities, Aëtius is the fullest on the medicinal virtues of earthworms. (ii, 168.) The Arabians do little more under this head than copy the descriptions of them given by Dioscorides, Galen, and Paulus. Avicenna recommends them, when pounded and drunk in wine, not only as being diuretic but also lithontriptic. (ii, 2, 198.) The *Lumbrici terrestres*, or earthworms, are described and very much commended for their medicinal virtues in Quincy's 'Dispensatory' (p. 140), and Lewis's 'Materia Medica' (ii, 76.)

Γίγαρτα,

Gigarta vinacea, *Grape-stones*, are desiccative in the second degree, but refrigerant in the first. Being, therefore, cooling, they agree with all defluxions.

COMM. COMMENTARY. Galen mentions *Grape-stones* as sour and astringent remedies, and, therefore, applicable in all defluxions from the bowels. Avicenna recommends the ashes of grape-stones with vinegar in torsion of the nerves, and along with oil for contusion of the limbs and softening of the joints. (ii, 2, 723.) See also Rhases (l. ult. Cont. i, 745.)

Γιγγίδιον,

Gingidium, *Toothpick Fennel*, is possessed of no manifest heat, but is desiccative in the third degree, and astringent. It is, therefore, stomachic.

COMM. COMMENTARY. Dioscorides says of the *Daucus gingidium*, that it is a good potherb, and that as a medicine, when taken in a decoction with wine, it is diuretic and lithontriptic (ii, 166.) Galen defines its virtues to be considerable astringency with slightly heating powers. The others treat of it in like terms. Few if any of the Arabians have noticed it.

Γλαύκιον,

Glaucium, *Horned Poppy*, is rather disagreeably astringent,

but decidedly refrigerant, so that it cures erysipelas when the attack is not severe.

COMMENTARY. In the Fifth Book we have treated of the COMM.
different species of poppy used by the ancients. It appears from Dioscorides that it was its expressed juice which was used in practice. It was used principally in applications to the eyes. Our author borrows from Galen, and he follows Dioscorides (iii, 90.) The Arabians recommend it, not only in affections of the eyes, but also in boils and erysipelas. See particularly Avicenna (ii, 2, 470); Rhases (Cont. l. ult. i, 464.) As far as we can discover, it does not occur in the works of the Hippocratists, nor in those of Celsus. It has been scarcely known in the modern practice of medicine.

Γλαύξ,

Glaux, *Milkwort*; the herb is hot and humid in temperament, and, therefore, promotes the formation of milk.

COMMENTARY. Dioscorides gives a very circumstantial COMM.
description of it, from which it has been concluded that the *Glaux* was a species of *Astragalus*. (iv, 139.) All the authorities mention it in the same light as our author, but few of them have described it. We are not aware of its having been used in modern practice.

Γλήχιον,

Pulegium, *Pennyroyal*, is strongly calefacient and attenuant. Hence, when applied externally, it proves rubefacient. It also promotes the expectoration of thick and viscid humours lodged in the chest and lungs.

COMMENTARY. Dioscorides commends the *Mentha Pulegium* COMM.
as an emmenagogue, and for forwarding delivery; and the same character has descended to it down to recent times. See Gerard, Culpeper, Quincy, and Hill. Even at the present day it holds a place in our Dispensatories, but with a diminished reputation: *stat magni nominis umbra!* The Arabians generally treated of it along with the dittany. See Avicenna (ii, 2, 461); Serapion (De Simpl. 310.)

Γλοιός,

Sordes, that of baths, is moderately heating, emollient, and

discutient. It, therefore, agrees with fissures and condylo-mata.

COMM. COMMENTARY. See Dioscorides, with the commentaries of Matthioli and Sprengel. Suffice it to say, that the *Sordes balneorum* was nothing but the sweat scraped from the bodies of persons who were *shampooed*, in an apartment of the bath for this purpose, namely, in the Laconicum. (See Book I, 68.) Of course it would consist of nothing but animal sweat, mixed up perhaps with either natron or the flower of beans, which was generally used during the process. The *Sordes gymnasiorum* is also in like manner treated of by Dioscorides, and it must have been the sweat collected from the statues and walls of the gymnasia. Dioscorides recommends it for crude boils (phy-mata), desquamated surfaces, and old sores. The *Sordes palestæ* must have been pretty much the same as the *Sordes balneorum*, and accordingly it was used in a similar manner. The *Sordes ex gymnasio* occurs in Celsus's list of emollients (v, 15); and is treated of likewise by the Arabians. It appears singular that mankind should have so long retained a fancy for such an application, considering how easy it was to find a more agreeable substitute for it.

Γλυκυρρίζα,

Glycyrrhiza, *Liquorice*, is of a tepid and humid temperament, having also some astringency. Hence it smooths asperities, not only in the trachea but also in a scabious bladder. It also quenches thirst.

COMM. COMMENTARY. It would appear to have been rather the *Glycyrrhiza glandulifera* than the *G. glabra*. The latter, according to C. Bauhin, contains more saccharine matter than the *G.* of the ancients. Dioscorides, in his usual empirical style, enumerates with considerable judgment the cases in which it may be administered with advantage; such as asperities of the trachea (hoarseness) in the form of a linctus, for ardour of the stomach, ulcerations of the bladder and kidneys, and so forth (iii, 9.) All the ancient authorities, from Dioscorides downwards agree in stating that liquorice quenches thirst; and this we believe is still the popular opinion in this country, and was the professional, down to a late date. See Ruty (Mat. Med. p. 221.) The glycyrrhiza occurs in the works of Hippocrates,

Celsus, and the Arabians. As they all give it the same characters, we need not occupy space with extracts from them. See particularly Serapion (De Simpl. 147); Ebn Baithar (ii, 66.) According to the Greek Pharmacopœia the *G. glabra* is the species now used in Greece. COMM.

Γλυκυσιδη,

Glycy-side, *Pæony*, (called also Pentorobon and Pæonia); its root is acrid, somewhat bitter and desiccative, having also some astringency. Hence it excites the menstrual discharge, and cleanses the kidneys and liver when drunk, to the size of an almond, with wine; but if the wine be austere it restrains alvine defluxions. When appended as a periapt, it cures the epilepsy of children.

COMMENTARY. Sprengel makes the two species described by Dioscorides to be the *Pæonia officinalis* and *Corallina*. We have mentioned in the Third Book that it has been much celebrated both in ancient and modern times as a cure for epilepsy when appended as an amulet. See Andreas Laurentius (De Mir. Strumar. Curat. pp. 40, 63), and Macer (De Viribus Herb.) Quincy, in his 'Complete English Dispensatory' (London 1769), says of the root of peony, "the good women highly esteem necklaces made of it to hang about their children's necks for convulsions and difficult breeding of the teeth." Considering the faith which many *educated* persons now repose in the virtues of galvanic rings and garters, the present generation has little ground for laughing at the credulity of our forefathers, with respect to amulets and other phylacteries. On the Pæonia, see particularly Dioscorides (iii, 147); Galen (De Simpl. v); Serapion (c. 61); Ebn Baithar (ii, 240.) The *Pæonia officinalis* is still retained in the Greek Pharmacopœia (p. 121.) COMM.

Γναφάλιον,

Gnaphalium, *Cudweed*, is so called because its soft leaves have been used in place of combed wool (gnaphalum.) They are white and moderately astringent, and are, therefore, drunk with austere wine for dysentery.

COMMENTARY. There has been a great shifting of names by botanical authorities of late, with regard to the *Gnaphalia* and the cognate genera. It seems now agreed that the medi- COMM.

COMM. cinal cotton-weed of the ancients shall be called *Otanthus maritimus*, Link. Our author borrows from Dioscorides and Galen, who both give exactly the same character of this plant, and this it retained down to a very recent period. See Quincy.

Γογγυλῖς,

Rapum, *Turnip*; the root and seed are flatulent, promote the formation of semen, and rouse to venery.

COMM. COMMENTARY. The predominance of authority has determined us, after a good deal of consideration, to set this down as the *Brassica Napo-brassica*, the navew, or French turnip. All the authorities, in a word, from Dioscorides downwards, held it to be aphrodisiacal. Dioscorides holds it to be a sovereign remedy for chilblains in fomentation, cataplasm, or prepared thus: a turnip is to be scooped out in the middle and filled with rose-cerate, which is to be melted by placing the turnip in hot ashes, when it forms an excellent application to ulcerated chilblains. (ii, 134.) Pliny likewise says of the turnip, "Est et rapo vis medica. Perniones fervens impositum sanat." (H. N. xx, 9.) A roasted turnip is still a popular remedy in Scotland for chilblains. Galen, Aëtius, and Oribasius give brief descriptions of the *gongylis*, and from them our author copies. Celsus treats of the *napus* and *rapum* only as potherbs. The Arabians give a confused account of the matter; Avicenna under *brassica*, and Serapion under *rapa*. (De Simpl. 191.) Rhases, translating the 134th chapter of Dioscorides, renders *gongyle* by *Rapa rotunda*. (Cont. l. ult. 557.) Altogether it appears to us strange that some of our late authorities should have referred the *gongylis* to the *Brassica oleracea*. See Dierbach (Mat. Med. Hippocrat.) The introduction of the different varieties of the latter into gardening is a very curious but difficult subject. See Beckmann (Hist. of Invent.), and Loudon (Encyc. of Garden. 674.)

Γορδύλιον,

Gordylium (called also by some Seseli), is hot, diuretic, and emmenagogue. The root of it, when taken in a linctus, with honey, promotes expectoration.

COMM. COMMENTARY. Most probably it is a species of Seseli. Either our author or some copyist of his works has evidently

been guilty of the mistake of writing *gordylion* for *tordylion*. COMM.
See the chapter of Dioscorides on the tordylium (iii, 56.)

Γύρις,

Pollen, *Fine Flour*, resembles starch in its properties, but is weaker.

COMMENTARY. On the medicinal properties of *pollen*, see COMM.
Pliny (H. N. xxii, 60), who, however, borrows all his information from Dioscorides (ii, 107.) Both recommend the pollen used for glueing books, in hæmoptysis.

Γύψος,

Gypsum, *Parget*, or Mineral White, in addition to its desiccant, is possessed of obstruent powers. Hence it agrees with hemorrhages, along with pollen and the white of an egg. When burnt it has no longer its obstruent powers, but it is more desiccant and repellent, especially with oxycrate.

COMMENTARY. We have treated pretty fully of this article in COMM.
another place (Vol. II, 233.) It is the sulphate of lime, of which selenite or the foliated sulphate of lime is a sub-species. In the shops, when pulverized, it is known by the names of mineral white and stucco. Dioscorides merely says of its medicinal powers, that it is styptic and emplastic, and restrains bleeding and sweats. Galen is somewhat fuller in his account of it, recommending it, with the fine flour of wheat, which is found sticking about the walls of mills, and the down of a hare, for stopping bleeding. Aëtius and our author copy closely from Galen. Serapion borrows both from Dioscorides and Galen (c. 379.) Avicenna recommends it with Armenian bole, lentils, myrtle-water, and some vinegar, as an application to the forehead in bleeding from the nose. (ii, 2, 284.) Rhases copies verbatim from Galen, Dioscorides, and our author. (Cont. l. ult. i, 235.) Averrhoes recommends it in the manner described above from Galen as a styptic. (Collig. v, 43.) Celsus prescribes it for stopping colliquative sweating in cardiac disease (iii, 19.)

Δάδες,

Tedæ, *Dead Pines*, have certain acrid, concoctive, and detergent powers. Hence boiled in vinegar they cure toothache

when the mouth is rinsed with the vinegar; but if a little honey is added, they bring away phlegm. When made into a linctus they promote the discharges from the breast.

COMM. COMMENTARY. This term properly signifies a small torch used in performing lustrations, but here it is used for a small slip taken from a pine-tree. The tree from which the *tedæ* were taken was the *Pinus Cembro*; this Matthiolus, Harduin, and our old herbalists have clearly made out. See in particular Parkinson (p. 1537.) Gerard calls it by the English name of torch-pine, and, evidently copying from Dioscorides, adds, "the torch-pine, cut into small pieces and boiled in vinegar, is a remedy against the toothache, if the teeth be washed with the decoction." (p. 1361.) The other authorities treat of it in general terms, under the head of *Pinus*.

Δαμασκηνά,

Damascena, *Damascenes*, will be treated of with Plums.

Δαμασσώνιον,

Damasonium, *Water-plantain*, has certain detergent powers, and proves lithontriptic, and occasions a metastasis of the contents of the intestinal canal to the urine.

COMM. COMMENTARY. There can be no doubt that it is the *Alisma* of Dioscorides, and therefore probably the elegant water plant now called *Alisma Plantago*. On this point see Gerarde, Parkinson, Cordus, and Sprengel. Dioscorides recommends its root in cases of poisoning by the sea hare, the red frog, and by opium; in tormina and dysentery when drunk by itself and with carrot; and in convulsions and hysterical complaints. He adds, that the herb binds the belly, is emmenagogue, and softens swellings when applied. (iii, 159.) Galen states that he had never any experience of it in the cases mentioned by Dioscorides; but that he had found it possessed of lithontriptic powers. The other Greek authorities follow him. The Arabians copy from both. See Avicenna (ii, 2, 244, 249); Ebn Baithar (ii, 513.)

Δαῦκος,

Daucus, *Carrot* (called also *Staphylinus*), consists of two varieties. The root of the cultivated carrot is flatulent and

aphrodisiacal; the seed of the wild is wholly devoid of flatulent properties, is diuretic and emmenagogue; and so in like manner the stem.

COMMENTARY. Of the three species of *Daucus* described by Dioscorides (iii, 76), the leaves of the first are compared by him to those of the fennel; the leaves of the second to those of the wild parsley; and the leaves of the third to those of coriander. The first is the species which was long known in this country by the name of Candy carrots, and which has obtained various names of late years from our botanical authorities. It seems now settled that it should be called *Athamanta Cretensis*. "The second," says our indefatigable herbalist, old Parkinson, whose practical acquaintance with all sorts of plants entitles his opinion to high consideration, "is acknowledged to be so like the first that the climate and country only make the difference." It is now called *Athamanta cervaria*. The third, or coriander-leaved daucus, as the same authority clearly indicates, was probably a species of *seseli*. It, however, is not very certainly determined. The following description of their medicinal virtues by our Quincy may be said to embody the concurrent opinions of all the ancient authorities, Greek, Roman, and Arabian. "The seed is aperient and good in disorders of the kidneys; as also to hasten delivery, and bring away the after-birth. It is likewise accounted a good alexipharmic, and proper against the bites of venomous creatures." See Avicenna (ii, 2, 214, 287); Ebn Baithar (ii, 462); Celsus (v, 23); Hippocrates (De Ratione Vict. in Acut.); also under Staphylinus.

Δάφνη,

Laurus, *The Bay-tree*; its leaves are powerfully desiccant and calefacient, but its fruit still more so. The bark of its root, being bitter and sub-astringent, proves lithontriptic and cures hepatic affections when drunk to the amount of three oboli with fragrant wine.

Δάφνη πόα,

Laurus herba (*Ruscus*? *Butcher's-broom*?), called also *Alexandrina*, is hot, acrid, and somewhat bitter; it therefore promotes the menstrual and urinary discharges. The daphnoides

and the chamædaphne are possessed of the same powers ; but the latter is edible.

COMM. COMMENTARY. Dioscorides describes the virtues of the bay-tree (*Laurus nobilis*) at considerable length, representing it to be heating and emollient, and hence he says, the decoction of it makes a good hip-bath in diseases of the womb and bladder ; the green leaves, he adds, are sub-astringent, and hence prove useful when applied to the stings of wasps and bees. He recommends the berries in phthisis and other complaints of the chest, as alexipharmic, and as forming a good application to leprosy, and as an injection in earache and deafness. The bark, he says, is lithontriptic, kills the fœtus in utero, and proves useful in hepatic diseases. (i, 106.) Galen briefly calls it diuretic and emmenagogue. The Arabians follow Dioscorides. See Avicenna (ii, 2, 444.) The *Laurus* still holds a place in the *Materia Medica*, although now seldom used. See Pereira (p. 800.) The concurrent authority of the commentators and herbalists has settled that the *Laurus Alexandrina* was a species of *Ruscus*, probably the *R. hypophyllum*. The chamædaphne was also a species of *Ruscus*, perhaps the *racemosus*. The daphnoides is generally held to be the mountain laurel of Parkinson, i. e. the *Daphne Alpina*. All the other authorities treat of these plants in nearly the same terms as our author. They are all generally held to be emmenagogue and diuretic.

Δέρμα,

Pellis, *Skin* ; that of a sheep newly taken off and still warm, when applied to those who have been scourged with rods, cures them wonderfully. The skin of the hippopotamus, when burnt and triturated with water and applied, disperses hard tubercles. That of the viper, when triturated and applied in cases of alopecia, promotes the growth of the hair in a wonderful degree. The leather of old shoes burnt has desiccative ashes ; hence it cures sores in the feet from friction, if not in an inflamed state ; and also burns, intertrigo, and protuberances.

COMM. COMMENTARY. We have mentioned, in the Fourth Book, that the fresh skin of a newly-killed sheep was esteemed an excellent application to parts which had been bruised or cut by scourges. (See Vol. II, 46.) Dioscorides and most of the other authorities recommend the ashes of old shoes in the cases

mentioned by our authors. Avicenna recommends the fresh COMM.
 skin of a goat as an application to poisoned wounds. (ii, 2, 539.)

Δίκταμνον,

Dictamnium, *Dittany*, consists of more subtile particles than pennyroyal, but resembles it in other respects. That variety called Pseudo dictamnium is weaker.

COMM.
 COMMENTARY. That the Dictamnus Creticus, so celebrated even in poetry (Virg. *Æn.* xii, 412) as a vulnerary herb, was a species of *Origanum*, has been long known and acknowledged. Until of late years it held a place in our Dispensatories under the name of dittany of Candy. It was always held to be alexipharmic, and as such it is commended by Dioscorides. Such, he adds, is the power of this herb that by the smell and touch it kills venomous reptiles; and the juice of it when poured into a wound inflicted by an iron instrument or the bite of a venomous animal immediately cures it. (iii, 34.) Galen would appear to have been sceptical as to the great medicinal powers said to be inherent in this plant, for he dismisses it with a brief notice to the effect that it is more attenuant than the pennyroyal, but like to it otherwise. See also Celsus (v, 25.) The Arabians follow Dioscorides, and represent it to be diuretic and emmenagogue. See Avicenna (ii, 2, 461) and Serapion (De Simpl. 310.) They describe it along with the pennyroyal. The bastard dittany has been pretty generally recognized as the *Dictamnus Fraxinella*. See Parkinson, Miller, and Pereira (ii, 1652, ed. sec.) The last of these authors remarks regarding it, that "it was formerly much used in medicine, but of late years has fallen into almost total disuse." Not very many years ago, however, it was in great repute as being diuretic, emmenagogue, alexipharmic, anthelmintic, &c. See Alston's Lectures (i, 434.) It is still esteemed by the Arabians and Persians as a tonic and stimulant. Ainslie (Mat. Med. 63.)

Διονυσίας,

Dionysias, is treated of under Androsæmum.

Διφρυγές,

Diphryges, *Husk of Brass*, is possessed of mixed powers,

being somewhat astringent and moderately acrid. It is therefore a good application for malignant ulcers.

COMM. COMMENTARY. Dioscorides gives a very circumstantial description of three varieties of this substance, which for many years has been lost sight of. Matthioli calls it the Husk of Bronze, and Sprengel says it is called *Kupfermulm* in Germany. Ruttj ranks it among the obsolete medicines of the ancients. (Mat. Med. pr. 27.) Rhases treats of it. (Cont. ult. 256.) See Serapion (c. 418.)

Διψάκος,

Dipsacus, *Teasel*; the root of this thorn is desiccant in the second degree, and is also somewhat detergent.

COMM. COMMENTARY. The root of the *Dipsacus fullonum*, or manured teasel, is praised by Dioscorides as an application to fissures and fistulæ of the anus, and it held a reputation in these cases down to a late period. See Ruttj (Mat. Med. 168.) Dioscorides further mentions its use as an amulet in quartans, for which also it was long celebrated; for our Quincy speaks of "the superstition of some people of his day in using it as a charm against agues." (Complete Dispensatory, 117.) For the Arabians, see particularly Serapion (c. 106) and Ebn Baithar. It is not noticed by Hippocrates nor Celsus.

Δορύκνιον,

Dorycnium, *Shrub Trefoil* (?), is of a similar temperament with the poppy and mandragora, that is, immoderately cold. When taken in a small quantity it occasions torpor, and in larger doses it proves fatal.

COMM. COMMENTARY. In the Fifth Book we have stated the difficulty of determining what it was. Authorities are divided between the *Convolvulus Dorycnium* L. (Angl. Shrubby Bindweed), the *Solanum Sodomæum*, and *Atropa Belladonna*. Dioscorides says of it that it is soporific, and when taken in large doses proves fatal; he adds, some affirm that the seed of it is sought after for philtres, or love potions. (iv, 75.) Galen gives nearly the same account of it under the name of *Dorycnidium*. The Arabians would appear not to have admitted it into the Mat. Med., for the *Doronicon* of Serapion is a different plant. (c. 335.)

Δρακόντιον,

Dracontium, or Dracunculus, *Dragon-herb*, somewhat resembles the Wakerobin (*Arum*), but is more acrid and bitter than it, and also hotter, and consists of more subtile particles. It has also some astringency. The root of it, therefore, when taken in a potion cleanses the bowels, and is an excellent application to malignant ulcers; and the leaves in like manner. But the fruit of it is stronger.

COMMENTARY. We have treated of the Dragon-herb (*Arum Dracunculus*) as an article of food in another place. (Vol. I, p. 114.) Dioscorides gives so circumstantial a description of its medicinal properties that we cannot find space for it. Suffice to say, he uses it internally in diseases of the chest, and as an aphrodisiac, externally, in various cutaneous diseases, in collyria, in injections into the ears, and as an alexipharmic. (ii, 195.) Galen embodies the substance of Dioscorides's empirical description of its virtues agreeably to his own system, recommending it principally as a deobstruent internally, and an application to sores and cancerous tumours externally. Aëtius also gives an elaborate description of its powers. Oribasius merely states in general terms that it is calefacient and attenuant. Apuleius recommends it for the bite of the asp. Mesue ascribes to it powerfully cathartic and carminative powers. His account of it is very elaborate, and deserving of more attention than we can afford room to bestow upon it. He recommends it in the form of a suppository to relieve hemorrhoids and flatulence. (De Simpl. 24.) Avicenna borrows largely from Dioscorides. (ii, 2, 432.) Rhases copies from Dioscorides, Galen, and Oribasius. (Cont. l. ult. i, 257.) Serapion does the same. (De Simpl. 43.) It remains to be mentioned that Dioscorides, Oribasius, Mesue, and Avicenna, besides the species of dracunculus which we have been treating of, also describe another by the name of the Lesser. It is supposed to be the *Arum Italicum*. The dragon-herb held a place in the Dispensatory down to a very late date. Boerhaave calls it a powerful diuretic and promoter of the menses. Quincy says it is reckoned alexipharmic.

Δρυοπτερίς,

Dryopteris, *Oak-fern*, is sweet, acrid, and bitterish, and its root has some sourness. It is septic, and hence it is depilatory.

COMM. COMMENTARY. According to Dierbach, it comprehends both the *Polypodium Dryopteris* and the *Asplenium Adiantum nigrum*, and this opinion is supported by that of the older authorities. See Parkinson (1042) and Alston (§ 52.) Sprengel refers it to the former. Our author borrows from Dioscorides, and Avicenna does the same. (ii, 2, 219.) Our older herbalists, Parkinson and Gerard, treat of the oak-fern, but it has long ceased to hold a place in our Dispensatory.

Δρῦς,

Quercus, the Oak; its leaves and fruit are possessed of desiccant and tepid powers, so as to agglutinate recent wounds and cure incipient inflammations. The membrane under the bark of the acorn which surrounds the fleshy part of the fruit being much more astringent, is given for the female fluor and other diseases attended with discharges.

COMM. COMMENTARY. Dierbach states that three species of the oak with edible roots grow in Greece, the *Quercus Æsculus*, the *Q. Ilex*, and the *Q. Ballote*. He adds, that the first species is generally meant by δρῦς in the Hippocratic writings. Eustathius remarks that the φηγός of Homer was a species of oak. (Ad Iliad. v, 691.) In fact, it was the *Quercus æschylus*, or rather comprehend it and the *Q. Robur*. See Parkinson (1389.) After all the illustration which the subject has received from the old herbalists, and more recent commentators on Dioscorides and Theophrastus, it must be admitted that there is still considerable difficulty in determining the various species of oak described by the ancients. Our author borrows his account of the medicinal powers of the oak from Dioscorides, whom all the other authorities also follow. The quercus occurs in the Mat. Med. of Hippocrates, and in those of all the Arabians. We need scarcely add that the *Quercus Robur* still maintains a place in our Dispensatory.

Ἐβενος,

Ebenus, Ebony; the wood is calefacient, detergent, and consists of subtile particles. Hence it is believed to remove films which obstruct the pupil, and is an ingredient for other ophthalmic remedies.

COMM. COMMENTARY. The Latin poet Virgil, who applies the term India both to the region of the East, which has always

held that name, and to Abyssinia (Georg. iv, 293), says, that India is the only country that produces ebeny. (Georg. ii, 116.) This account of it will still be admitted to be pretty correct. Dr. Royle mentions that "*Diospyros Ebenus* yields the best kinds in the Mauritius, perhaps also in Madagascar; but *D. ebenaster* and *D. melanoxyton*, the ebeny trees of the Coromandel coast, yield it in the peninsula, of very good quality, as other species do in other parts of India." (Hindoo Med. 89.) See Ainslie (Mat. Ind. ii, 48.) In medicine it was principally used in collyria for psorophthalmia and xerophthalmia as recommended by Dioscorides (i, 129), and in old ulcers and watery pustules as recommended by Aëtius (i) and Galen. (De Simpl. vi.) See also Celsus (v, 12.) The Arabians, who must have been still more familiar with it than the Greeks, say of it, in addition, that it is lithontriptic. Rhases (Contin. l. ult. 258), Avicenna (ii, 2, 226), and Serapion (c. 152.) It is still imported to this country, but has long ceased to occupy a place in our Dispensatory.

Ἐγκέφαλον,

Cerebrum, *Brain*; the boiled brains of a hare when rubbed in and eaten, are useful (it is said) for forwarding dentition in infants. Some write that brain when eaten proves useful for tremblings. Dioscorides says that the brain of a cock when drunk with wine relieves those who have been bitten by venomous animals, and that it stops hemorrhages from the meninges. Galen says that the brain of a camel when dried and drunk with vinegar cures epilepsy, and that of the weasel in like manner; that the brain of a swallow with honey is of use in suffusions; while that of sheep when prepared in like manner is an excellent remedy in the dentition of children.

COMMENTARY. Galen and Serapion treat of the medicinal properties of brains in much the same terms as our author. Indeed our author copies from Galen. Avicenna says brains prove emetic after food, and are useful in the case of a person who has swallowed any poison. (ii, 2, 125.)

Ἐλαία,

Olea, the Olive; the green shoots of it are possessed of the

same degree of coldness as of astringency; the fruit when perfectly ripe is moderately hot, but the unripe is more astringent and cold. The tear of Ethiopian olive resembling the slender ammoniac, is possessed of detergent powers. It is used, therefore, for cicatrices, albugo, and dimness of vision, and for the pains of the teeth when put into the carious hole. But some say that it is the wild olive that does this. Oil from fully ripe olives is sweet and moderately hot, and rather of a moistening nature. But the unripe has just as much astringency as coldness. The washed is freer from pungency. As to the old, the older it is, so much the hotter and more discutient is it, more especially if it consist of subtile particles at first. This is ascertained from its being pure and transparent, and from a small quantity being sufficient to anoint a large part of the body, and from its being readily drunk in by the skin. Such in particular is the Sabine. That from the wild olive is at the same time detergent, astringent, and drying, as an oil. Castor oil has the same powers as old oil. The other kinds, such as that of sesame, or of radish and the like, derive peculiar properties from the substance they are formed from.

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COMMENTARY. We have treated of the olive as an article of food in another place. (Vol. I, 135.) The Ethiopian or wild olive comprehended several species of the *Eleagnus*. The tears of it, mentioned by Dioscorides and our author, and likened to gum ammoniac, are now unknown. Some, as Parkinson remarks, have supposed it our gum elemi, but that is probably a mistake. All the authorities, Greek, Latin, and Arabian, mention it as a sour, astringent medicine. Samonicus calls it "succis oleaster acerbis." Abu l'Fadli calls it a powerful astringent. (Apud Celsii Hierobot.) The leaves of the cultivated olive Dioscorides says have the same kind of powers as the wild, but in an inferior degree, and hence, from their greater mildness, they are more suitable for ophthalmic remedies; he also recommends the juice of the green olive in pityriasis, psora, and other cutaneous diseases. (i, 136.) We need not follow out what has been written by the others on this subject.

Ἐλαιον. For an account of the oils used by the ancients in the practice of medicine, see in particular Dioscorides (i, 29 et seq.), Galen (De Simpl. vi), and Mesue (De Oleis.) The

Oleum Cicinum, i. e. oil of the palma christi, now called *castor oil*, is often mentioned by the ancient authors. Dioscorides states that it is purgative and anthelmintic. Aëtius states that *linseed oil* may often be used instead of it. *Almond oil* he particularly commends in complaints of the ears. The *oil of Sesame*, he says, resembles common oil, being a gentle purgative; it is the *gingilie* oil of the modern Hindoos. Serapion recommends the oil of olives as an astringent application to stop profuse perspiration, to remove scabies and other cutaneous complaints on the head, to cure aphthæ and ulcers of the mouth, and for various other complaints. He, however, merely copies from Dioscorides, (i, 136.) But of all the ancient authorities, Mesue is the one who gives the fullest account of the composition and medicinal powers of the oils. Some of them are not described by the Greeks before his time, as far as we know. We shall give a specimen of a few of his prescriptions. His *oil of mandragora*, which he recommends for extinguishing inflammation and procuring sleep, is prepared from equal parts of the juice of its berries and oil of sesame boiled in a double vessel until the juice be evaporated. Add, he says, a little juice and boil again, do so a third time, and lay it aside. For the oil of mandrake a much more complicated receipt is given by Myrepsus (xvi, 50), which held its place in our Pharmacopœia down to the days of Quincy. (Complete Dispensatory, 527.) The *oil of eggs*, which Mesue commends strongly from experience for cleansing the skin, curing cutaneous eruptions, making hair grow, and curing malignant ulcers, he directs to be prepared thus: about thirty yolks of eggs hardened by boiling, and broken down into pieces, are to be fried in an earthen fryingpan that has been leadened, stirring with a wooden or iron ladle until they grow red, and their oil is poured out, which they yield the more largely if compressed with the ladle. This oil of eggs is described in similar terms by Moses Charras, in the Royal Pharmacopœia (p. 200), and is a popular remedy in Scotland to this day. Mesue describes the composition of an oil of frogs, which he recommends much for soothing the pains of arthritis, and the burning heat of ardent fevers, also the oil of vipers, of wolves, and many others, which will be more properly treated of by us in section xx of this Book. The oils are also well described by Aëtius (i) and Myrepsus (De Oleis.)

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'Ελαιόμελι,

Elæomeli, *Honeyed Oil*. In Syria, an oil thicker and sweeter than honey, flows from a certain trunk; when drunk to the amount of two cyathi with a hemina of water, it produces a discharge of crude and bilious matters from the bowels. Those who have taken it become torpid; yet one need not be alarmed, but only rouse them.

COMM. COMMENTARY. Pliny describes it as a natural exudation from trees on the maritime coasts of Syria. He adds, it is fat, thicker than honey, thinner than resin, of a sweet taste, and is used in medicine: "Manat ex arboribus pingue, crassius melle, resina tenuius, sapore dulci, et hoc medicis." (H. N. xxv, 7.) He states in another place that it is a nauseous purgative. (xxiii, 56.) Dioscorides gives the same account of it as our author, and describes an oil to be prepared from it. Avicenna and Rhases recommend it as an application to ulcerated scabies. It appears singular that this natural substance should have been entirely lost sight of in modern times, inasmuch that unless we adopt the conjecture of Alston, that it was some species of manna, we must admit ourselves entirely ignorant of it.

'Ελατήριον,

Elaterium; the juice of the fruit of the wild cucumber is so called, being in the second order of calefacients. It promotes the menstrual discharge, and destroys the foetus when applied in a pessary, by its extreme bitterness. When rubbed in with milk it evacuates by the nose. When administered in an injection, it occasions a discharge downwards of phlegm, and sometimes of blood.

COMM. COMMENTARY. It would appear that Hippocrates applied the term to all drastic purgatives. See Eustathius, *Iliad*. (xviii, 564.) By Dioscorides and all subsequent authorities, it is restricted to signify the fecula of the *Momordica Elaterium*, or wild cucumber. It was much used by the ancient physicians in the cure of dropsy, as we have stated in the Third Book. Dioscorides correctly states that it evacuates bile and phlegm, both upwards and downwards. He recommends it particularly in cases attended with difficulty of breathing. As an emetic, he directs us to administer it in oil, or with the ointment of iris. As a purgative, he recommends it to be given with

double the quantity of salt and some mustard, in the form of a pill, of the size of a tare. Like our author, he states that it is emmenagogue, and proves fatal to the foetus when applied in a pessary. Galen and the other authorities on the *Materia Medica* give it nearly the same characters. Theophrastus states that it is the most durable of all medicines, and that the oldest is the best. (H. P. ix, 14.) It is said by Hippocrates, that if a woman or she-goat, giving suck, partake of elaterium, it will affect her young. (Epid. vi, 5.) Galen in his commentary remarks, that other purgatives have the same effect when given similarly. (Op. t. v, 218, ed. Basil.) The Arabians also show a good practical acquaintance with this substance. Thus, for example, Avicenna praises it strongly in affections of the chest attended with difficulty of breathing, and more especially in cases of dropsy. He recommends it also in the form of a clyster for the cure of diseases of the joints and sciatica, and speaks of a plaster of it for the gout. He directs a pill to be prepared from it with double the quantity of salt. He states correctly that it occasions evacuations of phlegm and blood; that it is diuretic, and emmenagogue, and kills the child in a suppository. (ii, 2, 177.) Mesue also writes of the wild cucumber and elaterium with great precision, recommending the latter internally as an emetic, a phlegmagogue, and a hydragogue, more especially in dropsy. He also recommends it in jaundice, and *engorgement* of the liver and spleen; and states that it is most beneficial in sciatica when administered in a clyster or applied as a plaster. He speaks highly of the efficacy of the roots of the wild cucumber when applied to the head, in a cataplasm for hemicrania, and as an errhine in the same complaint. (De Simpl. ix.) Serapion also, in treating of the wild cucumber, gives interesting extracts, both from Greek and Arabian authorities, respecting the medicinal powers of elaterium. (De Simpl. 204.) Ebn Baithar gives a most ample account of it. (ii, 276.)

Ἐλάτη,

Abies, the Fir; this tree is calefacient and desiccative, like the black poplar. Its resin will be treated of among the resins.

COMMENTARY. Without doubt it is the *Pinus Abies*, L. The other authorities in general do not treat of it, except under the

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COMM. resinæ. It does not otherwise occur in Dioscorides, Galen, Serapion, or Avicenna.

Ἐλατίνη,

Elatine, *the Toadflax*; this herb is like the Helxine, and is moderately refrigerant and astringent.

COMM. COMMENTARY. That the Fluellin or Female Speedwell (*Linaria Elatine*) is the elatine of the ancients has been long known and almost generally admitted. See Parkinson, Gerard, Ruttly, &c. Dioscorides recommends the leaves with flour for inflammations and running of the eyes, and for dysentery. Pliny, evidently translating Dioscorides, says of the elatine, "eadem cum line semine cocta sorbitionis usu dysenteria liberat." (H. N. xxvii, 50.) It would appear that it had been omitted by the Arabians. It held a place in our Dispensatory with its ancient character down to a late period. See Parkinson, Gerard, Quincy, Ruttly, and Hill.

Ἐλαφόβοσκος,

Pabulum cervi (*Parsnip?*), is of heating and drying powers in the second degree, and consists of subtile particles.

COMM. COMMENTARY. Our older herbalists and commentators are pretty well agreed in holding it to be the garden parsnip (*Pastinaca sativa*.) Dioscorides pronounces it to be alexipharmic, and Aëtius does the same. The other authorities treat very briefly of it. Avicenna calls the *Pastinaca* aphrodisiacal, and this reputation it maintained down to modern times. See Quincy.

Ἐλελίσφακος,

Salvia, *Sage*, is decidedly calefacient and subastringent.

COMM. COMMENTARY. The sage (*Salvia officinalis*) has held a place in the Materia Medica from the earliest ages down to our times. Dioscorides calls it diuretic, emmenagogue, alexipharmic, and vulnerary. The other Greek authorities, like our author, speak more moderately in its praise. The Arabians who treat of it follow Dioscorides. See Serapion (De Simpl. 153.) In modern times it was at one period held in much esteem. See Quincy. It is retained in the modern Greek Pharmacopœia (p. 142.)

Ἐλένιον,

Inula, Elecampane (?); it is calefacient and desiccative with some recrementitious humidity. When mixed with linctuses it promotes expectoration, and it acts as a rubefacient to the parts it is applied to.

COMMENTARY. All the other authorities give the elecampane COMM. (*Inula Helenium*) much the same characters as our author. Dioscorides says the root is calefacient, and proves diuretic and emmenagogue; that in a linctus, with honey, it is useful in coughs, orthopnoea, and the like; and, further, that it is carminative and alexipharmic. The leaves he recommends in a cataplasm with wine for ischiatic disease, and in powder for hæmoptysis. (i, 27, 28.) Galen's character of it mainly agrees with that of Dioscorides, that is to say, he recommends elecampane, internally, in chest complaints, and externally as a rubefacient in sciatica, hemicrania, and a disposition of the joints to dislocation. The Arabians give it all the characters ascribed to it by the Greeks, namely, of being diuretic, emmenagogue, expectorant, carminative, alexipharmic, and rubefacient externally; and, further, hold of themselves that it is cordial. See Avicenna (ii, 2, 235), and Rhases (Cont. l. ult. i, 237.) Serapion gives us the following extract from Hunain's 'Translation of Hippocrates' (Hunain ex verbo Hippocratis): "Elecampane drives away anger and sorrow, strengthens the mouth of the stomach, clears the chest, expels the superfluities in the veins by the menses and urine, and more especially a wine made from it." (De Simpl. 138.) In fact, as we ought perhaps to have mentioned, the helenium is a Hippocratic herb. (Nat. Mul. 572, ed. Foës.) It was also well known to Celsus (v, 11 et alibi.) The elecampane still retains its place in our Dispensatory and also in the modern Greek Pharmacopœia (p. 76.) The other species described by Dioscorides as the Egyptian elecampane, and which he recommends solely as being alexipharmic, is held by Sprengel to be the *Teucrium Marum*. Parkinson, however, supported by high authority, seems to make out a strong case for the *Cistus Helianthemum*, or rock rose (p. 655.) Old Gerard, on the other hand, adopts the opinion of those commentators who referred it to the *Marum*. (p. 67.) The *Teucrium Marum* also holds a place in the modern Greek Pharmacopœia.

'Ελεοσίλινον,

Apium palustre, *Marsh Parsley*; being formed in wet places, it has the same properties as the cultivated parsley, and is larger than it.

COMM. COMMENTARY. The smallage (*Apium graveolens*) is briefly treated of by the other authorities. We need scarcely say that it is still retained in our Dispensatory. See Quincy.

'Ελέφας,

Elephas, *the Elephant*; the parings from its hoof, when applied in a cataplasm, cure whitlow; and those of the bones and teeth of it, being of a drying and detergent nature, are mixed with similar medicines.

COMM. COMMENTARY. Dioscorides in like manner recommends a cataplasm prepared with the shavings from the *elephant's* hoofs in cases of paronychia. Most of the other authorities would appear not to have treated of it. Ivory shavings were retained in the Dispensatory until late years. See Quincy.

'Ελκυσματα τοῦ ἀργύρου,

Recrementum argenti, *the Dross of Silver*, has the same powers as the molybdæna, for it is astringent and epispastic, hence it is mixed with the plasters called *Fusca* and *Epulotic*.

COMM. COMMENTARY. What the *Scoriæ argenti* are will be readily understood from the following description of the process of extracting silver from the ores of it: "These ores are extremely hard, and also mixed with bituminous, sulphureous, arsenical, or vitriolic substances, which carry off with them a considerable part of the silver, or burn it to *scoriæ* along with themselves." Geoffroy, &c. (p. 272, Engl. ed.) Our author copies almost verbatim from Dioscorides, and the other Greek authorities supply nothing additional under this head. Aëtius treats of the *scoriæ* in general terms, as we shall see in the proper place, and merely says of the *Scoriæ argenti* that they are possessed of desiccative powers. Of the Arabians, Avicenna, in treating of this article, borrows every word from the Greeks. (ii, 2, 693.) Serapion quotes an Arabian authority, Adamasti, to the effect that the *scoria argenti* is of use in cardiac disease (c. 415.) Rhases, after quoting from Galen, Dioscorides, and

Paulus, gives the opinions of two Arabian authorities, Damas(?) and Chuz, the former to the effect that it is useful in palpitation of the heart and fetor of the mouth, and the other, that it cures scabies and pruritus. (Cont. l. ult. i, 74.)

Ἑλλέβορος,

Helleborus, *Hellebore*; both kinds are calefacient and desiccative in the third degree. It (the white) is also acrid and detergent; and hence it agrees with leprous affections of the skin. The black, when introduced into fistulæ, makes the callus cast off in three days.

COMMENTARY. Those who wish to see the general literature of this interesting article may find our opinions briefly stated under the proper head in the Appendix to Dunbar's 'Lexicon.' In this place it will be sufficient to mention that we have come to the conclusion that the Helleborus albus of the ancients was identical with our *Veratrum album*. Hippocrates makes mention of both species; when he simply uses the term helleborus, he means the white, as in Aphor. v, 1, and iv, 15, 16. He also recommends the *niger* as well as the *albus* in melancholy and quartans (Epist. 1288, ed. Foës.) Aretæus, at the conclusion of his work, as it has come down to us, pronounces a strong eulogy on hellebore, which he calls the great remedy in cases of elephantiasis. Dioscorides recommends it as an emetic, emmenagogue, and sternutatory. (iv, 148-9.) Mesue and Serapion mention it as an emetic, but concur with Hippocrates in stating that it sometimes induces convulsions if administered unguardedly. Haly Abbas gives exactly the same account of it. Averrhoes mentions that in his time the *Lapis lazuli* was used as a purgative in place of hellebore. (v, 42.) Rhases concurs with the Greek authorities in praising its effects for the cure of epilepsy, melancholy, arthritis, and mania. Macer Floridus praises it in the cure of epilepsy, mania, quartans, &c. We would now beg to be allowed to depart from our general rule, and to quote some modern opinions in illustration of the ancient on this important subject,—the more important from hellebore forming, as is supposed, one of the ingredients in the celebrated patent medicine *eau médicinale*. Conrad Gesner, an upright and learned physician, as Bergius calls him, had great

COMM. confidence in the white hellebore, which he took himself, and administered freely to his patients with great success. He says of it, "recreat et roborat, et hilariorem facit, et acuit ingenium, quod in me et aliis sæpissime expertus scribo. Ego, si vixero, in ellebori historiâ multa proferam quæ medici admirentur." The following is his formula for preparing it: R Hell. alb. dr. ij, vini cretici oz. vj, stent in maceratione, per mensem, additis, si placet, aromatibus. Of this preparation, from 6 to 9 scr. were given according to circumstances. Baglivi calls hellebore the "Hercules remediorum, plurimumque domitor incurabilium morborum." Platearius, treating of hellebore, says that the ancients used it as a purge, in like manner as scammony is now used, for that men's bodies, in former times, were stronger than now; such a medicine would require to be given with great caution. He says of it, that it purges phlegm and black bile. The white, he adds, is a more violent medicine than the black. (De Simplicibus Medicinis.) For a great many years past, with the exception of the partial administration of the *eau médicinale* in cases of gout, the internal use of the veratrum may be said to have been quite lost in the practice of medicine, and that, not only in this country, but also in the land of Hippocrates and Dioscorides. In the modern Greek Pharmacopœia it is directed to be kept as a poison. (p. 76.) Mesue, Serapion, and many of the authorities recommend the black hellebore in melancholy. That it was the *Helleborus niger*, or at least, the variety of it, *H. orientalis*, Tournefort, and not the *Veratrum album* which was commonly administered in Anticyra, in cases of mania and melancholy, is clearly proved from Dioscorides (iv, 149.) He further states of it that, applied *per vaginam*, it procures menstruation, and kills the fœtus; he recommends it for the cure of scabies, alphas, lichen, and leprosy; he also speaks favorably of it as an external application to fistulæ, dropsies, toothache, and diseases of the ears. Galen recommends both species equally in nearly the same class of complaints. Notwithstanding the high authority of Pereira, who maintains the contrary, we do not see the least reason to doubt that the *black hellebore* of the ancients was our *Helleborus niger*, or Christmas rose. See Gerard (Paradisus, p. 386) and Parkinson (p. 211.) Without doubt it was introduced

into this country by the Romans for their *H. niger*. The *H. officinalis*, Salisb., which Dr. Sibthorp brings forward in its place, must be merely a local variety of it. See Alston's Lectures (42); also the Greek Pharmacopœia, Athens, 1837, (p. 77.) COMM.

Ἐλίχρυσον,

Elichrysum, *Shrubby Everlasting* or *Eternal Flower* (called also *Chrysanthemum* and *Amarantum*), is a plant used for garlands, having capillary leaves of a golden appearance. When drunk with wine it is suitable for dysuria, the bites of reptiles, ischiatic disease, and fractures. It also promotes menstruation, and dissolves coagula when drunk with wine and honey, and relieves catarrhs.

COMMENTARY. Linnæus makes the ancient *Helichrysum* identical with his *Gnaphalium*. (Gener. Plant. 946.) Accordingly Sprengel, in his R. H. H., refers it, with *Cordus* and Sibthorp, to the *Gnaphalium Stæchas*. But in his edition of Dioscorides he rather inclines to the *Tanacetum annuum*. Dr. Hill says of the tansy: "It has been greatly celebrated as an uterine, a vulnerary, and a diuretic. It is recommended in suppressions of the menses, and in cases of the gravel, and other nephritic complaints." This agrees so well with the characters of the *elechrysus* as given by Dioscorides and Paulus, that we are inclined to identify this article with the *Tanacetum annuum*. It is proper to admit, however, that the virtues which Dioscorides ascribes to the *elechrysus* are ascribed by old Gerard to the cudweed. It is one of those articles in the ancient *Materia Medica* which can never be satisfactorily determined. See further, Parkinson (p. 695) and Lewis's Dispensatory (i, 411.) COMM.

Ἐλξίνη,

Helxine, or *Parietaria*, *Pellitory of the Wall* (called also *Perdicium*, *Parthenium*, *Sideritis*, and *Heraclea*); its powers are detergent and slightly astringent, with a coldish humidity. The *Helxine*, called also *Cissampelos*, is possessed of discutient powers.

COMMENTARY. This is evidently the second species of Dioscorides (iv, 86), who represents the leaves as being cooling COMM.

COMM. and astringent, and consequently proving a suitable cataplasm in cases of erysipelas, burning, and other inflammations, and as proving useful in chronic coughs, inflammations of the tonsils, and so forth. That this plant is the pellitory of the wall (*Parietaria officinalis*) has been long pretty generally acknowledged. See Parkinson, Gerard, and Sprengel. Galen ascribes the same medicinal virtues to it as Dioscorides; and Aëtius and Oribasius treat of it in nearly the same terms. It is the muralis of Celsus, who recommends the juice of it, added to ceruse, as an application to the gout. (iv, 24.) It may be proper to mention that Dioscorides (l. c.), Pliny (H. N. xxii, 19), and Apuleius (81), also recommend it as an application in cases of gout. The Arabians give the pellitory exactly the same characters as the Greeks do. See Avicenna (ii, 2, 335) and Rhases (Cont. l. ult. 536.) The Arabians call it herba vitri, because glass vessels were cleaned with it. It is now excluded from the Dispensatory, but held a place in it down to a late date. See Quincy, Hill, and Ruttly. That the former species of helxine described by Dioscorides was a species of *Convolvulus* has long been known. See Matthioli and Parkinson. Dodonæus makes it the *niger*, and Sprengel the *arvensis*. Dioscorides briefly states of its medicinal virtues, that it is laxative. (iv, 39.) It is not treated of, as far as we have discovered, by Galen, Aëtius, or Oribasius. The Arabians treat of it as a species of *Volubilis*, by the name of *acfn*. See Serapion (De Simpl. 41); Mesue (De Simpl. 24.) Both agree with Dioscorides in making it to be laxative. See further APP.

Ἐλυμος ἢ Μελίνη,

Panicum, *Panic*, is, like millet, desiccative and refrigerant in its powers when applied externally. It also dries up alvine fluxes.

COMM. COMMENTARY. Panic, as Miller remarks, is a plant of the millet kind. It is the *Panicum Italicum*. It is more an article of food than of medicine. We have treated of it accordingly in the part of this work devoted to Dietetics. See Vol. I, 124.

Ἐμπετρον ἢ Πρασσοδές,

Empetron, *Black-berried Heath*, is a medicine which purges phlegm and bile. It is also saltish and therefore, detergent.

COMMENTARY. It is not well determined whether it be a species of *Crithmum*, *Herniaria*, or *Salsola*. Dioscorides makes it to be a purger of phlegm, bile, and water; and all the other authorities, both Greek and Arabian, give it the same characters in the main. It does not appear that the Arabians have noticed it; neither do we find it in the works of Hippocrates or Celsus. In the modern Greek Pharmacopœia it is set down as being the *Pimpinella Saxifraga*. COMM.

Ἐπιθύμου,

Epithymum (vel *Cuscuta minor*?) *Dodder of Thyme*, is desiccant and calefacient in the third degree, being more drastic than thyme.

COMMENTARY. Dioscorides says of the *Cuscuta Epithymus*, or lesser dodder of thyme, that it purges phlegm and black bile, and agrees particularly with melancholic and flatulent cases. (iv, 176.) Aëtius, likewise, calls it a melanogogue medicine. Galen and Oribasius give exactly the same character of it as our author. Serapion gives a most graphic description of this singular parasitic plant, in the present instance quoting solely from Arabian authorities. They agree in general that it is deobstruent, cathartic, and emmenagogue, and join in recommending it particularly in jaundice, obstructions of the liver and spleen, and in the fevers of children. (De Simpl. 39.) Mesue, also, gives nearly the same characters of it; he mentions of it that it is a weak and slow purge, unless taken in a large dose, and, therefore, he recommends it to be given with Indian myrobalans, black hellebore, mulse, salts, or the like. (16.) See also Avicenna (ii, 2, 226) and Rhases (Cont. 270.) It held a place in our Dispensatory, with the character of being a cleanser, down to a late period. See Ruttý (Materia Medica, p. 80.); Quincy (Complete Engl. Dispens. p. 117.) COMM.

Ἐπιμήδιον,

Epimedium, *Barren Wort*; its powers are moderately refrigerant, with a watery humidity. When applied in the form of a cataplasm it preserves the breasts in a right state. It is also said to prevent conception when taken in a draught.

COMM. COMMENTARY. Our author borrows his description of the *Epimedium Alpinum*, or Barren Wort, from Dioscorides; and none of the others supply any additional information respecting it.

Ἐπιμηλις,

Epimelis, *Crab-tree*, called also *Unedo* by the Italian husbandmen. It is a sort of wild apple, the fruit of which, being sour, is bad for the stomach, and occasions headache.

COMM. COMMENTARY. It appears, from Dioscorides (i, 170), that it is a species of Medlar. Probably, then, it was the *Mespilus Germanica*. Dioscorides, Galen, and all the other authorities that treat of it give it the same character as our author. As a medicine, it has the same characters as the other Medlars.

Ἐπιπακτις,

Epipactis (called also *Helleborine*, or *Bastard Hellebore*), is drunk as an antidote for deadly poisons, and for diseases of the liver.

COMM. COMMENTARY. The older herbalists, supported by the authority of Anguillara, incline to refer this article to the genus *Herniaria*, or Rupture Wort. The *epipactis*, it would seem, is still in great repute throughout Greece, as being alexipharmic, and curing complaints of the liver. Our author and all the others who notice it take its medicinal characters from Dioscorides. (iv, 107.) As far as we have been able to discover, it is not noticed by Hippocrates, Celsus, nor any of the Arabians.

Ἐπίβιθος,

Cicer, *Vetch* or *Chick-pea*, a common kind of pulse; is flatulent, nutritious, a proper medicine for the bowels, diuretic, engenders milk and semen, and proves emmenagogue. The kind called *Arietinum* is more diuretic than the others. A decoction of them, more especially the black sort, breaks down stones in the kidneys. The species called *Ervinum*, is hotter than the others, and bitterish. The wild are in every respect stronger than the cultivated.

COMM. COMMENTARY. It comprehends several species of the *Cicer*. The κριός is undoubtedly the *Cicer arietanum*. The two other species cannot be so readily determined. Probably they

are but varieties produced by cultivation. We have treated COMM.
of them among the articles of food, in the 79th section of the
First Book. As a medicine, Dioscorides recommends them
especially in a cataplasm for inflammations of the testicles,
scabies, achor, lichen, cancerous and ill-conditioned ulcers.
All kinds of vetches, he says, are diuretic, and prove useful
when given with rosemary, for jaundice and dropsy. (ii, 126.)
Galen gives the chiches the same character, and further holds
them to be lithontriptic. (De Simpl. v.) Aëtius follows him
closely. (i.) The Arabians in addition say that chiches are
anthelmintic, diuretic, and purgative, and that they are useful
in arthritic diseases. See Serapion (80); Avicenna (ii, 2, 128);
and Rhases (Cont. l. ult. i, 209.) Avicenna, in particular,
gives a long list of their medicinal virtues. In addition to those
already stated, he joins Hippocrates in holding chiches to be
aphrodisiacal; and hence he says procreating animals, such as
camels, are fed with them. He joins the others in holding
them to be deobstruent, lithontriptic, cathartic, and diuretic.
Chiches long held a place in our Dispensatory with the cha-
racters given to them by Dioscorides and Avicenna. See
Quincy (111) and Ruty (122.) Three sorts were used in
modern as in ancient times, namely, the white, the red, and
the black, but, as Quincy remarks, their medicinal virtues are
all pretty much the same.

Ἐῶτα,

Lana, *Wool*; that which is unscoured is useful for embro-
cations, for the Œsypum is digestive, like butter. That which
is scoured is simply the vehicle for other applications. That
which is burnt has acrid, hot, and desiccative powers, with
some tenuity of parts so as to melt down the flaccid flesh of
ulcers.

COMMENTARY. Dioscorides, Galen, Serapion, and the other COMM.
authorities give nearly the same account of the medicinal pro-
perties of wool.

Ἐρικήη,

Erica, *Heath*, is possessed of discutient powers without
pungency. Its flower and leaves are principally to be used.

COMMENTARY. Sprengel and Schneider agree that it is the COMM.
Erica arborea, but the description of it given by Dioscorides,

COMM. namely, that "it is like the tamarisk but much smaller," would rather seem to apply to one of the lesser species. Dioscorides commends it as an application to the bites of reptiles. (i, 116.) Our author copies from Galen. The Arabians, with the exception of Ebn Baithar, would appear not to have treated of it, and it has not held a place in our Dispensatory for a long time past. The old herbalists, copying from the ancient authorities, ascribe to the heath the virtues which Dioscorides and Galen held it to be possessed of.

Ἐρινος,

Erinos, *Water-basil*, is an aquatic herb, two drachms of the fruit of which with four drachms of honey, when rubbed in stops defluxions of the eyes. Its juice is also a remedy for earache.

COMM. COMMENTARY. That it is a species of *Campanula* has been long agreed upon. Columna held it to be the *C. Rapunculus* or *Rampions*, but Sprengel names it *C. Erinus*. It is the *echinos* of Galen, as is obvious from the similarity of the descriptions of the two articles. Few of the other authorities notice it. Our author merely abridges Dioscorides (iv, 29.) The rapunculus or rampion is still cultivated as a salad. See Loudon (Encycl. of Garden. 734.)

Ἑρμοδάκτυλος,

Hermodactylus, *Hermodactyl*; the root of it is possessed of purgative properties, and also the decoction. It is given for affections of the joints in rheumatism, but it is bad for the stomach.

COMM. COMMENTARY. We cannot afford room here to discuss fully the much agitated question respecting the ancient hermodactylus, and beg to refer to what we have said on the subject in the Appendix to Dunbar's Lexicon. See also particularly the commentators on Mesue and Dioscorides. It is to be remarked that our author has entirely omitted to notice the *Κολχικόν* of Dioscorides by name, and that the only article which he has in place of it is the Ἑρμ. This is a presumptive proof of the identity of these two medicines. Serapion moreover, in his chapter on Hermodactylus, gives the words of our author in this place along with Dioscorides's account of the colchicum.

Accordingly, Bergius, Tournefort, Humelbergius, and Geoffroy COMM. are decidedly of opinion that they were identical. Prosper Alpinus, in like manner, says of it "*hermodactylus qui est radix colchici Græcorum.*" (De Med. Meth. iii, 9.) See also Hill's Mat. Med. On this side of the question we further beg to quote the authority of Dr. Paris: "The active ingredient of the *Eau médicinale* has been discovered to be the *Colchicum Autumnale* or meadow-saffron; upon investigating the properties of this medicine, it was observed that similar effects in the cure of the gout were ascribed to a certain plant called hermodactylus by Oribasius and Aëtius (Paulus Æg. ?), but more particularly by Alexander of Tralles, a physician of Asia Minor, in the fourth century; an inquiry was accordingly instituted after this unknown plant, and upon procuring a specimen of it from Constantinople it was actually found to be a species of colchicum." (Pharmacologia, 58.) We have already given a full account of the administration of hermodactyls in gout. (Book III, 78.) Alexander of Tralles, as far as we know, is the earliest authority that treats of the hermodactylus by name, and he recommends it for the cure of arthritic diseases. (xi.) Our author is the only one of the Greek writers who admits it into the *Materia Medica*. The Arabians treat of it fully, but some of them confusedly, by mixing up the ancient descriptions of the *ephemeron* and *colchicum* with it. Thus Serapion, after quoting, as already stated, Dioscorides's account of the *colchicum*, gives the opinions of various Arabian authorities, all of whom concur in representing it to be a calefacient herb, and most of them in recommending it in diseases of the joints. (De Simpl. 194.) Mesue recommends it as a phlegmagogue in diseases of the joints, when given internally with cumin, ginger, pepper, myrobalans, &c.; and externally in the form of a cataplasm. He also states it to be a good application to foul ulcers. (De Simpl. vii.) Avicenna quotes no Greek authority in his chapter on Hermodactylus but Paulus, from which it may be inferred that he did not identify it with the colchicum of Dioscorides, like Serapion. He recommends it especially in gout, both internally and in the form of plaster. (ii, 2, 343.) Rhases refers to no other Greek authorities on this head except Paulus and Alexander, but quotes the opinions of several Arabians, all of whom agree in recommending her-

COMM. modactylus in gout and foul ulcers. An anonymous authority makes it to be aphrodisiac. (Cont. l. ult. 362.) See also Haly Abbas (Pract. ii, 43.) It is particularly to be remarked that the Arabian authorities all notice three varieties of the hermodactyl root, the white, the red, and the black; and restrict the medicinal use of the H. to the first of these, and condemn the two others as being deleterious. Nicholaus Myrepsus (i, 1) and Actuarius (De Compos. Med. i), however, prescribe also the red, which the learned Fuchsius, in his annotations on the former, sets down as being the *behen rubrum*. We know not what are his grounds for this opinion. It is the white variety which has been always used medicinally. See Boerhaave, Quincy, and Pereira. We would beg particularly to refer our readers who wish to obtain the modern literature of this subject, to the *Materia Medica* of Pereira (p. 949.)

Ἐρπυλλος,

Serpyllum, *Wild Thyme*, is heating, so as to promote the urinary and menstrual discharge.

COMM. COMMENTARY. All agree that the *Thymus Serpyllum* is possessed of diuretic and emmenagogue powers. Dioscorides recommends it in tormina, convulsions, &c., and as an alexipharmic. The others, like our author, treat more briefly of it in general terms. Serapion and Avicenna borrow freely from Dioscorides. The *Serpyllum* held a place in our Dispensatory with its ancient characters down to a very recent date. See Quincy and Ratty (Mat. Med.) The latter, however, questions its identity with the ancient *Serpyllum*.

Ἐρυθρόδανον,

Erythrodanum, *Madder*, is the *Rubia Tinctorum*. Being sour and bitter, it purges the spleen, liver, and kidneys, so as to occasion a discharge of bloody urine. It acts as an emmenagogue, and cleanses the sordes of the skin.

COMM. COMMENTARY. There seems scarcely any reason to hesitate in admitting it to be the *Rubia Tinctorum*, madder and dyer's madder. Dioscorides holds it to be powerfully diuretic, inso-much as sometimes to occasion a discharge of blood in the urine. He recommends it in sciatica and paralysis; as an alexipharmic medicine, and as producing abortion, menstru-

ation, and the lochial discharge when applied as a pessary. COMM.
 He adds, that it cures alphas (mild leprosy) in a cataplasm with vinegar. (iii, 150.) Our author borrows from Galen, who sets it down as being deobstruent, diuretic, and emmenagogue. Aëtius uses nearly the same words as our author in treating of it. All the Arabians follow the Greeks in giving madder the character of being diuretic and deobstruent when given internally, and emmenagogue and alexipharmic when applied externally. See Avicenna (ii, 2, 573), Rhases (Cont. l. ult. i, 590.) The Arabian writers mention that a bread was sometimes prepared from madder in times of famine. (Casiri, Bibl. Arab. Hisp., 336.) It is still sometimes given as an emmenagogue, notwithstanding that Dodonæus questioned the truth of Dioscorides's opinion as to its possessing the powers of occasioning bloody urine and a discharge of the menses. (De Purgant. 97.) Our old herbalists, Parkinson and Gerard, dispute whether Dioscorides or Dodonæus is to be followed in this instance. The *Rubia Tinctorum* holds a place in the modern Greek Pharmacopœia.

Ἐρύσιμον,

Erysimum, *Hedge-mustard*; its seed is fiery and heating, equally as cresses. Wherefore, when boiled in leaven and added to linctuses, it purges the chest. It also softens indurations, and in the form of a cataplasm is of use for latent cancers.

COMMENTARY. We may pretty confidently set it down as the *Erysimum officinale*, Hedge-mustard. Our author abridges Galen, who, in the present case, borrows almost everything from Dioscorides. Aëtius copies from Galen even more closely than our author. The Arabians, in like manner, borrow everything from Dioscorides and Galen under this head. See in particular Serapion (De Simpl. 357.) It is worthy of remark that Dr. Hill gives the same medicinal character to the hedge-mustard which Dioscorides gives to the *Erysimon*, which it will be admitted forms a strong presumption of their identity; at all events, they were evidently congeners, a fact which is not disputed by those who question their identity. See Ruttý (Mat. Med.) and Sprengel (ad Dioscor.) COMM.

Εὔζωμον,

Eruca, *Rocket*, being also like it in temperament, is flatulent. It therefore produces venereal incitement, and the seed of it is diuretic. The wild is stronger than the cultivated.

COMM. COMMENTARY. There can be no doubt that it is the *Brassica Eruca*, L. Dioscorides agrees with our author in setting it down as being aphrodisiacal and diuretic, and Aëtius does the same. The latter proposes to correct its tendency to induce headache by giving it with lettuce. (ii, 169.) Celsus ranks the "eruca" among the things "quæ contrahere semen videntur." (iv, 21.) The Arabians agreed with the Greeks as to its aphrodisiacal properties. (Casiri, *Bibl. Arab. Hisp.* i, 336.) See also Serapion (224), Avicenna (ii, 2, 227.) Even down to a late date rocket retained this character. See Ruty (183), and Quincy (109.) It is still cultivated in gardens. See Loudon (*Encycl.* &c. 744.)

Ἐπατώριον,

Eupatorium, *Hemp-agrimony*, consists of subtile particles, and is possessed of incisive powers without manifest heat. Hence it clears away obstructions of the liver, and has also some astringency.

COMM. COMMENTARY. That the *Eupatorium* of Dioscorides and the other Greek authorities is the *Agrimonia Eupatorium*, will hardly be questioned now by any competent judge who has investigated the question. Dioscorides recommends its leaves in ill-conditioned ulcers, and its seed and stalk in wine, for dysentery and the stings of reptiles. (iv, 41.) Galen makes it to be deobstruent and tonic. Serapion copies from Dioscorides and Galen, and merely adds, in the end, from Rhases, that southernwood is more suitable in complaints of the liver; and from Mesue, that it is good in protracted fevers. (*De Simpl.* 77.) Avicenna's chapter on *Eupatorium* is entirely compiled from Dioscorides, Galen, and Serapion, without the slightest change or addition. (ii, 2, 239.) No one who has examined into the matter can therefore doubt that the Eu. of these two Arabians, was the same as that of the Greeks. The *Eupatorium* of Mesue, however, has been generally held to be a very different plant, namely, the *Eupatorium Canna-*

binum, according to some, from his comparing the leaves to those of the lesser centaury. It is to be borne in mind, however, that the Latin translations of the Arabians are not to be trusted in small matters, and therefore this comparison may be all a mistake. And that the Eu. of Mesue was the same as that of the others, seems highly probable from his recommending it in the same complaints, namely, in obstructions of the liver, and chronic fevers. (De Simpl. 15.) Such is the conclusion to which an impartial examination of the question has brought us. It is but fair to mention, however, that all the old herbalists and writers on the Mat. Med. down to Ruty and Quincy, are against us, and hold that the Eupatorium of Mesue was different from that of the Greeks. See Matthiolus (in Dioscor.); Parkinson (Theatre of Plants); and the commentators on Mesue. COMM.

Ἐυφόροβιον,

Euphorbium, is possessed of caustic powers, and consists of subtile particles like the other juices.

COMMENTARY. A gum-resin produced from some species of *Euphorbia* still holds its place in the Materia Medica. Alston remarks, "neither Dioscorides nor Galen take any notice of the cathartic quality of the Euphorbium, but Pliny does, as do also Aëtius, Paulus, and the Arabians; but all make it excessively acrid, upon account of which its internal use is now generally condemned." Mesue particularly commends it in diseases of the joints. It was formerly supposed that Euphorbium is procured from a species called the *E. antiquorum*, but it is now admitted that the species is still undetermined. See Pereira (1127.) Probably, as stated in the modern Greek Pharmacopœia, it is procured from several species of the Euphorbia. (66.) COMM.

Ἐφήμερον,

Ephemerum (or Colchicum Autumnale?), not the poisonous species but that which is called the Wild Iris. It is possessed of mixed powers, repellent, and discutient.

COMMENTARY. See Ἐρμοδάκτυλος, and Book V (48.) The *E.*, here said to be the same as the wild iris, is the *Convallaria verticillata*. Dioscorides recommends its root in toothache, COMM.

COMM. and its leaves as possessing discutient powers when applied to swellings and tumours. (iv, 75.) Galen is at great pains to explain its *modus operandi* agreeably to his theory of the action of medicines.

Ἐχίδνα,

Vipera, the Viper; its flesh is decidedly hot and dry in temperament, so that it cleanses the whole body by the skin. Wherefore many persons affected with elephantiasis, by eating or drinking of it have been cured. Those which live by the sea-side, or in other dry situations, rather occasion thirst.

COMM. COMMENTARY. As stated by us in the Fifth Book, the Echidna Asiatica of Nicander is the *Coluber Ægyptius*, and the E. Europæa the *C. Berus*. The ἔχις, probably is the *C. Amodytes*. Dioscorides recommends vipers, having their head and tail cut off, and the entrails taken out, boiled with oil, wine, a little salts and dill, for nervous affections and scrofula. He gives no credit, however, to the vulgar belief of his time, that living upon vipers prolonged life, or that they prevented lice from forming on the body. He describes distinctly the process of preparing salts from vipers, but says they have not the same efficacy as the flesh. (ii, 18.) The Arabians display much more credulity than Dioscorides, in describing the medicinal virtues of vipers, ascribing to them wonderful powers, not only of preserving life, but even of restoring youth. See in particular, Avicenna (ii, 2, 608), and Rhases (Cont. l. ult. i, 731.) Galen gives a very lengthened disquisition on the medicinal virtues of vipers. (De Simpl. xi.) Aëtius abridges the same. (ii, 160.) See Oribasius (Med. Collect. xv, 2.) We shall have occasion, however, to treat further of the medicinal properties of the viper when describing the composition of the theriac; and, instead of collecting the sentiments of the ancient authorities on this head, we shall in this place merely subjoin the opinion of a modern author, who appears to have been familiar with the use of it: "The powder of vipers is very much enlivened with the volatile salt where-with the vipers abound, which enables it to force its virtues through the pores, though never so close shut, to the more remote parts of the body. It is a singular medicine to cure scabs, itches, and crysipelas, and particularly the leprosy. It

restores plumpness of body to persons wasted with long agues and tedious diseases. It is to be taken fasting, in broths, wine, or any other cordial liquor, or else incorporated with some syrup, or in some confection like a bolus." (Moses Charras.) In Scotland the adder (which is a variety of the *Coluber Berus*) is a popular remedy for malignant diseases of the skin. It is taken in the form of soup, as described by Dioscorides. The viper broth is described in Quincy's Dispensatory (400) in nearly the same terms as by Dioscorides, and recommended "as doing good service in leprous and other obstinate cutaneous complaints."

Ἐχίνος,

Echinus; the herb is austere, repellent, and desiccant. Of the Land Echinus, or *Hedgehog*, the flesh when strongly dried is discutient and desiccant; when taken in a draught, therefore, it is beneficial in elephantiasis, cachexia, and many other complaints. Its skin, when burnt, becomes more desiccant and discutient. It therefore cures alopecia when rubbed in with liquid pitch. Of the Sea Echinus, the edible part is diuretic, and agrees with the bowels. Its shell, when burnt, resembles that of the land echinus.

COMMENTARY. The herb is not described by Dioscorides, Theophrastus, or Pliny. It would appear to be the same as the *Erinus*, which see. The Ἐ. χερσαῖος is undoubtedly the *Hystrix Cristata*, and the Ἐ. θαλάττιος the *Echinus Esculentus*. Dioscorides and Galen give the same account of their medicinal properties as our author. Serapion, after giving the description by Dioscorides and Galen, adds, from an Arabian authority, that the flesh of the land echinus is beneficial in protracted fevers. (De Simpl. 435.) Avicenna (ii, 2, 234,) treats of the two echini at greater length than any other ancient author, recommending the flesh of the land, in phthisis, dropsy, elephantia, scabies, scrofula, and other complaints of a formidable nature. Upon the whole, however, his account of it is mostly made up of extracts from Dioscorides and Galen. See in like manner Rhases (Cont. l. ult. i, 273.) He recommends the land echinus in the irretention of urine to which children are subject, adding that when frequently administered, it brings on dysuria. He and Avicenna quote Serapion as an

COMM. authority for its use in protracted fevers. Both the echini disappeared from our Dispensatory a considerable time ago.

Ἐχίον,

Echium, *Viper's Bugloss*, (some call it also *Dorias*, and others *Alcibiadium*), is a prickly herb, which not only relieves those who have been bitten by reptiles when drunk in wine, but, if taken beforehand, it preserves them from being injured.

COMM. COMMENTARY. It appears to us quite clear that this article is the *Echium vulgare* or Viper's Bugloss, which we have no doubt was introduced into Britain with other medicinal herbs by the Romans, for it is never found remote from cultivated places, and therefore we believe it not to be truly indigenous. Some have taken it for the *Echium rubrum*, from Dioscorides having described the flowers as being *purplish*, whereas, *purplish* signifies a bright blue, and not red as is supposed. Parkinson thus describes the colour of the flowers of the *Echium vulgare*: "The flowers are of a purplish violet colour, in them that are fully blown, but more reddish while they are in bud; but in some places of a paler purple colour," &c. (p. 413.) We, then, have no hesitation in acknowledging it as the *Echium vulgare*. Our author borrows his account of its medicinal powers from Dioscorides. (iv, 27.) The Arabians would seem to confound it with the *Anchusæ*, to which it is closely allied. Our old herbalists, in treating of the viper's bugloss, follow Dioscorides; but it has long ceased to hold a place in our Dispensatory. It still, however, is known in the shops, where its root retains the character of being aperient and slightly astringent. See Gray (Suppl. to Pharmacop. p. 54.)

Ἐψήμα ἢ σίραμον,

Defrutum, *Boiled Must*; it is moderately heating and digestive, and is also emplastic and free from pungency.

COMM. COMMENTARY. Pliny gives the following account of it: "Siræum quod alii hepsema, nostri sapam appellant, ingenii, non naturæ opus est, musto usque ad tertiam partem mensuræ decocto: quod ubi factum ad dimidiam est, defrutum vocamus." (H. N. xiv, 11.) Harduin states that the Hepsema is called *Rob* or *Sapa simplex*. (l. c.) Moses Charras gives the following directions for preparing it: "R. Of the new juice of white grapes

perfectly ripe, lb. xxx; boil it over a gentle fire in an earthen COMM.
glazed vessel, or a copper vessel tinned within, until a third
part of the juice only remains. But if you desire a *defrutum*,
boil it only to the consumption of the third part." (Roy. Phar.
p. 70.) The following prescription, taken from a still later
writer, will further be useful in illustrating the meaning of a
term which often occurs in the course of this work, but which
has now fallen into disuse. "The Simple Rob or Sapa. Take
of juice newly expressed from generous and white grapes any
quantity, and boil it over a slow fire, until one pint of it only
remains out of three, or it becomes of a honey consistence."
Quincy's Dispensatory (432.) Few of the other authorities
treat of this article at all, and those that do, despatch their
notice of it in few words. Thus, for example, Avicenna says
of rob, that it is expectorant, and hence it is made an ingre-
dient in the syrup of poppies; and that it is useful in pain of
the kidneys and bladder. (ii, 2, 570.)

Zéia,

Far, Spelt, has powers like the kinds of wheat, holding an
intermediate place as to heating and cooling; it is also gently
desiccative and emplastic.

COMMENTARY. This, as we have explained elsewhere (Vol. I, COMM.
123), is the *Triticum Spelta*, to which our older herbalists give
the names Greek Wheat, Spelt Wheat, or Spelt Corn. That
the *Zeia* of the Greeks was identical with the *Far* of the
Romans, is proved beyond all dispute from a passage of
Asclepiades preserved by Galen. (De Locis Affectis, ix.) The
term *spelta* is derived from the latino-barbarous translations of
the Arabians. See Serapion (122), who quotes under this
head the chapter of Dioscorides on *tragus*, which was spelt de-
prived of its hull. The other authorities say little of spelt as
a medicine; but commend it highly as an article of food.
(See Vol. I, l. c.) Avicenna describes it by the name of
harcoman (ii, 2, 323); and Rhases by that of *haratinam* (Cont.
l. ult. i, 352.)

Zγγγιβέρ,

Zingiber, Ginger; its root is powerfully heating, but not on
its first application, as it contains some crude and thick juice,

on which account it readily becomes carious, but it preserves the heat.

COMM. COMMENTARY. Without doubt the *Amomum Zingiber*. Dioscorides after describing the country of the ginger, and the characters of the best kinds of it, states its medicinal powers to be heating, digestive, mildly aperient of the bowels, and stomachic; and recommends it in nebulae of the cornea, and adds of it, that as an ingredient in antidotes and otherwise it resembles pepper (ii, 189.) Galen writes very elaborately in explanation of the action of ginger on the animal frame; and, in accounting for the difference between it and pepper and other articles of the same class practically, his conclusions regarding it are the same as our author's. Aëtius and Oribasius copy from him. Serapion, after quoting the opinions of Dioscorides and Galen, gives a very sensible account of the virtues of ginger from Mesue and another unknown authority. Mesue says it is beneficial in obstructions of the liver, arising from coldness and humidity; that it softens the belly, heats the stomach and the whole body; promotes digestion; is alexipharmic and aphrodisiacal; removes phlegm (water brash?) and is beneficial in obscurity of vision. The unknown authority says it improves the memory, and removes the humidity in the stomach, arising from the eating of fruit, such as melons and the like (De Simpl. 336.) In the works of Mesue, now extant, ginger is not treated of. Rhases gives very interesting extracts from Dioscorides, Galen, and various Arabian authors. Of the latter, one says of ginger, that it softens the belly, and another that it binds it. (Cont. l. ult. i, 762.) Avicenna quotes Dioscorides as stating that it is aperient, and Alcanzi as holding that it is astringent. He agrees with the latter, that ginger binds the bowels, when their loose state arises from indigestion and viscid humours. He agrees also with the other authorities, that it is stomachic and aphrodisiac. (ii, 2, 735.)

Zύθος,

Zythus, *Ale*, is of a compound nature; for it is acrid, as being formed by a putrefaction ("fermentation?"), and cold, as being possessed of an acid quality. It therefore produces bad chyle.

COMMENTARY. The plan of our present work prohibits us ^{COMM.} from entering into an exposition of the general literature of this subject, but we think this the less necessary as in another work, to which we have often referred in this part of our Commentary, we have given an elaborate disquisition on the ancient Ales, into which we have condensed all the information which we could procure respecting them. We would also beg leave to refer to Gruner's learned annotations on Zozimus Panopolita (De Zythorum Compositione); to Ludovicus Nonnius (De re Cibaria, iv, 15); Eustathius (Comment. in Iliad. xiii, 640); and Athenæus (Deipnos. x, 67, ed. Schweigh.) Our proper business now is to state the opinions of the medical authorities with regard to their medicinal powers. Dioscorides mentions two kinds of ale or beer, in his Mat. Med., both of them prepared from barley, but does not state wherein the difference between them consisted. The Zythus, he says, is diuretic, apt to affect the kidneys and nerves; peculiarly calculated to prove prejudicial to the membranes of the brain; is flatulent; engenders depraved humours, and occasions elephantiasis. Of the Courmi, he also says, that it occasions headache, forms bad humours, and is hurtful to the nerves; he adds, that drinks of this nature are also formed from wheat, in Spain and Britain (ii, 109, 110.) See further, Pliny (H. N. xxii, 82.) Aëtius, Oribasius, and our author, copy almost verbatim from Galen. Rhases treats of the Zythus, by the name of *foca*, first quoting the chapter of Dioscorides on the Zythus, and then adding, upon the authority of an Arabian writer, Bimasuy (Mesue the elder?), that ale prepared from barley, cloves, and rue, is prejudicial to the head; but that prepared from fine bread (similago?) mint, and parsley, forms good chyle, and is good for the stomach (Cont. l. ult. i, 306.) Avicenna's account of Zythus, which he also describes by the name of *foca*, is entirely made up of extracts from Dioscorides and Rhases. (ii, 2, 272.) Serapion, as far as we can discover, does not treat of this article. A liquor is treated of pretty copiously by Symeon Seth, under the head of *Fucas*, which, as his editors remark, is probably a corruption of Posca. In his account of it, he introduces a short sentence from Dioscorides's chapter on Zythus, to the effect that "ivory steeped in it becomes as ductile as wax." It was not, strictly speaking, an ale or beer, being

COMM. merely a mixture of vinegar and water, rendered more agreeable to the palate by some aromatics. See Harduin ad Plinii (H. N. xix, 29.) Respecting this beverage Seth states, as his own opinion, that it is wholesome, especially when used by persons of a hot temperature of stomach; that it quenches thirst; whets the appetite; increases the alvine and frequently the renal discharge.

Zύμη,

Fermentum, *Leaven*; it also is composed of opposite ingredients; for it is possessed of a cold acidity and putrefactive ("fermentative?") heat, and moreover of salts and flour. It is, therefore, heating and discutient in no ordinary degree.

COMM. COMMENTARY. On the ancient modes of preparing Fermentum or Leaven, see 'Geopon.' (ii, 31); and Pliny (H. N. xviii, 26.) The kind in most common use was prepared from millet and must, or the fresh juice of the grape. Our author's description of its medicinal powers is taken from Galen. Aëtius treats of it in nearly the same words. Dioscorides praises the leaven of wheat as being heating and epispastic, and suiting with complaints of the heels, phymata, and furunculi. (ii, 107.) Serapion under this head gives two extracts from Dioscorides and Galen, followed by one from Abenmesuai (the elder Mesue?), who recommends it in the fevers of children for quenching thirst. (De Simpl. 29.) Rhases gives a formula for a draught to be prepared from leaven, which he in like manner praises as being wonderfully efficacious in the fevers of children. (Cont. l. ult. i, 306.)

Ζωμός,

Jusculum, *Broth*, loosens the belly if drunk by itself or with wine, when made from fresh fish; but particularly that which is simply prepared from hakes, scorpion-fishes, rainbows, perches, and other tender fishes which dwell among rocks, with water, oil, dill, and salts. In like manner, also, the broth of the Crustacea, especially of the Tellinæ (limpets), the Chamæ (cockles), and Conchylæ (oysters). The broth of an old cock, boiled with salt to a great degree, is laxative; but that of a hen, on the other hand, is astringent.

COMM. COMMENTARY. The account here given of the broth of fishes is taken from Dioscorides (ii, 35.) Galen directs the

broth of fish to be prepared in the following manner : first COMM.
 pour in plenty of water, then add of oil *q. s.* with a little
 dill and leek ; then, when the fish are half boiled, sprinkle a
 little salt. (De Alim. Facult. iii) ; (Meth. Med. ix.) Apicius
 in the tenth chapter of his work, gives fourteen different re-
 cepts for preparing soups from fishes. Most of them contain
 wine, honey, vinegar, and oil, with pepper, lovage, cumin,
 rue, &c., among the ingredients which enter into their compo-
 sition. On the fishes mentioned under this head, see Book I
 (90.) The Arabians generally condense the substance of
 Dioscorides's two chapters on Garum and Jus into one, under
 the title of *Muria*. See Serapion (184), and Avicenna (ii, 2,
 486.) Serapion's Arabian authorities recommend it as a
 gentle purgative and phlegmagogue in sciatica, both when
 given by the mouth and in clysters. One of them says of it,
 that it makes the pustules of smallpox come out, when the
 eruption is slow in taking place.

Ἡδύσμων,

Mentha, Mint, is hot, consists of subtile particles ; its powers
 are acrid in the third order, with some half-concocted fluids ;
 it therefore provokes to venery. It has, likewise, some bitter-
 ness, by which means it kills intestinal worms ; and by its
 sourness it restrains recent discharges of blood.

COMMENTARY. We need have no hesitation in referring it COMM.
 with all the best commentators to the *Mentha sativa*, L. }
 Dioscorides says it has calefacient, astringent, and desiccative
 powers ; and hence, he adds, it stops the discharge of blood
 when drunk with vinegar, and kills the round worms. (iii, 36.)
 According to him, it stimulates the male to venery, but pre-
 vents conception in the female when applied on a pessary
 before coition. He further says of it, that it stops hiccup,
 vomiting, and cholera, when taken in a draught along with
 the juice of an acid pomegranate. He also recommends it, in the
 form of an external application, for headache, complaints of the
 breast, and other cases. Galen pronounces mint to be one of
 the most attenuate articles in the Mat. Med. He agrees with
 Dioscorides that it is useful in hæmoptysis ; and that it is
 anthelmintic and aphrodisiac. The author of the Hippocratic

COMM. treatise '*De Diætá*,' while, like Dioscorides, he gives mint the credit of promoting the urinary discharge and stopping vomiting, says, that taken in great quantity it weakens the semen and stops erections. Aristotle likewise holds the opinion that mint is anaphrodisiac. (Bibl. ii, 20.) Aëtius, seemingly with the desire of reconciling these great authorities, maintains that mint indeed generates much semen, but of a feeble nature. (Tetr. iv, 4, 26.) Ludovicus Nonnius, by the way, also attempts to account for the difference among the professional authorities on this point. (De re Cib. i, 15.) See also Ruddy, (Mat. Med. 323), and Parkinson (35.) The Arabians in treating of it follow Dioscorides and Galen closely, and add little or nothing of their own. They all agree with Dioscorides, that it is aphrodisiac and stops vomiting. See in particular Serapion (290), and Avicenna (ii, 2, 188.) We need scarcely mention that this species of *Mentha* is now rejected from our Mat. Med., but that three other species of it are still retained.

Ἡδύσαρον ἢ Πελέκινος,

Hedysarum, *French Honeysuckle*, is bitter and subastringent. It is therefore stomachic, when taken in a liquid form, and clears away visceral obstructions.

COMM. COMMENTARY. There has been great difference of opinion among the commentators and herbalists respecting this herb; but we are inclined to decide, with considerable confidence, that it was the Hatchet Vetch, or *Coronilla securidaca*. Dioscorides says of it that it is stomachic and alexipharmic, and that, in a pessary, it prevents conception. Our author abridges Galen, and Aëtius does the same; and so likewise Oribasius. We have been unable to find it in the Mat. Med. of the Arabians, with the exception of Ebn Baithar, who merely copies from Dioscorides (i, 80.)

Ἡλιοτρόπιον,

Heliotropium, *Sunflower*; the large one (called also Scorpiurus) is possessed of calefacient, desiccant, and detergent powers. Its decoction when drunk brings away phlegm and bile. Its fruit in a cataplasm dries myrmecia and such like

cutaneous complaints. The small Sunflower also removes these complaints and kills worms if drunk with the fruit along with natron, hyssop, and cardamom.

COMMENTARY. Dioscorides calls the great Sunflower (*Heliotropium Europæum*) phlegmagogue and cholagogue, and says it is useful in the bites of scorpions, both internally and externally. He adds, that it was used as an amulet to produce sterility. He also recommends it in intermittent fevers, and as a cataplasm and fomentation to various tumours, sprains, &c. He adds, that it is emmenagogue, and procures abortion when powdered and applied on a pessary. (iv, 190.) None of the other Greek authorities, as far as we have been able to discover, have treated of either of the heliotropes; and if the Arabians describe them, we have not been able to discover under what name it is. The lesser heliotrope is probably the *Croton tinctorius*. COMM.

Ἡλεκτρον,

Electrum, *Amber*; they say that it is the tears of the poplar, which are discharged into the river Po, and get concentered into a golden-coloured substance. This, being pulverized and drunk, stops defluxions of the stomach and bowels and discharges of blood.

COMMENTARY. It is well known that the ancient authors in general represent amber as an exudation from the poplar tree, commonly found on the banks of the Po. Some of them, however, such as Lucian (*De Electro*), held that it is a bituminous substance. See also Theophrastus (*De Lapidibus*, with the annotations of Hill.) Serapion says of it, that it is formed in the sea as mushrooms are formed on land; and when the sea is troubled it casts forth large stones, and with them are cast out crusts of amber. He also gives an account, which is not very intelligible in the Latin translation, of its being swallowed up by a fish, from which, when killed, amber was procured. What is of a citrine colour, he says, is good; but what is white, like an ostrich's egg, is bad. Upon the authority of Aben Mesuai (Mesue the elder?), he calls it a hot and dry medicine, and says it strengthens the brain, all the senses, and the heart, and is useful to old persons and men of a cold temperament. (*De Simpl.* 196.) Avicenna's account of it is COMM.

COMM. mostly made up from Serapion. Amber, he says, in my opinion, is an emanation from a fountain in the sea. He also repeats the account from Serapion, of its being procured from the belly of a fish which has swallowed it and dies. He must allude to the ambergris which is procured from the sperm-whale. He determines it to be hot in the second and dry in the first degree. He recommends it in exactly the same cases as Serapion. He makes mention of a species used for dyeing the hair black. (ii, 2, 62, and 364.) Rhases merely gives its medicinal character, which is the same as that quoted above from Serapion. (Cont. l. ult. 44.) But no ancient writer has given so full and correct an account of amber as Symeon Seth. He says it abounds in various places, and that there are fountains of it as of pitch, bitumen, and the like; that the best kind is of a grayish colour (*grisea ambra*?) and fat, which is sold in a certain city of India, called *Silachetum*. The ambergris or *ambra-grisea*, is found in a city of Arabia Felix, called *Syachria*. The worst kind, he says, is black, and is collected from fishes that have swallowed amber at its fountains. It has, he adds, calefacient and incisive powers, and therefore some add it to stomachic remedies. It strengthens the head and heart; and when smelled to in drinking accelerates intoxication, and still more so if added to the wine. (*De Alimentis*, xiii.) Psellus says, it cures dysury when appended as an amulet, removes fever, stops defluxions of the stomach, and sharpens the sight. (*De Lapidibus*.) Having been led along in the present instance by the ancient authorities who have given the most correct description of amber, we omitted to mention at the commencement, that Dioscorides describes the *electrum* under the head of *populus*, as being said to be the tears of poplars which have dropped into the *Po*, and become coagulated. He adds, it is of a fragrant smell when rubbed, and of a golden colour; and when triturated and drunk, it stops defluxions of the stomach and belly. (i, 110.) See also Pliny (*H. N.* xxxvii, 11), who supposes amber an exudation from pines, and gives otherwise a very authentic and interesting account of its origin. He makes mention of amber being used as an amulet in diseases of children, a practice which, like other superstitions of the like kind, has been transmitted to modern times. We need scarcely remark

that the ancient opinions regarding the origin of amber, are now looked upon as being not far removed from the truth. Amber, although now in a fossil state, is supposed to have been an exudation from some tree of the genus *Pinus*. See Pereira (*Mat. Med.* 223); and the Appendix to this section. COMM.

Ἡμεροκαλλις,

Hemerocallis, *Lily of the Valley*; its root has powers like those of the lily, and, like it, is useful for burns.

COMMENTARY. This is undoubtedly a plant of the lily tribe; probably the *Lilium bulbiferum*. Dioscorides, besides recommending it in burns, like our author, says of it that when drunk and applied in a pessary of wool it produces discharges of water and blood; and that its leaves form an excellent application to the inflammations of the breasts after parturition, and to those of the eyes. Our author follows Galen. Serapion treats of it under the head of *Lilium*. (189.) COMM.

Ἡμιονίτις,

Hemionitis, *Moon Fern*, is possessed at the same time of astringency and bitterness. It therefore relieves affections of the spleen when taken with vinegar.

COMMENTARY. Galen calls it also by the names of *Scolopendrium* and *Asplenium*. (ii, 292, ed. Basil.) Dioscorides describes it so as to leave no doubt of its being a cryptogamous plant. It is a species of the *Scolopendrium*. The other authorities praise it in enlarged spleen. COMM.

Ἡπαρ,

Hepar, *the Liver*; if that of a mad dog be roasted and eaten, it is said to relieve those who have been bitten by him. The sanies of a boiled goat's liver relieves nyctalopia when injected into the eye. They also direct the vapour of it when boiling to be received into the eyes, and also to be eaten. They say that it rests epileptics if eaten, and that the liver of the buck-goat does the same. The liver of a lizard when put into carious teeth relieves the pain. That of the wolf is added to the hepatic medicine prepared from eupatorium. The liver of an ass when roasted is of use to epileptics when eaten fasting. That of a bear when dried in its fresh state and

trituated with wine is drunk for the bites of reptiles. The liver of the cormorant, when dried and taken in a draught, makes calculi be discharged.

COMM. COMMENTARY. We have treated of the livers of animals in the dietetical part of the First Book. See also in particular Galen and Serapion. Our author copies from the former, who in his turn follows closely in the footsteps of Dioscorides.

Ἡριγέσων,

Senecio, *Groundsel*, has mixed powers, being refrigerant and moderately discutient.

COMM. COMMENTARY. Dioscorides recommends it (*Senecio vulgaris*) in inflammatory complaints, and also says of it that when drunk with must it relieves the pains of the stomach proceeding from bile. Galen and the other authorities, like Paulus, treat of it in general terms as an antiphlogistic application. Apuleius recommends it in sciatica (75, 5.) In modern times it had the character of being emetic, but the ancient authorities do not say that it has this property.

Ἡρύγγιον,

Eryngium, *Eryngo*, is calefacient in no imperceptible degree, and has no little heat and subtilty of parts.

COMM. COMMENTARY. That it is a species of *Eryngium* or sea holly seems indisputable. It may either be the *maritimum*, the *planum*, or the *campestre*, all of which are brought into view and figured by our careful herbalist Parkinson. (Theatre of Plants, 986.) Dioscorides's description of its localities would seem to agree best with the *campestre*; he calls it calefacient, and says it is diuretic and emmenagogue, removing tormina and flatulences, and proving serviceable in hepatic diseases, and as an alexipharmic. He adds, that it is related of it that it discusses hard tumours, both when appended as an amulet and in a cataplasm; and that the root of it cures opisthotonos and epilepsy when drunk with hydromel. (iii, 21.) Galen and the other Greek authorities treat of it in general terms like Paulus. The *secacul* of the Arabians has been taken for this article, but erroneously, as Matthiolus has well remarked. (Ad Dioscor. iii, 21.) But Serapion treats of it under the name of *Iringi*, as being a white variety of the

Aster Atticus. He merely translates the words of Dioscorides COMM. and Galen. (De Simpl. 96.) We cannot find any mention of it in the works of the other Arabians, except Ebn Baithar, who also does little more than copy from Dioscorides and Galen. The eryngo long retained its place in our Dispensatory, indeed it can scarcely be said to be yet formally expelled from it. Pereira briefly notices the *Eryngium campestre*. It is the *Eryngium maritimum*, however, which is described in the Edinburgh Mat. Med. Quincy, by the way, in imitation of Serapion, confounds the Eryngo with the Aster Atticus. (Complete Engl. Disp. 113.) Boerhaave gave the candied root and decoction of eryngo as an attenuant and deobstruent in obstructions of the viscera, and for coughs; and Tournefort makes mention of the same as being in common use in his days. (Mat. Med. 98. Engl. edition.)

Θάλασσιον ὕδωρ,

Aqua Marina, *Sea Water*, is acrid, moderately calefacient, and desiccant; it is bad for the stomach when taken in a draught, disorders the bowels, and proves phlegmagogue. If poured hot on a part it attracts and discusses.

COMMENTARY. The ancient authorities who have written COMM. most learnedly on this important, although common-place article of the Mat. Med., are Dioscorides, Avicenna, and Rhases. Sea water, says Dioscorides, is heating, acrid, and bad for the stomach, for it disorders the belly, bringing away phlegm and bile. When poured hot on a part it attracts and discusses, suiting with affections of the nerves and chilblains before they become ulcerated. It is proper for mixing with raw barley-meal, and is suitable for plasters and discutient malagmata. For evacuating the bowels it is injected in a tepid state, and for tormina in a hot. It is a suitable fomentation in cases of scabies, pruritus, lichen, enlarged tonsils, and turgid mammæ. In hot fomentations it dispels lividities, and is useful in the bites of venomous animals, such at least as induce tremblings and rigors, but especially of scorpions, phalangia, and asps, and if, in such cases, one go into a hot bath, it proves useful; and in chronic cachexiæ of the body and nerves the bath of it is useful. Its hot vapours soothe dropsies, headaches, and dullness of hearing. It is given as a purge

COMM. either alone or with oxycrate, wine, or honey; and after the purging takes place the broth of a hen or of fishes is exhibited to dilute its acrimony and pungency. (v, 19.) Avicenna borrows largely from Dioscorides, but supplies some additional remarks of his own by no means devoid of interest and importance. He recommends sea water for chilblains, for killing lice, and discussing extravasated blood. He also, copying from Dioscorides, praises it in pruritus, scabies, and impetigo. Epileptics, he says, are benefited by tepid salt water, but injured by hot. The vapour of salt water, he adds, is beneficial in vertigo and dropsies. (ii, 2, 58.) From Rhases's very lengthened dissertation on this subject we can only find room for a few extracts. Upon the authority of Johannitius (Serapion?), he states that the use of salt water to one unaccustomed to it proves laxative and pinches the belly, but to one accustomed to it, it proves astringent. Another of his authorities, Judæus, says salt water proves beneficial in pain of the head and chest, in dropsy, and a watery stomach. He also states of salt water, that although at first it proves laxative, the continued use of it brings on constipation, because, he says, its salt dries, astringes, and strengthens the belly. (Cont. l. ult. i, 70.)

Θαλίτρον,

Thalictrum, *Meadow Rue*, has desiccant powers, without pungency. It therefore heals chronic ulcers.

COMM. COMMENTARY. Sprengel confidently pronounces it to be the *Thalictrum minus*, L., that is to say, the lesser meadow rue of our herbalists. See Parkinson (265.) Dioscorides and Galen state its medicinal properties in the same terms as our author. It is the Thalitruum of Pliny, who likewise praises it as an application to ulcers. (H. N. xxvii, 112.) We have not been able to find it described by any of the Arabian authorities on the *Mat. Med.* except Ebn Baithar, and it has had no place in our English Dispensatory for many ages past.

Θαψία,

Thapsia, *Deadly Carrot*, is acrid and strongly calefacient, with some humidity. It therefore attracts strongly the deep-seated fluids, and dispels them when attracted.

COMMENTARY. The authorities are divided between the *Thapsia Garganica* and the *Thapsia Asclepium*. Old Gerard gives it the name of deadly carrot, but Parkinson that of scorching fennel. Theophrastus mentions that it purges upwards and downwards. (P. ix, 10, 24.) Pliny describes it as a very acrid poison. (H. N. xxiii, 43.) See Dioscorides (iv, 154.) Serapion states that it is a violent emetic and cathartic, and operates powerfully as an external application. The thapsia has long ceased to be employed in medicine; even old Culpeper calls it "a venomous foreign root, and therefore no more of it."

Θείον,

Sulphur; it likewise is possessed of attractive powers, is hot, and consists of subtile particles, so as to be an antidote against many poisonous animals, more especially the sea-turtle and dragon, either sprinkled dry or mixed with saliva, or with the urine of a child, or oil, or honey. It is also a wonderful remedy for scabious complaints.

COMMENTARY. Sulphur was extensively used in medicine from the earliest times. Pliny gives a very full and interesting account of it. (H. N. xxxv, 50.) The sulphur vivum, of which mention is so often made in this work, was evidently native sulphur, that is to say, the prismatic sulphur of Jameson. The sulphur ignem expertum was clearly the factitious sulphur or brimstone, namely, that which is procured from pyrites by sublimation. We need scarcely mention that sulphur was extensively used as an application in cutaneous diseases, and more especially scabies. It was also given internally in catarrhs and other complaints of the chest. See Dioscorides and Pliny. The words of the latter are well worth quoting in the present instance. "Natura ejus calfacit, concoquit, sed et discutit collectiones corporum: ob hoc talibus emplastris malagmatisque miscetur. Renibus quoque et lumbis in dolore cum adipe mire prodest impositum. Aufert et lichenas a facie cum terebinthi resina et lepras. Harpacticon vocatur a celeritate avellendi, avelli enim subinde debet. Prodest et suspuriosis linctum. Purulenta quoque extussientibus, et contra scorpionum ictus. Vitilignes vivum nitro mixtum atque

COMM. ex aceto tritum et illitum tollit, item lendes in palpebris, aceto sandarachato admixto." We have not found the acetum sandarachatum mentioned by any other writer; from its name, it was no doubt composed of vinegar and arsenic, that is to say, realgar. Serapion, in treating of sulphur, confines himself entirely to Greek authorities (407); and so in like manner Avicenna (ii, 2, 612), and Rhases (Cont. ult. 694.)

Θέριμος,

Lupinus, *Lupine*; that which is edible is possessed of em-
plastic powers; but the bitter is detergent, discutient, and
desiccative, without pungency. It kills worms, both when
applied externally and when taken in infusion, and it cleanses
the bowels when drunk with rue and pepper. It also cleanses
the skin, and discusses tumours when applied with oxymel.
The wild is more bitter and stronger than the cultivated in all
respects.

COMM. COMMENTARY. Two varieties of the lupine, the *sativus* and
sylvestris, were used in medicine from the days of Dioscorides
down to our Quincy. Though the former of these, which
was the one principally used, be well known, there is some
doubt as to the species; whether it was the *pilosus*, or the
hirsutus, or, what is more probable, whether it comprehended
both. Dioscorides and Galen agree in enumerating a long list
of cases to which the lupine is applicable, but as our author's
account embraces the sum of what they have written on it,
we need not enter here into an exposition of their opinions.
Suffice it to say, that as an emmenagogue and deobstruent
it was much relied upon internally, and applied in a great
variety of external complaints in fomentations. The same
virtues are ascribed to it by the Arabians, who, however, sup-
ply no additional observations of any importance. Avicenna's
account of its medicinal powers is particularly full. (ii, 2, 440.)
Rhases derives almost all his information from the Greeks.
(Cont. l. ult. i, 435.) Serapion copies altogether from Dioscorides
and Galen (De Simpl. 74.)

Θηλύπτερον,

Which some call *Nymphæa* or *Filix*, *Female Fern*, is like the

fern in all its properties. When drunk with wine it kills the broad and round worms. It also destroys the fœtus in utero. Its leaves, when eaten, soften the belly.

COMMENTARY. There seems every reason to refer it to the *Asplenium Filix fœmina*, Bernh., or *Polypodium*, L. Theophrastus recommends it as a vermifuge medicine. (H. P. ix, 20.) Galen, Avicenna, and all the authorities that treat of it, concur in assigning to it this faculty. Dioscorides also sets it down as a medicine calculated to induce sterility and occasion abortion. The powder of it is recommended as an application to ill-conditioned sores. In the days of Quincy it still held an equivocal place in the Dispensatory. COMM.

Θλάσπι,

Bursa Pastoris, *Shepherd's Purse*, is possessed of acrid powers, so that when drunk it breaks internal abscesses, and occasions a flow of the menses; and if injected by the anus it relieves ischiatic disease by occasioning a bloody discharge. It otherwise purges bile upwards and downwards when drunk to the amount of an acetabulum.

COMMENTARY. Sprengel holds that the Θ. of Dioscorides is the *Thlaspi Bursa Pastoris*. Dioscorides describes another species, which is either the *Iberis umbellata*, or the *Viola latifolia*. Pliny recommends the *Thlaspi* as a phlegmagogue and cholagogue. (H. N. xxvii, 113.) Dioscorides assigns it the same character, and also holds that it is emmenagogue. Our author copies closely from Galen. Avicenna dwells at considerable length upon the virtues of *Thlaspi*, calling it emetic and purgative, and also anthelminthic, emmenagogue, and carminative. The *Thlaspi arvense* held a place in the Dispensatory, with all the characters of the ancient T., down to a late date. See Quincy (Compl. Engl. Dispens. 66.) COMM.

Θρίδαξ,

Lactuca, *Lettuce*, is a juicy and cold potherb, yet not extremely so, but of the temperament of spring water. It therefore suits with hot inflammations, and also quenches thirst. When taken in an infusion it stops gonorrhœa and libidinous dreams. The wild lettuce is less cooling and diluent than the other, and is also more juicy.

COMM. COMMENTARY. The cultivated kind is certainly the *Lactuca sativa*: the wild the *L. virosa*. The ancients, as we have stated in another place, were well acquainted with the hypnotic powers of lettuce. See Celsus (ii, 32); Dioscorides (ii, 164); Athen. (Deipnos, ii, 80, ed. Schweig.); Pliny (xix, 38); Galen (De Alim. Facul. ii, 40); Geopon. (xii, 13); Aëtius (i, 168); Symeon Seth (De Alimentis); Macer Floridus (De Herb. vir.); Serapion (De Simpl. ex Plant.) According to Dioscorides, it is also anaphrodisiac, and removes the *pollutio nocturni somni*. One of Serapion's Arabian authorities commends it in jaundice; and another of them says that it dispels the unpleasant effects produced by intoxication. (De Simpl. 240.) Avicenna's account of its medicinal virtues is very interesting, but is in the main derived from Dioscorides and Galen. He represents it to be an eminently cold, that is to say, a sedative plant, and recommends it in all complaints of a hot nature, in watchfulness, alienation of mind, and in *coup de soleil*. He also speaks highly of its milk in hot affections of the eyes. (ii, 2, 441.) Rhases likewise gives an excellent description of its powers, but in nearly the same terms as Avicenna. He makes it to be soporific, anaphrodisiac, and alexipharmic. (Cont. l. ult. i, 386.) Dioscorides states that the wild lettuce is a hydragogue purgative, and we may mention that the late Dr. Collin, of Vienna, gave it with great success in dropsies. Avicenna says the wild, in virtue, resembles the black poppy. We need scarcely say that both the *L. sativa* and *virosa* have, of late years, been restored to the *Materia Medica*. Upon reference to the works of Orfila, Paris, Pereira, and other authorities of the day, it will be seen that the ancients had correctly stated the medicinal virtues of both species.

Θύμος,

Thymus, *Thyme*, heats and dries in the third degree. It also incides viscid and thick humours.

COMM. COMMENTARY. We have little hesitation in describing it to be the *Thymus vulgaris*. Dioscorides states that thyme is expectorant, diuretic, emmenagogue, and discutient; and all the authorities, down even to modern times, confirm this character of it. Galen says it is to be placed in the third order of desiccants and calefacients. He recommends it as being

diuretic and emmenagogue, and says that it destroys the fœtus COMM. in utero, clears out the viscera, and is useful in discharges from the chest and lungs. Oribasius gives it the same character. Aëtius, from personal experience, as he says, writes of its virtues more elaborately than any other ancient author. Thus he gives a prescription for a draught composed of oxymel and finely powdered thyme, which he says proves beneficial in arthritic diseases by purging bile and the acrid humours, both by the belly and by the bladder. He recommends similar compositions in sciatica, pleuritic pains, meteorism of the hypochondria, and tympanitis. He prescribes, in like manner, thyme and oxymel to melancholic persons, to those disordered in mind, and possessed with morbid apprehension; and in gout, when given with undiluted wine. He also recommends it to be given in swellings of the testicles, to the patient fasting, in undiluted wine. The Arabians write fully on this head, but borrow almost all their information from Dioscorides and Galen, and make no reference to Aëtius. See in particular Avicenna (ii, 2, 328), and Serapion (De Simpl. 281.) They all agree in giving it the character of being diuretic, emmenagogue, anthelmintic, and phlegmagogue.

Θύμβρα,

Thymbra, *Savory*; the wild has the same powers as thyme. The garden is in all respects weaker, but is better for food.

COMMENTARY. The ancients made use of *Savory* (*Satureia* COMM. *Thymbra*) as a condiment. Aristophanes (Nubes, 420.) Dioscorides recommends it in the same cases as thyme, and all the others write of it in much the same terms. Symeon Seth says it promotes digestion, is emmenagogue, diaphoretic, and carminative. Macer Floridus affirms that it is aphrodisiacal, and produces abortion in pregnant women when applied on a pessary. It long held a place in the Dispensatory with the character of being "warm and discussive." See Quincy (127.)

Θυμελαία,

Thymelæa, *Spurge-flax*; from it the *Granum Gnidium* is produced, which has similar powers to it.

COMM. COMMENTARY. The confusion about the Thymelæa and Chamelæa of the ancients may be partly removed by the following account of the matter given by Alston. There are three species of Laureola, 1st, the *L. officinalis*, or *L. Mas*, *Dwarf Laurel*, or *Spurge Laurel*, which grows in hedges and woods in England; 2d, the Chamelæa, or *Laureola femina* namely, the true *Mezereon*, or *Spurge Olive*, which grows plentifully in Germany; 3d, the Thymelæa, *Spurge Flax*, or *Mountain Widow Wail*, which grows in the south of France. We will treat further of the Chamelæa, or Mezerion, in its proper place. Sprengel is decidedly of opinion that the Thymelæa of the ancients is *Daphne Gnidium*, L., or flax-leaved daphne, and one of the latest and best authorities on the Mat. Med. comes to the same conclusion respecting it. Dr. Pereira says, "*Daphne Gnidium* is the Θυμελάια, or Thymelæa of Dioscorides, whose fruit is the κόκκος κνίδιος, or Gnidium berry, used by Hippocrates. Its properties are similar to those of the *D. Mezereon*." (Elements of Mat. Med. 807.) For an account of its effects on the animal economy, see Orfila (Toxicol. ii, 3.) We will treat of its medicinal virtues under *Coccus gnidius*.

Ἰδαία ρίζα,

Idæa Radix, *Idæan Root*; being sour as to taste and powers, it agrees with hemorrhages and rheumatic affections when drunk or applied externally.

COMM. COMMENTARY. As may be seen upon referring to Bauhin, Woodville, Sprengel, and Pereira, several of the authorities have been disposed to hold this plant for the *Arbutus Uva Ursi*; but the probability is that it was the *Laurus Alexandrina*, or *Uvularia amplexifolia*. Dioscorides recommends it in fluxes from the bowels and womb, and in all kinds of hemorrhage. (iv, 44.) Pliny translates the chapter of Dioscorides. (H. N. xxvii, 69.) Our author copies from Galen; and Oribasius, in like manner, borrows his description of the plant from him. As far as we can discover the Idæa Radix is not treated of by the Arabians; and even in the days of Matthiolus it had disappeared from the Mat. Med.

Ἰδρωῶς.

Sudor, *Sweat*; it is troublesome to collect by itself; but

is mixed with the powder of those who exercise themselves in the palestra, which powder, being only repellent before, thus becomes altogether discutient. It is, therefore, a powerful remedy for inflamed nipples, and for extinguishing the heat in them. It also answers with buboes; but if too dry it must be softened with oil of privet or oil of roses.

COMMENTARY. *Sweat*, or the matter of Perspiration. COMM.
 "Sweat," says Galen, "is one of the fluids formed in the animal body, consisting of the same materials, and having the same mode of formation, as the urine, for both are formed from the liquids drunk, these being heated, and acquiring also some bilious property. But the sweat is more elaborated, as having passed through so many intervening bodies to the skin." (De Med. Simpl. x.) This is a very ingenious account of the nature of the sweat and urine, which, it is certain, bear a close analogy to one another, and are often vicarious discharges. Thus, in cases of suppression of urine, the perspiration has often an urinous taste and smell. But this is not the place for enlarging further upon this subject. Our author's account of the medicinal properties of sweat is taken from Galen. (l. c.) All the other authorities, in like manner, copy from him. See in particular Serapion (De Simpl. 466), and Avicenna (ii, 2, 648.)

Ἰξός,

Viscum, *Birdlime*, is heating with acrimony. It attracts, therefore, the deep-seated humours powerfully, and is discutient, like the *Thapsia*, but is much more inefficacious than it.

COMMENTARY. The *Viscum*, or *Birdlime*, is got from the *Loranthus Europæus*, or *Misseltoe*. The *Viscum quercinum* held a place in the *Materia Medica* from the earliest times down to a very late date. Dioscorides mentions that birdlime is also got from the apple tree, the pear tree, and other trees, and is found upon the roots of certain shrubs. Pliny describes the ordinary mode of preparing it. (H. N. xvi, 94.) Dioscorides recommends it principally as an agglutinative and attractive application to indolent tumours and sores. When mixed with the caustic ley (quicklime and potass) he says birdlime increases its efficacy. With orpiment and sandarach, and applied

COMM. in a cataplasm, it draws off diseased nails. (iii, 93.) Galen remarks that, like Thapsia, its calefacient powers do not come into immediate operation. The other authorities, in treating of this substance, follow Dioscorides and Galen. See in particular Avicenna (ii, 2, 717), and Ebn Baithar (i, 410.) The *Viscum album* is retained in the modern Greek Pharmacopœia. (Athens, 1837, 167.)

'Iòv,

Viola, the Violet; its leaves have a watery and coldish substance for their prevailing ingredient.

COMM. COMMENTARY. There can be little or no doubt that the purple violet of Dioscorides is the *Viola Odorata*. On the violet, see a most interesting disquisition by Celsius (*Hierobotanicon* in voce *Dudaim*); also Sprengel (R. H. H.) Dioscorides calls it refrigerant, and recommends it as an external application in ardor of the stomach, inflammation of the eyes, and prolapsus ani; and mentions, that it had been taken internally in quinsy and epilepsy of children. (iv, 120.) Galen merely recommends it externally in the same cases as Dioscorides. The Arabian authorities extend the use of this article. Thus, Avicenna recommends it in heat of the stomach, both internally and externally; in a syrup for coughs, pleurisies, and other affections of the lungs; in pains of the kidneys as a diuretic, and as a cholagogue. (ii, 2, 715.) See also Rhases (*Cont. l. ult. 3, 21*), and Ebn Baithar (i, 170.) Serapion, on the authority of Aben Mesuai, says further of it that it is laxative in doses of from three to seven drachms. (*De Simpl. 141.*)

'Iòς,

Ærugo, Verdigris, has a bitter quality to the taste, being discutient, cathartic, and corrosive, not only of soft but also of hard flesh; but by mixing a little of it with much cerate, one may render the medicine detergent without pungency.

COMM. COMMENTARY. That it was the *Ærugo Æris*, or Verdigris, seems indisputable. The scraped verdigris (*ιòς ζυστός*) was the common kind, and the name is still retained in the modern Greek Pharmacopœia (61.) Hippocrates, Dioscorides, Pliny, and Galen recommend verdigris in complaints of the eyes. Dioscorides describes very minutely the process for preparing

verdigris, which is not very unlike that which is now practised COMM.
 in France. He also makes mention of another species, }
 namely, the *Ærugo Scolecia*, with which we are now unacquainted. He gives an interesting account of the cases in
 which it is applicable. (v, 92.) Galen also writes of it with
 great precision. He says, when lightly applied it relieves fungated sores; and when diluted with cerates, it cleanses them.
 (De Simpl. ix.) The other Greek authorities give much the
 same account of it. The Arabians treat fully of the two kinds,
 which they call *Ærugo rasilis* and *subtilis*, but borrow almost
 all their information from Dioscorides and Galen. Like the
 Greek authorities, they apply it principally in intractable
 ulcers and in diseases of the eyelids. See Avicenna (ii, 2,
 739), and Serapion (De Simpl. 383); Haly Abbas (Pract. ii,
 44); Ebn Baithar (i, 540.)

Ἱππόκαμπος,

Hippocampus, is a sea animal, the ashes of which when
 burnt thicken the hair in alopecia, along with liquid pitch.

COMMENTARY. It is, indisputably, our *Syngnathus Hippo-* COMM.
campus. Ælian relates that it has proved useful in cases of }
 hydrophobia. (Hist. Anim. xiv, 20.) Our author borrows
 from Dioscorides (ii, 3.) The Arabians do not treat of it.

Ἱππολάπαθον,

Hippolapathum, *Horse Burdock*, grows in marshes, being
 like the Burdock.

COMMENTARY. This article, which would seem to be the COMM.
Rumex Hydrolapathum, is treated of in the same brief terms }
 by the other authorities. See Dioscorides (i, 141.)

Ἱππομάραθρον,

Hippomarathrum, *Horse Fennel*; that variety which resem-
 bles the Cachrys is more desiccant than the common Fennel.
 It is, therefore, astringent, lithontriptic, and emmenagogue;
 but that species which has seed like coriander seed, is also
 like it in other respects, but weaker.

COMMENTARY. There is little doubt that the former COMM.
 species is the *Cachrys Sicula*. The other is undetermined. }
 Our author copies closely from Dioscorides (iii, 76); and the

COMM. others follow his example. The modern herbalists, in like manner, borrow from Dioscorides. See Parkinson (884.)

Ἴπποπόταμος,

Hippopotamus, *Sea-horse*: its testicle, when dried and drunk, is a remedy for the bites of reptiles.

COMM. COMMENTARY. This brief notice of the *Hippopotamus amphibius*, or *Water-horse*, is taken from Dioscorides (ii, 25.) Most of the other authorities have omitted it.

Ἴπποσέλινον,

Hipposelinum, *Horse Parsley*, has properties resembling those of parsley, but weaker.

COMM. COMMENTARY. It is the *Smyrniium Olusatrum*, according to Dierbach, Stackhouse, Sprengel, and all the best authorities. Dioscorides represents it to be emmenagogue and diuretic, and as proving beneficial in rigors. (iii, 71.) Galen and the others treat of it briefly like our author. The Arabians treat of it under *Selinum* (*Apium*.)

Ἴππουρίς,

Hippouris, *Horse-tail*, has astringent qualities with bitterness, and on that account it is at the same time powerfully desiccant, without pungency. It is agglutinant, therefore, of the largest wounds, and is useful in intestinal hernia, and cures defluxions when drunk with wine.

COMM. COMMENTARY. The first species of Dioscorides corresponds to our author's, and is marked as the *Equisetum Fluviatile* by Sprengel, which is called in English the *Horse-tail*. The other is the *E. Limosum*. Apuleius recommends it in dysentery and spitting of blood. Aëtius recommends it in the same complaints. But both, in fact, only borrow from Dioscorides and Galen, especially the latter, who treats of it more fully than Dioscorides. The Arabians give exactly the same account of the *Equisetum*; indeed they profess to borrow everything from Dioscorides and Galen. See in particular Serapion (137), and Avicenna (ii, 2, 200.)

Ἴπποφαῖς ἢ Ἴπποφαῖος,

Hippophaes, used for scouring clothes. It is a branchy

shrub, the root of which contains juices which are extracted like those of *Thapsia*. One obolus of the juice mixed with the flour of tares, purges phlegm and bile; and the whole plant, when dried, becomes purgative.

COMMENTARY. Without entering into the discussion regarding this plant, we shall merely observe that we are disposed to agree with those who refer it to a species of spurge, namely, *Euphorbia spinosa*. Dioscorides describes it as being cholagogue, hydragogue, and phlegmagogue. (iii, 159.) It does not appear that it is treated of by Galen, nor by the Arabian authorities.

COMM.

Ἴρις.

Iris, Fleur-de-lys, is calefacient, consists of very subtile particles, and is detergent and digestive. It therefore agrees with coughs, renders expectoration easy, cures tormina, and cleanses foul ulcers. When drunk with honeyed water it evacuates the bowels.

COMMENTARY. Probably it comprehends the *Iris Germanica* and *I. Florentina*. It is the first article treated of by Dioscorides, who gives a full account of it, and concludes by saying that the different species of it are useful for many purposes. He recommends them as an external application in cutaneous diseases and ulcers, and as being soporific and alexipharmic; when drunk with wine as proving emmenagogue, and also applied in pessaries, malagmata, and acopa. The others treat of its virtues less copiously, with the exception of Serapion and Avicenna. One of Serapion's Arabian authorities, Aben Mesuai, says it purges yellow bile and black bile, and is deobstruent in obstructions of the liver. He also mentions it as a sternutatory and masticatory. (De Simpl. 189.) Avicenna's characters of the *Iris* are in the main derived from Dioscorides, but altogether his description of it is very interesting. He recommends it very particularly in diseases of the rectum and uterus, both when administered internally and in a hip-bath. He also represents it as proving useful in gonorrhœa, and in the *pollutio nocturni somni*. He concludes by calling it a general alexipharmic (ii, 2, 349.) The root of the Florentine *Iris* or Flower de Luce, was used in the practice of medicine down to a late date. See Quincy and Boerhaave. It is still kept in the shops, and has the charac-

COMM.

COMM. ter of being a drastic hydragogue. Gray, Suppl. to Pharmacop. (251.) It retains a place in the Modern Greek Pharmacopœia.

Ἰσάτις.

Isatis, *Woad*; the garden species which dyers use, is of a desiccative nature, having also some astringency. By means of these powers it agglutinates even the large wounds of hard bodies, is of use in hemorrhages, discusses œdematous swellings, and opposes the progress of all malignant diseases. The wild is more pungent, and on that account being more desiccant, it the more strongly resists all humid gangrene, but for all other purposes it is worse as being pungent. Owing to its strong powers, it is useful in affections of the spleen.

COMM. COMMENTARY. Dr. Martyn says, "The *Woad* is called Isatis and Glastum, and affords a blue tincture." (Ad Virg. Ec. iv, 43.) See also Miller, Parkinson, and Gerard. It is the *Isatis Tinctoria*. The second species of Dioscorides, or *Sylvestris*, is the *Saponaria Vaccaria*, L., but the passage is probably spurious. Our author's account of the Isatis is abridged from Galen, who has an elaborate article under this head. Aëtius copies still more closely from Galen. Both these authorities direct bread or barleymeal to be mixed with its pounded leaves when they are otherwise too strong. Of the Arabians, Avicenna gives the most accurate account of it under the head of *Nil seu Glastum sativum et sylvestre*. In its external use he follows Dioscorides and Galen, and joins Rhases in recommending it internally as an emetic for the cough of children, ulcers of the lungs, and pleurisy arising from black bile. He further commends the wild species in affections of the spleen. (ii, 2, 505, 290, 299.) Serapion and Rhases give a confused account of the Isatis, under the head of Indicum. (De Simpl. 47); (Cont. l. ult. 370.) The Woad held a place in our Dispensatory down to a recent date. See Quincy (91.) Woad and indigo were long used together in dyeing, which probably is the reason of these two articles being confounded together by certain of the ancient authorities.

Ἰσόπυρον ἢ φασίολον,

Isopyrum or Fascoilus, (Bog Bean ?) ; its seed is bitter and

somewhat sour. It is, therefore, detergent, and exudes the thick and viscid humours at the same time that it contracts bodies, and is astringent. It therefore purges deep-seated humours, and is not against persons affected with vomiting of blood.

COMMENTARY. From our author's account of it, it would seem to be the same as the *fasil*, or kidney-bean; but Dioscorides clearly distinguishes between them. (iv, 119.) Dodonæus had referred it to the *Menyanthes trifoliata*, or bog-bean; but this opinion is rejected by Sprengel. He inclines to the *Corydalis claviculata*, Pers., but is not decided. We rather incline to the opinion of Dodonæus, on the ground that its medicinal character, as given by Galen and our author, applies very well to the *Menyanthes trifoliata*. It is not treated of by Aëtius, nor can we find it in the *Mat. Med.* of the Arabians. COMM.

Ἰτιά,

Salix, the *Willow*; the leaves and flower are possessed of desiccant powers without pungency. It has also some astringency; but the bark is drier, and when burnt, the ashes of it are powerfully desiccant, for they remove clavi and myrmecia with vinegar.

COMMENTARY. Several species of the *Salix* are described by Theophrastus and other ancient authors. Milligan refers that of Celsus to *S. alba*, *fragilis*, and *purpurea*; but to define the species, which are so numerous in this genus, is futile. But that the *Alba* was one of the medicinal willows of the ancients, can admit of no doubt. See Parkinson (1430.) Dioscorides says the fruit and leaves, and bark and juice of the willow tree are possessed of an astringent power, and accordingly he recommends them both externally and internally in various complaints for which astringents are indicated, such as hæmoptysis, and as a fomentation in arthritic complaints. He also mentions the ley of it when prepared with vinegar for the removal of callus and corns. (i, 35.) Galen also gives a very elaborate statement of its medicinal virtues; he says it is desiccative without pungency, and has some astringency; and he recommends it strongly in the same cases as Dioscorides and our author; indeed, the latter merely abridges Galen. COMM.

COMM. Aëtius copies from Galen almost word for word. The Arabians treat fully of it; but in the same terms as their Grecian masters. See Rhases (Cont. l. ult. 2, 250); Avicenna (ii, 2, 319, 677); Serapion (De Simpl. 136); Ebn Baithar (i, 122.) In the modern Greek Pharmacopœia both the *Salix fragilis* and *alba* stand for the ancient *ίρέα*.

Ἰχθυοκόλλα,

Ichthyocolla, *Fish-glu*e; its powers are emplastic and desiccant. It answers well for the composition of cephalic and agglutinative plasters, and of those which are prepared for leprosy; also for removing wrinkles from the face.

COMM. COMMENTARY. That described by Dioscorides and our author was got from the *Acipenser Huso*. The large fish described by Herodotus, and Eustathius, in his commentary on the work of Dionysius the geographer, under the name of Antacæus, was, most probably, nearly the same as the Huso. See the modern Greek Pharmacopœia (83.) Artedi makes the *Huso*, *Ichthyocolla* and *Antacæus* to be varieties of the species of *Acipenser*, which he calls *Acipenser tuberculis carens*. It would appear to be the ὀξύρρυγχος of Ælian. (H. A. xvii, 32.) He makes mention of its gluten or isinglass. Our author's account of its medicinal virtues is mostly copied from Dioscorides. The others supply no additional information. The Arabians treat of it under the general head of gluten, and recommend it in the same cases as the Greeks, quoting Dioscorides, Galen, and Paulus. Serapion and Rhases recommend it in hæmoptysis. See Avicenna (ii, 2, 202); Serapion (c. 138); Rhases (Cont. l. ult. i, 336.)

Κάκανος,

Cacanus; its root is moderately desiccative and not pungent, also emplastic, and hence it relieves roughness of the windpipe in a linctus with wine, and when chewed like traga-canth and liquorice.

COMM. COMMENTARY. It is not mentioned by Dioscorides, Pliny, Theophrastus, Aëtius, or any other ancient author but Galen and Paulus; nor has any one of the commentators noticed it. We are unable, therefore, to determine anything for certain

respecting it. But as Dioscorides and Pliny ascribe nearly COMM.
 the same medicinal powers to the *Cacalia* as our author does to
 the *Cacanus*, it seems not improbable that they may have been
 identical. Our author evidently borrows from Galen.

Κάγκαμον,

Cancamum; it is the tear of an Arabian wood, resembling myrrh, fragrant, and hence used in perfumes. It has the power of extenuating fat bodies, and is detergent and deobstruent.

COMMENTARY. Dioscorides treats of it in the portion of his COMM.
 work devoted to aromatics, calling it the tear of an Arabian
 wood, having some resemblance to myrrh, which was used
 in fumigations with myrrh and storax. He calls it emmenago-
 gogue; mentions that it is given in asthmatic, epileptic, and
 splenic cases; says it is useful as a cleanser in diseases of
 the eye; but that it is most particularly applicable for fungous
 gums and toothache. (i, 23.) Galen has omitted it from his *Mat.*
Med. Of the Arabians, Avicenna is the authority who has
 treated of it most distinctly. He calls it a gum of a bad taste
 which is brought from the region of the west. (This account of
 the country which produces it may warrant suspicion that he
 had confounded it with some other gum, the production of Italy
 or Spain.) He says of it, that some had confounded it with
sandaracha (gum vernix?). In giving its medicinal virtues, he
 copies closely from Dioscorides (ii, 2, 382.) It is doubtful,
 from this imperfect description of the *Cancamum*, what sub-
 stance it applies to; probably either to *Gum anime* or to *Gum*
elemi. There seems no good ground for referring it, as some
 have done, to *Lacca*; nor to some nondescript species of the
Amyris Katef, as Sprengel does. (Ad Dioscor. l. c.)

Καδμία,

Cadmia, *Calamine*; both kinds of it are desiccant, but that
 which is called *Botryitis*, consists of the more subtile particles,
 and the *Placitis*, of the grosser. When calamine is burnt, it
 becomes desiccant and detergent, without pungency, and is
 also useful for sores requiring to be filled up, about the eyes
 and in the whole body, more particularly those on softer
 bodies, which are more humid, for those upon harder bodies
 require stronger means.

COMM.

COMMENTARY. Under this head we cannot do better than in the first place copy the account of the ancient cadmia given by the learned and accurate Geoffroy. "The name *Cadmia* has been applied to several things. Dioscorides understood by *καδμία* the recrements which arise from brass while melting in the furnace. Galen applied it to two substances, one which comes from brass (*chalcos* ?), which is the same with the cadmia of Dioscorides; the other a native substance found in the island of Cyprus, which he terms *λιθώδης* or stony. Pliny, besides the factitious cadmia of Dioscorides and Galen, mentions another by the name of *Lapis ærosus*, which he says was an ore out of which copper was made, and this perhaps is the same with the *Cadmia lapidosa* of Galen." (ii, 2, 6.) The botrytial or clustered cadmia was Tutty, or the *Cadmia fornacis* seu *factitia*. It is the *Zinci Oxydum impurum*. The *Capnitis* and *Placitis* were merely varieties of the same, the former being in the shape of a fine powder, collected at the mouths of the furnaces, and the latter consisting of coarser and heavier grains. The minerals from which all these preparations of cadmia were prepared, are the two varieties of calamine, now called by mineralogists "the siliceous oxide of zinc" and "the carbonate of zinc." See Cleavland's 'Mineralogy' (656, 657.) Dioscorides gives a very distinct description of the cadmia, which he recommends principally in the composition of ophthalmic remedies (v, 84.) Galen's account of it is to the same effect, and is couched in his peculiar logical language. (De Simpl. ix.) The Arabians give a confused description of cadmia and the other mineral substances used by the Greeks in medical practice. See Avicenna (ii, 2, 163, 164); Serapion (418); Rhases (Cont. l. ult. i, 150.) For an elaborate disquisition on the *cadmia* of the ancients, we beg to refer to Beckmann's 'History of Inventions.'

Κακκαλία,

Cacalia; its powers and use are like the *Cacanus*.

COMM.

COMMENTARY. See under *Cacanus*.

Καλαμαγρώστις,

Calamagrostis, is desiccative; wherefore, its juice and the decoction of the roots of it are mixed up as ingredients with ophthalmic remedies; but its seed is diuretic and stomachic.

COMMENTARY. This is decidedly the *Calamagrostis Epigeios* COMM.
 Roth. or Small Reed. Dioscorides says it proves destructive
 to cattle when eaten by them, especially the variety which
 grows in Babylon by the wayside. Parkinson (Theatre of
 Plants, 1181) figures and describes a species of reed-grass,
 bearing a considerable resemblance to our *Epigeios*, but of
 more luxuriant growth; which, he says, Lobel calls *Calamagrostis forte Babylonica*. Neither Galen nor Aëtius treat
 of it. The Arabians briefly notice it under the head of *Theil*
 or Gramen, but merely copy from the Greeks. See Serapion
 (De Simpl. 119), and Avicenna (ii, 2, 704.)

Καλαμίνθη,

Calamintha, *Calamint*, is of a hot and drying temperament
 in the third degree, consists of subtile particles, is acrid, and
 much stronger than mint; for it is a sort of wild mint. It,
 therefore, attracts readily the deep-seated fluids to itself, and
 hence evacuates dropsies, and discusses swelling of the whole
 body, and stops periodical rigors, when strongly rubbed in
 externally with oil, and when taken internally in a draught.
 When applied in a clyster it removes pains of the hip-joint,
 and clears away impurities from the skin.

COMMENTARY. Apuleius says, “Græci calaminthen Latini COMM.
 mentham vocant, alii nepetam,” (De Herbis.) R. Stephens
 says, “Calaminthæ Dioscoridi tria sunt genera, quorum pri-
 mum nihil aliud quam vulgare *Calamentum*; secundum
 Latine Nepeta appellatur; tertium est nostra herba Cataria,
l’herbe du chat.” Sprengel makes the first species of Dios-
 corides to be the *Melissa Cretica*, L.; the second, the *Thymus*
Nepeta, Scop.; and the third, the *Melissa altissima*. Our
 author’s calamint is evidently the first species. Galen, Dios-
 corides, Aëtius, and Serapion, like Paulus, describe it as a hot
 and acrid medicine, which proves useful in diseases of the
 joints. They all, also, say that it is emmenagogue; and
 recommend it as a discutient and expectorant medicine.
 Dioscorides and Aëtius recommend it in elephantiasis, for
 attenuating and cutting the gross humours which give rise to
 the disease. All agree in praising calamint in the cure of
 intermittent fevers. Dioscorides recommends it as a vermifuge
 when given with salts and honey. Dioscorides, and, after him,

COMM. Aëtius and other of the authorities, say that calamint-water, when injected into the ear, kills worms in it. Galen and Dioscorides both affirm that when taken internally and applied on a pessary, it procures abortion. All agree that it is also beneficial in asthmatic complaints. Avicenna gives a lengthy and very elaborate account of the three species of calamint; but it can hardly be said that he adds anything of importance to the information which he drew from his Grecian masters. He agrees with them that it is diuretic and emmenagogue, and holds that it is anaphrodisiacal, and removes the pollutio nocturni somni. He also, like them, commends it as a deobstruent in jaundice and other obstructions of the viscera. He praises it as a stomachic. (ii, 2, 154.) None of the other Arabian authorities treat so fully of this article as Avicenna. Rhases, however, is worth consulting. (Contin. l. ult. i, 466.) The calamint, that is to say, the first species of Dioscorides, would appear to be the "mentastrum" of Celsus, who recommends it as a remedy in the bites of venomous animals. (v, 277.) It also occurs in the 'Flora Hippocratica.' See Dierbach. The three kinds of calaminth were long retained in the Materia Medica of the moderns. See Tournefort's Materia Medica (i, 6, 4.) More recently only one kind was used. See Quincy. Of late all the kinds have been nearly discarded from our Dispensatories, but are still to be found in the shops of apothecaries. See Gray's Supplement to the Pharmacopœia (p. 47.)

Κάλαμος ἀρωματικός,

Calamus Aromaticus, *Sweet-cane*, is heating and desiccant in the second order. It also consists of subtile particles, and has some astringency. It is, therefore, diuretic, and is mixed up with stomachic remedies, and those prepared for the liver and womb. The species called phragmitis is detergent, but the leaves of it are green and moderately cooling, and the bark of it, when burnt, is heating and desiccant in the third degree. The root of it, when applied with bulbi, is said to extract darts and thorns.

COMM. COMMENTARY. Having shown above that the acorus of the ancients is the *Acorus Pseudacorus*, we need have little hesitation in stating that we agree with the older authorities, who

refer the present article to the *Acorus Calamus*. Dr. Royle, COMM. however, holds that it was the *Andropogon Calamus aromaticus*. See Hindoo Med. (34) and Lindley (Veg. Kingd. 133.) The *φραγμίτης* of Dioscorides and our author is decidedly the *Arundo Phragmites*, or Common Reed. Our author follows the description of them given by Dioscorides and Galen, and more especially the latter. Galen says of the *aromaticus* that it is more desiccative than calefacient, and that it has some volatility, like all the aromatics. Aëtius, in like manner, copies mostly from Galen. The Arabians, in treating of these reeds, borrow closely from Dioscorides. Thus Avicenna, among other virtues which he holds that they possess, commends them as being diuretic, emmenagogue, and alexipharmic. (ii, 2, 64.) The *calami* do not occur as articles of medicine in the Hippocratic collection. The *Calamus Alexandrinus* of Celsus (v, 24), was no doubt the *C. aromaticus*. Although a native of India, as Dioscorides states, it is likely that the Romans would get it through Alexandria. It occurs in the modern Greek *Pharmacopœia*, and is now found growing in Laconia.

Κάμπαί,

Eruca, *Caterpillar*; those upon potherbs, when rubbed in with oil, are said to preserve from the bites of venomous animals.


COMMENTARY. The metamorphosis of *Caterpillar* is accurately described by Theophrastus (C. Pl. v.) See also Aristotle (H. A. v, 20), and Pliny (H. N. xi, 32.) Our author's account of these *erucæ* is taken word for word from Dioscorides (ii, 64.) Few of the other authorities treat of them. COMM.

Κανθαρίδες,

Cantharides; those found among wheat, have pale, transverse zones, and being suffocated by the steam of hot vinegar, are used for many purposes. For, with cerate, they cast off scabious nails, and relieve *clavi* and scabious affections. They are also corrosive and caustic. Some mix a small quantity of them with diuretic remedies, and give them in this form.


COMMENTARY. Dioscorides and Galen direct the species which is found among corn to be used medicinally. As the *Meloe vesicatorius* is commonly found upon trees, such as the COMM.

COMM. *fraxinus*, *sambuchus*, and *ligustrum*, it is evidently different from the ancient *cantharis*, and yet their effects upon the human frame would appear to have been very much alike. It appears to be now agreed upon by all competent judges that the medicinal *cantharis* of the ancients is the *Mylabris Cichorii* or *M. Füsselini*, which is still used for forming blistering plasters by the profession in Constantinople and by the native practitioners in Hindostan. See Ainslie (*Mat. Ind.*, i, 622), Royle (*Antiq. of Hindoo Med.*), and Pereira (1834.) The *Buprestis*, however, which also is included by Dioscorides in his *Materia Medica*, can have been no other than the *Meloe vesicatorius*. See Book V of this work. It is the tellini fly of the Hindoos. See Ainslie (*Mat. Ind.* ii, 417.) The ancients prepared the *cantharides* for medicinal use in the same manner as the Spanish fly is now prepared, namely, by killing them with the fumes of vinegar. Dioscorides says *cantharides* are septic, ulcerative, and calefacient, and hence are mixed up with the medicines that cure cancerous diseases, leprosy, and lichen agrius; they are also emmenagogue when applied in a pessary; and some, he adds, relate that *cantharides* are beneficial in dropsies, by acting as diuretics. Their wings and feet are further said to be antidotal, that is to say, we suppose, to counteract the operation of the body of the insect. (ii, 65, 66.) Galen treats of the *cantharis* and *buprestis* in very nearly the same terms as Dioscorides. Instead of using only the wings and feet, as mentioned by Dioscorides, he says that he used the whole insect. (*De Simpl.* xi.) In moderate doses he held it to be a safe diuretic. (ii, 463, ed. Basil.) Aëtius and Oribasius give nearly the same account of the *cantharis* as Galen. *Cantharides* are frequently mentioned in the Hippocratic treatises (*De Nat. Mulier.* 565, ed. Föes; *De Intern. Affect.* 552), and in the works of Celsus. (199, ed. Milligan.) Aretæus is the first author, as far as we know, who notices the external use of *cantharides* as a rube-facient. (*De Curat. Morb. Chron.* i, 4.) The Arabians, in treating of *cantharides*, borrow nearly all the information they give from Dioscorides and Galen. See Serapion (c. 441), Avicenna (ii, 2, 201), Rhases (*Cont. l. ult.* i, 162.) Rhases on his own authority, affirms, that administered in small doses *cantharides* cleanse the kidneys. We are rather surprised to

find that the *Mylabris* does not occur in the modern Greek Pharmacopœia. COMM. 

Κάναβις,

Cannabis, *Hemp*; the fruit is carminative and desiccative, so as to dry up even the semen. The juice of it when green is useful for pains of the ears and obstructions of them.


COMMENTARY. It appears evidently to be the *Cannabis* COMM. 
sativa, or Hemp. The species *sylvestris* of Dioscorides, is the *Althæa Cannabina*. See Sprengel (ad Dioscorid. iii, 155), and Parkinson (Theatre of Plants, 307.) Dioscorides recommends the latter in the form of a cataplasm to soothe inflammations and discuss tumours. Our author copies from Galen, who, like him, only describes the *sativa*. The Arabians describe both species with more accuracy than the Greeks. See Avicenna (ii, 2, 170, 656), Serapion (207.) Avicenna calls them carminative and desiccative; and hence he holds that they dry up the semen. He says a middling dose proves laxative of the bowels.

Κάνωπον,

Canopum, *the Flower of the Elder-tree*, which has been already treated of.

Κάπνιον,

Fumaria, *Fumitory* (called also Capnos), and is so named because the juice of it provokes a great discharge of tears; and it sharpens the vision. It is also acrid and bitter; hence it occasions a discharge of much bilious urine, and cures obstructions and atony of the liver. It also strengthens the stomach and softens the belly.

COMMENTARY. All the commentators seem agreed that it is COMM. 
the *Fumaria officinalis*, except Sibthorp, who prefers the *F. parviflora*, Lam. Our author's account of it is mostly taken from Dioscorides and Galen. The others give nearly the same description of its medicinal virtues. See particularly Serapion (c. 71), and Avicenna (ii, 2, 275.) They represent it as being a stomachic and hepatic medicine, gently purgative and diuretic. Fumitory is described as a medicinal herb by all our old herbalists, and held a place in the Dispensatory down to a late date. See Quincy (125.) The *F. officinalis* is still retained in the modern Greek Pharmacopœia.

Κάππαρις,

Caparis, *Caper-tree*; its root deterges, purges, incides, and discusses by its bitterness and acrimony. It also contracts, astringes, and condenses by its sourness. It therefore cures indurated spleens when drunk and when applied externally. It is also emmenagogue, and occasions a discharge of phlegm. It cures ill-conditioned ulcers, and relieves pains of the teeth, dispels tumours and alphas, and kills vermin in the ear. The leaves and fruit of it are possessed of similar powers, but weaker.

COMM. COMMENTARY. It is the *Capparis spinosa*, namely, the plant which produces our officinal capers. Dioscorides and Serapion mention that pickled capers act as a gentle laxative, but say that they are bad for the stomach. The Arabians held that they are good whetters of the appetite. Casiri (Bibl. A. H. i, 337.) Galen gives a very elaborate article on the virtues of capers, which, he says, are the best medicine which we possess in scirrhus enlargement of the spleen. He says it clears away the humours by the belly and by urine, and also acts as an emmenagogue. Their taste, he says, is a combination of bitterness, acrimony, and sourness. He concludes by stating that capers produced in very warm climates, such as Arabia, are much more acrid than in his country. (De Simpl. vii.) The Arabians held that capers are aphrodisiacal and alexipharmic. See Rhases (Contin. l. ult. i, 164), Avicenna (ii, 2, 138), and Serapion (c. 291.)

Κάρδαμος,

Nasturtium, *Cress*; the seed of it is caustic like mustard. When applied externally, therefore, it proves rubefacient, incides also the thick humours when drunk with other things. And the dried herb is possessed of similar powers, but the juicy one is more moderate; it therefore is eaten raw.

COMM. COMMENTARY. It was indisputably a species of cress, probably the *Lepidium sativum*. We have treated of it as an article of food in Book I. Our author's account of it is mostly derived from Galen. Symeon Seth, with most of the authorities, calls it aphrodisiacal. Macer says, on the contrary, that its powers are equal to those of rue for repressing venereal desires. Dioscorides calls it alexipharmic, and says

of it, that in fumigations it drives away venomous reptiles. COMM.
 It occurs in the Flora Hippocratica. See Dierbach. The
 Arabians treat of it very elaborately. See Rhases (Cont. 1.
 ult. i, 472), Avicenna (ii, 2, 502), and Serapion (c. 359.) They
 agree that it evacuates bile both upwards and downwards, that
 it is aphrodisiac and alexipharmic. The cress (*Nasturtium*),
 until very lately, was admitted into our Dispensatory. See
 Gerard, Parkinson, Culpeper, and Quincy.

Καρδάμωμον,

Cardamomum, *Cardamum*, is also acrid, but weaker than the
 Cardamus. It has also some bitterness, by which it destroys
 intestinal worms, and with vinegar clears away scabies.

COMMENTARY. The officinal cardamom of the present time COMM.
 has now got the scientific name of *Elettaria Cardamomum*,
 and as far as we can see there is no reason to doubt its being
 identical with the cardamomum of the ancients. There are,
 however, several varieties of the cardamom which are not
 satisfactorily defined, any more than the four species men-
 tioned by Pliny. (H. N. xii, 29.) See Ainslie (Mat. Ind. 32),
 and Pereira (Mat. Med. 694.) Dioscorides recommends it for
 various purposes, both externally and internally; for epilepsy,
 coughs, ischiatic disease, nephritis, and as an alexipharmic
 and lithontriptic medicine. (i, 5.) Galen is more guarded in
 enumerating its virtues, and all the other Greek authorities
 follow him. The Arabians rather imitate Dioscorides. See
 Avicenna (ii, 2, 156), and Serapion (c. 64.) One of Serapion's
 Arabian authorities, Isaac eben Amram, describes two species,
 the greater and the lesser, a distinction still recognized. We
 need scarcely add that it is well known at the present day,
 and is used for various purposes both in this country and in
 the East.

Καρίς,

Squilla, a *Legless Lobster*, when triturated and drunk with
 the root of bryony it kills lumbrici.

COMMENTARY. The squilla belongs to the order of *μαλακόσ-* COMM.
τρακα. (See Book I, 91.) The present article we suppose is
 the *Cancer Squilla*, L. It is treated of very cursorily by the
 other authorities.

Καρκίνος,

Cancer, *Crab*; of the ashes of burnt crabs, that of river-crabs is equally desiccative with those of the sea-urchins and cockles. By the peculiarity of its whole substance it proves wonderfully efficacious when applied to persons bitten by mad dogs, as mentioned in another place. The ashes of the sea-crabs being extremely desiccative, do not indeed agree with them, but rather relieve those who stand in need of desiccative remedies. The river-crab when pulverised and applied, ejects thorns and the points of darts.

COMM.

COMMENTARY. The *Cancer Pagurus*, a large edible crab, would appear to be the sea animal treated of under this head. The river-crab, we suppose, is the *Astacus fluviatilis*, or crawfish. Dioscorides recommends the ashes of the river-crab most especially in hydrophobia, and as an application to fissures in the feet and anus, chilblains, and cancers, and also as an antidote to the bites of venomous animals. Galen also gives an interesting account of the use of them in hydrophobia, and Serapion repeats Galen's account of them. See further, Book V, 3, of this work. Galen speaks with great confidence of their efficacy in this case, indeed he affirms that he had never known them fail when they had got a fair trial. The other authorities supply no additional information of interest under this head. See Avicenna (ii, 2, 147), Rhases (Cont. l. ult. iii, 42.) These two agree that the flesh of the river-crab with the milk of asses is beneficial in phthisis.

Κάρον,

Carum, *Caraway*; the seed is desiccant and heating in the third degree; and not only the seed, but also the whole plant is carminative and diuretic.

COMM.

COMMENTARY. There can be no doubt that it is the *Carum Carui*. It is evidently the careum of Pliny, and derives its name from Caria. (H. N. xxix, 49.) Our author copies closely from Galen. Dioscorides calls it diuretic, stomachic, pleasant to the taste, digestive, &c. The Arabians further give it the character of being a cordial and anthelmintic medicine. (See Serapion (c. 279), Avicenna (ii, 2, 137), and Rhases (Cont. l. ult. i, 178.)

Καρπήσιον,

Carpesium, is aromatic, and consists of subtile particles. It therefore clears away visceral obstructions, proves diuretic, and removes calculi of the kidneys.

COMMENTARY. The Arabians identified this substance with their own *Cubebæ*. See Rhases (Cont. l. ult. i, 242), Avicenna (ii, 2, 134), and Serapion (c. 188.) But we will show in another place that this was a mistake on their part. Nothing satisfactory has been ascertained regarding it, and we have no pleasure in dwelling upon the conjectures of the commentators on Dioscorides and of the herbalists. COMM.

Καρόνον,

Nux Juglans, *Walnut*; the tree has some astringency in the shoots, but more in the bark of the nuts. The juice of them, therefore, when boiled with honey, becomes a stomachic medicine. The rind of it, when burnt, consists of subtile particles, and becomes desiccant without pungency; but the edible part of it being oily, is readily converted into bile. The oil formed from them consists of subtile particles, and discusses swellings and gangrenes. Walnuts which are rancid from age prove detergent of cutaneous affections. But the Pontic, called the slender nut, is colder and austere, but in other respects is like the large.

COMMENTARY. We have treated of this article in the portion of our work devoted to dietetics. See Book I. We shall merely repeat that the two species of nuts described by Paulus and other ancient authorities are evidently the *Nux Juglans*, or walnut, and the *Nux Avellana*, or filbert. This is very evident from Galen's description of them. (Opera. ed. Basil, ii, 88.) Our author copies closely from him. Dioscorides treats of the nuces still more circumstantially, recommending them both internally and externally as being vermifuge, and curing ill-conditioned ulcers, and many other diseases. The filbert, when triturated with axunge or bear's grease, he recommends for the cure of baldness. (i, 178, 179.) The Arabians, under this head, do little more than condense the information supplied to them by their Grecian masters. See in particular Rhases (Cont. l. ult. i, 505), Avicenna (ii, 2, 42, 494), and Serapion (c. 162.) Serapion states that the nux COMM.

COMM. *avellana* is useful in catarrhs, and as an application in cases of alopecia. Here, however, he professes to borrow from Dioscorides. Avicenna and Rhases recommend the oil of the hazel-nut in herpes esthiomenos, erysipelas, and fistula lachrymalis. They speak favorably of both as a remedy for the bites of venomous animals. They also are agreed that the walnut is expectorant.

Καρυόφυλλον,

Caryophyllum, *Cloves*; they are not the substance which their name might imply, but, as it were, the flowers of a tree which are brought from India; like chaff, black, nearly a finger's length, aromatic, acrid, bitterish, hot, and desiccative in about the third degree. They serve many useful purposes for condiments and other medicines.

COMM. COMMENTARY. From our author's description there cannot be the least hesitation on our part in acknowledging it to be the *Caryophyllus aromaticus*, L. (*i. q.*), *Eugenia Caryophyllata*, Thunberg, that is to say, the Clove-tree. We are equally well convinced that no mention of this article is to be found in the works of Dioscorides, Pliny, Theophrastus, Galen, Aëtius, Oribasius, nor, in short, in those of any preceding author. Whence Paulus drew his knowledge of it cannot now be ascertained. The Arabians display a very correct acquaintance with it. Avicenna, in treating of it, refers to no other Greek authority but Paulus. After describing it in much the same terms as our author, he states it to be hot and dry in the third degree, says it renders the breath fragrant, improves the sight, and is useful in pterygium; is stomachic and hepatic, and removes vomiting and nausea. (ii, 2, 311.) Serapion, in treating of the *Gariofilus*, first quotes from a translation of Galen the description of the *Garyophyllon* given by Paulus, which he affirms is taken line for line from Galen. This is evidently a mistake, founded on some erroneous translation of Galen into Arabic. He then gives its characters from several Arabian authorities to the effect that it is stomachic, hepatic, cordial, aphrodisiacal, and digestive; and says that it is brought from India. (c. 319.) Rhases says cloves are hot and dry, and are both stomachic and cordial. (Ad Mansor. iii, 22.) We have not been able to find the passage in the 'Continens' where they are treated of, there being some mistake in the

marginal reference of Avicenna. Symeon Seth says of the caryophyllon that it is hot and dry in the second, or, perhaps, in the third degree; is the fruit of a tree, and is stomachic, hepatic, and cordial; removes nausea connected with humidity, but is bad for the bowels. (c. 15.) The caryophyllon also occurs in one of the antidotes of Myrepsus. (c. 22.) Ebn Baithar, however, is the ancient authority who gives the fullest account of cloves, which he represents as being useful in diabetes and strangury, in black bile, diarrhœa, and chronic coughs. He says in particular that they are uterine and aphrodisiac, and hence warm the uterus and promote impregnation. He also holds that they are stomachic, carminative, and hepatic. (ii, 281.)

Κάσσημον,

Cassamum; some say that it is the fruit of the balsam-tree, of which we have treated under that word.

Κασσία,

Cassia, is heating and desiccative in the third order, consists of sufficiently subtile particles, is acrid, and moderately astringent. It is therefore incisive and discutient, imparts strength to the organs, and is also emmenagogue.

COMMENTARY. Salmasius contends that the ancient Cassia COMM. was the same as our cinnamon. See Needham (ad Geopon. vii, 13), and Celsus (Hierobot. in voce Kiddah.) Stackhouse affirms, however, that the ancients were unacquainted with the *Laurus Cinnamomum*. He refers it to the *Laurus gracilis*. (Comment. in Theophrast.) Sprengel, in his R. H. H., makes it to be the *Laurus Cassia*, which has now got the scientific name *Cinnamomum Cassia*. The close connexion between the cinnamon and cassia has occasioned difficulty in distinguishing them from one another, down even to the present times. They are often sold for one another in the Indian bazaars. The *Cassia lignea* of the ancients would appear to have been the same thing as the *Cassia bark* of the moderns. According to Ainslie, the odour of it is very like cinnamon, but fainter. (Mat. Ind. 35.) The *Cassia Fistula* was merely the bark rolled up into *fistulæ*, or pipes. The Greeks, as we shall show in another place, were unacquainted with the true

COMM. *Cassia Fistula.* Dioscorides describes several varieties of it which cannot now be readily recognized. He calls it heating, diuretic, desiccant, and mildly astringent, and recommends it as an emmenagogue, and for various other medicinal purposes. He concludes by saying it may be used in place of cinnamon, and that it is useful for many purposes. (i, 12.) Galen and the other Greek authorities treat of it briefly, in nearly the same terms as Paulus. All the Arabians treat of it fully. See in particular Rhases (Cont. l. ult. 183), Serapion (c. 301), and Avicenna (ii, 2, 151.) Avicenna describes circumstantially several kinds of cassia, which he says is closely allied to cinnamon in nature and in virtues. He recommends it in diseases of the eyes and uterus, and joins Serapion in holding it to be alexipharmic. The only Arabian authority quoted by Rhases under this head (namely, Misib) calls it stomachic, hepatic, and attenuant. The same authority is quoted by Serapion. Another of Serapion's authorities says it has strong powers for procuring abortion. The cassia occurs in the works of Hippocrates, and in those of Celsus. The latter ranks it in his list of discutients. (v, 11.) Galen states that, in the absence of cinnamon, a double dose of cassia or of carpesium may be used in place of it. (ii, 434, ed. Basil.) It is described by Theophrastus (H. P. ix, 5), and Pliny (xi, 43).

Καστόριον,

Castorium, *Castor*, is heating and desiccative, with excessive tenuity of parts, by which, in addition to its other actions, it is rendered a suitable remedy for affections of the nerves proceeding from a collection of humours. It also readily warms parts which are immoderately cooled, both when applied externally and when drunk, without at all injuring any other part, even if they should be in a state of moderate fever, as in cataphora and lethargy. It is likewise emmenagogue, and expels the secundines. In affections of the brain and lungs it is a very efficacious remedy, even when inhaled in respiration.

COMM. **COMMENTARY.** All the ancient authorities describe the *Castor* as being the testicles of the beaver (*Castor Fiber*, L.) Matthiolus, we believe, was the first to rectify this error. It is a substance contained in follicles situated between the anus and genital organs. The use of castor in hysteria is men-

tioned by Herodotus. (iv.) Dioscorides, Galen, Rhases, and Serapion, like our author, recommend it as an emmenagogue; Celsus prescribes castor with pepper in cases of tetanus. (iv. 3.) He also recommends it in lethargy and deafness. (vi.) Pliny also mentions its being used in tetanus and other cases where soporifics are indicated. (H. N. xxxii, 3, 8.) Of all the ancient authorities Avicenna treats of it most fully, recommending it particularly in nervous affections, stupor, and paralysis, also in hiccough when drunk with vinegar, and as a carminative in flatulence of the bowels. The best counteragents to it are acid citrons, vinegar with wine and asses' milk. He says of it, that it is alexipharmic, and proves beneficial in the suffocation induced by hellebore. (ii, 2, 122.) Serapion copies literally from Dioscorides and Galen (c. 445.) Rhases recommends it as a calefacient medicine for warming the nerves, promoting menstruation, and dissolving swellings. (Ad Mansor. iii, 30.) The account which he gives of it in his 'Continens' is made up of extracts from Dioscorides, Galen, and our author. (l. ult. 188.) Ebn Baithar gives a very lengthy and not uninteresting account of this substance. (i, 263.)

Καυκαλῖς,

Caucalis, *Wild Carrot*; it is heating, like the carrot, desiccant, diuretic, and is pickled as a preserve.

COMMENTARY. Sibthorp supposed it to be the *Tordylium officinale*; but perhaps we may venture to refer it rather to the *Caucalis maritima*, Lam. R. Stephens calls it *Persil batard*, i. e. *Bastard parsley*. It is more properly an article of food than a medicine. Our author borrows his account of it from Dioscorides and Galen, and none of the other authorities supply any additional information of interest respecting it. In modern times its application in medicine has been extended. See Matthiolum (in Dioscorid.) and Parkinson (922.)

Κέγγροος,

Milium, *Millet*, is cooling in the first degree, and desiccant in the second. It also, to a certain degree, consists of subtile particles. When used then for a fomentation in small bags, and in the form of a cataplasm, it is of a desiccant nature.

COMM. COMMENTARY. Dierbach inclines to the *Holcus Sorghum*, a species of millet called *Sorgo* or *Guinea corn*. Most of the other authorities refer it to the *Panicum Italicum*. (See Sprengel, Schneider, and Parkinson.) We have treated of it among the articles of food in Book I. As a medicine, it is principally in the form of a fomentation that it is prescribed by Dioscorides and the other authorities. Galen does not speak very favorably of the cataplasm prepared from it. The Arabians treat of it in much the same terms as the Greeks. See Rhases (Cont. l. ult. i, 532), Avicenna (ii, 2, 288), and Serapion (c. 102.) They all speak of it as being a very inferior article of food; and as a medicine, recommend it only in a fomentation. It was retained in our English Dispensatory down to a late date. See Quincy. To this day it is much prized by the native practitioners of Hindostan. See Ainslie (Mat. Ind. 124.)

Κέδρος,

Cedrus, *Cedar* (?), or *Juniper*; the shrub, which resembles juniper, and the tree are calefacient and desiccative in the third degree; but the oil prepared from them, which they call cedræa, touches upon the fourth, being composed of sufficiently subtile particles. It therefore corrodes soft flesh readily, and without pain; and the hard flesh, more particularly of dead bodies, it dries and preserves from putrefaction. It kills lice, nits, ascarides, worms in the ears, and has many other powers.

COMM. COMMENTARY. Dioscorides describes two species, the larger being probably the *Juniperus Phœnicea*, and the smaller the *Juniperus communis*. The ἄρκυθος was a species of the same genus. Pliny calls the pitch of the tree by the name of *Cedria*, and the oil by that of *Pisselæon*. Is the cedria the gum vernix, called sandarax by the Arabians? We will discuss this question in the Appendix to this Book, when we come to treat of the substances introduced into the *Materia Medica* by the Arabians. Dioscorides says of the fruit of the cedar or juniper, that it is calefacient and bad for the stomach, that it is useful in coughs, as an emmenagogue, and alexipharmic. (i, 105.) Galen says the fruit is edible, but apt to occasion headache and pain of the stomach. (De Simpl. vii.) The

Arabians treat fully of it. See Avicenna (ii, 2, 160, 668.) COMM.
 He and the other Arabians borrow nearly all their information from the Greeks. Even Ebn Baithar contains little that is original under this head. (ii, 94.) We observe, by the way, that his translator, Dr. Sontheimer, marks it as the *Pinus Cedrus*, but this it clearly cannot be.

Κεντάυριον,

Centaurium, *Centaury*; the root of the great centaury is acrid and heating, with a terrene astringency. It therefore promotes menstruation, kills and expels the fœtus, agglutinates wounds, relieves hæmoptysis, and other affections of the chest. The root of the small centaury is possessed of no powers, but the branches are strongly desiccative, and without pungency. Hence they are applicable in those cases in which the great centaury was mentioned as being useful; and in ischiatic complaints the decoction of it given in an injection evacuates bile and sometimes blood, which affords great relief.

COMMENTARY. The *Centaurea Centaurium*, L., and the COMM.
Erythræa Centaurium, Pers., would appear to be the greater and less centaury of the ancients. See Parkinson, Sprengel, and the other commentators on Dioscorides. Pliny describes three sorts, but would seem to have fallen into a mistake as to the meaning of a passage in Theophrastus. See Harduin ad Plinii H. N. xxv, 32, and Parkinson (Theatre of Plants, 273.) Dioscorides recommends the greater centaury in the same cases as our author, who abridges him and Galen under this head. He says very particularly of it, that it produces menstruation, and expels the fœtus when applied in the form of a collyrium (tent) to the vagina. (iii, 6.) The Arabians give it the same characters as their Grecian masters. See Avicenna (ii, 2, 158), Rhases (Cont. l. ult. i, 176), and Serapion (c. 202.) Serapion and Mesue likewise recommend the lesser centaury in sciatica, either in a potion to the amount of two drachms, or in a clyster to the amount of three ounces, with oil of sesame. Galen, has a whole book on the virtues of the lesser centaury, in which there is a prescription for an extract of it. The ancients had great faith in it for the cure of hydrophobia. According to Galen,

COMM. (who it may well be supposed had devoted great attention to the study of its virtues), it is possessed of bitterness with some astringency, and is most especially excellent as a deobstruent in obstructions of the liver and scirrhus of the spleen. He mentions that some gave it in a potion for nervous affections, and that in a clyster it relieves sciatica by occasioning evacuations of bile. He also recommends it strongly in the form of a fomentation to ill-conditioned and obstinate ulcers. The lesser centaury (*Erythraea Centaurium*, Persoon) still continues to hold a place in our Dispensatory, but, as Dr. Pereira remarks, "is rarely used by medical practitioners; yet it might be used as an indigenous substitute for gentian." (*Materia Medica*, 809.) In the days of Quincy it retained all its ancient characters. (*Engl. Dispens.* 103.) Galen's tract on it must have been in great repute anciently, since Serapion has given a translation of the whole of it. It is retained in the modern Greek Pharmacopœia.

Κέρας αίγός,

Cornu Capri, *Goatshorn*, and Κ. έλάφου, *Cornu Cervi*, *Hartshorn*, cleanse the teeth when burnt, and restrain the progress of foul ulcers. The hart's horn, when pulverised and then applied, fastens loose teeth; when washed after burning, it relieves dysentery, cæliac affection, spitting of blood, and jaundice, when given to the amount of two spoonfuls. It is also mixed up with ophthalmic remedies. The horn of a bull, when taken in water, restrains hemorrhages.

COMM. COMMENTARY. Dioscorides, Galen, and Serapion speak of the medicinal properties of *horn* in nearly the same terms as our author. We need scarcely say that the stag's or hart's horn has been much used in modern times for the preparation of ammonia, which is hence called the spirit of hartshorn. Dioscorides recommends hartshorn when burnt until it become white, and cleaned like calamine, in affections of the eyes. It will now be readily understood, that when so treated it is reduced to a phosphate of lime. Avicenna further prescribes it for removing the swelling of dropsy; and, like Dioscorides, he recommends it in jaundice. (ii, 2, 178.) We would remark, in conclusion, that it was the red deer which furnished the

medicinal hartshorn of the ancients, but that the moderns COMM.
 have commonly used the horns of the fallow-deer instead.
 See Hill's *Materia Medica* (835.)

Κεράσια,

Cerasia, Cherries; the sweet are more laxative, the austere more stomachic, but the acid agree best with pituitous and foul stomachs, owing to their being incisive. The gum of the tree smoothes asperities of the trachea, and relieves calculous affections when drunk with wine.

COMMENTARY. This unquestionably is the *Prunus Cerasus*, COMM.
 L. We have given some account of cherries in the portion of our work devoted to ancient dietetics. Galen, in his work on *Simplex*, treats of them with great precision; he remarks that in some the austere quality, in some the sweet, and in others the acid prevails, and that when unripe the sour is predominant. In fact, our author's account of them is manifestly abridged from Galen. Aëtius and the other authorities, in like manner, copy from Galen. See also Serapion (c. 145.)

Κερατώνια,

Ceratonia, Carob-tree, and the fruit of it (*siliquæ*) are possessed of desiccant and astringent powers, with a certain share of sweetness.

COMMENTARY. It is unquestionably the *Ceratonia Siliqua*, L., COMM.
 or *Carob-tree*. We have given some account of it among the articles of food in Book I. All the other authorities on the *Materia Medica* give it nearly the same characters as our author. The writer who is fullest on this head is Avicenna, who treats of it under the name of *Carob*, i. e. *Siliqua*. (ii, 2, 193.) See also Serapion (c. 135), and Rhases (Cont. l. ult. i, 366.) Our modern herbalists treat of it in nearly the same terms as the ancients. See Parkinson (236.) It is still used on the Continent and in Asia as an inferior article of food, and holds a place in the modern Greek *Pharmacopœia*.

Κεφαλαί,

Capita, Heads; those of pickled herrings, when burnt, acquire a desiccative power without being very acrid. They therefore relieve fissures about the anus, and chronic cases of

indurated uvula. The entire head of the anchovy (*smaris*), when burnt, is useful in alopecia when applied with bear's grease. The burnt head of a mouse when applied with honey does the same thing. The dried head of the kite without its feathers, when drunk in water to as great an amount as can be lifted with three fingers, relieves gouty affections. They say that the head of a lizard extracts sharp-pointed things, and removes myrmecia, acrochordon, and clavus.

COMM. COMMENTARY. Our author's account of the medicinal properties of *Heads* is taken from Galen. See also Aëtius and Serapion. Dioscorides treats of the different articles separately, and not under a general head like Galen and his successors. (See ii, 31, 32, &c.) The Arabians merely copy from Dioscorides and Galen, especially the latter. See in particular Serapion (c. 571.)

Κηκίς,

Galla, *Gall*; that sort called *Omphacitis* is a very sour medicine, and hence it proves desiccant, repels defluxions, contracts and astringes relaxed and debilitated parts. It agrees also with all cases of defluxion. It is to be placed in the third rank of desiccants, and the second of refrigerants. The other sort, which is yellow, porous, and large, is desiccant indeed, but less so than the other, inasmuch as it is deficient in astringency. In a decoction it relieves inflammations of the fundament and prolapsus ani when burnt. Extinguished in vinegar they become styptic.

COMM. COMMENTARY. Dioscorides describes two species of galls, of which the better kind, called *omphacitis*, consisted of small, hard, and solid pieces without perforations, and is not to be confounded with the *ὄμφακίς*, or cupula of the acorn, mentioned by Paulus. (iii, 62.) See also Theophrastus (*Hist. Plant.* iii, 9), Pliny (*H. N.* xvi, 9), and Serapion (*De Simpl.* c. 237.) Galls were much used by the ancient physicians in all cases requiring powerful astringents. According to Dr. Hill, the *Gallæ omphacitæ* of the ancients were the same as the Aleppo galls now in use, and the other kind, sometimes called *Onocicæ*, the same as the European. Dioscorides describes the gall as the fruit of the oak, an error which is to be found, as Dr. Pereira remarks, in the works of comparatively recent writers.

We need scarcely say that the excrescence is now well ascertained to be the production of a hymenopterous insect on the *Quercus infectoria*. Dioscorides treats largely of the cases in which galls are applicable, concluding with the remark that their use is indicated whenever it is wished to astringe, restrain, or dry. (ii, 146.) Our author's description of their medicinal properties is mostly taken from Galen. Nearly the same may be said of Aëtius and Oribasius. The Arabians, in treating of them, borrow all the information which they give from the Greeks. See in particular Avicenna (ii, 2, 308), Rhases (Cont. l. ult. i, 234), Serapion (c. 98.)

Κηπία,

Cepea, resembles the Purslain. The leaves of it in an infusion relieve scabious bladder when drunk; and the root of it, when taken in a draught with rock asparagus, relieves strangury from obstruction.

COMMENTARY. Little is known for certain of this herb; but the most probable conjecture that has been made regarding it is, that it is the *Sedum Cepæa*, L. Our author's account of it is taken literally from Dioscorides. Galen does not treat of it, nor have we been able to trace it out in the *Materia Medica* of the Arabians. Our old herbalists treat of it very hesitatingly under the head of brooklime. See Gerard and Parkinson.

Κηρός,

Cera, Wax, being of a moderate temperament, forms the basis of many other medicines. By itself it is slightly detergent, and has some discutient and calefacient powers.

COMMENTARY. This article is so well known that it requires no illustration. Dioscorides describes very circumstantially the process for bleaching wax and making it white. It was done with salt water and natron in a manner quite different from the process now pursued for this purpose. (ii, 105.) The Arabians treat fully of it, but without making any addition of much importance. See in particular Serapion (c. 10) and Avicenna (ii, 2, 462.) Avicenna says that wax, when applied to the wound inflicted by a poisoned arrow, prevents it from being followed by any bad effects. He recommends it as an expectorant in diseases of the chest, both in a liniment and in

COMM. a potion. One of Serapion's authorities, Abugerig, in like manner, recommends it in diseases of the chest.

Κήουκες,

Buccinæ (a species of shell-fish); their shell when burnt is possessed of sufficiently desiccative powers without pungency, they therefore agree with malignant ulcers, and are to be used for putrid ulcers with vinegar, wine, or oxymel. That part of them which is as it were their flesh when alive, if boiled in oil, renders the oil an useful injection for relieving earache.

COMM. COMMENTARY. Sprengel makes them to be the *Buccina Harpa* and *Lapillus*. They are noticed among the articles of food in the ninety-first section of the First Book. Dioscorides correctly remarks that a species of quicklime is got from their shells. He recommends it as a dentifrice, and as an application to burns. (ii, 5.) Galen very properly inculcates the necessity of getting them finely levigated before applying them to sores. Avicenna treats of the buccina along with other crustacea under one head. His information is almost entirely borrowed from Dioscorides and Galen. (ii, 2, 529.) See also Rhases (Cont. l. ult. i, 224.)

Κίκι,

Ricinus, *Palma Christi*; its fruit, which is also purgative, has detergent and discutient properties, and so also has its leaf, but weaker. We have already spoken of its oil.

COMM. COMMENTARY. There can be no doubt that the κίκι or κρότων was the *Ricinus communis*, the Castor-oil plant, or *Palma Christi*. It is mentioned by Herodotus (*Euterpe*, 94) and in several passages of the Hippocratic treatises. See *Æconom. Hippocrat.* (218.) It does not occur, however, in the works of Celsus. Dioscorides informs us that it is called *croton*, from its resemblance to the dog-tick, and it is worthy of observation that both the plant and the dog-tick bear the name of Ricinus in Latin. See Pliny (*H. N.* xi, 34, and xv, 7.) Dioscorides says that the oil is used for lamps and plasters, and also as a purgative and emetic; but that it is a very loathsome and harsh medicine when administered internally. He further mentions the seeds as being used in cutaneous diseases, and the leaves in diseases of the eyes (iv, 141.) Galen notices it

but very briefly as a purgative having detergent and discutient powers. Aëtius and Oribasius appear to have overlooked it. Mesue commends it as a purgative in cases of colic attended with flatulence. He says it produces vomiting and painful dejection of the bowels, but that its operation occasions a discharge of phlegm and bile, which often proves effectual in diseases of the joints. (De Simpl. 28.) He calls it by the names of *Albemesuch*, *Granum regum*, and *Kerva*. Avicenna says of the oil, that it is laxative, and is a good application to scabies and other cutaneous diseases. (ii, 2, 523.) It is deserving of remark that the *Grana regia* of Rhases (Cont. l. ult. i, 339), are applicable to the *Lathyrus*, and not to the *Cici*. Indeed Mesue jumbles together his description of these two substances. (l. c.) We have mentioned already that the *Oleum Cicinum* or *Castor-oil*, was used as a purgative by the ancient physicians. Dr. Hill says of it, "the ancients obtained an oil by expression, and also by boiling, from the seeds; they called it *Oleum Cicinum*; they used it, for burning in their lamps, and in some of their ointments and plasters. Dioscorides commends it internally against worms; and Piso tells us that it is sometimes used in the same manner in the Brazils, with success."

Κιννάβαρις.

Cinnabaris, *Sanguis Draconis*, is possessed of moderately acrid powers with some astringency.

COMMENTARY. We must refer to what we have stated in another work, which we have already often quoted, for the general literature of this subject. It will be sufficient in this place to state that the substance here treated of under the name of Cinnabaris is indisputably the *Sanguis Draconis*, or concrete juice of the *Dracæna Draco*. This is obvious from Dioscorides's description of it, who says that it is of a deep colour, and hence some had thought it the blood of the dragon. (v, 109.) See further, Pliny (H. N. xxxiii, 38), and the very interesting note of Harduin, in which the origin of the confusion of the dragon's blood with cinnabar is fully explained. Serapion treats of the *Sanguis Draconis* as the production of a tree, and quotes a description of it from Dioscorides and Galen. What vegetable substance in their Mat. Med. Serapion refers to, we are at a loss to decide.

COMM. One of his authorities, Constantinus, calls it the juice of a plant, possessed of styptic powers, and therefore used as an astringent both internally as a suppository, and externally when so applied. (De Simpl. 341.) Avicenna recommends it similarly, but gives no description of it. (ii, 2, 627.) It is to be borne in mind that besides the vegetable cinnabar, the ancients described two other substances under this name, viz., the native mineral cinnabar or sulphuret of quicksilver, and a factitious cinnabar, which was their Sal Atticum. See Hill (Mat. Med. 60), and Geoffroy (215.) The dragon's blood is retained in the modern Greek Pharmacopœia, where it is set down as the product of the *Calamus Draco*.

Κιννάμωμον,

Cinnamomum, *Cinnamon*, is composed of extremely subtile parts, yet is not extremely heating, but only in the third degree. But of those in the same rank of calefacients none is so desiccative owing to the tenuity of its parts. The cinnamomis is a sort of weak cinnamon; but some call it pseudo-cinnamomum.

COMM. COMMENTARY. Sprengel and Dierbach acknowledge it as the *Laurus Cinnamomus*. We have stated, however, under *Cassia* that Stackhouse is of opinion that the ancients were unacquainted with our *Laurus Cinnamomus*; but we see no good grounds for this opinion. We shall give the words of Sprengel: "Cassia lignea nostratum et cassia cinnamomea eadem esse videntur, unde et cassiam ipsam ex eadem arbore provenire, quæ cinnamomum largiatur, veteres jam statuerunt." (ad Dioscor. i, 13.) Dioscorides recommends cinnamon in uterine affections, that is to say, for promoting the flow of the menses and for the expulsion of the fœtus. We need scarcely mention that this use of it has been revived of late. He also holds it to be alexipharmic, recommends it in coughs, dropsies, and diseases of the kidneys and bladder; in complaints of the eyes, and in the formation of elegant ointments; in short, he adds, it is a medicine much in use. (i, 13.) Galen and the other Greek authorities give its medicinal characters in more general terms. The Arabians treat of it at great length, and more especially Avicenna, who recommends it in the same cases as Dioscorides, namely, as a diuretic, emmenagogue, and alexi-

pharmic medicine, and also as a stomachic and deobstruent in congestion of the liver. He also holds it to be cordial and expectorant. (ii, 2, 124.) Serapion professes to borrow his account of cinnamon from Dioscorides and Galen; but the extract which he gives from the latter, is not to be found in his works as they now exist. In it cinnamon is commended as being an aromatic medicine, applicable in complaints of the stomach and liver, in affections of the eyes, and as an emmenagogue and diuretic. (De Simpl. 266.) Rhases copies from Dioscorides, Galen, and our author. (Cont. l. ult. i, 213.)

Κιρκία,

Circea, *Enchanter's Nightshade*; its root, which is desiccative and fragrant, when drunk with wine, cleanses the uterus. Its fruit, when taken in gruel, promotes the formation of milk.

COMMENTARY. The commentators are much divided respecting it. Sprengel inclines to the *Cynanchus niger*. Lobelius took it to be the *Solanum Dulcamara*. One thing is certain, that it was quite different from any known species of the modern genus *Circæa*. See Parkinson (351.) Both Galen and our author, in treating of it, borrow from Dioscorides, the former of these professedly. We have not been able to detect it in the Mat. Med. of the Arabians.

Κίσσηρις,

Pumex, the *Pumice-stone*, is detergent, and more particularly of the teeth, not only in power, but also by its asperity. It is also joined to the medicines used for the incarnation of ulcers, and to the abstergent plasters applied to the skin. If burnt, its parts became finer, but it is then pungent; but if washed it lays aside its pungency.

COMMENTARY. There can be no doubt that it was Pumice. Pumice, according to the latest analysis, is found to contain silica, argil, magnesia, soda, oxyd of manganese, and some water. For an account of it, see Pliny (H. N. xxxvi, 42.) He recommends it in diseases of the eyes. It appears evident, however, that he had copied from his contemporary, to whom he is so frequently indebted, we mean Dioscorides, who gives a similar description of pumice, and also recommends it in diseases of the eyes, more especially in opacity of the cornea,

COMM. and likewise as an ingredient in applications to sores, and as a dentifrice. (v, 124.) Galen, after some preliminary discussion whether pumice be a metal, a stone, or an earth, proceeds to state its medicinal properties, in which he agrees with Dioscorides, most especially commending it as a dentifrice. (De Simpl. ix.) We may just mention in this place that modern authorities do not think so highly of this substance as a dentifrice. See Jameson's 'Mineral.' (i, 333.) The Arabians under this head merely copy from Dioscorides and Galen. See in particular Serapion (De Simpl. 417.) Pumice anciently was used for polishing the leather with which books were bound. (Catullus, Epig. i.) Theophrastus (De Lapidibus), states that pumice is formed by the action of fire; and M. Dolomieu suspects that it is a vitrified granite or gneiss. The pumice, for some time past, has ceased to hold a place in our Dispensatory. Neither is it to be found in the modern Greek Pharmacopœia.

Κιστός ἢ Κίσσαρος,

Cistus, *Rock-rose*; it is an astringent shrub, and of gently cooling powers. Its leaves and shoots are so desiccative as to agglutinate wounds; but the flowers are of a more drying nature, being about the second degree, and hence when drunk they cure dysenteries and all kind of fluxes. Externally they relieve putrid ulcers.

COMM. COMMENTARY. Stackhouse marks it simply as the *Cistus*, L., called by Miller the *Rock-rose* (Index to Theophrastus.) Woodville calls it the *C. Creticus* (Medical Botany.) Dioscorides describes two species of it, which probably are the *C. salvifolius* and *C. villosus*. Galen particularly commends the former in uterine diseases. He also treats under this name of a much more celebrated species of the cistus, namely, the *Ladaniferus*, of which we will have to give some account under *Λάδανον*. Aëtius and Oribasius are the copyists of Galen. The Arabians treat separately of the *Cistus* and *Ladanum*, recommending the former as a powerful astringent, both in external ulcers and in those of the intestines and womb. Avicenna speaks favorably of it in deafness and other affections of the ear. (ii, 2, 111.) Serapion would appear to have confounded it with the *κισσός* (ivy); or at least he has given a

very confused account of it in his chapter on the Ivy. (De COMM.
Simpl. 41, 42.) Rhases does not appear to notice it separately
from the *Ladanum* (*Ladanum*) (Cont. l. ult. iii, 67.) The
two species of *cistus* treated of under this head have long
ceased to hold a place in our modern Dispensatories.

Κισσός,

Hedera, *Ivy*, is composed of opposite powers, for it is astringent and cooling, and acrid and hot; consisting of a watery and tepid ingredient when green. Its leaves, when boiled with wine, are agglutinative of wounds and relieve burns and splenic affections. Its juice is an errhine, and cures chronic defluxions from the ear. Its tears, being more acrid, kill lice and act as a depilatory.

COMMENTARY. We need have no hesitation in referring it COMM.
with the best authorities to the *Hedera Helix*, L. Dioscorides
describes three varieties of it, the white, the black, and the
helix; but it is easy to see that they are all varieties of the
same species. His distinctions, however, occasioned great
trouble and confusion both to his Arabian copyists and to the
modern herbalists. See Serapion (De Simpl. 41), and
Parkinson (*Theatre of Plants*, 680), and Gerard (*History of
Plants*, 857.) Our author's account of its medicinal properties
is taken from Galen. The tears of it, mentioned by Dioscorides
and our author, were evidently its resin, now generally known
by the name of gum ivy. All the ancient writers recommend
it for thinning the hair and killing lice.

Κίτριον,

Citrium, *Citron*, called also *Malum Medicum*; its middle part is acid or devoid of qualities; but the part in which the seed is contained belongs to the third rank of cooling and desiccative medicines. The bark is desiccative in the second degree, but not cooling, for it is acrid. Its flesh engenders thick chyme, is phlegmatic and cold. Its seed is discutient and desiccative in the second degree; and the leaves of the tree are possessed of desiccative and discutient powers.

COMMENTARY. Without doubt, as Sprengel states, it is the COMM.
Malus Medica, L., or *Citron*. Most of the commentators on
Virgil agree that it is his "felix malum" (*Georg.* ii, 127.) Dr.

COMM. Paris remarks that it probably deserves the praises bestowed on it by him as an antidote to poisons (Pharmacol. 254); and on this head there is a very interesting dispute between the celebrated Fr. Hoffmann and Moses Charras, the famous French authority on the Pharmacopœia. See Pharm. (ii, 39.) According to Macrobius, it is the *θύον* of Homer, who mentions it in the following line:

θύον ἀνα νῆσον ὀρώδει.—Odys. v.

Pliny, however, is not of this opinion (H. N. xiii, 16.) Our author copies closely from Galen. Dioscorides's account of its medicinal properties is far more precise and interesting. Citrons, he says, when drunk with wine, counteract the operation of deadly poisons, and loosen the belly; the decoction is a gargle for occasioning sweetness of the breath; its juice is much used by women labouring under pica (see Book I, 1, of this work), and their seeds seem to preserve clothes in a chest from being moth-eaten. (i, 166.) The Arabians treat very fully of the medicinal properties of the citron. See Serapion (De Simpl. i, 1), Avicenna (ii, 2, 116), and Rhases (Cont. l. ult. i, 219.) They all agree that its seed is alexipharmic, both when taken in hot water, and when the juice is applied to a poisoned wound. See particularly Avicenna (De Med. Cord. ii.) They also hold that it is an excellent cordial and stomachic; that it stops bilious purgings, fluxes, and vomiting; and that it dispels sorrow. They hold, however, that it is prejudicial to the lungs and nerves. They speak highly of the oil of citrons in paralysis and other affections of the nerves. We need scarcely remark that this preparation has been much celebrated in modern times (see Charras, l. c.), and is still retained in our Pharmacopœia. See Pereira, 1235.

Κιχόριον ἢ πικρὸς,

Cichorium, *Succory*, is, as it were, a wild endive, being cooling and desiccant in the first degree. It has also some astringency, and hence it agrees with hepatic dysenteries.

COMM. COMMENTARY. It is the *Cichorium Intybus*. We have treated of it among the pot-herbs in the First Book. It occurs in the Flora Hippocratica. Dioscorides recommends both the garden and the wild succory as being astringent, cooling, and

stomachic, in various cases, both internally and externally, for binding the bowels in dysentery, as a cataplasm in cardiac affection, and as a remedy for gout and ophthalmy. (ii, 159.) Celsus also ranks the intybus and ambubeia, which are the wild and garden succory, with astringents. (ii, 30.) Galen and the other Greek authorities give it the same general characters. The Arabians treat of the seris and intybus at greater length, and seem to confound the latter, or endive, with the taraxacon (*Leontodon taraxacum*?). See in particular Avicenna (ii, 2, 229, 683.) He recommends the latter most particularly as a deobstruent in obstructions of the liver and other viscera; he speaks favorably of it as a plaster in palpitations of the heart, and as a gargle along with *Cassia fistula* in inflammations of the throat. All the Arabians recommend both species as antidotes to the bites of venomous animals. See Avicenna (l. c.), Serapion (c. 143), and Rhases (Cont. l. ult. i, 266.) The wild succory (*Cichorium Intybus*) is still sometimes employed in medicine. Dr. Pereira says, "the medicinal properties of *Cichorium Intybus* are analogous to those of *Taraxacum Dens-leonis*." (Mat. Med. 698.) It occurs in the modern Greek Pharmacopœia.

COMM.

Κλήματις,

Clematis, *Virgin's-bower*, (called also *Myrsonöides*, *Daphnöides*, and *Polygonöides*,) has twigs as long as the thickness of a May-rush, (*holoschænus*,) and petals like the bay, and is of a desiccant nature; it, therefore, stops diarrhœas, dysenteries, and pains of the teeth, and is useful for the bites of venomous animals. The other species of *clematis* twines around trees like ivy, being of an acrid and caustic nature. Its fruit, when drunk with water, evacuates bile and phlegm downwards; and its leaves in a cataplasm, remove leprosy.

COMMENTARY. The former species, distinguished by the synonyme of *Daphnoides*, is the *clematis* described by Dioscorides (iv, 179), and is the second species of Galen, who expresses himself contemptuously of Pamphilus for confounding the two species together. It is clearly a species of *Clematis*, either the *vitalba* or *cirrhusa*. All agree in recommending it as a safe astringent. The other species described by Dioscorides (iv, 7), and which is the former species of

COMM.

COMM. Galen, may be decidedly determined to be either the *Vinca major* or *minor*. It, according to Galen, is possessed of acrid and caustic powers. The Arabians would appear not to distinguish properly the *clematis* from the *hedera*. See Serapion (c. 41), and Avicenna (ii, 2, 169.) The modern Greek Pharmacopœia contains the *C. erecta*.

Κλινόποδιον,

Clinopodium, *Field Basil*, is possessed of heating and desiccative powers, not caustic however, but of the third degree.

COMM. COMMENTARY. It may with considerable confidence be set down as being the *Clinopodium vulgare*, although doubts have been started on this head. See Parkinson (*Theatre of Plants*, 23), and Sprengel (*Ad Dioscorid.*) Our author follows Galen very closely. Dioscorides represents it to be diuretic and emmenagogue (iii, 99.) We have not been able to discover any traces of it in the *Mat. Med.* of the Arabians, nor in Hippocrates.

Κνίκος,

Cnicus, *Bastard Saffron*; its seed is used only for purgings, but if applied externally it belongs to the third order of calefacients.

COMM. COMMENTARY. The preponderance of authority is decidedly in favour of its being the *Carthamus tinctorius*, a plant which held a place in our Dispensatory with its ancient characters down to recent date. (See Quincy, 167.) Dioscorides mentions of it that it is used as a potherb, and as a medicine for opening the bowels. Galen gives it exactly the same character as our author. The Arabians give rather a confused account of it by treating of it along with *Atractylis*, which they held to be the wild cnicus. See in particular Avicenna (ii, 2, 159.) All the Arabians hold that it is not only laxative, but also powerfully alexipharmic. They call it *Kartam* or *Cartamus*. See further Serapion (c. 202), and Rhases (*Cont. l. ult. iii, 46.*)

Κογχύλια,

Conchylia; their powers resemble those of the buccinæ.

COMM. COMMENTARY. This name was applied to various Testacea, or *Shell-fish*. See Harduin (*Ad Plinii H. N. ix, 60*); Athenæi

Deipnos, iii; Aristotle, H. A. v, 14; and Gesner, De Aquat. COMM.
 Oysters are frequently called by this name, as in the following
 lines of Petronius Arbiter:

Lucrinis
 Eruta littoribus vendunt Conchyliis, cænis
 Ut renovent per damna famem.—*Satyricon.*

Dioscorides does not treat of this article, at least, under this name. The Arabians would appear to have identified them with the *Cochlææ*. See in particular Serapion (c. 434.)

Κοιλία,

Venter, *the Belly* of the cormorant, either when boiled, fresh, or dried, is said to be stomachic if eaten; and in like manner, the inner coat of the stomach of hens when dried and taken in a draught. But Galen says, that he found upon trial both these statements false. Dioscorides relates that the stomach of a wood-pigeon, if drunk, gradually makes stones be expelled by urine. The stomach of a weasel, when drunk, is a preservative against all poisonous animals.

COMMENTARY. Properly speaking *the Stomach*. Our au- COMM.
 thor, as he acknowledges, borrows from Galen and Dioscorides. }
 Serapion repeats the same characters of this article upon the
 authority of Dioscorides. (c. 469.) We may be allowed to
 mention that the inner membrane of the crop of a fowl is still
 a popular remedy for indigestion in the north of Scotland.

Κόκκος κνίδιος,

Granum Gnidium, is the fruit of the *Thymelæa* and not of the *Chamelæa* as some have supposed. Being possessed of acrid and caustic powers, when drunk, it purges water downwards.

COMMENTARY. See under *Θυμέλαια*. All the authorities, COMM.
 from Hippocrates downwards, describe it as an acrid purga- }
 tive. Dr. Pereira says, "*Daphne Gnidium* is the *Thymelæa* of
 Dioscorides, whose fruit is the *κόκκος κνίδιος*, or *Gnidian-berry*,
 used by Hippocrates. Its properties are similar to those of *D.*
Mezereum." (Mat. Med. 807.) Dioscorides gives a full de-
 scription of the *thymelæa*, and states, with excellent precision,
 its operation on the animal economy. He says it purges,

COMM. bringing away a watery discharge, and kills the foetus in utero when applied on a pessary. (iv, 170.) Galen and Aëtius and Oribasius state its characters in brief terms, like our author. It would appear, in fact, to have been little used in medicine. The Arabians confound the thymelæa, chamelæa, and chamæleon together, so that there is great difficulty in making out what were their exact views on the *Thymelacæa*. Indeed, the genera of this tribe of plants are still with difficulty distinguished from one another. See Lindley's Vegetable Kingdom, 530.

Κόκκος βαφικός,

Granum tinctorium, is desiccative without pungency. It agrees, therefore, with large wounds and wounds of the nerves when triturated with vinegar or oxymel.

COMM. COMMENTARY. It is *Vermilion* or *Scarlet grain*, being the product of a little hemopterous insect called *kermes* or *Coccus ilicis*. See Theophrastus (H. P. iii, 16), and Pliny (H. N. xvi, 12.) It was anciently used in dyeing, but is now superseded by the cochineal. An interesting account of *kermes* and cochineal is given by Beckmann. (History of Inventions.) Dioscorides and the other authorities, like Paulus, commend it as a vulnerary medicine, especially in wounds of the nerves. The Arabians, in treating of the *kermes*, merely repeat what Dioscorides and Galen had written on this head. See in particular Serapion (De Simpl. 321); Avicenna (ii, 2, 718); Rhases (Cont. l. ult. i, 740.)

Κοκκομηλία,

Prunus, the *Plum*; its fruit loosens the belly, if fresh, in a greater degree, or if dried, in a smaller. The decoction of it in gargles, cures inflammations about the uvula. The gum of the tree has the powers of an incisive and attenuate substance, so that some relate that when drunk with wine it proves lithontriptic. With vinegar it is said to cure the lichen of children. The fruit of the wild plums is manifestly astringent, and constipates the belly. This plant in Asia is called *Prumnium*. The dried garden plums, now called *damascenes*, appear to be similar, as Galen says.

COMM. COMMENTARY. Without doubt it is the *Prunus insiticia* or *Bullace tree*, a well known species of plum. The *Damask-plums*

are much celebrated by ancient authors. We have treated of COMM. plums as an article of food in the First Book. Pliny and Marcellus Empiricus recommend them particularly in diseases of the tonsils and gums; but, indeed, all the ancient authorities prescribe them as astringents in such cases. There is a slight difference of opinion between Dioscorides and Galen regarding the virtues of the plum. Dioscorides says, "the fruit is esculent, but bad for the stomach, and loosens the bowels. But the dried fruit of the Syrian plums, and more especially those which grow about Damascus (damascenes?), are stomachic and astringent of the bowels." Galen says, "the fruit of the plum tree loosens the bowels, the fresh in a greater degree and the dried in a less. I know not how it is that Dioscorides says that the dried damask-plums bind the bowels, for even these manifestly loosen, but in a less degree than the Spanish; for the damask are more astringent, and the Spanish more sweet, &c." (De Simpl. vii.) This slight difference created a keen controversy in modern times between Brasavolus, who impugns, and Matthiolus, who defends the strictures of Galen. To us it appears that the only mistake committed by Dioscorides consists in stating his views too succinctly. He, no doubt, never meant to deny that the damask-plums have a certain purgative faculty mixed up with astringency, like plums in general. Galen's language is more precise, but we do not see that there is much real difference between his views and those of Dioscorides. The Arabians gravely state this mighty controversy between the two ancient sages, but scarcely pretend "tantas componere lites." See Rhases (Cont. l. ult. i, 565); Avicenna (ii, 2, 532); and Serapion (c. 139.) One of Rhases's authorities says of plums, that they moisten the stomach and loosen the belly, purging yellow bile. Another of them, named Chuz, says the water of them is emmenagogue, and their gum, mixed with sugar, cures impetigo. Avicenna quotes this opinion with approbation. All agree that they are lithontriptic.

Κόλλα,

Gluten, *Glue*; that prepared from the similago and pollen is of an emplastic and digestive nature.

COMM. COMMENTARY. *Gluten* or *Paste*. Dioscorides mentions that the best kind is prepared from the hides of bulls in Rhodes. Galen makes mention of another kind prepared from flour, and used in binding books. (De Simpl. vii.) See further, Pliny (H. N. xiii, 26.) The Arabians, in treating of it, derive most of their information from the Greeks. See Serapion (c. 138); Avicenna (ii, 2, 202); and Rhases (Cont. l. ult. i, 336.) They treat of the *ichthyocola* under this head.

Κολοκύνθη,

Cucurbita, the *Gourd*, is of a humid and cold temperament in the second degree. Hence, when applied entire in a cataplasm, it cools hot inflammations.

COMM. COMMENTARY. We have stated the difficulty of determining this article in the chapter of the First Book on the summer fruits. It would appear to be sometimes put for the *Cucumis sativus* or *Cucumber*, and sometimes for the *Cucurbita* or *Gourd*. About the species, however, there is some doubt. On its medicinal properties, besides the medical authorities, see Geopon. (xii, 19.) Dioscorides recommends it raw, as a cooling application for various swellings and apostemes; also for the siriasis of infancy (See Book I, 13), for inflammations of the eyes, and those of gout in like manner. He also speaks of it as being useful in erache and heat of the stomach. He states that it is laxative of the bowels; and for this purpose directs a raw gourd to be hollowed out, and wine having been poured into it, it is to be exposed for a time to the heat of the sun, when it will become gently laxative. (ii, 161.) Galen, Aëtius, and others give it much the same characters as our author. The Arabians, as usual, borrow freely from the Greeks without making any addition of much consequence. See Avicenna (ii, 2, 175); Serapion (c. 248); and Rhases (Cont. l. ult. 1, 344.) One of Serapion's authorities, called Masarugie, says of the gourd, that when it is surrounded with paste and roasted, the water thus squeezed out of it is beneficial in acute diseases and cough, that it quenches thirst, and when taken with sugar gently opens the bowels. Another of them, Habix, gives nearly the same account of it. Another of them says of its seed, that it is diuretic, and softens the belly. In modern

times the seeds of gourd were formerly held as one of the four greater cold seeds. See Charras (Roy. Pharm. 66) and Quincy (p. 197.) COMM.

Κολοκινθίς,

Cucurbita sylvestris, *Colocynth*, is possessed of a strong purgative power. If the juice of it, while in a green state, be rubbed into the part, it relieves ischiatic disease.

COMMENTARY. There can be no doubt that it is the *Cucumis Colocynthis*, *Coloquintida*, or *Bitter Gourd*. It was used in medicine from the earliest times, being the *κολοκύνθη ἀγρία* of Hippocrates (De Mulieb. 621, ed. Föes), as Galen has explained. It does not occur, however, in the works of Celsus. Dioscorides gives an excellent account of it, recommending it as a powerful phlegmagogue and cholagogue, both when given by the mouth and in clysters; and as a gargle in toothache. He says it kills the foetus *in utero* when applied on a pessary. (iv, 175.) Our author's account of it is copied from Galen. The Arabians treat of it more fully. See Avicenna (ii, 2, 127); Rhases (Cont. l. ult. i, 222); Serapion (c. 272); Mesue (De Simpl. 4); Averrhoes (Collig. v, 421); and Ebn Baithar (i, 331.) Avicenna is very precise in giving directions for the preparation of the medicine. His statement of its medicinal properties is so long that we cannot find room for it. He says it evacuates phlegm, bile, and perhaps blood from the intestines; that it is useful in dropsy, and that it is alexipharmic, in proof of which he refers to the report of a case of a person who had been stung by scorpions, and was immediately cured by it. But of all the authorities, Mesue is, perhaps, the one who treats of it most elaborately: he recommends it as purging phlegm and yellow bile, in cephalæa, hemicrania, epilepsy, apoplexy, vertigo, defluxion in the eyes, cold gout, and other affections of the joints; asthma, chronic cough, dyspnœa, &c. But, he adds, it is more especially useful in pituitous and flatulent colic, and in dropsy. For this purpose it may be administered by the mouth, in clysters and in suppositories. Applied *per vaginam* it kills the foetus. He directs its bad effects to be corrected by means of mastich, tragacanth, &c. He forbids it to be administered either in great heat or cold. Averrhoes ranks it with the strongest phlegmagogues, and recommends that its activity should be abated by almonds, tragacanth, fistics, &c. COMM.

COMM. Ebn Baithar treats of it at very great length. Serapion says that, being a drastic purgative, it ought not to be given during the heat of summer, or cold of winter; for that, at these seasons, Hippocrates had forbid to administer purgatives. Pliny recommends it in injections for diseases of the intestines, kidneys, and loins. He says that an embrocation of it with oil cures pains of the spine and hip-joint, and is useful in jaundice when followed by oxymel. (H. N. xx, 7, 8.) Marcellus, the Empiric, says of it that it purges phlegm, yellow and black bile, when given with oxymel. (c. 30.) Ruffus Ephesius says of colocynth, that it purges phlegm and pure bile: in a word, he adds, it is useful in asthma, pleurisy, chronic headache, vertigo, and dimness of vision. (De Med. Purg.)

Κόμαρος,

Arbutus, the *Arbutus Tree*, is of a sour quality, both the tree and its fruit, which is called memycœlon. It is hurtful to the stomach, and occasions headache.

COMM. COMMENTARY. Apuleius says "Comaron Græci, Romani fragum vocant." It is the *Arbutus Unedo* or *Wild Strawberry Tree*, which must not be confounded with the *Fragaria vesca*, L., Angl., Wood Strawberry. It seems difficult to account for its holding a place in the ancient *Materia Medica*, since all the authorities, like Paulus, speak unfavorably of its medicinal powers. See Dioscorides and Galen.

Κόμμι,

Gummi, *Gum*, is of a desiccative and emplastic nature, and manifestly cures asperities (hoarseness?).

COMM. COMMENTARY. For an account of the ancient gums see Pliny (H. N. xiii, 20.) He says the best kind is got from the Egyptian thorn or Acacia; this must have been either the *Acacia vera*, L., or *Acacia Senegal*. Galen delivers the medicinal character of gum in the same terms as our author, and the other Greek authorities do the same. Dioscorides recommends the gum of the acacia (gum-arabic?) as possessing emplastic powers, and for blunting acrid medicines when mixed with them. He adds that, when mixed with the white of an egg, it prevents blisters from rising on burnt parts. (i, 133.) The Arabians concur in recommending gum-arabic as being

beneficial in hot coughs, in ulcers of the lungs, and for clearing the voice; they also held it to be stomachic and theriacal. COMM.
See Avicenna (ii, 2, 310); Rhases (Cont. l. ult. i, 345); and Serapion (c. 229.)

Κορία,

Lixivium, *Lye*; the washings, as it were, of ashes are so named. The most detergent and desiccative of all are those made from the ashes of figs and of the spurges, so that they are possessed of almost septic powers. If a little quicklime be added to the ashes it renders the lye caustic, which is then called protostactos, being mixed up principally with medicines administered by injection. But the strongest of all is that prepared from quicklime alone.

COMMENTARY. We have given some account of the *Lixivial Ashes* or *Lyes* of the ancients in the 9th section of Book VI. COMM.
They were all of them preparations of potass mixed up with various impurities. The term was applied not only to the solution, but also to the dried *cineres* of the same. Even quicklime is sometimes called by this name: *κορία ἢ ἄσβεστος*. (Scholiastes in Theocrit. Idyll. i.) The Cinis lixivius of the fig-tree is the one most frequently mentioned of them. See Pliny (H. N. xv, 18); Geopon. (v, 33); Dioscorides (i, 186); Serapion (183); and Avicenna (ii, 2, 188.) Avicenna recommends the lye of the mezerion in quinsy and affections of the eye. See also Rhases (Cont. l. ult. i, 214.) The protostactos was a composition of potass and lime. (See Book VI, s. 9.) On the alkalies or Cineres lixivii of the ancients, see further, Dutens (Découvertes attrib. aux Modern. 187.)

Κόνυζα,

Conyza, *Fleabane*; both species of it are desiccant and calefacient in the third degree. Hence, even the oil in which it is boiled stops periodical rigors; and the flowers have similar powers. The decoction of them promotes menstruation, and expels the fœtus. That which grows in moist situations is more fetid and has weaker powers.

COMMENTARY. There is considerable difficulty in determining exactly the conyzæ of the ancients. See Parkinson COMM.
(Theatre of Plants, i, 44), and Sprengel (Ad Dioscor. iii, 126.)

COMM. The preponderance of authority seems to lead to the conclusion that they all were species of *Inula*, namely, the greater *I. viscosa*, Act., the lesser *Inula saxatilis*, and the third, *I. oculus Christi*. The conyzæ were employed in medicine at a very early period, being frequently mentioned in the Hippocratic treatises. See Dierbach, who, however, has decided differently from us as to the plants to which the conyzæ are referable. He marks the fetid conyza as being *Ambrosia maritima*, and the fragrant as *Inula bifrons*. The greater conyza of Dioscorides would appear to be the cunilago of Pliny (H. N., xx, 63), where see the note of Harduin. Our author follows Dioscorides and Galen, who agree in the main as to the medicinal properties of these plants. All the authorities concur in opinion that the greater conyza is emmenagogue, and procures abortion in pessaries. Ebn Baithar seems to treat of it rather confusedly under the head of *Thuback*. (ii, 150.) Few, if any, of the other Arabians have noticed it; and it is not contained in the Greek Pharmacopœia.

Κόπρος,

Stercus, *Dung*; all kinds of it are of a heating, desiccative, and discutient nature, but they differ from one another according to the temperament and diet of the animal which voids it. The dung, then, of dogs fed on bones, when dried, cures dysenteric affections if taken in a draught with divided milk (lac scissum), and old ulcers, if mixed with suitable medicines. In cynanche and inflammations about the tonsils, it is rubbed into the parts mixed with honey. These complaints are greatly relieved by the dung of children who have not been permitted to take too much food. The dung of wolves and the whiter sort which is found upon certain shrubs, is an admirable remedy for colics, and that, not only in a draught, but also when appended as an amulet. It may be fastened either with the wool of a sheep recently killed by a wolf, or the skin of a stag. Goat's dung, being more acrid and discutient, discusses scirrhus tumours when applied externally, more especially upon hard flesh. When burnt it is more detergent and attenuate. The dung of oxen has some attractive powers, and, therefore, cures the stings of wasps and bees. And if the whole body of persons affected with dropsy be

rubbed with cow's dung in the sun they will be much relieved thereby. Sheep's dung with vinegar cures myrmecia, acrochordon, furunculus, and clavus. That of wild pigeons, being much more acrid than the other kinds, proves rubefacient when applied with the seed of cardamus. That of domestic fowls, when drunk with oxymel, vinegar, or wine and honey, causes the suffocative mushrooms to be vomited, and proves a preservative from them. Some have given it to drink also in colics. They say also that the dung of storks, when drunk, is useful in orthopnœa. That of mice, being more detergent than all others, agrees with alopecia, and when applied to the anus of children provokes evacuation. The dung of starlings, when they feed on rice, becomes detergent so as to clear away freckles. That of land crocodiles removes alphas, as that of the crocodiles of the Nile is believed to attenuate leucoma (white films on the eyes).

COMMENTARY. Our author's account of the medicinal properties of *Dung* is abridged from Galen. As we have no wish to see this article restored to the *Materia Medica*, we shall not enlarge upon the subject. Those who wish to improve their knowledge of the medicinal articles mentioned under this head by our author, may find them treated of *usque ad nauseam* by Dioscorides, Galen, Serapion, and Avicenna. Many of them were retained in the Dispensatory down to a comparatively recent date. For example, the white dung of dogs, usually called *Album Græcum*, was long used in the cure of quinsies. See Quincy (140, 206.)

COMM.

Κοράλλιον,

Corallium, *Coral*, is a sort of petrified arboret, not growing on dry land, but among the mud of the sea, being of a red colour, and like stone. Its powers are decidedly desiccant and moderately astringent. It answers, therefore, with cases of hæmoptysis and dysentery.

COMMENTARY. The Coral of the ancients is the *Isis nobilis*, Pall.; the name *Isis* being borrowed from Pliny. (H. N. xiii, 52.) Pliny mentions, in another place, that corals, burnt and pulverised, and drunk in water, are useful in some pains of the bowels and bladder, and in calculus. He adds that they are also soporific. Corals were much used as amulets or

COMM.

COMM. } phylacteries. (H. N. xxxii, 5.) See also Solinus (ii), and Geopon. (xv, 1.) Celsus ranks the corallium with those substances which burn: "Veratrum, album et nigrum, corallium, cantharides, pyrethrum, adurant." (v, 208.) This article does not occur in the Hippocratic treatises, nor in Galen's work 'On the Faculties of Simples.' The latter, however, prescribes it for spitting of blood in another place. (De Comp. Med. sec. loc. vii.) Dioscorides and Serapion, likewise, recommend it as an astringent in hæmoptysis and in dysentery. It appears from the Royal Pharmacopœia of Moses Charras, that it was used for the cure of these complaints in his time. He prefers the red coral, and directs us to give it in the form of an impalpable powder. The red coral held a place in our English Dispensatory until a recent date. See Quincy (101.) It was much used in infantile convulsions. It is still admitted to be a good antacid. See Gray (Pharmacol. 146.) According to Dr. Ainslie, the Tamool practitioners prescribe it, when calcined, in cases of diabetes and bleeding piles. The Arabians place it among their astringents and cordials. (Mat. Ind. 52.) The sea-coralline is retained in the modern Greek Pharmacopœia, under the title of *Helminthochortos*, which, however, as is there stated, comprehends several species of the *Ceramium helminthochortum*, mixed up with *ulvæ*, *confervæ*, but especially red corallines. (77.) On the use of it by the Arabians, see the commentators on Mesue. (De Electariis, 89.) The Electarium de Gemmis, in which it occurs as an ingredient, is said to be most efficacious in cold affections of the brain, heart, stomach, liver, and womb; an excellent exhilarant and cordial; and restorative in palpitation of the heart, and in syncope.

Κόρεις,

Cimices, *Bugs*; these animals are of an acrid nature. Some write that when drunk with vinegar they eject leeches.

COMM. } COMMENTARY. Dioscorides recommends *Bugs* in quartan intermittents, uterine suffocation, and as an antidote to the bite of the asp. (ii, 36.) Galen properly recommends garlic as a substitute for them in the case of leeches which have been swallowed. Pliny, apparently deriving his information from Dioscorides, ascribes to bugs alexipharmic properties of the most general nature; and more especially commends them as

being a remedy against the bite of asps. (H. N. xxix, 17.) COMM.
 The Arabians copy all that the Greeks had recorded respecting the medicinal virtues of bugs, without making any addition. See in particular Avicenna (ii, 2, 270.)

Κορίτζ,

Coris, the herb; some call it *Hypericum* (*St. John's Wort*). It is acrid and fragrant; but the fruit of it, in a draught, promotes the urinary and menstrual discharges. It is also a remedy for the bites of venomous spiders; and in cases of episthotonos it is rubbed in with oil.

COMMENTARY. It is *Hypericum Coris*. This name is taken COMM.
 from Pliny, who recommends it in strangury and pleurisy. (xxvi, 54.) Our author's statement of its medicinal powers is abridged from Dioscorides. (iii, 164.) Galen does not treat of it by name, but ascribes nearly similar powers to hypericum. We cannot find it described in the works of the Arabians.

Κοριανθὸν ἢ κόριον,

Coriandrum, *Coriander*, is composed of opposite powers. For it consists of a terrene part formed of subtile particles, which is bitter, and of a watery juice, which is tepid (mild?). It has also a small degree of astringency, so as to accord with inflammations and cases of erysipelas, which are not of too hot a nature; and it also discusses the softer tumours with some of the other subtile remedies. The seed, when drunk in small quantity with sweet wine, expels worms; but when taken in larger doses it disturbs the understanding.

COMMENTARY. It certainly is the *Coriandrum sativum*. COMM.
 Dioscorides says that its action is refrigerant, but Galen insists that it is calefacient. Symeon Seth, Mesue, as quoted by Serapion, and most of the ancient authorities adopt the opinion of Dioscorides. Our modern views would seem to correspond better with those of Galen; coriander-seed being now generally looked upon as an aromatic stimulant, and as being carminative and stomachic. Galen's remarks under this head are highly interesting. The coriander was used in the age of Hippocrates. (359, etc. ed. Föes.) Celsus, like Dioscorides, holds it to be refrigerant. (84, ed. Milligan.) He also calls it diuretic. (Ibid.) The Arabians say that when the juice is

COMM. taken to the extent of four ounces, it proves destructive of life. Avicenna (ii, 2, 143); Serapion (c. 44); and Rhases (Cont. l. ult. i, 229.) They also hold that it is possessed of soporific powers. They prescribe it for the cure of epilepsy, in which case they say it checks the aura which ascends from the stomach to the brain. The *Coriandrum sativum* holds a place in the modern Greek Pharmacopœia. (58.) It is also still retained in our Materia Medica. See Pereira (1073.)

Κόρυδος ἢ Κορυδαλλος,

Alauda, the Lark; this bird when boiled with plain broth is of use in colic affections. But one must eat it perseveringly and frequently with the broth.

COMM. COMMENTARY. No one can doubt, from the ancient descriptions of it, that it was the *Alauda cristata*. Galen remarks, that it is correctly described by Aristophanes, in his 'Birds;' and that it is noticed by Theocritus. (Idyll. vii.) It is also mentioned by Aristotle and Ælian in their works on Natural History. Pliny calls it *Galerita*. Galen says there is a herb of the same name. Like our author, he praises it when given in broth, for the cure of colic. Both, however, copy from Dioscorides. (ii, 59.) It is not noticed in the works of Hippocrates and Celsus. It would appear that it is the *hanabroch* of Serapion, who, in describing it, merely gives extracts from Dioscorides and Galen. (436.) It is also briefly noticed by Ebn Baithar in nearly the same terms as Serapion. (ii, 329.)

Κορωνόπουρος,

Coronopus, Buck's-horn Plantain; the root of it is believed to be useful in colic affections when eaten.

COMM. COMMENTARY. It is the *Plantago Coronopus*, called in English Buckshorn Plantain. See Parkinson, Gerard, and Quincy. Dioscorides says it is used as a potherb, and that it is given as a medicine in colic. (ii, 157.) None of the others supply any additional information regarding it worth quoting.

Κόστος,

Costos, is possessed of a small degree of a bitter, but a greater degree of an acrid and hot quality. Wherefore, when

a part requires to be heated, or a deep-seated humour attracted to the surface, one has recourse to the costus. It is therefore diuretic, emmenagogue, and anthelmintic. It has also some flatulent powers, so that it excites to venery when drunk with wine and honey. It suits with ischiatic and paralytic affections, and with periodical rigors when rubbed in with oil.

COMMENTARY. We should occupy more space than we can afford to devote to it if we were to enter into a disquisition on the general literature of this article. Those who feel curious to know our opinions on this subject, are referred to the Appendix to Dunbar's Lexicon, already frequently quoted by us. Much interesting information respecting the costus has been supplied by very recent writers. See Royle (Ant. of Hindoo Medicine, 88), Ainslie (Mat. Ind. 152), and Pereira (Mat. Med. 699.) Dr. Lindley says of it, "Dr. Falconer has ascertained that the costus of the ancients is the root of his Auklandia Costus, a plant inhabiting the moist open slopes surrounding the vale of Cashmere. In Cashmere the plant is not held in repute as a medicine, but is chiefly employed for protecting bales of shawls from the attacks of moths." (Vegetable Kingdom, 708.) We may add, that although the zeduary be not the same as the costus, as has been supposed, there can be no doubt that it was often used in place of the costus. (See M. Charras' Pharm.) More recently, we have reason to think, our costmary, *Balsamita vulgaris*, was used as a succedaneum for the ancient costus. Compare Parkinson (80) with Hill (M. M. 624.) The three kinds of costus described by Dioscorides, namely, the Arabian, the Indian, and the Syrian, would appear to have been only varieties of the same substance. He says it is possessed of calefacient, diuretic, and emmenagogue powers, and is useful in uterine affections, in pessaries, fomentations, and fumigations. He recommends it as being alexipharmic, expectorant, aphrodisiacal, vermifuge, a good application externally in paralytic cases; and, in short, he gives it nearly the same characters as our author, who evidently copies from him and Galen. Aëtius and Oribasius do the same. The Arabian authorities on the Mat. Med. in like manner, do little more than quote what Dioscorides, Galen, and our author have

COMM. written on the subject. See Rhases (Cont. l. ult. i, 236); Avicenna (ii, 2, 161); Serapion (c. 318.) Avicenna and Rhases agree that it dries up humid ulcers when sprinkled over them. One of Rhases's authorities states that the oil of costus is useful in relaxation and coldness of the nerves, and in sciatica; and that a fumigation made with it by means of an instrument for the purpose (per embotum), kills the foetus, and promotes menstruation. All join in giving it the character of being alexipharmic. The costus, as far as we have been able to discover, does not occur in the works of Hippocrates. Celsus mentions it along with other aromatics (iv, 14, et alibi). It is often noticed as a precious ointment and aromatic by the classic authors. See Pliny (H. N. xii, 24); Columella (xii, 20); Propertius (iv, 6, 5); Lucan (ix, 917); Horace (Carm. iii, 1, 44); Ovid (Met. x, 308.)

Κοτυληδών,

Cotyledon, *Navel-wort*, is cooling, repellent, detergent, and discutient. It is believed that when the leaves of it are eaten along with the root, they prove lithontriptic and diuretic.

COMM. COMMENTARY. Dioscorides describes two species, which are the *Cotyledon umbilicus*, and the *C. serrata*. Our author's description applies to the former of these, and is abridged from Galen. Galen further recommends it strongly as an application to inflammatory erysipelas and erysipelatous inflammation, the nice distinction between which he has stated under coriander, and in his work Therap. ad Glauc. (ii.) See Rhases (Cont. l. ult. i, 138.)

Κοχλίας,

Cochleæ, *Snails*, when burnt are of a moderately desiccative nature, and somewhat heating. They are useful in dysenteries when mortification has not yet taken place, if to four parts of them, one part of white pepper, and two parts of galls be added. Unburnt, they are triturated and applied whole to the belly in dropsical complaints, and to the joints in arthritic, with advantage, being allowed to remain until they drop off spontaneously; and upon the whole they dry strongly deep-seated humours.

COMM. COMMENTARY. The κ. χέρσαϊος is the *Helix Pomatia*,

Escargot, or *Vinegar Snail*. The snail was esteemed a delicacy COMM. by the Roman gourmands. See Varro (de R. R. iii, 14) and Pliny (H. N. ix, 25.) The use of it, however, was forbidden by the Mosaic law. In one of the Hippocratic treatises, the cochleæ are recommended for procidentia ani. (De fistul.) Pliny, in like manner, recommends them in dysentery. (H. N. vii, 30.) Dioscorides and Galen give nearly the same account of their medicinal properties as our author. The latter says that they are difficult to digest, but very nutritious when digested. Celsus, on the other hand, ranks them among the weak articles of food. Horace seems to say that they whet the appetite.

Tostis marcentem squillis recreabis et Afrâ
Potorem cochleâ.—*Satir.*

Κορνία,

Cornus, the *Cornel*; the fruit of the tree being sour, proves strongly astringent of the belly when eaten. The leaves and shoots, by their sourness, are strongly desiccative, so as to agglutinate the largest wounds of hard bodies.

COMMENTARY. It is the *Cornus Mas*. Dioscorides recom- COMM. mends it as an application to lichen. (ii, 72.) Our author abridges Galen's account of it. The Arabians speak favorably of it in the same cases as the Greeks, and also recommend it for cholera, diabetes, and vomiting. See Avicenna (ii, 2, 315), Rhases (Cont. l. ult. 357.)

Κράμβη,

Brassica, *Cabbage*; that sort which is esculent has desiccative powers both when eaten and when applied externally, but it is not sensibly acrid. It therefore agglutinates wounds and ill-conditioned ulcers, and cures tumours which are difficult to discuss. It is also somewhat detergent, by which property it cures leprosy. Its seed when drunk kills worms, and especially the seed of the Egyptian cabbage does this. The ashes of its stalks when burnt are possessed of caustic powers, and with grease are applicable in chronic pains of the sides. The wild is stronger than the garden cabbage in all respects; hence it cannot be taken internally without inconvenience. The sea-cabbage being saltish and bitterish loosens the belly.

COMM. COMMENTARY. The *Brassica sativa* of the ancients no doubt comprehended several species of cabbage. Dioscorides dwells largely on its medicinal properties, but in nearly the same terms as our author. He calls it laxative and alexipharmic, and recommends it as an application to erysipelas, epinyctis, and leprosy; with salts, he says, it breaks anthrax, and when boiled and mixed with milk, it is a good application to spreading gangrene. The *Brassica sylvestris* (which Sprengel inclines to set down as being the *Brassica incana*, Zenor.), he says, is agglutinative of wounds, and discutient of swellings and inflammations. Its cyme, he says, is not unpleasant to the taste. To the sea-cabbage (*Convolvulus soldanella*) he assigns the same characters as our author. (ii, 146, 147, 148.) Galen gives nearly the same account of the three species of brassica. In the Hippocratic treatises, the decoction of cabbage is recommended as an injection to the womb. (De Mulieb. ii.) According to Celsus, the brassica when half raw is laxative, but when twice boiled, astringent. (ii, 29, 30.) The Arabians treat of the different kinds of brassica at great length; as usual, drawing largely from the stores of the Greeks. One of the Arabian authorities quoted by Rhases, says its seed, if applied per vaginam post coitum, will prevent impregnation, and that the decoction of it expels the tapeworm. Another of the same authorities recommends a decoction of it as an application to the joints in gout, and to blistered surfaces after burning, more especially when its ashes are mixed up with the white of an egg. (Contin. l. ult. i, 198.) See in like manner, Serapion (c. 32) and Avicenna (ii, 2, 139.) As we have stated in our commentary on the 95th section of the First Book, all the ancient authorities held that the cabbage counteracts the intoxicating powers of wine. The brassicæ held a place in our Dispensatory, and retained their ancient character down to a comparatively recent date. See Parkinson, Culpeper, and still more recently Quincy. (116.) They are still much prized as medicines by the Arabians and Persians. See Ainslie (M. Ind.)

Κραταίγονον,

Cratægonon; the fruit of this herb is acrid to the taste and cold like millet.

COMMENTARY. Dioscorides assigns it wonderful powers in promoting procreation, and hence its name. He calls it intensely acrid. Galen and the other Greek authorities, treat of it very succinctly like Paulus. We have not been able to find any traces of it in the Mat. Med. of the Arabians. What plant it was seems a puzzle. Both Parkinson (Theatre of Plants, 858) and Sprengel (Ad Dioscor. l. c.) incline to the *Polygonum Persicaria*, but the medicinal virtues of it, as given by our older herbalists, do by no means agree with the characters of the cratæogonon as given by the ancients. COMM.

Κρηθμον,

Crethmum, *Samphire*, is somewhat saltish with a little bitterness, and therefore its powers are detergent and desiccative.

COMMENTARY. It is the *Crithmum maritimum*, *Samphire*, or *Sea-fennel*. Dioscorides recommends its fruit, root, and leaves, when boiled in wine, for dysuria and jaundice. He further mentions it as a potherb and pickle. (ii, 156.) Galen and the other Greek authorities state its characters briefly like our author. Pliny, like Dioscorides, mentions it as a potherb and pickle, but says nothing of it as a medicine. (H. N. xxvi.) We do not find it noticed by Celsus nor by the Arabians, with the exception of Ebn Baithar. (ii, 280.) COMM.

Κριθή,

Hordeum, *Barley*, is of the first order of cooling and desiccative medicines, and is also somewhat detergent. It is more desiccative than the flour of beans, and less flatulent. The polenta of barley is more desiccative than barley itself. Its ptisan is not only more diluent, but is also more detergent.

COMMENTARY. It is the *Hordeum vulgare*, comprehending no doubt several species. We have treated of it among the Cerealia in the First Book (Vol. I, p. 123.) The ἀλφιτον, or polenta, was a sort of malt. See Pliny (H. N. xviii, 14.) We have treated of it in the same place; and also of the mode of preparing ptisan. It was a favorite remedy with Hippocrates (de victu acut. et alibi.) Dioscorides calls it suitable to the acrimony, roughness, and ulceration of the windpipe, and says it attracts milk when taken boiled with COMM.

COMM. the seed of fennel, and is diuretic, detergent, flatulent, bad for the stomach, and digestive of swellings. He further recommends the flour of barley for discussing boils and inflammations, when boiled with figs and honeyed water. See further (ii, 108.) Galen, Aëtius, and Oribasius, treat of it in nearly the same terms as our author. The Arabians give nearly the same statement of its virtues as a medicine. See Avicenna (ii, 2, 530.) He recommends barley-water very much as a drink in fevers, being, as he says, diluent and cooling; in hot fevers it is to be given pure, and in cold, with parsley and fennel. Ebn Baithar treats of it at great length. (ii, 97.)

Κρίνον,

Crimmon, *Bran*; the thick part of the flour of wheat and of spelt is so named, being more nutritious than polenta, but more indigestible.

COMM. COMMENTARY. It is, properly speaking, groats or coarse meal; it was also applied to spelt and other species of grain coarsely ground. See Dioscorides, from whom our author's account of it is principally taken. Both Dioscorides and Galen recommend the coarse meal of spelt which has been toasted for binding the belly. From the coarse meal of wheat, pap or porridge, they add, is prepared.

Κρίνον,

Lilium, the Lily; its flower is of a mixed temperament, being composed of a subtile part, a terrene, and a certain watery substance of a moderate temperament. Hence the oil composed from it being of a discutient and emollient nature agrees well with inflammations of the uterus. The root of it and its leaves are desiccative, detergent, and moderately discutient, and hence are useful for burns. The juice of it is serviceable for wounded nerves, with oxymel.

COMM. COMMENTARY. Without doubt it is the *Lilium candidum*. Dioscorides praises the seed of the lily, given in wine, as an antidote to poisonous serpents; and, by the way, the same character is given of it by Walafridus Strabo in the ninth century, and by Macer Floridus in the tenth. Dioscorides further recommends it as an application to burns, ulcers, erysipelas, and so forth. He further describes a species of lilium with purple

flowers, which grows in Syria and Pisidia of Pamphylia, and was famous for the composition of unguents. This might be the *Lilium Martagon*. Galen writes elaborately on this article, but in the main agrees with Dioscorides as to the medicinal virtues of the lily, of which he mentions only the former species, He recommends it principally in external applications to wounds, ulcers, and diseases of the skin, such as scabies, leprosy, and achores, and also very particularly to diseases of the uterus. Aëtius and Oribasius briefly give it the same characters. Celsus mentions a decoction of the leaves of the lily boiled in old wine and oil, as an application to burns. (v, 17, 18.) For the Arabians, see Avicenna (ii, 2, 436); Serapion (c. 189); Rhases (Cont. l. ult. i, 422); Ebn Baithar (ii, 68.) They commend it as a general alexipharmic, both when applied to the bites of venomous animals, and as an antidote to hyoscyamus, coriander, and mushrooms. They all agree that it is one of the best applications to burning with hot water. Avicenna says the oil of lilies given internally, is useful in ileos. Ebn Baithar treats of the lily at very great length.

Κροκοδείλιον,

Crocodylium; the seed and juice of it are possessed of desiccative, heating, and discutient powers, and are, therefore, diuretic and emmenagogue; the root is of great use as an expectorant, and occasions a discharge of blood by the nose.

COMMENTARY. Dioscorides describes it immediately after the black chamæleon to which he compares it. We therefore are inclined to join the modern commentators and herbalists, who hold it to have been the *Carlina vulgaris*, rather than those who refer it to the *Eryngium maritimum*. See Parkinson (Theatre of Plants, 971, 988) and Sprengel (Ad Dioscor. iii, 10.) Galen calls its seed aromatic and acrid, and says it is diuretic and emmenagogue. The juice of the seed and stalk being possessed, he says, of similar powers, is useful in nephritic diseases. The root is expectorant, and produces a discharge of blood from the nostrils. (De Simpl. vii.) We have not been able to discover any traces of it in the Mat. Med. of the Arabians, except in Ebn Baithar. (ii, 253.) His German translator holds it to be the *Eryngium maritimum*.

Κρόκος,

Crocus, *Saffron*, is of the second order of heating and of the first of desiccative medicines. It is also astringent and digestive.

COMM.

COMMENTARY. Without doubt it is the *Crocus sativus*. Dioscorides gives an interesting account of the different varieties of it which were used in his time. Suffice it to say, that the best decidedly was the Cicilian, from Mount Corycus, which is often alluded to by classical authors. See Pliny (xxi, 6); Celsus (v, 22); Statius (Silv. v, 3, 41); Galen (De Antid. i.) With regard to its action on the animal economy, he mentions that Thessalus held that it is merely fragrant, while some, on the other hand, maintained that it is a deadly poison in doses of dr. ij, but that in truth it is diuretic and sub-astringent, and therefore applicable to erysipelas and defluxions of the eyes, as a cure for surfeit, and for producing a discharge of urine (i, 25.) See, in like manner, Pliny (l. c.) It occurs in the Hippocratic treatises, and in the works of Celsus, who calls it purgative, emollient, and discutient. (196.) By the way, we may mention that by purgative, Celsus evidently means cleansing in external applications, as is evident from the substances with which it is enumerated, namely, verdigris, orpiment, &c. His editor, Dr. Milligan, therefore evidently mistakes the meaning of his author. (l. c.) Galen and his followers call it heating in the second degree, and drying in the first, with some astringency. The Arabians adopt the views of the Greeks as to its virtues, but prescribe it in a great many more cases than their predecessors. See Serapion (c. 173); Rhases (Cont. l. ult. i, 241); Avicenna (ii, 2, 126.) Thus they held that it is both aphrodisiacal and cordial, and recommend it accordingly. They also used it in cases of difficult labour, and as a deobstruent in obstructions of the liver and spleen. One of Rhases's authorities says that in doses of three drachms it proves fatal. Another of them says of it, that it improves the breathing and appetite. Symeon Seth says that it is stomachic and improves the colour. He, Serapion, and other of the ancient authorities, affirm that in large doses it occasions involuntary laughter, immoderate mirth, and the other effects which result from intoxicating liquors. From late experi-

ments, it would appear that its powers had been overrated. COMM.
 See Pereira (Mat. Med. 696.) It was much used by the
 ancients as a perfume. See Beckmann's 'Hist. of Inventions,'
 Joh. Bodæus a Stapel (Ad Theophrast. H. P. vi, 6), and
 Hertodt's 'Crocologia,' as quoted by him. Its medical use, he
 adds, has always continued among the Orientals.

Κρόμμυον,

Cepa, *Onion*, is of the fourth order of heating medicines, its substance consisting of thick matter, and hence when applied to hemorrhoids it opens them. It is also sufficiently detergent, and removes alphas with vinegar; and in alopecia it occasions a more rapid growth of hair than alcyonium. Its juice is useful in suffusion and dimness of vision from thick humours.

COMMENTARY. It is the *Allium Cepa*, or onion. COMM.
 Dioscorides, and Serapion recommend it as an application in cases of alopecia or *Porrigo decalvans*. Dioscorides says that some applied it as a suppository to promote the discharge of blind piles, and he mentions its being introduced into the nose to promote the discharge from it. As a cataplasm with salt, rue, and honey, he recommends it for the bites of rabid dogs. He says it concocts and breaks hard tumours. Upon the whole, Galen, Aëtius, Oribasius, and our author, do little more under this head than abridge the more ample account of it given by Dioscorides. Celsus calls it an aperient of the bowels (ii, 29) and a diuretic (ii, 31.) He recommends it to be chewed in paralysis of the tongue. (iv, 2.) The Arabians treat of it at great length. See Avicenna (ii, 2, 119); Rhases (Cont. l. ult. iii, 18); Serapion (c. 354.) They speak favorably of it as a rubefacient, and all ascribe great powers to it as an alexipharmical medicine.

Κύαμος,

Faba, *the Bean*, is not far removed from a middle temperament as to cooling and drying. Its flesh is also somewhat detergent. It agrees, therefore, with expectorations from the chest and lungs. Its outer skin having also some astringency renders the whole bean, when boiled in oxycrate, a suitable remedy for cæliac and dysenteric affections. In a cataplasm

it cures inflammations and swellings, and dispels the milk in the breasts.

COMM. COMMENTARY. We have stated in the First Book the difficulty of determining exactly the nature of the ancient faba. See Parkinson (Theatre of Plants, 1054) and Dickson (Husbandry of the Ancients.) Dioscorides describes two species, the Egyptian and the Greek, of which the former, there can be little doubt, is the *Nelumbium speciosum*. See Sprengel (Ad Dioscor. ii, 128), and Lindley (Veget. King. 414.) The other, as we formerly stated, was probably a variety of our small bean. The characters of both are fully stated by Dioscorides, from whom Galen and our author borrow largely under this head. They treat, however, only of the Greek bean. Dioscorides says the Egyptian is astringent and stomachic; that the flour of it made into a poultice, answers in dysenteric and colic affections, and in earache. The Arabians give a very full account of the two species of bean, both as articles of food and as medicines. See in particular, Avicenna (ii, 2, 241); Serapion (c. 97); Rhases (Cont. l. ult. i, 279.) Avicenna and Rhases agree in commending beans for spitting of blood, and other affections of the chest.

Κύανος,

Cyanus, is possessed of acrid, purgative, and discutient powers, greater than those of the cinnabar. It has also some astringency.

COMM. COMMENTARY. Matthiolus determines it to be the *Lapis Lazuli*, and Sprengel agrees with him that it was a mineral containing copper and some impurities, and nearly allied to the *L. Laz.* Serapion describes the ἀρμένιον by the name of *Lapis Lazuli*, and, in fact, the ἀρμένιον and κύανος seem to have been nearly the same thing. He recommends it as a purgative which evacuates black bile. Rhases, in his chapter on the *Lapis Lazuli*, gives the observations of Dioscorides and Galen on the ἀρμένιον, and in his chapter on the *Lapis Armenus*, he compares it to the *Lapis Lazuli* (Cont. l. ult. i, 393, 404.) The following is Sprengel's account of the armenium and cyanus: "Armenium est cuprum carbonicum terreum, lapidi Lazuli simile. Id in australibus petris arenosis, has ipsas penetrans mineram æris arenosam format. Ea vocatur

κύανος." (Ad Dioscor. v, 105.) From what has been stated, any person acquainted with mineralogy can have no difficulty in deciding that the *cyanus* and *armenium* were varieties of the mineral called "blue copper" by Jameson, that is to say, the "blue carbonate of copper" of Cleaveland (566.) For further information regarding it, we would refer to Matthiolus and Sprengel (Ad Dioscor. l. c.), Beckmann (Hist. of Invent.), and our article under this head in the Appendix to Dunbar's Greek Lexicon. Our author copies his account of it from Galen. Dioscorides recommends it only as an external application, possessed of repressing, moderately septic, escharotic, and ulcerative powers. (v, 106.) The Arabians, who, however, evidently do not distinguish properly this mineral from the lapis lazuli, recommend it as an emmenagogue and purgative. When boiled with lentils, Avicenna says, it acts as an emetic in the case of a person who has swallowed any poison. He also prescribes it in asthma and pain of the kidneys. See Avicenna (ii, 2, 56); Rhases (Cont. l. ult. i, 692); Serapion (c. 389.) The later Greek writers on medicine, like the Arabians, confound this substance with the lapis lazuli. See Theophanes Nonnus (c. 125, 143); Myrepsus (i, 30.) The former of these prescribes it as a specific in the plague. In modern times also the cyanus or blue copper has been confounded with the lapis lazuli. See Lewis (M. M. ii, 50.)

Κυκλάμινος,

Cyclaminus, *Sow-bread*, is possessed of various powers; for it cleanses, incises, opens the mouths of vessels, and discusses; the juice of it, therefore, when applied to hemorrhoids opens them, and it discusses hardness along with other things. Along with honey it agrees with suffusions and purges by the nose. When rubbed into the epigastrium, it loosens the belly and kills the foetus. The whole root, though weaker than the juice, is also strong, so that when drunk with honeyed water to the amount of three drachms, it purges the internal parts. To the skin it also proves detergent. The root of the other species of sow-bread (called Cissanthemum) is of no medicinal use, but its fruit is drastic, so that when drunk it acts like the former.

COMMENTARY. Dioscorides treats at considerable length of COMM.

COMM. the medicinal virtues of the former species, which was the *Cyclamen Europæum*, recommending it as being phlegmagogue, hydragogue, emmenagogue, and alexipharmic; as an errhine in diseases of the head, and a suppository per vaginam. His other species, which he describes as having leaves like the ivy, and which some of the commentators set down as being the *Lonicera Periclymenum*, and others as the *Solanum Dulcamara* he recommends in splenic affections, in orthopnoea, and retention of the lochial discharge. (ii, 193, 194.) Pliny recommends also the second species as a remedy for coughs (H. N. xxv, 68.) Harduin agrees with Dodonæus in holding it to be the *Dulcamara*. The scholiast on Theocritus recommends the cyclaminus as an application to chilblains. (Ad Idyll. v.) Galen writes of it in such terms as shows that he looked upon it as a very important article. He says it promotes menstruation, both when taken internally and when applied per vaginam; and that it cures jaundice, not only by purging the viscus, but by evacuating the whole body with sweats; he also recommends it as an external application in hardness of the spleen. The other species he praises in asthma. The other Greek authorities supply nothing of much interest under this head. The Arabians treat of it largely, but somewhat confusedly. See Avicenna (ii, 2, 6, 61, 271); Rhases (Cont. l. ult. 281); Mesue (De Simpl. 26); Serapion (c. 259.) Avicenna directs it to be given to the extent of three drachms with wine or mulse in cases of jaundice, and the patient is to be then covered up with many clothes, when he will sweat out the bile from his body. He says it purges the body, not only when given by the mouth, but in a suppository, and when rubbed into the skin. Rhases (l. c.) describes it under the names of *Falamios*, or Panis porcinus, whence the English name Sow-bread. His extracts from Dioscorides, Galen, Oribasius, and Bimasay comprise all the information on the subject possessed by his Grecian masters and his countrymen. Mesue gives a very elaborate article on the Sow-bread, which, like Avicenna, he praises as a general purger of bile, when taken by the mouth, in a suppository, and as a liniment rubbed into the belly; he also praises it as an emmenagogue, both when taken by the mouth and when applied as a pessary, and as a tried remedy in jaundice and induration of the spleen. Even as late as the days of Quincy,

the cyclaminus held a place in the Dispensatory, and retained all its ancient characters. (i, 4, 293.) Orfila ranks it with the acrid poisons (iii, 3.) See further (ii, 242.) COMM.

Κύμινον,

Cuminum, *Cumin*, belongs to the third order of heating medicines, and is diuretic and carminative.

COMMENTARY. The C. of our author is no doubt the *Cyminum sativum* of Dioscorides, i. e. *Cuminum Cyminum* L. COMM.
The two varieties of the wild cumin of Dioscorides have never been satisfactorily determined. See Parkinson, Matthiolus, and Sprengel. Dioscorides represents it as being calefacient, astringent, desiccative, and relieving tormina and flatulence, and describes a variety of cases in which he calls it applicable. (iii, 61.) Galen says it is diuretic and carminative, being calefacient in the third degree. Aëtius and Oribasius give it much the same character. Celsus assigns to it diuretic powers. (iv, 9.) The Arabians treat of it at so great length, that we can scarcely do justice to their views on this head. See Rhases (Cont. l. ult. i, 212); Serapion (c. 287); Avicenna (ii, 2, 136); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 394.) Avicenna says the immoderate use of it renders the face pale. This property of cumin is alluded to by the poets as well as the medical authors. See Horace (Epist. i, 19, 18); Persius (Sat. v.) This character of it is confirmed by modern authority. See Matthiolus (Ad Dioscor. l. c.); Bodæus a Stapel (in Theophrast.) Cumin now barely holds a very undistinguished place in our Mat. Med. (See Pereira, 1057.)

Κυνόβατος,

Rubus caninus, Hip-tree or Dog-rose; the fruit is no bad astringent; the leaves are moderately astringent; but we must guard against the woolly part of the fruit, as it is injurious to the trachea.

COMMENTARY. Dioscorides's description is not so precise as to enable us to pronounce decidedly what it was; but we incline with several of the best authorities to refer it to the *Rosa canina*, or Hip-tree. Galen, our author, and the other Greek authorities, follow Dioscorides. COMM.

Κυπάρισσος,

Cupressus, *Cypress*; the spherical fruit and shoots of it are possessed of desiccative powers, having no sensible heat, so that they agglutinate large wounds in hard bodies. In moist gangrene it consumes deep-seated humours without trouble, and is useful in intestinal hernia.

COMM.

COMMENTARY. It appears unquestionably to be the *Cupressus sempervirens*. See Stackhouse (Tab. Syst. in Theophrast.) Its fruit, being of a globular shape, was called σφαίρια by the Greeks and *Pihulæ* by the Latins. Pliny (H. N. xvii, 14.) Pliny recommends this as a cure for the stings of serpents, and in cases of hæmoptysis. (H. N. xxiv, 10.) Dioscorides and Serapion recommend it in these and various other cases. The cypress-nut is powerfully astringent and balsamic: hence it proves an excellent remedy in diarrhoeas and dysenteries, and, as such, it is celebrated by many authors ancient and modern. Dioscorides in particular recommends it for stopping bleeding, for agglutinating wounds, and as an application to erysipelas and anthrax. Galen writes fully of it, but borrows largely from Dioscorides. Serapion does little more than give the notices of it by Dioscorides and Galen. (c. 55.) Avicenna recommends the cypress, and more especially the nut, in various cases requiring astringents, and among others as an application to polypus of the nose; he also speaks favorably of it in cases of hæmoptysis and dysuria. Like the others, he says it is a good application in ruptures. (ii, 2, 146.) See further Rhases (Cont. l. ult. i, 216.) The cypress is found in the 'Flora Hippocratica,' and in that of Celsus. The cypress-nuts are commended as astringents by all our older herbalists, and held a place in our Dispensatory as late as the time of Quincy. (93.)

Κύπερος,

Cyperus, is heating and desiccative, without pungency. Hence it promotes the cicatrization of the more humid ulcers in a wonderful manner, and relieves those in the mouth. It has also some incisive quality, and is lithontriptic, diuretic, and emmenagogue.

COMM.

COMMENTARY. It is undoubtedly the *Cyperus rotundus*.

Our author's account of its medicinal uses is taken from Galen, COMM. and is confirmed by Serapion, Avicenna, and Rhases. All of them, however, are indebted to Dioscorides, who gives it the character of being calefacient, anastomotic, and diuretic, recommends it in uterine complaints as an emmenagogue, in ulcers of the mouth, and as an ingredient in emollient plasters. (i, 4.) A modern author, Dr. Hill, gives it nearly the same character as the ancients; he calls it stomachic, deobstruent, emmenagogue, and diuretic. It likewise occurs in the *Materia Medica* of Tournefort, who also calls it deobstruent and emmenagogue. Quincy gives a confused account of it under the name of *Cyprus* (*Engl. Dispens.* i, 1, 69); see also Lewis. Dioscorides describes also an Indian species having a root resembling ginger. Both Matthiolus and Sprengel are inclined to refer to the *Curcuma*. We shall have occasion to notice it afterwards, when describing the substances introduced into the *Mat. Med.* by the Arabians.

Κύπρος,

Ligustrum, Privet; its leaves and tops are possessed of mixed powers, being discutient and astringent, and desiccative without pain or pungency. Hence the decoction of it, when poured on a part, is useful for burns, and agrees with inflammations of a hot nature. When chewed it also relieves aphthæ, and is mixed up with splenic remedies.

COMMENTARY. We must decline entering upon the general literature of this subject, which has created a good deal of COMM. discussion. Suffice it to say, that we have now no hesitation in deciding it to be the *Lawsonia inermis*, namely, the plant from which the henna of Egypt is obtained. See Lindley's *Veg. King.* (575.) It is used by females for staining their hands and feet of an orange colour. Dioscorides mentions that an infusion of its leaves in the juice of saponaria, or soapwort, was used for painting the hairs yellow. He says of the ointment prepared from it (*unguentum cyprinum*), that it is calefacient, emollient, and fragrant. (i, 124.) Galen, Aëtius, and Oribasius give it the same characters as our author. The Arabians describe it under the name of *alcanna*, which seems to be *henna* with an Arabic prefix. See in particular Serapion (*De Simpl.* 110), and Avicenna (ii, 2, 50.) Both copy freely from Dioscorides and Galen. They say its virtues in female

COMM. complaints are similar to those of the Sanguis Draconis. All praise it as a vulnerary herb, and a good application in cases of burning. They further commend it in pleurisy and quinsy as a plaster. Ebn Baithar treats of it at very great length. (i, 338.) It would appear that the privet is still used as a medicine and dye by the native physicians of Hindostan. See a very interesting account of it in Ainslie's *Mat. Indica* (ii, 190.)

Κύτισος,

Cytisus; its leaves are of a gently discutient and tepid nature, like those of melons.

COMM. COMMENTARY. After maturely weighing the opinions which have been held respecting this classical herb, we have no hesitation in agreeing with those who refer it to the *Tree-medick* (*Medicago arborea* L.) Dioscorides says its leaves are cooling and discutient when applied externally, and diuretic when taken in decoction. (iv, iii.) Galen and the other Greek authorities treat of it very succinctly, like our author. Avicenna briefly recommends it as a diuretic medicine, and one which is applicable in diseases of the spleen. (ii, 2, 24.)

Κώνιον,

Cicuta, *Hemlock*; that it is possessed of extremely cold powers is obvious.

COMM. COMMENTARY. It appears unquestionably to be the *Conium maculatum*. Stoerck and Bergius, contrary to the opinions of the ancient physicians, affirm that it is aphrodisiacal. This, however, seems doubtful. We have treated of its effects as a poison in the Fifth Book. As a medicine it does not appear to have been much used latterly, although Dioscorides says that its inspissated juice is of great use in the healing art, being mixed with wine in anodyne collyria, and used as a cataplasm for the cure of erysipelas and herpes. He also speaks of its being applied as a cataplasm to the testicles for the removal of the pollutio nocturni somni, and with the view of inducing impotence; and to the breasts, in order to dispel milk and render them atrophied. (iv, 79.) Galen, Aëtius, and Oribasius, like our author, merely state of it, in their works in the *Mat. Med.*, that it is possessed of intensely refrigerant powers. It would appear that Galen was in the practice of administering it inter-

nally. (T. ii, 451, ed. Basil.) Of the Arabians, Avicenna gives COMM.
 the fullest exposition of its remedial powers, but he copies
 closely from Dioscorides, recommending it as a cold and nar-
 cotic application in the same cases as Dioscorides. He says
 it stops bleeding, congeals the blood, and induces torpor. (ii, 2,
 662.) See also Serapion (c. 347.) It is, most probably, the
 cicuta of Celsus, who places it in his list of emollients. (v, 15.)
 It occurs also in the Hippocratic Collection, where both its
 leaves and seeds are recommended in fomentations. (De Steril. ;
 de Fistulis, &c.)

Κῶνος,

Strobilus, *the Wild Pine* ; the bark and leaves have powers
 like the pine, but more acrid and drastic. As to the fruit,
 which is called strobilus, the green has some bitterness and
 acrimony, with humidity, and hence it is applicable for pro-
 moting expectoration from the chest. The esculent kind,
 when soaked in water, so as to lay aside its acrimony, becomes
 of a good temperament, being free from pungency and emplas-
 tic, and hence it smooths asperities.

COMMENTARY. It here signifies the *Pinus sylvestris*, or COMM.
 Wild-pine ; but it is commonly put for the *Nux Pinea*, or the
 cones of the *Pinus Pinea*, called in the shops *Pignoli pines*, and
 the seeds *pine-nuts*. Athenæus says that Theophrastus called
 the tree *πέυκη* and the fruit *κῶνος*. Diphilus, as quoted by
 the same, calls the pine-nuts nutritious, and says that they
 lubricate the trachea, and promote expectoration. (Deip. ii.)
 Galen, Serapion, and the other authorities also commend them
 in similar cases. Dioscorides treats of this subject in the 86th,
 87th, and 88th chapters in the First Book, but not under the
 same head as our author. He recommends the different
 articles in nearly the same cases as Paulus and the other
 authorities. The fruit of the wild pine he commends as a
 demulcent in affections of the bladder and kidneys, and as a
 sedative in pains of the stomach. Celsus prescribes “nuclei
 ex pinu silvestri duodecim,” among his remedies for ulcerated
 kidneys. (iv, 10.) Avicenna treats of the subject under differ-
 ent heads, like Dioscorides, whom he closely follows. (ii, 2, 280,
 301, 555, 693.) He recommends these articles in diseases
 of the chest and kidneys. He calls the fruit aphrodisiacal. See

COMM. also Rhases (Cont. l. ult. 3, 20); Serapion (c. 63); Averrhoes (Coll. v, 42.) All speak favorably of these medicines in diseases of the kidneys and bladder.

Λαγώπους,

Lagopus, is possessed of desiccative powers and dries up fluxes of the belly.

COMM. COMMENTARY. This plant, the description of which is passed over by Dioscorides as being well known, may be set down among the articles of the ancient Materia Medica, which are least known to us. We may just mention regarding it, that some take it for *Trifolium arvense*, and others for *Lagurus ovatus*. Dioscorides calls it an astringent of the bowels, and mentions that it was used as an amulet in buboes. (iv, 17.) Galen, Aëtius, and Oribasius briefly notice it as a desiccative medicine. We have not been able to find this article in the Mat. Med. of the Arabians, but are aware that it may be concealed under some of their odd corruptions of the Greek terms. It seems probable that this is the *lagopyrus* of Hippocrates. (De Ulcer.)

Λάδανον,

Ladanum; it is formed from the Cistus called Ladanus; the goats feeding upon it bring away upon their beard and thighs the fatter and more juicy part of the herb. Ladanum, when collected, is an excellent medicine, hot in about the second degree, and consisting of subtile particles. It is moderately emollient, discutient, and digestive; it therefore agrees with uterine affections in particular. It has also some astringency, and hence it strengthens hairs which are falling out.

COMM. COMMENTARY. Dierbach and Sprengel agree with the elder commentators in calling it the *Cistus Creticus*. See also Royal Pharm. (i, c. 20.) Dr. Lindley says of the ladanum, that it is a resinous balsamic substance obtained from *Cistus Creticus*, and other species of the genus; he adds, that it has been esteemed as a stimulant and emmenagogue, and recommended in chronic catarrh. (Veg. King. 350.) Dioscorides mentions that it was procured either from the beards of goats which had browsed upon it, or by scraping the tree with thongs. Dioscorides, Pliny, and Galen deliver its medicinal characters

in much the same terms as our author. Dioscorides recommends it not only in uterine diseases, but also as a diuretic. COMM.
 He also speaks favorably of it as an ingredient in anodyne and expectorant plasters. (i, 128.) See Galen (ii, 160 ed. Basil.) The Arabians treat fully of it, but borrow almost every word they say respecting it from Dioscorides and Galen. See Avicenna (ii, 2, 422); Serapion (c. 43); Rhases (Cont. l. ult. i, 361); Averrhoes (Collig. v, 42.) The labdanum was retained in the Dispensatory as late as the time of Quincy, who has given an accurate account of it. (70.) It is also very correctly described by Tournefort, both in his voyage to the Levant and in his Mat. Med. (363.) Its use, however, is now obsolete. See Pereira (1263.) In Pemberton's edition of the Dispensatory, there is given a formula for the composition of a "stomach plaster," one of the ingredients of which is labdanum. (359.) We would vote for its being restored to the Pharmacopœia.

Λαθυρίς,

Lathyris, is a species of spurge, and some say that its juice purges in a similar manner. Its seed in particular has purgative powers.

COMMENTARY. There can be no doubt, from our author's COMM.
 brief notice of it, that it is the *Euphorbia Lathyris*, L. Dioscorides says of it that it evacuates phlegm, bile, and water. He mentions that its leaves were boiled along with a fowl or pot-herbs to loosen the bowels. Galen and the other Greek authorities treat of it in brief terms, like our author. The Arabians treat of it at greater length, recommending it strongly in diseases of the joints, gout, and sciatica. They also mention its being a remedy for dropsy. They say it acts as an emetic. They direct its seeds to be boiled in the broth of an old cock, and taken. See in particular Avicenna (ii, 2, 473); Serapion (c. 354.) It is not met with in the works either of Hippocrates or of Celsus. It does not occur in the modern Greek Pharmacopœia, but is briefly noticed in Dr. Pereira's *Materia Medica* (777.)

Λαμψάνη,

Lampsana, *Nipplewort*, when eaten supplies bad juices to the body. In a cataplasm it is detergent and discutient.

COMM. COMMENTARY. It appears pretty certain that it is the Charlock, that is to say, either the *Raphanus Raphanistrum* or *Sinapi Arvensis*. Both are known by the English name of *Charlock*. It is rather a potherb than a medicine.

Λάπαθον,

Lapathum, *Dock*, is possessed of moderately discutient powers; but the oxylapathum is also somewhat repellent. The seed, particularly of the oxylapathum, being astringent, cures diarrhoeas and dysenteries. The leaves, in so far, have opposite qualities to the seed; for they, when eaten, loosen the belly, whereas it, when drunk, proves astringent.

COMM. COMMENTARY. Of the *Rumices*, the Oxylapathum, or *Rumex acutus*, was the species most used in medicine, and is the only one particularized by our author, with the exception of the hippolopathum already described. Of the four other species described by Dioscorides, the ὄξαλις is pretty generally acknowledged as the *Rumex acetosa*. The others cannot be determined with any degree of accuracy. See Sprengel, Sibthorp, Matthioli, Parkinson, Gerard, and Ruttj. Dioscorides gives the first of his species much the same characters as our author, recommending it most especially as a discutient application to leprosy and scrofulous tumours. He also speaks favorably of it as applied on a pessary in the fluor albus. The roots, he adds, boiled in wine, cure jaundice, and act as lithontriptics, emmenagogues, and alexipharmics. He further speaks of the dock as being appended in the form of an amulet for scrofulous swellings. (ii, 140, 141.) Galen and the other Greek authorities treat cursorily of the lapatha, like our author. They occur in the works of Hippocrates and of Celsus; the latter ranks the *lapathum* among the articles of food which contain bad juices (ii, 21), are bad for the stomach (ii, 25), and are laxative of the bowels (ii, 29.) Pliny's account of the lapatha is mostly taken from Dioscorides. (H. N. xx, 85.) The term *rumex*, now generally applied to the genus dock, is taken from Pliny (xix, 60.) The dock is recommended by Africanus in jaundice, dropsy, and for the cure of leprosy, lichen, and alphas. (Geopon. xii, 38.) Macer, in the tenth century, describes it under the name of *paratella*, and, like the more ancient authorities, commends it externally for the

cure of cutaneous diseases, and internally as an astringent. COMM.
 The Arabians, in like manner, prescribe it in these cases, and
 in general copy from Dioscorides in treating of the different
 species of dock. See in particular Avicenna (ii, 2, 53);
 Serapion (c. 3); Ebn Baithar (i, 324.) The last of these
 treats fully of the rumices, but does not seem to describe any
 species not noticed by the Greeks.

Λειμώνιον,

Limonium, *Sea Lavender*; its fruit being austere, is given
 to the amount of an acetabulum, with wine, in celiac and
 dysenteric affections, in hæmoptysis, and for the uterine dis-
 charge.

COMMENTARY. Our author's account of the limonium is COMM.
 borrowed from Dioscorides, who describes the plant as having
 leaves like beet, but more slender and longer, a slender straight
 stem, like that of the lily, filled with red fruit of an astringent
 taste. Like our author, he recommends it in cases requiring
 astringents. As far as we can judge, the characters here given
 it by Dioscorides apply very well to the plant called sea
 lavender or red behen, namely, the *Statice Limonium*, L.
 Compare Parkinson (*Theatre of Plants*, 1234) and Gray
 (*Suppl. to the Pharmac.*) with Dioscorides (iv, 16.) There
 seems no necessity, therefore, for following Gesner in trans-
 ferring it to the *Polygonum Bistorta*. The other authorities,
 both Greek and Arabian, follow Dioscorides closely in treating
 of the limonium. See Rhases (*Cont. l. ult. i*, 423); Avicenna
 (ii, 2, 433); Ebn Baithar (ii, 452.) The German editor of the
 last of these, we are glad to find, agrees with us in referring
 this article to the *Statice Limonium*.

Λειχῆν,

Lichen; that upon rocks, which is like moss, being pos-
 sessed of detergent and, at the same time, moderately refrige-
 rant and desiccative powers, cures lichen, and is anti-inflam-
 matory; and, as Dioscorides says, also stops hemorrhages.
 The lichens of horses, when triturated with vinegar, are said
 to cure epilepsy and the bite of every venomous animal.

COMMENTARY. Our author's account of the vegetable is COMM.
 abridged from Dioscorides, who, as stated by him, recommends

COMM. it for stopping hemorrhages, and also for dispelling phlegmons and curing lichens: he adds, that it cures jaundice and removes defluxions of the mouth when rubbed in with honey. (iv, 53.) To which of the Lichenales of modern botanists it is applicable is somewhat doubtful: whether to the *Sticta pulmonacea*, as Matthioli held; to the *Peltidea aphthosa*; or to the *Peltigera canina*. Compare Sprengel (Ad Dioscor. l. c.) with Lindley (Veg. King. 48), and Parkinson (1315.) This is also evidently identical with the second species of lichen described by Pliny. (H. N. xxvi, 10.) His former species is the *Marchantia conica*, L. (Ibid.) See Harduin (apud l. c.)

The λέιχνηες ἰππῶν are the well-known callosities forming at the knees of horses, called *spavins* in English. See further, Harduin ad Plin. H. N. xxviii, 49. They are thus described by Cælius Aurelianus: "Sunt autem squamulæ anteriorum crurum sub armorum partibus in ipsis animalibus (equis) nata; hæc Græci lichenas vocant, sive chelidonas, nos vero impetigines vel hirundines." (Tard. Pass. i, 4.) The Empirics gave them for the cure of epilepsy. (Ibid.) See Avicenna (ii, 233) and Rhases (Cont. l. ult. 271.)

Λεοντοπέταλον,

Leontopetalum, *Lion's-leaf*; its root is heating and desiccative in the third degree, and is possessed of discutient powers.

COMM. COMMENTARY. Although Dioscorides has described this plant with more than his wonted accuracy, there is still some uncertainty regarding it, some holding it to be the *Leontice Leontopetalon*, and others the *Corydalis bulbosa*. The latter would appear to agree better in character with the description of Dioscorides than the other. See Lindley (Veg. King. 436.) The other authorities treat of it in very general terms, like our author, except Oribasius, who gives a pretty minute description of it, like Dioscorides. It is noticed by Ebn Baithar (ii, 186), who, however, does not supply much additional information. Dr. Sontheimer sets it down for the *Leontice Leontopetalon*.

Λεπίδιον,

Lepidium, *Pepperwort* (by some called *Iberis*), belongs to

the fourth order of calefacients, being like the cress in powers, but less desiccative.

COMMENTARY. Our author's account of this plant (which is *Lepidium latifolium*, Pepperwort) is mostly taken from Galen. Dioscorides says it is made into a pickle with milk, and that the power of its leaves is acrid and ulcerative, and hence it is used in a cataplasm for sciatica. He says further of it, that it is also applicable in diseases of the spleen, removes leprosy, and that its root *would seem* to soothe the pains of the teeth when appended to the neck as an amulet. (ii, 205.) It is to be remarked that Dioscorides always speaks of the virtues of amulets in ambiguous terms. It is described by the Arabians under the name of *Sitarig* or *Scitaragi*. See Rhases (Contin. l. ult. i, 655) and Avicenna (ii, 2, 657.) Avicenna's description of it is somewhat confused, and cannot be easily reconciled with that of Dioscorides, but with regard to its medicinal virtues, they are quite agreed. Bimasuy, one of Rhases's authorities, says of it, that its seed is like the seed of nasturtium, but not so heating. Beckmann mentions that the *Lepidium latifolium* was at one time used as a kitchen vegetable, and was called, in England, *poor man's pepper*. (Hist. of Invent.)

Αερίς,

Squama, *Flake*; all kinds are strongly desiccative and astringent, and pungent in no inconsiderable degree. But the squama æris (*Flakes of copper*) is more desiccative, consists of more subtile particles, and has also some verdigris, more especially that from Cyprian nails, which is hence called clavaris. The squama ferri is possessed of more astringency, and still more that which is formed from the edge of sharp instruments, called stomoma, hence it is better for ill-conditioned ulcers. But the squama æris cleanses and melts down flesh more.


COMMENTARY. The squama æris was a black per-oxyd of copper. The squama ferri, a black oxyd of iron. The stomoma was the chalybs or steel. See Dioscorides (v, 89), with the Commentaries of Matthiolus and Sprengel, and also the Appendix to Dunbar's Lexicon. Geoffroy says of the squama æris, that it is little different from the æs astum being only

COMM. the particles of burnt copper that fly off when hammered. Dioscorides calls it astringent and epulotic: when drunk with honeyed water, he says, it is phlegmagogue; some give it in flour as a pill; it is mixed, he adds, with ophthalmic remedies, drying defluxions, and removing asperities of the eyelids. The stomoma, he says, is inferior to the squama æris as a purgative. (v, 89, 90.) Our author's account of these substances is borrowed from Galen. Aëtius also copies from Galen. Oribasius gives a fuller description of them, differing very little from that of Dioscorides. The Arabians treat of all these substances, as usual, borrowing freely from Dioscorides, and not adding much of their own. See in particular Avicenna (ii, 2, 231); Serapion (c. 404); Rhases (Cont. l. ult. vi, 48); Averrhoes (Collig. v, 43.) They prescribe the squama æris internally as a purge, and say of it that when the palate is smeared with it vomiting is excited. These substances occur in the Hippocratic treatises and in the works of Celsus. They have not been used medicinally in this country for some time past. The Hindoos use the preparations of copper both internally and externally, according to Dr. Royle. (Hindoo Med. 90.)

Λευκάκανθον,


Leucacanthon, *White Acanthus* (called also Polygonaton and Ischias); its root is of a cutting nature and desiccative in the third degree, and it is heating in the first.

COMM. COMMENTARY. We can only determine for certain that it belonged to the *Carduineæ*, but can scarcely venture to fix the genus, so loose is the description which the ancient authors have given of it, and so various the conjectures of modern commentators and herbalists respecting it. Upon the whole, the preponderance of the authorities is in favour of the *Cirsium tuberosum*. Dioscorides says of it, that its root is intensely bitter, and that the decoction of it with wine relieves chronic pleurisy and sciatica, ruptures and sprains, and further, that it relieves toothache. (iii, 19.) Galen recommends it in cæliac and stomach affections and hemoptysis; as a cataplasm to swellings, and a cure to toothache when used as a gargle. Aëtius gives the same character of it. The Arabians ascribe the same virtues to it, and also hold it to be alexipharmic. See in particular Avicenna (ii, 2, 80, 671) and Rhases (Cont.

l. ult. i, 118.) The use of it in medicine is as old as the Hippocratic age. See Dierbach's *Materia Medica Hippocr.* COMM. 


Λευκάς,

Leucas, is heating and desiccative in the third degree, but its prevailing property is acrimony.

COMMENTARY. It appears certainly to be a species of *Lamium*, either the *album* or the *maculatum*. See Parkinson (*Theatre of Plants*, 672) and Sprengel (*Ad Dioscor.*) Dioscorides commends it as an application to venomous animals, especially those of the sea. (iii, 103.) The other authorities treat of it in general terms, like our author, who copies almost word for word from Galen. COMM. 

Λευκόιον,

Viola alba, *Stock Gillyflower*; the whole plant is detergent and attenuating, especially its flowers, and those in particular which are drier, so that it promotes menstruation, kills and ejects the fœtus; and if their powers are blunted by a mixture with water, they will answer with inflammations, particularly those of the uterus. The roots being possessed of similar powers, are composed of more gross matter, and are more terrene. But with vinegar they relieve indurated phlegmons.

COMMENTARY. That the plant here described was stock, i. e. *Cheiranthus Cheiri*, is unquestionable. Dioscorides evidently included also another plant of the same order under this head, which, as stated by Sprengel, may probably be a variety of the *Matthiola incana*. He gives nearly the same account of its medicinal virtues as our author. Dioscorides says it kills the fœtus *in utero* when applied on a pessary; and Galen and Aëtius ascribe the same powers to it when taken in a draught. By the Arabians it is obscurely treated of, their authorities in general seeming to confound it with the violet. See Rhases (*Ad Mansor.* iii, 21); Haly Abbas (*Pract.* ii, 37, 226); Ebn Baithar (i, 403.) The last of these does little more than copy from Galen and Dioscorides. It is not contained in the modern Greek Pharmacopœia. It is the *Viola lutea* of our herbalist Gerard, and held a place in our Dispensatory as late as Quincy. COMM. 

Λέυκη,

Populus alba, the *White Poplar*; the tree being composed of a watery, tepid, and terrene substance, has detergent properties.

COMM. COMMENTARY. There can be no doubt of its being the *Populus alba*, L. Dioscorides says of it, that its bark, when taken in a draught, cures sciatica and strangury; that it is said to prevent conception; and that it is a remedy for earache and other complaints. (i, 109.) Our author copies from Galen. The Arabians, under this head, are servile copyists from the Greeks. See Serapion (c. 30); Avicenna (ii, 2, 333); and Ebn Baithar (i, 340.)

Διβανωτίς,

Rosmarinus, *Rosemary*; there are three varieties of it, one of which is sterile, and the other two bear fruit. They are possessed of detergent, incisive, discutient, and emollient powers. The juice of them, with honey, cures dimness of sight occasioned by thick humours. A decoction of that variety, which is used for garlands, proves serviceable in jaundice.

COMM. COMMENTARY. Dioscorides, like our author, describes three species, of which the first bears a fruit called *cachrys*, a term previously used by Theophrastus and Nicander, and from which the plant has now got the scientific appellation of *Cachrys Libanotis*. The root of this plant is still kept by our apothecaries, although it has long ceased to hold a place in our Dispensatory. See Gray's Suppl. to the Pharmacop. (80.) The second species is probably the *Ferula nodiflora*. The third cannot be satisfactorily determined. Our old English herbalists give the libanotis the name of "herb frankincense." (See Parkinson and Gerard.) These libanotides, however, must be distinguished from "the libanotis, called *rosmarinus* by the Romans," which was the well-known *Rosmarinus officinalis*, and of which the flower, known by the name of *anthos*, was in frequent use as a medicine in the age of Sydenham, and still retains a place in our Dispensatory. We have been obliged to enter with more length than usual into the general literature of this subject, to prevent the mistake of confounding

the *cachrys* with the *rosmarinus*, which might be readily done, COMM.
 if the distinction now adverted to had not been clearly pointed
 out. Dioscorides recommends the libanotides for various medi-
 cinal purposes, as being emmenagogue, diuretic, and discutient.
 Our author's character of them is mostly taken from Galen.
 The Arabians treat obscurely and confusedly of this subject. See
 particularly Avicenna (ii, 2, 67); Rhases (Cont. l. ult. i, 71);
 Serapion (c. 327.) Rhases says of the rosemary, that it is
 calefacient and attenuant, and hence proves carminative,
 diuretic, and emmenagogue. In the modern Greek Pharma-
 copœia the *Rosmarinus officinalis* stands as the representative
 of the λιβανωτίς. (Athens, 1837.)

Λιβανωτός,

Thus, *Frankincense* is heating in the second order, and
 desiccative in the first. It has also a slight sub-astringency.
 The bark of it is perceptibly astringent. It is, therefore, desic-
 cative in the second degree complete. Consisting of thicker
 matter than the frankincense, and being less acrid, it cures
 hæmoptysis, dysentery, cæliac and stomachic affections, both
 externally and when taken internally. The green shoot of it
 is heating and desiccative in the third degree. It is also
 somewhat detergent, by which property it cleanses and fills
 ulcers in the eyes.

COMMENTARY. It is still by no means satisfactorily deter- COMM.
 mined what tree it is which produces the frankincense; but
 the best authorities are now inclined to think that it is the
Boswellia turifera. See Pereira (Mat. Med., 1185); Ainslie
 (Mat. Ind. 78); and Lindley (Veg. Kingd. 459.) Dioscorides
 says the best kind of incense is "the male," by which the
 ancients meant the purest kind of it, or that consisting of the
 larger grains. See Gray (Pharmacop. 200.) The Indian is
 of an inferior quality. He calls it heating, astringent, and
 cleansing; and recommends it in hemorrhages, recent wounds,
 burns, chilblains, and other diseases of a like nature. He gives
 minute directions for the use of it in fumigations. The bark
 of the frankincense tree he recommends in fluxes and hemor-
 rhages, and in ulcers of the eyes. The *manna* of frankincense
 will be explained by us under that head. (Mat. Med. i, 81-3.)
 Oribasius gives a perfectly similar account of the frankincense;

COMM. indeed, he avowedly copies from Dioscorides. (Med. Collect. xi.)
 Our author's account is mostly taken from Galen. On the
Thus see further Pliny (H. N. xii, 30) and Rhases (Contin.
 xxxvii, § 716.) Most of the ancient authorities affirm that it
 acts beneficially in mental disease, that it sharpens perception,
 and improves the memory. They also recommend it in fumi-
 gations for removing the pestilential constitution of the atmo-
 sphere, as we have stated in the Second Book. Symeon Seth,
 mostly borrowing from Galen and our author, says, under the
 head of frankincense, that it is of a drying nature, with a
 certain astringent quality; that it binds the bowels; in fumi-
 gations helps coughs and defluxions; is emmenagogue both
 when drunk and applied per vaginam; that in fumigations it
 is possessed of powers for averting the pestilence; and hence
 in a pestilential season that houses should be diligently fumi-
 gated with it, in order to correct the pernicious quality of the
 air. The Arabians used it very freely as an ingredient in
 their applications to ulcers, including those of the eyes. See
 Avicenna (ii, 2, 525) and Serapion (c. 278.) Averrhoes, like
 preceding authorities, recommends the bark in fluxes, hæmo-
 ptysis, and ulceration of the intestines. (Collig. v. 42.) The
 frankincense occurs frequently in the treatises contained in the
 Hippocratic collection, and in the works of Celsus. The latter
 used all the kinds mentioned by the Greeks, such as, "thus
 masculum," "fuligo thuris," and "cortex thuris." These he
 uses for the same purposes as the Greeks, that is to say, for
 suppressing bleeding, concocting pus, cleansing sores, and so
 forth.

Λύγρις,

Fuligo, *the Soot* arising from certain kinds of substances when
 they are burnt, such as frankincense, myrrh, turpentine, storax,
 liquid pitch, and cedar, is desiccative, terrene, and attenuate:
 but there are varieties of it agreeably to the material that is
 burnt. It is used for ophthalmic remedies and those for
 adorning the eyebrows. That which is most used is the soot
 from frankincense, as being the mildest; and again, that from
 the pine, wild pine and pitch tree, as being the strongest.
 It is applied, therefore, for baldness of the eyebrows, and
 for watery and ulcerated canthi of the eyelids, and weeping
 eyes.

COMMENTARY. Little need be said under this head. Pliny COMM.
 recommends it along with vinegar as an application to erysi-
 pelas. Galen recommends it in the same cases as our author.
 He defines the *soot* to be the remains of the fire which con-
 sumed the *materiel*. Serapion's account of it is entirely taken
 from Galen. Dioscorides (i, 84) and Oribasius (Med. Collect.
 xi) describe more minutely than any of the others the pro-
 cess for preparing the *Fuligo Thuris*. It was used principally
 in ulcers of the eyes. The soot of storax and myrrh, as
 Serapion says, is prepared agreeably to the same process as
 that of frankincense.

Λιγυστικόν,

Ligusticum, *Lovage*; the root and seed of it are heating to
 such a degree as to promote menstruation. It is also very
 carminative.

COMMENTARY. We have always thought that the *Ligusticum* COMM.
Levisticum had been introduced into this country by the Romans,
 in order to supply them with an article frequently used by them
 at home, as a condiment. See the works of Apicius (pluries.)
 Dioscorides describes it minutely, and recommends it in a
 great variety of complaints, as an emmenagogue and diuretic,
 to promote digestion and dispel flatulence. He also mentions
 that it was often used as a condiment in place of pepper. (iii,
 51.) Galen and the other Greek authorities treat of it very
 succinctly. The Arabians ascribe to it anthelmintic and
 alexipharmic powers. See in particular Avicenna (ii, 2, 377);
 Rhases (Cont. l. ult. iii, 17.) It is not met with in the works
 of Celsus, nor, as far as we can discover, in those of Hippocrates.
Lovage held a place in the *Materia Medica* with all its ancient
 characters down to a late date. See the works of Parkinson,
 Gerard, Culpeper, Ruttty, and Quincy. It holds a place in the
 modern Greek *Pharmacopœia* (97.)

Λιθάργυρος,

Spuma Argenti, *Litharge*, is of the middle order among me-
 tallic substances; we therefore often use it as the vehicle for
 other remedial powers. It is moderately desiccative, detergent,
 and astringent; hence it is used for excoriations of the thighs
 from friction.

COMM.

COMMENTARY. The ancient Litharge was nowise different from the modern, being a secondary product in the cupellation of argentiferous lead. It was, therefore, a protoxide of lead. The varieties of it known to the ancients, and their modes of preparing it, are circumstantially described by Pliny (H. N. xxxiii, 35), Dioscorides (v, 72), and Oribasius (Med. Collect. xiii.) It was used by the Hippocratists in the practice of medicine. (De Morb. Mulier. ii.) It is the "Spuma Argenti" of Celsus, who notices it in various parts of his works as a cooling and cleansing medicine. (v, 290.) Dioscorides merely says of it, that washed litharge seems to suit ophthalmic remedies, unseemly cicatrices, wrinkled faces, and maculæ. (v, 102.) Our author condenses what Galen says under this head. The Arabian authorities treat of it fully, but supply little or no additional information respecting it. See Serapion (De Simpl. 410); Avicenna (ii, 2, 460); Averrhoes (Collig. v, 43); Rhases (Cont. l. ult. i, 428.) They recommend it generally as an astringent in fetor of the armpits, to restrain copious perspiration, to dispel extravasated blood, and remove unseemly cicatrices, and especially the marks of variolæ and morbilli. It does not appear that any of the physicians administered it internally; but Avicenna mentions that he had known women give it in fluxes and ulceration of the intestines. Ebn Baithar is very full on this head (ii, 513.) One of his Arabian authorities, Ibn Ben Amram, recommends it in diarrhœa, as a clyster to stop the discharge; and mixed up with vinegar and rose-oil, it is said to be useful in congenital hernia and other complaints about the scrotum.

Λίθοι,

Lapides, *Stones*; all kinds are desiccative like earth; but the Hæmatites, or *Blood-stone*, is astringent and desiccative in a considerable degree, so that it agrees with trachoma of the eyelids, and if they are free from inflammation it is to be used with water; but if inflamed, with an egg. It is drunk also with advantage for spitting of blood; and it restrains the fungous flesh of ulcers. The *Schistos* or *Scissilis* has similar properties, but is weaker: and after it the Galactites, or *Milk-stone*. The Melititis, or *Honey-stone*, has also a certain degree of heat. The Moroxus (called also Leucographis), being so

much softer than the others, and possessing no active quality, is much more mild, and occasions less pain; it is, therefore, used as an application to the soft parts of the body with cerate for the cicatrization of ulcers. The greenish *Jasper*, being possessed of stronger powers, attenuates cicatrices and pterygia. The Green Jasper is useful in stomach complaints, when appended as an amulet, and when worn in a ring. That called the *Judaic-stone* breaks renal calculi, and hence the moderns have called it *Tecolithos*. The *Pyrites* acts as a powerful discutient of tumours and coagula; and when it is not at hand, the *Molaris* may be used instead. The *Phrygian*, in addition to being powerfully desiccative, has also some astringency and pungency; hence it is repellent and discutient, and is therefore mixed up with ophthalmic remedies. The *Ageratus*, being possessed of astringent and discutient powers, is of use in inflammations of the uvula. The flower of the *Asian-stone* is composed of so subtile parts that it corrodes flabby flesh without pungency. The *Gagate-stone*, being considerably desiccative, agrees principally with chronic cases of emphysema. The *Magnet* (called also the *Heracleian-stone*) has similar powers to the *Hæmatites*. The *Arabian-stone* is like ivory, desiccative and detergent. Some give those affected with stomach complaints a draught composed of burnt *Alabaster*. The *Smeris*, *Emery*, having detergent powers, cleanses the teeth. The stones found in *Sponges* break down renal calculi; and those formed on the *Argæan* mountain of *Capadocia* are possessed of similar powers, and in like manner the stone called *Ophites*, which is appended as an amulet with advantage to those bitten by the viper. The *Ostracites* and *Geodes* are said to be considerably desiccative so as to cure inflammatory swellings. The *Retrimentum Naxiæ cotis*, *filings of the Naxian Whetstone*, is said to be refrigerant, so as to repress the breasts of virgins, and the testicles of children. The filings of the *Cos oleraria*, being detergent, suit with alopecia. It is said that the *Hieracites* and *Indian-stone*, when appended as amulets, stop the discharge of blood from hemorrhoids, and that the *Sapphire*, when drunk, relieves persons bitten by the scorpion, and the *Aphroselinum*, epileptics. The *Armenian-stone* purges the belly downwards, but is prejudicial to the stomach.

COMM.

COMMENTARY. The following account of the stones used by the ancients in the practice of medicine is derived from a careful study of the ancient writers on this subject, especially Theophrastus, Pliny, Orpheus, and Psellus. We have also availed ourselves freely of the labours of the modern commentators who have written on these ancient authors, namely, De Laet, De Boet, Marbodeus, Hill, and others. For a fuller description of some of the articles, we would beg to refer to our Appendix to Dunbar's English and Greek Lexicon.

The *Hæmatites* or *Blood-stone* was so called from its colour, or because it was used as a styptic for stopping hemorrhages, as stated by Galen. It consists principally of the oxide of iron. Professor Cleaveland says it contains from 60 to 80 per cent. of iron of excellent quality. It was used for the cure of ophthalmia. See Dioscorides (v, 143); Galen (*De Simpl.* ix); Serapion (*De Simpl.* 421.) They also recommend it in menorrhagia. Alexander praises it in hæmoptysis. Averrhoes recommends it in diseases of the eyelids and eyes. (*Collig.* iv, 43.) Dr. Hill says it is accounted astringent and desiccative. He adds, "it is given from 10 to 25 grains in hemorrhages and in distemperatures of the eyes." Besides this, the ancients were acquainted with another Blood-stone which they call *Heliotrope*.

The *Schistos* is only a variety of the hæmatites, having a fibrous appearance and ochre colour. Pliny says it is used in diseases of the eyes.

The *Lapis Melitites* of Pliny is supposed by Dr. Kidd to have been borax, or the borate of soda. Pliny recommends it mixed with wax for ulcers of the throat. (*H. N.* xxxvi, 33.) See Isidorus (*Orig.* xvi, 4.) It seems likely that it was the same as the tincar of the Arabians, although on this point we do not venture to pronounce a decided opinion. One of Serapion's authorities speaks highly of it in caries of the teeth, and says it kills the worms in them. Is this the original of the popular belief, that toothache is connected with worms in the teeth? (*De Simpl.* 423.)

The *Galactites* most probably consisted principally of chalk. Matthioli and Sprengel mention that it is found in Saxony. Dr. Hill remarks that it is, properly speaking, a species of in-

durated clay, and not a stone. Dr. Jameson conjectures that it may have been Fuller's earth. Dioscorides recommends it as a liniment in defluxions of the eyes. (v, 149.) COMM.

The *Morochthus*, according to Sprengel, is called *Speckstein* and *Seifenstein* in German. It consists of talc, argil, and silica, with a small proportion of iron and manganese. Dr. Hill says it is an indurated clay, and is now known by the name of *French chalk*. Dioscorides recommends it in hæmoptysis, cæliac affections, and pains of the bladder; and for the cure of fluor albus on pessaries. (v, 151.) Avicenna speaks favorably of it also in fistula lachrymalis. (ii, 2, 431.)

The *Achates*, or *Agate*, is well described by Orpheus, and recommended as a remedy for fever and various other complaints. It does not seem to be noticed by the medical authorities.

The ancients were acquainted with several varieties of *Jasper*. See Pliny (H. N. xxxvii, 37.) They contained talc and various other ingredients. Dioscorides recommends it solely as a phylactery or amulet to expedite delivery. (v, 159.) Galen and Avicenna speak of its being useful as an amulet in affections of the stomach and bowels. The latter calls it *Lapis aneseb*. (ii, 2, 408.) Even in modern times the *Jasper* has been celebrated as an amulet. See Andreas Laurentius (De Mirab. Strum. Sanat. 69), and Hill (Mat. Med. 276.)

The *Judaic-stone* appears to be the *Tecolithos* of Pliny. It is now ascertained that it is formed from the quills of the *Echinus Marinus*, impregnated with calcareous earth, silica, and perhaps some magnesia. Most of the ancient authorities commend it as a lithontriptic. V. Harduin in Plin. H. N. xxxvii, 68. Dioscorides recommends it not only as a lithontriptic medicine, but a remedy for dysuria in general. (v, 154.) Galen and Serapion also affirm that they had experienced good effects from it when given in calculus of the kidneys or bladder. See in particular Serapion (c. 390.) Rhases, however, affirms that he had tried the lapis vesicæ, by which he probably means this article, but had not found it to be lithontriptic. (Cont. l. ult. 414.) Dr. Hill says it is, undoubtedly, diuretic, but it is not so certain that it is lithontriptic.

The *Pyrites*, when burnt, forms an oxide of copper with sulphur. From our author's account, it is evident that the

COMM. Molaris nearly resembled it, and the same may be understood from Pliny. It will, of course, be understood that it is the copper pyrites, and not the iron. This is very obvious from the description of it given by Dioscorides. He calls it heating, detergent, and a cleanser of obscurities of the eyes, and recommends it for repressing fungated ulcers. When burnt, he adds, some call it *diphryges*. It is described under the name of *marchasita* by Serapion (c. 395), Rhases (Cont. l. ult. i, 449), and Avicenna (ii, 2, 464.) They all recommend it with vinegar in leprosy and other obstinate diseases of the skin.

The *Phrygian-stone* was a pumice with alum and some other ingredients. Dioscorides says it has astringent, cleansing, and moderately escharotic powers, and proves a remedy for burns. (v, 140.) Galen professes to have had great experience of it in diseases of the eyes. (Ed. Basil. t. ii, 122, 208.) See also Avicenna (ii, 2, 405.)

The *Ageratus* does not occur we believe in Dioscorides or Pliny. Galen calls it a stone which the curriers of leather use. He says it is astringent and acrid, and recommends it particularly in inflamed uvula. Avicenna copies from him. (ii, 2, 409.)

The *Anthrax* or *Carbuncle* of the ancients comprehended the ruby and a multitude of other gems of the same colour. It was scarcely used in medicine.

De Boet says that the *Asian-stone* is light and spongy, and contains alum, nitre, and salt. Dioscorides calls it slightly septic and discutient, and recommends it as an application to old, and more especially fungated, ulcers, and those of a malignant nature. The flower of it, by which was meant an efflorescence on the surface of it, he says does good in phthisis. He further says of it, that a hip-bath prepared with it is highly beneficial in the cure of gout. (v, 141.) Galen and the other authorities treat of it in more general terms. (De Simpl. ix.) See also Serapion, who merely copies from Dioscorides and Galen. (c. 393.)

The *Amethyst* of our times is the same gem that the ancients knew by this name. Except that it was suspended from the neck as an amulet to prevent drunkenness, we are not aware that it was used in medicine. See Pliny (H. N. xxxvii, 40) ; Marbodeus (De Lapid. 4.)

The *Gagate* is a fossil, bituminous substance, containing carbon and ethereal oil. It is jet. The *Thracian-stone* was similar to it; indeed, we suppose, a variety of it. The *Gagate* was used by the ancients as a test of epilepsy, and a restorative from hysterical fits. Galen gives an interesting account of his experience in the medicinal use of *gagate* and *Thracian-stone*, the result of which is, that he found *gagate* rather to weaken than increase the powers of the bitumen which he had picked up upon the shores of the Dead Sea; but that as a desiccant, it operated beneficially in the cure of sores, and that not only of recent, but also of sinuous ulcers. (De Simpl. ix.) He mentions that he could not discover the river *Gagas* in *Lycia*, from which, according to *Dioscorides*, this stone derives its name. (Ibid.) There is an interesting description of the *Thracian-stone* in a passage of *Nicander* quoted by *Galen*, under this head, *Theriac.* (45.) The *Arabians* who treat of it merely copy from the *Greeks*. See *Rhases* (Cont. l. ult. 399, 400), and *Avicenna* (ii, 2, 407.) *Mesue* gives a formula for an oil of *gagate*. (De Oleis, i.)

Aristotle suggests that perhaps the *Magnet* is animated. (De Anima.) To comprehend his reasons for maintaining this singular opinion, it would be necessary to understand his theory of motion, as fully exposed in his 'Auscultationes Naturales.' *Lucretius*, with considerable ingenuity, attempts to explain the manner in which the magnet attracts iron. (vi, 1000.) *Plato* (in *Timæo*) and *Hippocrates* (De Sterilibus) also allude to its attractive property. *Galen* recommends it in dropsies. *Dioscorides*, *Galen*, and the other Greek authorities treat of it in a very cursory manner, merely stating of it that it has the same virtues as the *hæmatite*. The *Arabians*, more especially *Serapion*, give a much fuller description of it, which at all events identifies the *Magnetis* or *Heracleian-stone* of the ancients with our loadstone, that is to say, the magnetic oxide of iron. It was used by the *Arabians* as an application to poisoned wounds. See *Serapion* (De Simpl. 394); *Avicenna* (ii, 2, 463.) It was used in the practice of medicine from the earliest date. See *Hippocrates* (De Sterilibus.) *Ebn Baithar* recommends it in pains of the head and feet, if taken hold of, and in cramps. He copies *Aëtius*. (ii, 25.)

The *Arabian-stone* is a species of white marble. It is re-

COMM. commended by Dioscorides for hemorrhoids and as a dentifrice.
(v, 145.)

The *Alabastrites* is a thick concrete gypsum. See Kidd's 'Mineral.' (i, 63.) Galen says of it, that when burned it is adapted for medicinal use, and that it is sometimes administered in a draught to persons affected with stomach complaints. Dioscorides speaks of its being applied externally in such cases along with wax; calls it discutient, and says it represses the gums. (v, 152.) It would appear that this article is the Lapis eburneus of Rhases, who calls it an astringent and dentifrice. (Cont. l. ult. i, 395.)

Geoffroy says that the Smiris is the *Emery* of the shops. It is held by the mineralogists to be a variety of Corundam. See Cleaveland's 'Mineral.' (278.) A specimen of it, from the Isle of Naxos (which may be supposed a good representation of the ancient Smiris), was found by Tennant to consist principally of alumine, with small proportions of silex and oxide of iron. Dioscorides recommends it in looseness of the gums, and as a dentifrice; he ranks it with septic and caustic substances. (v, 165.)

The *Stones in Sponges* consist principally of the muriate of lime. They were much commended as lithontriptics. See Dioscorides, Pliny, Galen, and Avicenna.

The *Ophites* is a pellucid stone, so called from its serpentine streaks. It was that variety of serpentine called *verde antico*. See Jameson's 'Mineralogy.' According to Dioscorides, it was useful as an amulet in the case of persons stung by snakes, and was also reported to be useful in lethargy and headache. (v, 161.) Galen holds it to be lithontriptic. (De Simpl. viii.) The Arabians copy from Dioscorides and Galen. See Avicenna (ii, 2, 406.)

The *Ostracites* appears to have been petrified oysters. Dioscorides recommends it in menorrhagia, in inflamed breasts, and spreading sores. (v, 164.) Galen also recommends it for clearing the cornea. (De Simpl. viii.) See in like manner Avicenna (ii, 2, 393.)

The *Geodes* contains iron, argil, and silica. It is nearly allied to the Eagle-stone, and hence it is often called the Bastard Eagle-stone. See Hill's 'Theophrastus.' Dioscorides recommends it as an ophthalmic remedy, and as a liniment for

inflammations of the mammæ and testicles. (v, 168.) Avicenna COMM. says the vapour of vinegar in which it is dissolved checks the flow of blood and cures hot aspostemes. (ii, 2, 398.)

Matthioli confesses himself quite unacquainted with the *Naxian Whetstone*. Sprengel reckons it allied to the Smiris. Galen would rather seem to make it a variety of the Ostracites.

The *Lapis Lyncurius* of the ancients was our Jacinth or Hyacinth. See Beckmann, and De Laet, 'de gemmis.' Dioscorides recommends it in affections of the stomach and bowels. (ii, 100.) Serapion describes minutely the *Lapis iacinctus*, or hyacinth, but merely mentions of it that it was used as a seal to avert the thunderbolt. (c. 398.) The stone which he describes in the following chapter, would appear decidedly to be the Tourmaline. He calls it *Lapis rubeus, seu, hager albu- zedi*. Used as a seal, he says it dispels bad dreams.

The *Cos* is composed of a schistose argil. The *Cos Olearia* would appear to have derived its name from requiring the use of oil to answer the purpose of whetstone. See Pliny (H. N. xxxvi, 47.)

It is impossible to determine accurately the nature of the *Hieracites*. Aëtius, who has given the fullest account of it, describes it as a darkish green stone.

The *Indian-stone* would seem to be identical with the Arabian-stone. Rhases (Cont. l. ult. 401.)

The *Lydian-stone* is ranked by Dr. Thomson as a sub-species of Flint-slate. He remarks that it was used as a touchstone by the ancients.

The *Ætites*, or *Eagle-stone*, is a species of oxide of iron. Dr. Hill remarks that custom has given the name of ætites to every fossil that has a loose nucleus within it. The ancients used it very frequently as an amulet and incantation. See particularly Dioscorides and Aëtius. The Arabians also confirm, in the strongest terms, the imaginary efficacy of the Eagle-stone when used as an amulet. That it accelerated the delivery of woman in tedious labours, Serapion and Rhases declare, from ample experience, and that it would produce this beneficial effect on those who had faith in it we can readily believe. Indeed, we have often regretted that such innocent modes of working upon the imagination of women in labour had given place to more dangerous methods of practice in such

COMM. cases. The Eagle-stone was retained in the English Dispensatory with all its ancient characters as late as Quincy. (165.)

The *Thyites*, according to Fuchsius, was a Turquoise; but Matthiolus is of a different opinion. Sprengel thinks it may have been a species of turquoise, although not the common one. Dr. Hill says it contains a small quantity of copper, which rendered it a valuable ingredient in collyria. It is prescribed for this purpose by Dioscorides. (v, 153.)

The *Amiantus* is composed of talc, calcareous and siliceous earth, clay, and a small proportion of iron. It is often confounded with the *Alumen plumosum* of the ancients, to which it is compared by Dioscorides. He does not mention any medicinal use to which it was applied, but merely states of it that it was used for forming the *linum asbestinum*. (v, 155.) See further Harduin in Plin. H. N. (xxxvi, 31.)

The *Sapphirus* of the ancients is supposed by Beckmann to have been the Lapis lazuli. (History of Inventions.) This opinion is now pretty generally established, and yet there is a difficulty attending it; for the Arabians, in treating of the *Lapis lazuli*, do not quote the descriptions of the sapphirus given by Dioscorides and Galen, but apparently refer to the *cyanus*. Dioscorides recommends the sapphirus as an alexipharmic, and a remedy for internal ulcerations and diseases of the eyes. (v, 156.) Galen merely recommends it as an antidote to the stings of scorpions. Rhases, under the head of "Lapis lazuli," quotes Dioscorides as saying of it that it promotes the growth of the eyelashes, that it restrains fungous flesh, is septic, caustic, and ulcerative; and Galen, as saying of it, that it has abstergent powers, with a moderate degree of attenuating and styptic virtues; that it may be mixed in collyria for the eyes, and especially for the eyelids when affected with sharp humours, which it represses, and also prevents the growth of the hairs. (Cont. l. ult. i, 404.) See also Serapion (c. 389); Averrhoes (Collig. v, 43); and Haly Abbas (Pract. ii, 45.)

The *Calais* of Pliny and the ancients is said by Dr. Hill to be the *Turquoise*, or *Gemma Turcica*, which consists principally of lime and iron. See the *Thyites*.

The *Memphites* contains bitumen and ethereal oil. It is the *retinasphaltum* of Mr. Hatchett, or *retinite* of Jameson. (Mineral. iii, 478.) According to Dioscorides, when rubbed

smoothly upon places about to be burnt or cut, it renders them COMM.
insensible without danger. (v, 157,)

The *Selenites* consists principally of a compact lamellated gypsum. According to Eustathius, it is the same as the *Lychnitis*, which Dionysius the geographer, describes as resembling fire in lustre. (Orbis. Descrip. 328.) It is soft, pellucid, and colourless. Dioscorides describes it minutely, and mentions of it that it was given as a draught to epileptics, and used as a phylactery by women. He adds, that it was also appended to trees in order to make them keep their fruit. (v. 158.) Rhases, under the head of "lapis lunaris," copies this chapter of Dioscorides. (Cont. l. ult. i, 405.)

The *Lapis Specularis* was the same as the Moscovy talc. It was much used by the ancients for windows in place of glass. It is a variety of selenite, or sparry gypsum. See Kidd and Jameson. We have treated of it under the head of Gypsum in the Fifth Book.

The *Smaragdus* of the ancients is unquestionably referable to our emerald, but there is every reason to believe, also comprehended coloured crystals and certain stones of the jasper kind. It does not occur in the works of Dioscorides or Galen; and, as far as we know, Aëtius is the first medical author who describes it. He says of it, that when roasted and levigated with Attic honey, it cures dimness of vision; that it is most useful in elephantiasis, both externally and internally; and that as an amulet it restrains bleeding. (ii, 39.) We are not aware that any other ancient authority, whether Greek, Roman, or Arabian, has noticed it.

We will treat of the *Bezoar-stone* and *Gall-stone* of the bull in the Appendix to this section.

Λιθόσπερμον (called also λιεύσπορμον ἢ ἡράκλειον),

Lithospermon, *Gromwel*, is the seed of the herb called Aegonychus, of a stony hardness, and white, which, when drunk with white wine, proves lithontriptic and diuretic.

COMMENTARY. Without doubt it is the *Lithospermum* COMM.
officinale, or *Gromwel*. Pliny expresses himself respecting it in the following terms: "Nec quidquam inter herbas majore quidem miraculo aspexi. Tantus est decor, velut aurificum arte alternis inter folia candicantibus margaritis: tam exqui-

COMM. sita difficultas lapidis ex herba nascentis." (H. N. xxvii, 74.)
 Dioscorides describes it minutely, and, like our author, calls it lithontriptic and diuretic. (iii, 148.) Serapion and Avicenna give it the same characters, which it maintained in modern times, as long as it held a place in the Dispensatory. See the works of Parkinson, Culpeper, and Quincy.

Λινόσπερμον,

Linum Semen, *Linseed*, is heating in the first order, and holds the middle rank of diluents and desiccants. When eaten, it is flatulent, even although roasted.

COMM. COMMENTARY. It is the seed of the *Linum usitatissimum*, Angl. *Linseed*. Dioscorides gives a long account of its medicinal virtues, recommending it externally for ephelides, vari, and other complaints, and internally as an expectorant and aphrodisiacal medicine. He further commends it as an enema in pains of the bowels and womb, and as a hip-bath in inflammations of the uterus. (ii, 125.) Galen, like our author, treats of it in very general terms. The Arabians, and especially Avicenna, give a more circumstantial account of it. (ii, 2, 598.) See Serapion (c. 21); Rhases (Cont. l. ult. 426.) Like Dioscorides, they recommend it as an external application to apostemes of a hard character, and internally for the cure of diseases of the chest and intestines.

Λινόζωστις,

Mercurialis, the herb *Mercury*, is considerably laxative of the belly, and applied in cataplasms it is discutient. It ought to be known that when its seed is rubbed upon those preternatural excrescences of the body, which the vulgar call naphria, it is found to make them disappear. But the seed must be green, and they must be often rubbed with it.

COMM. COMMENTARY. Most of the botanical authorities agree that it is the *Mercurialis annua*, L. It occurs frequently in the Hippocratic treatises as an article of diet and gentle laxative. Dioscorides, who, describes it in two separate places of his *Materia Medica*, (iii, 130 and iv, 188), speaks of it as being a laxative pot-herb, and a medicine of which the decoction in water proves cholagogue and hydragogue. He also alludes to the popular notion that the leaves of the female plant,

when applied to a woman's parts of generation after her menstrual period, will promote conception of a female, while those of the male plant will promote conception of a male. It does not occur in the works of Celsus, nor, as far as we can discover, in those of any of the Arabians, with the exception of Averrhoes, who calls it a gentle purgative of the same class as Cassia fistula, tamarinds, and the like, and says it evacuates yellow bile and phlegm; and boiled in wine proves an excellent application to large sores, and in particular to the ulcers produced by burns. He further recommends its leaves boiled in vinegar for diseases of the spleen, and its flower in a masticatory and errhine. (Collig. v, 42.) What our author says of its virtues in the diseases called *narphia*, by the vulgar, is taken from Aëtius (i), where, however, the reading is *carphia*. Galen says of it, "everybody uses the herb mercury for purging the belly." (De Simpl. Med.) Notwithstanding this testimony, which is, in fact, confirmed by that of all the ancient writers who have treated of it, Bergius says, "Virtus suspecta: vis emolliens nondum ritè nobis constat." However, Moses Charras, who appears to have written from experience, affirms of it that "it loosens the belly, and provokes the menstruums. The dose is from oz. j to iij." (Roy. Pharm. 106.) Alston likewise acknowledges its laxative powers. Dr. Hill says of it, "This plant is of an emollient nature, and is eaten by many people in the manner of spinach, which, when cultivated in the garden, it greatly excels. If eaten largely it gently opens the bowels." (Mat. Med.) It held a place in our Dispensatory as late as Quincy. (106.)

Λίτρον,

Nitrum, *Nitre* (or *Soda*?), is possessed of intermediate powers between the aphronitrum and salts. When burnt it becomes more attenuate and discutient. If taken internally it cuts and attenuates the thick and viscid humours more than any other. The Chalestræan (so called from Chalestra, a place in Thessalonica) is more acrid and desiccative, so that it is used for defluxions from the head, and for arthritic complaints.

COMMENTARY. The following extract from Pliny's description of the nitrum clearly indicates the substance to which he

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COMM. applies it: "Non est differenda et nitri natura, non multum a sale distans. Exiguum fit apud Medos, canescentibus siccitate convallibus, quod vocant halmyrhaga. Optimum copiosumque in Litis Macedoniæ quod vocant Chalestricum, candidum, purumque, proximum sali. Lacus est nitrosus, exsiliante e medio dulci fonticulo. In Ægypto autem conficitur multo abundantius, sed deterius. Fit pæne eodem modo quo sol, nisi quod salinis mare infundunt, Nilum autem nitrariis." (H. N. xxxi, 46.) Compare the above with the following account of the native carbonate of soda: "In Egypt it is plentifully found in what are called *the Lakes of Natron*. These lakes, six in number, are westward of the Nile, not far from Terrana, in a valley surrounded by limestone. The carbonate and muriate of soda exist together in these waters; but when the water is diminished by natural evaporation, these salts are deposited in distinct layers." (Brogniart, in Cleaveland's Mineral., 133.) It would be superfluous to bring any further proof that the ancient nitrum generally applies to our natron or the native carbonate of soda. Were the Greeks, Romans, and Arabians then entirely ignorant of saltpetre or the nitrate of potash? This seems incredible, considering how largely it is distributed in Europe, Asia, and Africa; and, therefore, we cannot bring ourselves to think that this mineral can have entirely escaped the observation of the ancients; and if this were the proper place for such a disquisition, we believe that we could state satisfactory reasons for drawing the conclusion, that "nitrum" was applied to it as well as to the other mineral. But at the same time, as mentioned above, we are quite satisfied that by *litrum* and *nitrum* the medical authors generally, if not universally, meant the native carbonate of soda. Dioscorides, with regard to its medicinal powers, merely states of it that it has alterative or metasyncritic powers. (v, 129.) We have given his views respecting the *Aphronitrum* under that head. Our author abridges Galen's account of it, but omits to mention, as stated by Galen, and also by Aëtius, that the different kinds of nitre were popularly used as counter-agents in cases of poisoning by mushrooms. All the Arabians treat largely of this substance generally under the name of *baurach*. See Avicenna (ii, 2, 84); Rhases (Cont. l. ult. iii, 115); Mesue (De Simpl. xvii); Serapion (c. 401);

Haly Abbas (Pract. ii, 46, 487); Ebn Baithar (i, 187.) Rhases COMM.
 marks what it is: "Nitrum appellatur Arabicè natrum et est
 simile sali gemmæ." (Cont. l. ult. ii, 508.) They used it ex-
 ternally for the cure of prurigo and scabies, and as an appli-
 cation to discaised joints, and along with figs to remove
 dropsical swellings. They recommend an injection of it into
 the ear for the cure of deafness. The aphonitrum, or African
 nitrum, is said by Avicenna to be possessed of emetic powers,
 and that it was more incisive of gross humours than the other
 varieties of it. It was used by them in cases of poisoning
 with mushrooms, cantharides, and bull's blood; and as an
 application to the bites of mad dogs. Mesue, with his wonted
 precision, states its powers very distinctly, recommending it,
 when given by the mouth, in clysters, and in suppositories as
 an evacuant of crude and viscid phlegm, for colic and affections
 of the stomach. Like Avicenna, he says that it will sometimes
 occasion vomiting. His commentator, Costa, has many in-
 genious observations on the ancient nitrum, which will be
 found very interesting to those who desire to become better
 acquainted with this subject. Haly Abbas states that friction
 with it before the hour of invasion will prevent an attack
 of ague.

Λόγχιτις,

Lonchitis, *Rough Spleenwort*; the root of that species
 which has triangular seed, like a spear, resembles that of the
 carrot, and is diuretic. But the green leaves of that species
 which resembles the scolopendrium, are agglutinative of wounds;
 and when dried, and drunk with vinegar, they cure indurated
 spleens.

COMMENTARY. Our author's account of the two species of COMM.
Lonchitis is taken from Dioscorides. Of these, the former, which
 has been conjectured to be the *Serapias Lingua*, he says is diu-
 retic. The other, which would seem to be the species of *aspidium*,
 to which the name is still appropriated, he calls vulnerary and
 anti-inflammatory, and recommends for reducing the size of
 the spleen. Galen and the other authorities give a similar
 account of it. Such of the Arabians as treat of it follow
 Dioscorides. See Avicenna (ii, 2, 336.)

Λύκοψις,

Lycopsis, *Hound's-tongue*; having an astringent root, Dioscorides says, that when applied with polenta in a cataplasm, it agrees with erysipelas, and that if rubbed in with oil it is sudorific.

COMM. COMMENTARY. It is either the *Echium Italicum*, L., or the *Lycopsis echioides*, L., probably the former. Our author, as he acknowledges, borrows from Dioscorides. Galen, Aëtius, and Oribasius, as well as Hippocrates and Celsus, do not treat of it at all. If the Arabians notice it, they do so under the head of *Anchusa*.

Λύκτιον,

Lycium, *Buckthorn*, is composed of heterogeneous powers, one part of its ingredients being heating, attenuate, and discutient, and the other, or terrene part, being cooling and gently astringent; so that it is desiccative in the second degree, and calefacient and refrigerant in an intermediate degree. They use it, therefore, as a detergent in obstructions of the pupil, and as an astringent in cæliac and dysenteric cases and ill-conditioned ulcers; and in inflammations as a discutient. The Indian is the best.

COMM. COMMENTARY. Dioscorides gives a sufficiently distinct description of the tree which produces the *lycium*, so as to leave no doubt that he points to the *Rhamnus infectorius*. The *Lycium Indicum* of the same author, is now satisfactorily determined to be the product of the *Berberis Lycium*. See Royle (*Antiq. of Hind. Med.* 32), and 'Linn. Transact.' (xvii, 83); also Pereira (*Materia Medica*, 1152.) Dioscorides recommends the former of these as an astringent for the cure of various complaints, such as obscurities of the cornea, psoriasis, and pruritus of the eyelids, purulent ears and tonsils, ulcers of the gums, chapped lips, fissure of the anus; in cæliac and dysenteric affections, both in draughts and clysters; in hæmoptysis and coughs; in female fluxes, hydrophobia, and so forth. The Indian, he states, cures inflammation of the spleen and jaundice, prevents menstruation, purges water, and is a counter-agent to deadly poisons. (i, 132.) Galen's account of it being nearly the same as our author's, we need not expound at any length. He holds that the Indian species is far stronger

than the other. (De Simpl. ix.) Oribasius and Aëtius in like manner follow Galen. Celsus recommends lycium strongly in ulceration of the throat. (iv, 4, 3.) As far as we have been able to discover, it does not occur in the works of Hippocrates. The Arabians treat fully of this article. See Rhases (Cont. l. ult. i, 429); Avicenna (ii, 2, 390); Serapion (c. 7); Averrhoes (v, 42.) We do not find that they supply any new views regarding its medicinal virtues. In the modern Greek Pharmacopœia the extract of catechu is set down as being the *Lycium Indicum*. We agree, however, with the authorities quoted above regarding it.

Λυσιμάχιον,

Lysimachium, *Moneywort*; its prevailing power is astringency; hence it agglutinates wounds, and is styptic, both itself and its juice. It also relieves dysentery when drunk and injected.

COMMENTARY. The L. of Dioscorides and our author is most probably the Yellow Loose-strife of our English herbalists, namely, *Lysimachia vulgaris*, L. Our author abridges Dioscorides, who recommends it as an astringent in various cases, such as hæmoptysis, dysentery, fluor albus, hemorrhage from the nose, and as a vulnerary and styptic herb. (iv, 3.) Galen and Aëtius treat of it in nearly the same words as our author. We have not been able to find it in the works of the Arabians, except Ebn Baithar, and yet we do not assert that it may not be treated of under some name which we have not been able to interpret. Ebn Baithar merely quotes Dioscorides and Galen. The lysimachia, although not now included in our Dispensatories, still holds a place in the shops of the apothecaries, with the character of being astringent. See Gray's Supplement, &c. (48.)

Λυχνίς,

Lychnis, *Campion*; the seed of that species which is used for garlands is hot and desiccative, according to the second order complete.

COMMENTARY. This plant is the *Lychnis coronaria* of Dioscorides, and still retains this name. Dioscorides recommends it in the case of persons stung by scorpions. The wild lychnis of Dioscorides may be either the *Lychnis dioica* or

COMM. *Agrostemma githago*; it is said by Dioscorides to be a cholagogue, and a remedy in the case of persons stung by scorpions. (iii, 104-5.) Galen and the other authorities merely state the characters of the *Lychnis coronaria* in general terms. We have not found this article in any of the Arabians, not even in Ebn Baithar.

Λωτὸς,

Lotus, *Bird's-foot Trefoil* (?); the cultivated species is by some called trifolium. It is possessed of detergent and moderately desiccative powers, and is of a proper temperament as to heat. The seed of the wild lotus belongs to the second order of calefacients, and is also somewhat detergent. The seed of the Egyptian lotus is also made into bread. The *Lote*, or *Nettle-tree*, consists of subtile particles, and is moderately desiccative and astringent. Hence it is applicable for the female fluor, and for fluxes of the bowels, both when drunk with wine or water, or when used in an injection. It also strengthens the hairs that are falling out.

COMM. **COMMENTARY.** We need not enter further into the literary history of this interesting subject, which we have given at some length in the Appendix, already so often referred to, than to mention that the Lotus, called also Trifolium, is referable to the *Melilotus officinalis*, and probably some of its congeners, and the Lotus Arbor to the *Zizyphus Lotus*, with perhaps some other trees of the same tribe. Dr. Lindley says of it, "The Lote-bush, which gave its name to the ancient Lotophagi, is to this day collected for food by the Arabs of Barbary, who call it sadar, and its berries nabk." (Veg. Kingd. 582.) The wild lotus of Dioscorides and the other authorities has never been satisfactorily determined. Perhaps it was the species of *melilotus* named *cærulea*. The Egyptian lotus, there can be no doubt, was the *Nymphæa Lotus*, L. Dioscorides gives a striking description of this last, which, he says, the inhabitants of Egypt use for making bread; and it is deserving of remark that the rhizomes of the nymphæa are still roasted and eaten by the Negroes of Senegal. See further under *Nymphæa* in this section. Our author's characters of the other loti are copied from Dioscorides or Galen, who agree, in the main, under this head. See, in like manner, Aëtius and

Oribasius. The Arabians treat at great length of the different COMM. loti, and more especially of the L. Arbor, with which they must have been familiarly acquainted. See Avicenna (ii, 2, 298, 513); Serapion (c. 120); Rhases (Cont. l. ult. i, 487); Ebn Baithar ii, 539.) They all recommend it as a powerful astringent in looseness of the bowels, bloody flux, menorrhagia, ulcers of the bowels, and in asthma and affections of the chest. One of Serapion's authorities calls it stomachic and a whetter of the appetite. The lotus occurs in the Hippocratic treatises; indeed, from the fable of the Lotophagi, contained in the Odyssey of Homer, there can be no doubt that the lotus had been known and used as an article of food long before the time of Hippocrates.

Μάκερ,

Macer is a bark brought from India, being desiccative in the third order, and intermediate as to heating and cooling properties. It consists of subtile particles, and is astringent; hence it agrees with cæliac and dysenteric complaints.

COMMENTARY. Under this head we cannot do better than COMM. quote the words of an excellent living authority: "*Macer*, a bark from the Barbaric region, has been thought to be *Wrightia antidysenterica*, supposing this to be the *macre* described by Crist. d'Acosta. (Clus. Exot. 266.) Though *macer* is always described as a bark, I had given me as such the highly aromatic leaves of *Rhododendron lepidotum* under the name of *talisfur*. *Mafur* and *mafurbooz* are in Persian works assigned as the Greek names of *talisafar*, under which name the *macer* of Dioscorides is alluded to by Avicenna." (Antiq. of Hindoo Med. 91, by Dr. Royle). Though the *macer* of the Greeks, then, was different from mace, there can be no doubt that the Arabians confounded the two substances together. Thus Avicenna, in his chapter on mace, quotes the words of Paulus on the *macer*. (ii, 2, 448.) Serapion in like manner, under mace, which he correctly describes as the rind or membrane of the nutmeg, gives the characters of *macer* from Dioscorides. (De Simpl. 2.)

Μαλάβαθρον,

Malabathrum; the leaf of it has powers like the spikenard.

COMM. COMMENTARY. Dr. Ainslie, treating of the Cassia Lignea, or Cassia bark, says, "the narrow-pointed leaves of the *Laurus Cassia*, as well as the oblong, ovate, shining leaves of the Cinnamon-tree, are sold in the Indian bazaars under the names of *lawangapatery* and *tejpat*, from a notion that they are the leaves of the *Laurus Cassia*. In commerce these leaves are called *Folia Indica*, or *Malabathra*, a name which more especially applies to the leaves of the *Laurus Cassia*." (Med. Ind. § 35.) Geoffroy, Sprengel, and Royle also agree in holding the Cassia, or Cinnamon-leaf, to be the *Folium Indicum*. Dr. Sonthaimer, then, in his translation of Ibn Baitar, makes it to be a peculiar species of *Laurus*, calling it *Laurus Malabathrum*, and Dr. Pereira does the same. In the modern Greek Pharmacopœia, the query is put whether the Cassia-buds be the product of *Laurus Cassia*, or *L. Malabathrum*. Isidorus says of it, "*Folium dictum quod sine ulla radice innatans in Indiæ littoribus colligitur.*" (Orig. xviii, 9.) It is always simply called *Folium* by Apicius. Horace applies the word to an ointment. "*Malabathro Syrio capillos,*" (Od. ii, 7); on which passage his commentator, Porphyrius, remarks, "*Malabathrum unguenti speciem esse scimus.*" This is the *Unguentum Malabathrinum* of Dioscorides. (i, 76.) The ancients, as Dr. Hill remarks, have said much of the virtues of *Malabathrum*. They call it stomachic, sudorific, and cephalic. Dioscorides ascribes to it all the virtues of the Indian spikenard; but he says it possesses them in a superior degree. He also mentions it as a scent. (i, 11.) Galen and the other Greek authorities, like our author, dismiss it with a brief notice, comparing it to spikenard. The Arabians treat of it at greater length, but do little more, after all, than copy the characters of it given by Dioscorides. See Avicenna (ii, 2, 253); Serapion (c. 53.) It occurs only once in the works of Celsus (v, 23), as an ingredient, in one of his antidotes; and does not occur at all, we believe, in the Hippocratic Collection.

Μαλάχη,

Malva, *Mallows*; the wild is moderately discutient and emollient; but the garden, as being more moistening, is also weaker. Its fruit, however, is as much stronger as it is drier.

COMMENTARY. There seems no reason to doubt that it applies to *Malva sylvestris*, but probably comprehended other species. Dioscorides describes minutely the cases to which it is applicable, namely, as a cataplasm in incipient fistula lachrymalis, with oil for achores and furfures, and also so prepared for burns and erysipelas; its decoction as a hip-bath in diseases of the uterus; and as a suitable enema in pains of the bowels, womb, and anus; its broth he praises in cases of poisoning, as producing evacuation of the stomach, and says it is beneficial to persons stung by phalangia, and attracts milk to the breasts; its fruit, when the reed of the wild lotus is mixed with it, allays pains about the bladder. (ii, 144.) Galen and the other Greek authorities treat of it as a medicine in more general terms, representing it to be gently discutient and demulcent. It occurs in the works of Hippocrates and Celsus; the latter praises it as a pot-herb, and recommends it as a gentle laxative. (vii, 27.) The Arabians treat of it fully; but have little to add to the excellent description of its medicinal powers given by Dioscorides, whom they all copy. One of Serapion's authorities briefly commends it as a demulcent in affections of the chest and bladder, and as a cataplasm in hot apostemes. (c. 149.) Avicenna's account of it is highly interesting, but too lengthy for our purpose. He recommends it internally in complaints of the lungs and liver, and externally as an emollient application in a variety of cases. (ii, 2, 194.)

Μαμίρας,

Mamiras, is a sort of radicle of a herb, having, as it were, thick knots, which are believed to attenuate cicatrices and leucomata, being of a decidedly detergent power.

COMMENTARY. This article is not mentioned by Dioscorides, Pliny, Galen, Oribasius, nor, we believe, by any of the Arabian writers, with the exception of Avicenna, who calls it abstergent and cleansing, and recommends it for clearing away albugo of the eye, and for cleaning the nails; he adds of it that it is useful in jaundice and pungent pain of the belly. (ii, 2, 479.) It further occurs in one of the antidotes of Nicholas Myrepsus (c. 138), where, his commentator says, the description of it given by Paulus applies very well to the root known officinally by the name of *Doronicum*.

Μανδραγόρας,

Mandragora, *Mandrake*, belongs to the third order of cold medicines. But its apples have a certain share of heat and humidity, and hence they are possessed of a soporific power. The bark of the root of it being stronger is not only cooling, but also desiccant; but the inner part of it is weak.

COMM.

COMMENTARY. Waiving disputed points regarding the ancient Mandragora, we shall merely mention in this place that we believe the *M. Mas* of Dioscorides to have been *Mandragoras vernalis*, Bertolin, and the *M. Femina M. autumnalis*. The ancient authors make frequent mention of its narcotic and soporific powers. Celsus directs its apples to be placed below the patient's pillow in cases of obstinate insomnolency. (iii, 18.) Dioscorides, in like manner, says, its apples are narcotic when smelled to, and also their juice; that if persisted in, they will deprive the person of his speech. He mentions mandrake as an ingredient in anodyne collyria and pessaries, and says that in an enema it induces sleep. He recommends the wine of mandragora to be given to patients before they are subjected to the operation of cutting or burning. He gives minute directions for making the various preparations of mandragora. He concludes his chapter on it by giving from information an account of another species of mandragora, called morion, which he represents as being powerfully narcotic; and hence as being administered by medical men when about to operate by cutting or burning. This plant we agree with Dodonæus and Cordus in thinking must have been the *M.* of Theophrastus, namely, the *Atropa Belladonna*. Considering the diligence of the ancient herbalists, it is not likely that they should have wholly overlooked so prominent and important an article as the *Belladonna*. The objections stated to this opinion by Parkinson (*Theatre of Plants*, 344) do not appear to us of much force. The account of mandragora given by Pliny is mostly taken from Dioscorides. (H. N. xxv, 94.) Our author and Aëtius borrow almost word for word from Galen. Isidorus says of it, "Cujus cortex vino mixtus ad bibendum iis datur quorum corpus propter curam secandum est, ut soporati dolorem non sentiant." Serapion in like manner describes it as a powerful narcotic, and says that it was administered before the performance of amputation to diminish sensibility. (c. 333.) Avicenna parti-

cularly commends the narcotic and soporific powers of this medicine. He says that it exerts its action in a suppository. The milky juice of it, he adds, evacuates phlegm and yellow bile. He states that if a young person, by mistake, partake of its berries, they bring on vomiting, purging, and perhaps death. The seed mixed with sulphur vivum, is said by him to stop menorrhagia. Like Dioscorides, he says, that mandrake evacuates the stomach and bowels like hellebore. (ii, 2, 357.) Averrhoes briefly says of its apples, that they are soporific, and that its bark is desiccative, but its root weaker. (v. 42.) See also Rhases (Cont. l. ult. i, 446.) Servitor describes both a concrete and an expressed juice of mandragora. The former, which he calls lachryma, he says could not be procured everywhere. Even the non-professional writers allude to its soporific powers. Thus Lucian speaks of ὑπο μανδραγόρας καθεύδειν. (Timon.) Pollux says that it produces heaviness of the head, that is to say, stupor. Our old herbalists, Turner, Gerard, Parkinson, and Culpeper, mention the soporific powers of the mandrake, but in such a way as implies that they had not much practical acquaintance with it. By the days of Boerhaave and Quincy, its internal use had been abandoned, both in this country and on the continent. Although it has now disappeared from our Dispensatories, we see no good reason why its well-regulated use might not be revived. That the ancients have described its operation on the animal economy correctly, is admitted by our latest writers on Toxicology and the Materia Medica. See the works of Orfila, Christison, and Pereira. In conclusion it may be proper to state, that the modern Arabians and Persians still use the mandragora as a narcotic and antispasmodic. See Ainslie (Mat. Ind. i, 1, 116.) It is not contained in the Greek Pharmacopœia of the present day.

Μάννα λιβάνου,

Manna Thuris, has similar powers to frankincense, but enfeebled and gently astringent.

COMMENTARY. Gesner says of it, "Manna thuris est fragmina minora corticis ramentis permista." (Lexicon Rusticum.) Dr. Hill calls it the fragments of the cluster frankincense broke off in the carriage. It is singular that the Greek and Roman writers make no mention of the manna now

COMM. in use, namely, the concrete juice of the *Fraxinus Ornus*. Actuarius had, no doubt, learned the use of it from the Arabians. (Meth. M. v, 8.) We will treat of the true manna more properly in the Appendix to this section, among the medicinal substances introduced by the Arabians.

Μάραθρον,

Fœniculum, *Fennel*, is heating in the third degree, but desiccative in the first; it therefore forms milk and relieves suffusions of the eye.

COMM. COMMENTARY. Dioscorides gives a fuller exposition of the medicinal properties of this substance (*Anethum Fœniculum*) than any of the other authorities on the Mat. Med., representing it as being possessed of powers to promote the secretion of milk; as being useful in complaints of the kidneys and bladder as a diuretic, and in those of the uterus as an emmenagogue; as being alexipharmic, and as a suitable application to the bites of mad dogs; and an excellent ingredient in collyria, and more especially the gum of it, which is produced on the plant in Spain. (iii, 74.) Galen, in the main, gives it the same characters, holding it to be diuretic, emmenagogue, and a suitable ingredient in collyria. Aëtius and our author follow Galen. It occurs frequently in the Hippocratic treatises. (551, &c. ed. Foës.) Celsus ranks it among his diuretics (ii, 31), and among the articles which at the same time repress and mollify (ii, 33.) The Arabians treat fully of the fennel in nearly the same terms as the Greeks. See Avicenna (ii, 2, 274); Serapion (c. 324); Averrhoes (Collig. v, 42); Rhases (Cont. l. ult. i, 293.) They all represent it as being diuretic, emmenagogue, alexipharmic, and an excellent application in diseases of the eyes. They quote Democritus (?) as stating that vipers and other venomous creatures rub their eyes upon fennel to improve their sight. This species of fennel, namely, the *Fœniculum vulgare*, is not now employed as a medicine in this country. The other species, *Fœniculum dulce*, or Sweet Fennel, although Matthiolus takes it for the ancient *Marathron*, would seem to have been unknown to the ancients. The former species, however, held a place in our Dispensatory down to a recent period. See Quincy (77.) It still holds a place in the modern Greek Pharmacopœia (68.)

Μαστίχην,

Mastiche, *Mastich*; the Chian is heating and dessicant in the second degree; but it is possessed of complicated powers, being at the same time astringent and emollient; hence it agrees with inflammations of the œsophagus and stomach, and those of the intestines and liver; but the Egyptian, being darker, is more desiccant and discutient, and less astringent; wherefore it discusses furunculi.

COMMENTARY. Mastich is correctly described as the resin COMM.
of the lentiscus by Dioscorides (i, 90), and Pliny (H. N. xxiv, 28.) Both mention that it is used in the formation of agglutinative plasters for the cure of trichiasis. Serapion joins the Greek authorities in recommending it for hæmoptysis. Its use in medicine is as old as the time of Hippocrates. The “resina ex lentisco” is an ingredient in one of the discutient plasters recommended by Celsus for the cure of phymata. (v, 18, 22.) Honain, one of Serapion’s authorities, recommends it in inflammations of the stomach, and in cough. Another of them says of it, that when mixed with aloes it forms a good masticatory. (c. 183.)

Μέλαν,

Atramentum; the Indian, as Dioscorides says, is of the class of slightly refrigerating medicines, and of those which occasion the rupture of phlegmons and swellings, and cleanse ulcers.

COMMENTARY. Dioscorides describes two distinct substances COMM.
by the name of Ἰνδικόν. The one is the vegetable pigment, still called Indigo; the other was probably a red mineral of copper, some variety, we suppose, of the mineral called “tetrahedral red copper ore” by Jamieson, or “red oxide of copper” of Philips. Dioscorides recommends it in much the same cases as our author. (v, 107.) The other Greek authorities scarcely treat of it. Our author seems evidently to refer to Indian ink. The Arabians confound together the dye-producing plants, and accordingly treat of the woad (*Isatis tinctoria*) along with the plant which produces indigo. See Serapion (c. 47), and under *Isatis* in this section. Averrhoes’s description is very indistinct, so that it is difficult to know what to make of his *Indicum*. (Collig. v, 42.) Avicenna in one place

COMM. alludes to the mineral pinguent of our author, which he calls Tinctura Inda. (ii, 2, 689.) We beg to refer our readers to Beckmann's 'History of Inventions' for much curious information under the head of *Indigo*.

Μελαντηροία,

Atramentum metallicum, is powerfully astringent with subtile of parts.

COMM. COMMENTARY. Dioscorides gives a pretty circumstantial description of three or four varieties of it, and yet none of them can be recognized with any degree of certainty. One thing only is certain, that they must all have contained more or less of copper, being found in mines of copper. As far as we can judge, the mineral named "ferruginous arseniate of copper" by Cleaveland, is the most likely to be the melanteria of Dioscorides. He says it has the same caustic powers as misy. (v, 117.) Galen calls it only powerfully astringent and of subtile parts; and hence Sprengel inclines to set down his melanteria as being different from that of Dioscorides; but between the action of a strong astringent and a weak caustic, the distinction is not great. In describing the melanteria, Aëtius follows Galen, and Oribasius Dioscorides. There is no mention of it in the works of Hippocrates, Celsus, and Pliny. The Arabians confuse their description of it by mixing together those of misy, chalcitis, and sori along with it, under the head of *Atramentum sutorium*. See Avicenna (ii, 2, 47.) Serapion also fails to give any distinct account of it. (De Miner.)

Μέλαν ᾧ γράφομεν,

Atramentum scriptorium, *Writing Ink*; this, too, is decidedly desiccant; but when dissolved in oxycrate and rubbed in, it straightway relieves burns.

COMM. COMMENTARY. *Writing Ink*. Dioscorides describes the composition of two different kinds of ink; the former consisting of the soot of pines with gum, and the other containing the soot of rosin, bull's glue, and copperas. For a fuller account of the inks used by the ancients, see Pliny (H. N. xxxv, 6), Oribasius (Med. Collect. xiii), Isidorus (Orig. xix), and Montfauçon (Palæog. Græca, c. i.) Dioscorides says of it that it is adapted to the healing of putrid ulcers and burns, when

rubbed in thick with water and allowed to remain, until cicatrization takes place; for, he adds, when the application falls off the ulcers are healed. (v, 182.) Celsus alludes to the same principle of treating aphthous sores in the throat, but directs the crusts to be formed with alum, chalcitis, or the Atramentum sutorium. The Atramentum scriptorium he only notices once, in describing the operation of trephining the skull. (viii, 4.) Avicenna alludes also to the practice of Dioscorides. (ii, 2, 689.)

Μελάμβιον,

Nigella sativa, *Gith*, is calefacient and desiccant in the third degree. It is also distinguished for tenuity of parts; and hence when smelled to it cures catarrhs, and is most carminative when taken internally. It is also bitter, and hence it is anthelminthic. It is also detergent and incisive, and hence it agrees with orthopnoea, cleanses leprosy, ejects myrmecia, and promotes menstruation.

COMMENTARY. It is the *Nigella sativa*, or *Gith*. Dioscorides, with great precision, and in his usual empirical style, enumerates all the cases in which this substance is applicable. As these in the main are the same as those in which our author recommends it, we need not enter much into an exposition of the views of Dioscorides on this head. He says it promotes the secretion of urine, menses, and milk; removes dyspnoea when drunk with wine; remedies persons stung by venomous spiders; drives away reptiles, in the form of a fumigation; and that it is reported to prove fatal when drunk in large quantity. (iii, 83.) Galen explains its medicinal virtues most scientifically, upon the principles laid down by him in his preliminary dissertation to the *Materia Medica*, of which we have given an exposition in an extract from Aëtius. *Gith*, he says, is heating and drying according to the third order, and seems to be attenuant, or of subtile parts; wherefore it cures catarrhs when applied hot in a linen cloth, so as to be constantly smelled to. And it is most carminative, when taken into the body, as is obvious from its being of subtile parts, and of a substance fine-wrought by the heat, wherefore, also, it is bitter; for it was shown in the Fourth Book of these Commentaries, that when a terrene substance arrives at an extreme tenuity and elaboration, the bitter quality is formed. No wonder, then, if it

COMM. proves vermifuge, not only when eaten, but when applied externally to the belly; for it was formerly shown that a bitter juice does this. Nor that it removes leprosy, clavus, and myrmecia, need it seem wonderful to one who remembers what was formerly said. And thus it relieves orthopnœa, and promotes menstruation, when it is restrained by the thickness and viscosity of the humours; and, in a word, when we wish to incide, cleanse, dry, and heat, it is a most useful medicine. (De Simpl. viii.) Having given so full an exposition of Galen's views, we must be brief on those of the other authorities. The gith occurs in the Mat. Med. of Hippocrates, but is not to be met with in the works of Celsus. For the Arabians, see Avicenna (ii, 2, 516); Rhases (Cont. l. ult. i, 496); Serapion (c. 328.) They all follow closely in the footsteps of Dioscorides and Galen. Though the gith has ceased for some time past to be used in medicine, it is still sometimes sought after as a spice. See Gray (Suppl. to Pharmacop. 123.)

Μέλι,

Mel, *Honey*, is heating and desiccant in the second order, and is also considerably detergent. When boiled it becomes less acrid, detergent and cathartic, but more nutritious. But bitter honey, like that in Sardonias, is of mixed powers, being terrene and hot. The *Sacchar* (Sugar) which is brought from Araby the Blessed is less sweet than that with us, but is possessed of equal powers, with the additional advantage of not injuring the stomach and occasioning thirst like it.

COMM. COMMENTARY. On the use of honey, see Book I, s. 69. "The honey of reeds" is mentioned in a fragment of Theophrastus. (ed. Heinsius.) It is distinctly noticed by Dioscorides (i, 104), Strabo (Geogr. xv), Pliny (H. N. xii, 17), Galen (Med. Simpl. vii), Oribasius (Med. Collect. xi), Isidorus (Orig. xvii, 7), Alexander Aphrodisiensis (Probl.), and Symeon Seth (in voce Sacchar.) It is alluded to by Statius in the following line:

"Et quas præcoquit Æbusita cannas."—*Silv.* i, 6, 15.

Lucan also mentions it. (Pharsal. iii, 237.) All the Arabian medical authors, in a word, make frequent mention of it. It is obvious, however, as is remarked by Harduin, Salmasius, Freind, Millward, and Sprengel, that the ancient sugar was a concretion formed

upon the surface of reeds by the heat of the sun, and consequently COMM.
 it was different from the sugar of the moderns, which is formed
 by boiling. Symeon Seth says of sugar that it is heating and
 humid in the first degree, detergent, and diaphoretic like
 honey. Mesue recommends it for the composition of electu-
 aries. Dr. Hill states that although the *Bambu* be the sugar-
 cane with which the ancients were most familiar, it would ap-
 pear that the "tenera arundo" of Lucan was rather the com-
 mon sugar-reed of our times.

Μελία,

Fraxinus, the *Ash*, is a well-known tree, the leaves of which,
 when taken in a draught, agree with the bites of vipers. Its
 bark, when burnt and rubbed in with water, removes leprosy.
 The sawdust of the wood when drunk is said to be deadly.

COMMENTARY. There can be no doubt of its being a species COMM.
 of *Fraxinus*, or perhaps both the *F. Ornus* and *F. rotundifolia*.
 Our author's account of it is taken literally from Dioscorides.
 (i, 108.) Avicenna mentions it as a vulnerary herb, and re-
 commends it in the same cases as Dioscorides does. (i, 108.)

Μελίλωρον,

Melilotum, *Melilot*, is possessed of mixed powers, being as-
 tringent, discutient, and digestive.

COMMENTARY. It is the *Melilotus officinalis*, L. Dioscorides COMM.
 says of it, that it has some styptic power, and is an emollient of
 all kinds of inflammations, especially about the eyes, womb,
 anus, and testicles, when boiled with must and applied, or along
 with albumen of an egg, flour of fenugreek, &c.; that it cures
 meliceris when recent, aches, and pain of the stomach, and
 earache when injected into the ear, and headache when used
 as an embrocation with vinegar and oil of roses. (iii, 41.)
 Galen and the other Greek authorities state its application in
 general terms like our author. For the Arabians, see Avicenna
 (ii, 2, 445); Averrhoes (Collig. v, 42); Rhases (Cont. l. ult. i,
 465); Serapion (De Simpl. 18.) They scarcely suggest any
 new cases for its administration, but borrow what they say of
 its medicinal powers from Dioscorides and Galen. The
 melilot was used in medicine, and held a place in our English
 Dispensatory even as late as the time of Quincy. (118, 204.)

Μελισσόφυλλον,

Apiastrum, *Baum*; its action is in every respect like that of horehound.

COMM. COMMENTARY. According to Dioscorides, *Baum* (*Melissa officinalis*), when its leaves are taken in a draught with wine, or when applied as a cataplasm, is alexipharmic in the case of persons stung by scorpions or venomous spiders, and of those who have been bitten by mad dogs; the decoction in the form of a fomentation (or effusion) does the same; it makes a good hip-bath for promoting menstruation; is a gargle for toothache and a clyster for dysentery; its leaves, in a draught, cure those who have taken poisonous mushrooms, and those suffering from tormina; it forms a linctus in orthopnoea, and along with salts a discutient application to scrofula and ulcers; and as a cataplasm it soothes pains of the joints. (iii, 108.) Our author borrows from Galen, who, like him, gives its characters in general terms. Aëtius, under this head, copies from Galen, and Oribasius from Dioscorides. We believe it is not to be found either in the works of Hippocrates, or those of Celsus. Serapion gives a full account of it, first quoting from Dioscorides and Galen, and then from Abenmesuai and Isaak ebn Amran; the former of whom says it is exhilarating, and the other that it is useful in a cold and humid intemperament of the stomach, promotes digestion, proves cordial, &c. (c. 23.)

Μεμάικυλος,

Memæcylus, being the *Fruit of the Arbuté*, has been treated of under the letter K.

COMM. COMMENTARY. It is, as here stated, the fruit of the wild *Strawberry-tree*, that is to say of the *Arbutus Unedo*, L.

Μέσπιλα,

Mespila, *Medlars* (called also *Tricocca*); their fruit being decidedly sour and scarcely edible, proves astringent of the bowels: and its shoots and leaves are also decidedly sour.

COMM. COMMENTARY. Dioscorides describes the two species of Medlar in such distinct terms as leaves no doubt that they are the *Mespilus Azarolus* and *Germanica*. He represents their fruit as being esculent and slightly astringent. (i, 169, 170.)

Galen says of the medlar, that it is acid and austere, and barely esculent, and that it restrains fluxes. (De Simpl. vii.) COMM.
 The other Greek and Arabian authorities give the same account of it. See in particular, Avicenna (ii, 2, 742) and Ebn Baithar (i, 532.) The Arabians prepared an ointment from it for making the hair black and curled. Casiri (Bibl. Arab. Hisp. 330.) The term *azarolus* is borrowed from the Arabic. See Avicenna (l. c.)

Μήδιον,

Medium; the powers of the root are contrary to those of the fruit, for the former is austere and astringent of fluxes, so as to restrain the female fluor. But the seed even promotes menstruation, being possessed of attenuating and incisive powers.

COMMENTARY. The description of this article given by Dioscorides is sufficiently precise to decide its belonging to the genus *Campanula*. It was at one time generally referred to the species called *Medium*, but, as Sprengel remarks, the appearance of the leaves does not agree with those of the *medium*. Sibthorp, therefore, in his 'Flora Græca,' has decided that it is the *C. laciniata*. (i, 141.) Dioscorides and Galen agree in giving it the same medicinal powers as our author. We are at a loss to determine whether or not it occurs in the *Materia Medica* of the Arabians, with the exception of Ebn Baithar, who merely gives the descriptions of it by Dioscorides and Galen. (ii, 541.) COMM.

Μήκωνες,

Papavera, *Poppies*; there are several species, but of the garden poppy, which they call *Thylacitis*, the seed is edible, and when eaten with bread is moderately soporific. That species which is called *Rhæas*, because its seed soon falls off, is stronger than the garden. It is therefore not eaten by itself, but a small quantity of it is mixed with much honey. That which has a sessile head has seeds which are black and strongly medicinal, being considerably cold. That the top of which is longer and more contracted, is the most strongly medicinal of all, so as to induce torpor even to mortification. For it and its juice, which is called, *per excellentiam*, opium, belong to the fourth order of congealing medicines. But that variety which is called *Cornutum* is possessed of detergent powers, so that

the decoction of it when drunk is serviceable in hepatic complaints. Its leaves and flowers cleanse foul ulcers and remove eschars. That species which is called *Heractium* and *Spumosum*, has seeds which purge phlegm.

COMM. COMMENTARY. In the Fifth Book we have treated fully of the different species of poppy known to the ancients. See also Schulze (Toxicol. Vet.) The *Rhæas* would seem to be the *Papaver dubium*, the *sativum* is the *P. Rhæas*. The *Papaver cornutum* appears to be the *Glaucium luteum*, Scop. The *P. spumeum* may be the *Gratiola officinalis*, Angl. Hedge Hyssop. The ancients distinguished two kinds of the inspissated juice of the poppy: the one was the juice obtained by wounding the poppy-heads, and was called μήκωνος ὄπος, and ὄπιον; the other was an expressed juice, much weaker than this, called μηκόνιον. The second sort is not known at present. We will treat more fully of opium under that head, and therefore we shall dismiss the present subject with a briefer notice than we should otherwise have thought it necessary to bestow upon it. The views of the Arabians regarding the different kinds of poppy may be best learned from Avicenna (ii, 2, 563.) He copies, however, almost all his information from Dioscorides. He recommends the application of the *Papaver cornutum* in diseases of the eye, with certain cautions, explained under opium. He follows Dioscorides in strongly commending the leaves of the same as an application to foul ulcers, when he says they have the effect of removing all the eschars upon the sores. Dioscorides, by the way, mentions that the veterinarians used the horned poppy for removing the albugo and nebula on the eyes of cattle. He speaks favorably of the effects of the poppy in general for the cure of hot catarrhs, defluxions on the breast, and hæmoptysis. See further Serapion (c. 72); Rhases (Cont. l. ult. i, 533); Avernhoes (Collig. v, 42.) The last of these joins Avicenna in approving of the poppy for affections of the chest. Ebn Baithar, in different parts of his great work, treats of the several species of poppy noticed under this head.

Μῆλα,

Mala, *Apples*; a common property of all apples is that of an excrementitious and cold juice, but those which are dissolved and watery are colder and more humid than the others. The

sweet are watery, but not sensibly cold. Those which are austere are colder than the sweet, but less humid. Those which are acid are also cold, and cut the thick humours in the stomach. The sour, such as *Quinces*, and that species of them called *Struthia*, are of a cold and terrene temperament, and, on that account, prove astringent of the belly, and agglutinative of wounds. Thus the leaves, juices, and barks of trees differ from one another.

COMMENTARY. By *Mala*, as Macrobius states, the ancients understood all kinds of fruit which have their hard part or kernel in the middle, and their esculent part without. (Saturnalia, iii, 19.) The *malum cydonium* is undoubtedly the *Quince*. The *Struthia* is a species of it. See Dioscorides (i, 160); Pliny (H. N. xv, 10); Casiri (Bibl. Arab. Hisp. i, 329.) These, namely, the *Struthia*, according to Harduin, are the same as our *Pear-quince*; it is an astringent, stomachic fruit. There is more difficulty in determining for certain what the *Malum Persicum* was. Stackhouse makes it to be the *Citrus aurantium*, or *Orange*, but we are disposed to think that the evidence preponderates in favour of the opinion of Matthioli, R. Stephens, and Harduin, who held that it is the *Peach* (*Amygdalus Persica*.) That species, or rather variety, which Pliny calls *Duracina*, was probably the *Nectarine*, as Harduin suggests. The *Malum Armeniacum*, or *præcocia*, was undoubtedly the *Apricot*. See Harduin in Plin. H. N. (xv, 31); Casiri (Bibl. Arab. Hisp. i, 330); and Gesner (Lex. Rust.) Contrary to the opinion of the etymologists, we have long thought that the English name is a corruption of the Latin *præcocia*. See, however, Loudon (Encyc. of Garden. 806.) We have given their characters as articles of food in the First Book. As to their medicinal powers, little need be added to our author's account of them, as it agrees entirely with that of the other authorities. See in particular, Dioscorides (i, 160, 166); Galen (De Simpl. vii); Avicenna (ii, 2, 562.) Galen makes mention of the quince and pear-quince as being preserved with honey. He recommends the leaves, the juice, and the rind of apple trees in general, as being possessed of acid and austere qualities, and thus agglutinating wounds, restraining the defluxions of incipient inflammations, and strengthening the stomach and bowels when they have lost their tone. Dioscorides and, after-

COMM. wards more fully, Avicenna state that the immoderate use of fruit is flatulent, and superinduces nervous debility. Dioscorides describes accurately the mode of preparing a wine from quinces, which, he says, is possessed of the same medicinal powers as the parts of the quince. He also makes mention of an ointment prepared from it. Avicenna represents all the fragrant kinds of apples as being cordial and alexipharmic, and strengtheners of the stomach. One of Rhases's authorities gives an interesting account of the medicinal powers of apples as cordials, stomachics, and astringents. (Cont. l. ult. i, 441.)

Μηλία Περσική,

Malum Persicum, *the Peach*; the shoots and leaves are manifestly bitter, and therefore kill worms when triturated and applied to the navel. The fruit of it, which forms the edible peach, is humid, and cold in the second degree.

COMM. COMMENTARY. See under Μηλα.

Μηλία Ἀρμενιακή,

Malus Armeniaca, *Apricot*; the fruit, which some call Præcocia, is possessed of the same powers as peaches.

COMM. COMMENTARY. See under Μηλα.

Μήρον,

Meum, *Spignel*; its roots are hot in the third degree, but dry in the second. It is therefore diuretic and emmenagogue, but occasions headache when taken often.

COMM. COMMENTARY. Without doubt it is the *Meum Athamanticum*, which is the same as the *Ligusticum Meum* of Hooker, Angl., Spignel, Meu, or Bald-money. Our author and most of the other authorities copy closely from Dioscorides, who describes the roots of the meum as being fragrant, and heating the tongue. These, he says, being boiled in water or given in powder without boiling, prove soothing in diseases of constriction about the kidneys and bladder, relieve dysuria, flatulence of the stomach, tormina, hysterical affections, and pains of the joints. When pulverized and administered with honey, they are useful in pectoral defluxions as a linctus, and in a hip-bath promote the flow of the menses. When applied as a cataplasm to the region of the pubes in infants, they are said

by him to produce the discharge of the urine. But when taken immoderately, the meum occasions headache. (i, 3.) In the above extract, by "diseases of constriction" Dioscorides alludes to a well-known dogma of the Methodists. It would appear, then, that he was imbued with the principles of that sect. None of the other Greek authorities treat of it so fully as Dioscorides. As far as we have discovered, it does not occur in the works of Hippocrates, nor in those of Celsus. For the Arabians, see Avicenna (ii, 2, 454); Serapion (De Simpl. 182); Rhases (Collig. l. ult. i, 477); Averrhoes (Collig. v, 42.) They do nothing but copy from Dioscorides. In the works of all our old herbalists and authorities on the English Dispensatory, down to the days of Quincy and Lewis, the meum retains a place with all its ancient characters.

Μίλαξ,

Milax or Smilax, *Bindweed*; both the smooth, and the rough species which twines round trees, are possessed of acrid and heating powers.

COMMENTARY. The two species here noticed are most probably the *Smilax aspera* and *Convolvulus sepium*. Dioscorides commends the former of these principally as being alexipharmic, and the latter as being soporific. (iv, 142, 143.) Galen and the other Greek authorities, like our author, merely give their general characters. The Arabians would seem to confound it with the other climbing herbs. See Serapion (De Simpl. 41); Avicenna (ii, 2, 724.)

Μίση,

Misy, is one of the escharotic and caustic medicines, with a strong astringency. It is less pungent than chalcitis, owing to the greater tenuity of its parts. And Galen says that chalcitis and sori, in the course of time, change to misy, the change beginning at the surface.

COMMENTARY. It appears strange that this mineral should now be so little known, seeing it was well known as late as the days of Boerhaave, and is still used medicinally in the East. Boerhaave says of it, "Misy, a yellow mineral very much resembling the marcasite or mundick of our mines, but lighter, and of a less compact nature . . . It is a vitriolic mineral, and

COMM. is reduced by calcination to a colcothar." (M. M. 184.) Dr. Ainslie, treating of the preparations of copper employed in medicine by the natives of India, says, "Misy is the name of an oxide of copper used by the natives of India against the tooth-ache, and to stain their teeth black." (Mat. Ind. i, 513.) Dr. Royle, treating of the *misy* and *sory* of Dioscorides, states that they had been supposed by Rossius to be sulphurets of copper, "but it is remarkable that *mis* is a Persian name for copper, and that *missy* is a name frequently applied in India to sulphate of iron." (Antiq. of Hindoo Med. 102.) From these descriptions of it we find some difficulty in deciding what mineral substance it was; but see under *Chalcitis*. The following is Dioscorides's description of the *misy*: "Of a golden appearance, hard, shining like gold when broken, and glancing like stars." (v, 116.) He says it has the same powers as *chalcitis*. Galen gives an elaborate description of *misy* and its cognate fossils *sory* and *chalcitis*, but says little more than our author respecting its medicinal powers. (De Simpl. viii.) The other Greek authorities supply nothing additional of any great interest under this head. Serapion describes the three substances we have mentioned under the general head "de vitreola," calling the *sory* *Zeg rubeum*, the *chalcitis* *colcothar*, and the *misy* *Zeg viride*. His account of them is taken entirely from Dioscorides and Galen. (c. 386.) Avicenna confounds them and other metallic preparations under the name of "Atramentum sutorium." He throws no light on the subject. (ii, 2, 47.) See Rhases (Cont l. ult. 747.) Averrhoes, under the head of *Alceg*, i. e. Vitriolum, gives a translation of Galen's description already noticed. (Collig. v, 43.) *Misy* occurs in the works both of Hippocrates and Celsus. The latter uses it as a caustic. (v, 8, 9.)

Μολύβδανα,

Plumbago, has similar powers to litharge, but removed from the middle temperament to the colder.

COMM. COMMENTARY. Several varieties of the Molybdæna are described by Dioscorides, from which it would appear that the ancients applied the term to more than one metallic substance; the variety resembling litharge being most probably graphite or plumbago; and the one of a leaden colour, being the mo-

lybdate of lead, or "yellow lead-spar" of Jameson. It is named Galena by his translators, but whether it, that is to say, the sulphuret of lead, was also comprehended under it we are unable to determine. The molybdæna occurs in the works of Hippocrates. Dioscorides recommends it as being incarnative and epulotic in plasters. Galen and the other Greek authorities treat of its medicinal powers succinctly like our author. None of the Arabians appear to have distinguished the molybdæna properly from litharge.

Μόλυβδος,

Plumbum, *Lead*, is possessed of refrigerant powers, and has also a considerably humid substance congealed by the cold. If wine, the oil of unripe grapes, or any of the cooling juices be rubbed with it, it will make an excellent application for ulcerous inflammations about the pudenda and anus. A plate of lead worn upon the loins restrains libidinous dreams; and a piece of lead put upon ganglia discusses them. Burnt lead being more desiccative, is also somewhat acrid. If washed it becomes desiccative without pungency, and makes a good application for ill-conditioned ulcers.

COMMENTARY. We have already treated of this article as a poison. (Book V, 62.) The ancients distinguished lead into two kinds, the black and the white. Of these the latter is the same as the cassiteros, that is to say, tin. The other comprehended several of our native ores of lead. Both kinds are described in the works of Hippocrates and of Celsus. (v, 26, v, 18, &c.) See also particularly, Pliny (xxxiv, 47) and Isidorus (Orig. xvi, 21), who have given accurate descriptions of the ancient varieties of lead. Dioscorides, Galen, and Serapion agree in describing it as a powerfully cooling or refrigerant medicine. Galen's account of it is lengthy but interesting. (De Simpl. ix.) Oribasius says that it forms an excellent application to irritable and malignant sores. Dioscorides recommends washed lead very much in rheums of the eye. He gives a very circumstantial description of the process of preparing washed lead. He further says of it, that it is a good styptic, and an excellent application to fungated sores, hemorrhoids, condylomata, and ulcers about the anus. Averrhoes treats of it in nearly the same terms as our author. (Collig. v,

COMM. 43.) The Arabians, in general, prescribe it, in imitation of Galen, as an application to cancer. See Averrhoes (l. c.) and Avicenna (ii, 2, 12.) The latter joins Dioscorides in praising lead as an application to the eyes. Serapion gives a very full account of this article in extracts from Dioscorides and Galen. (De Simpl. 419.) See also Rhases (Contin. l. ult. i, 556); Ebn Baithar (ii, 128, et pluries.)

Μοράια,

Morus nigra, the *Mulberry-tree*; the fruit, when ripe, loosens the belly, and is useful in all complaints of the mouth which require a moderate degree of astringency. The unripe, when dried, becomes a very styptic medicine. The bark of the root of the tree is also purgative, with a certain degree of bitterness; hence it kills the broad intestinal worm. The leaves and tender shoots hold an intermediate place between purgatives and astringents.

COMM. COMMENTARY. There can be no doubt that it is the *Ficus Morus*, L., or the *Black Mulberry-tree*. It is the *σνκάμινος* of Theophrastus, which, however, was sometimes applied by others to the sycamore. See Celsus (iii, 18.) The mulberry is commended by Pliny as an antidote to poisons, as it is in like manner by Dioscorides. The latter calls it laxative of the bowels, but an article readily spoiled, and bad for the stomach. He also ascribes astringent powers to its juice, which, he says, when mixed with a little honey is useful in defluxions, spreading ulcers, and inflamed tonsils. He also praises the leaves when pounded with oil, as a good cataplasm to burns. He speaks of it also as being used for dyeing the hair, and the decoction of its leaves as a gargle for toothache. (i, 180.) Galen's account of it is the same as our author's, by whom it is abridged. Aëtius treats of it fully as an article of food, but briefly as a medicine. He says, when taken upon a clean stomach, it proves an excellent article of food; but the very reverse when the stomach is loaded and contains any noxious humours. The Arabians, in treating of it, follow Dioscorides and Galen. See Avicenna (ii, 2, 491); Rhases (Cont. l. ult. i, 201); Serapion (De Simpl. 132.) The mulberry is described as a medicine by all our old herbalists, and was retained in the Dispensatory until after the time of Quincy. (94, 198.)

Μύαγρον,

Myagrum ; the seed of it is fatty, and the oily part of it is possessed of an emplastick power.

COMMENTARY. It is generally held to be the *Camelina sativa*, COMM. Crantz., of which we think there can be no doubt. Both Dioscorides and Pliny mention it as producing an oil from its seed ; and it is well known that the Camelina, or Gold of Paradise, is still noted as one of the oil plants. See Lindley (Veg. Kingd. 353.) The two authors mentioned above recommend this oil in ulcers of the mouth. Our author borrows from Galen. As far as we can discover, it is not treated of by the Arabian authorities, with the exception of Ebn Baithar, who merely quotes the description of it given by Dioscorides and Galen.

Μύακες,

Musculi, *Muscles*, have the same power, when burnt, as the buccina. But they have the property, when washed, of removing asperity of the eyebrows and leucomata when applied with honey. Their flesh is applied with advantage to persons bitten by dogs.

COMMENTARY. Called Μύες by Aristotle and Athenæus, COMM. Myaces by Pliny, and Musculi by Celsus, are the *Mytili edules*, L., or Muscles. Celsus ranks them with those things which open the bowels. (ii, 29.) He prescribes the soup of muscles as a purgative in fevers. (iii, 6.) Dioscorides merely recommends them externally as a stimulant and detergent application in diseases of the eyes, and their flesh for the bites of mad dogs. (ii, 7.) The Arabians treat of them in general terms along with the other crustacea. See particularly Avicenna (ii, 2, 529.)

Μύαρρον,

Myaron (called also Melampycon) ; it is a branchy and fatty herb. The oil extracted from it would seem to smooth the asperities on the body.

COMMENTARY. This is clearly the same as the μύαγρον COMM. described above. See Jani Cornarii *dollabella* in P. Æ. vii.

Μυελός,

Medulla, *Marrow* ; it is possessed of the property of softening indurated and scirrhus bodies. The best is that of stags,

next to it, that of calves. That of bulls and of buck-goats is more acrid and desiccative. That from the limbs is more fatty and emollient; but that from the spine is harder and drier.

COMM.

COMMENTARY. According to Aristotle, the *Marrow* is a superfluity concocted from the nutritive blood of the bones. He states that the spinal marrow is considerably different from that of the other bones. (De Partibus Animalium, ii, 7.) Pliny, copying from Dioscorides, thus delivers the general characters of marrows: "Omnes molliunt, explet, siccant, calefaciunt." (H. N. xxviii, 39.) Dioscorides, Galen, and Serapion concur in giving the preference to the marrow of stags. Dioscorides gives minute directions for preparing it to keep. (ii, 95.) He says that smearing the body with stag's marrow drives away venomous reptiles. (Ibid.) The Arabians recommend a suppository from marrows as a remedy for scirrhus of the uterus. See Avicenna (ii, 2, 485), Rhases (Cont. l. ult. i, 460.)

Μύκητες,

Fungi, *Mushrooms*, are of a decidedly cold and humid temperament. Some of them prove fatal when eaten, more particularly those which have a putrid quality mixed with their nature.

COMM.

COMMENTARY. We have already treated of mushrooms as articles of food (i, 77), and as poisons (v, 54); and shall, therefore, be excused saying anything more of them in this place. In fact, we cannot see with what propriety the ancient authorities assigned them a place in the *Materia Medica*, since, as far as we can recollect, they never prescribe them medicinally.

Μυσωτήν,

Is described under *Alsine*.

Μύξα,

Myxa, the *Sebesten-plum*; the fruit of this tree is smaller than the bullace-plum, but of similar powers.

COMM.

COMMENTARY. It would appear indisputably to be the *Sebesten-plum*, or fruit of the *Cordia Myxa*. Whether or not this tree be also the *Persea* of Dioscorides (i, 187), has been much disputed. See Sprengel (in Dioscor. l. c.) and Lindley (Veg. Kingd. 628.) We are inclined to doubt their identity,

and of this there can be no question, if the authority of Pliny COMM.
 be held of any weight in this case, for he evidently distinguishes }
 between the *perseæ* and *myxa*. (H. N. xv, 11, 12.) Neither
 Celsus, Galen, Aëtius, nor Oribasius has noticed this article by
 name. The sebesten-plum is described by the Arabian autho-
 rities without their making any reference to the Greek autho-
 rities, as is their wont. See Serapion (c. 8); Avicenna (ii, 2,
 638); and Rhases (Contin. l. ult. iii, 42.) The barbarous
 translation of Avicenna begins thus, under the head of sebesten:
 "Sebesten et nominatur mukeita." For mukeita we suppose
 the proper reading would be *myxa*. The Arabians describe
 the sebesten-plum as being a mild laxative fruit, which quenches
 thirst and soothes the breast. It is praised by Serapion as a
 laxative and cooling remedy in coughs; as a refrigerant medicine
 for ardor urinæ, and an anthelmintic. The sebestens con-
 tinued long to hold a place in our English Dispensatory, and
 retained the character which the ancients had given them.
 See Quincy (130.)

Μυρική,

Myrica, the Tamarisk, is possessed of incisive and detergent
 powers, without being manifestly desiccative; it has also some
 astringency. The decoction of it, therefore, when drunk, is
 useful in diseases of the spleen; and it likewise cures the tooth-
 ache. The fruit and bark of it nearly approach to galls in
 powers. The ashes of the tree are more desiccative.

COMMENTARY. We may briefly say that we agree with the COMM.
 authorities who refer it to the *Tamarix Gallica*, L. Dioscorides, }
 Galen, Avernhoes, and Serapion, like our author, recommend
 it as a powerful astringent which may be substituted for galls.
 Dioscorides accordingly enumerates a variety of cases in which
 it is applicable, such as in remedies for affections of the mouth
 and eyes, spitting of blood, cæliac disease, fluor albus, jaundice,
 and the bites of venomous spiders, and to discuss swellings in
 the form of a cataplasm. He further recommends its decoction
 in wine for reducing the enlarged spleen; as a gargle in tooth-
 ache; a hip-bath in fluxes, and as a fit lotion for killing lice
 and nits: the lixivial ashes of it, he adds, restrain a discharge
 from the womb: some, he says, form goblets out of the trunk
 of it, which they use as drinking-cups in diseases of the

COMM. spleen, draughts taken with them being found to be serviceable in such cases. (i, 116.) None of the other authorities give by any means so satisfactory an account of this subject as Dioscorides. Galen, Aëtius, and Oribasius evidently follow him. Celsus ranks the "tamarix" among his articles which repress and soften. (ii, 33.) It occurs in the works of Hippocrates. (See Dierbach.) For the Arabians, see Serapion (c. 31); Avicenna (ii, 2, 684); Rhases (Cont. l. ult. i, 700); Averrhoes (Collig. v, 42.) Serapion, after quoting the sections of Dioscorides and Galen on the tamarix, says of it, on the authority of Mesarugie, that it dries up all ulcers, especially those from burns. He also relates, on the authority of Alchazi, the case of a woman who was cured of a leprosy, by means of it. Avicenna and Rhases say of it, that its fruit is beneficial in chronic coughs. Avicenna says it cures the bite of the viper. The curious reader will find it interesting to compare the medicinal characters of the tamariscus as given in our English Dispensatory by Quincy, with those given it by the ancients, as stated above. (134.)

Μυριόφυλλον,

Millefolium, *Millefoil*, is desiccative to such a degree as to agglutinate wounds.

COMM. COMMENTARY. It appears to be the *Myriophyllum spicatum*, Angl., spiked water millefoil. At least the description of it given by Dioscorides evidently points to some species of *myriophyllum*. He recommends it as a cataplasm with vinegar to recent ulcers; and says of it, that it is drunk with water and salts in cases of falls. (iv, 113.) Galen and the other Greek authorities, like our author, merely mention it as a vulnerary herb. We have not found it in the works of Hippocrates or Celsus; nor in those of the Arabians, with the exception of Ebn Baithar. (ii, 500.)

Μύρρα ἢ Μύρρις,

Myrrha, *Myrrh*, belongs to the second order of calefacients, and is also distinguished for tenuity of parts to a certain degree. The root of it is fragrant and sweet. It is emmenagogue, and promotes expectoration from the chest and lungs.

COMMENTARY. The *Myrrhis odorata*, as Sprengel remarks, COMM. agrees very well with Dioscorides's description of this plant. Dioscorides says of it, that when drunk with wine it relieves those who have been bitten by phalangia; that it promotes the menstrual and lochial discharges; taken in draughts is useful in phthisis; and that some say, that when taken in a pestilential season it preserves persons free from the disease. (iv, 114.) None of the other Greek authorities supply anything of interest under this head. We have not been able to find it either in the works of Hippocrates or of Celsus. We are at some loss to account for its being also overlooked, as far as we, upon a cursory examination of their works, can discover, by the Arabian authorities. Was it that those *illiterate scholars* could not distinguish it from *myrrh* and *myrtle*? Our old English herbalists, in like manner, seem to have known little about it, and it has long ceased to hold a place in our Dispensatory.

Μυρρίνη,

Myrtus, the *Myrtle*, is composed of opposite ingredients. But the cold and terrene prevails in it, and hence it is powerfully desiccative. The *myrtis*, which is a callous excrescence on the trunk and branches of it, is strongly desiccative and astringent. The dried leaves are more desiccative than the green. The fruit and juice are possessed of similar powers, both when administered externally and internally.

COMMENTARY. It is the *Myrtus communis*. The *myrtis* COMM. or *myrtas* of our author is the same as the *myrtidanum* of Dioscorides, and most probably was some morbid excrescence upon it. Dioscorides calls the myrtle astringent, and recommends it in such a variety of cases that it would occupy too much space to enumerate them all; such, for example, as hæmoptysis, erosion of the bladder; as a stomachic and diuretic; an alexipharmic in the case of persons stung by phalangia or scorpions; as a soothing application in inflammations and extravasated blood about the eyes; for furfures, achores, exanthemata, and so forth. (i, 155.) The excrescence already mentioned possesses, he says, stronger powers than the fruit or leaves, and is mixed with cerate, pessaries, hip-baths, and cataplasms requiring astringency. (i, 156.) Galen gives a somewhat fuller, but not a materially different, account of the

COMM. myrtle from our author. He says it is a powerful astringent, both internally and externally. Aëtius abridges him, as Oribasius does Dioscorides. Celsus notices the berries and boiled leaves of myrtle frequently as astringent and cooling articles. The Arabians treat of them very fully. See Avicenna (ii, 2, 446); Rhases (Cont. l. ult. i, 475); Serapion (De Simpl. 92); Averrhoes (Collig. v, 42); Ebn Baithar (i, 38.) Avicenna recommends the decoction of its leaves as an astringent in profuse sweats, fetor of the armpits, in hot apostemes, erysipelas, herpes, &c. He also prescribes it in ulcers of the hands, and in burns. He says it cures ophthalmy, and proves stomachic and cordial. All the Arabians give it the character of being alexipharmic. It is useful, according to Avicenna, in heat of urine, and immoderate flow of the menses. He says it is useful also in cases of ununited fractures when poured upon the place; stops the flow of blood from the nose, and cures furfures and other ulcers of the head. Abenmesuai, one of Serapion's authorities, says of the juice of myrtle, that it is useful in the cure of pains of the breast and lungs, in cough, and looseness of the bowels; that it is a cordial, and strengthens the internal viscera. Myrtle-berries were used as astringents in fluxes down to a late period. See Quincy (94.)

Mῶλυ,

Moly, *Allium hirsutum*, *Wild Garlic* (some call it *Ruta silvestris*, others *Armalan*, and the Syrians, *Basanan*); it belongs to the third order of calefacients, and is composed of subtile particles. Hence it cuts thick and viscid humours, is discutient and incarnant.

COMM. COMMENTARY. It was the species of garlic now called *Allium Moly*, Mönch. Mention is made of this plant by Homer as a charm against incantation. (Odys. x, l. 302.) It is probably the same as the *μῶλυζα* of Hippocrates. (See Dierbach.) Dioscorides merely recommends *moly* pounded with the ointment of iris as a pessary to promote the menstrual discharge. (iii, 47.) On the *moly*, see Pliny (H. N. xxv, 8.) Galen and the other Greek authorities mention it in nearly the same terms as our author. It does not occur in the works of Celsus, nor have we been able to find it in those of the Arabian authorities.

Νάσκαφθον,

(Called also Narcaphthon) is an Indian aromatic, and is used in fumigations for constriction of the uterus.

COMMENTARY. Our author's account of this substance is taken, with few alterations, from Dioscorides. Galen and Serapion also copy from him. In the Appendix to this section we shall have occasion to notice the opinion that it was *mace*. All we need say of the Nascaphthon in this place amounts to this, that it was an Indian aromatic, which the industry, even of Royle, Ainslie, and Roxborough, has failed to determine.

Νάπυ,

Sinapi, *Mustard*, is heating and desiccative in the fourth degree.

COMMENTARY. We may pretty confidently refer it to the *Sinapi nigrum*. No author, ancient or modern, has treated of its medicinal powers so elaborately as Dioscorides. He says it has heating, attenuant, and attractive powers, and when chewed, produces a discharge of phlegm; when its juice is mixed with hydromel, it forms a suitable gargle for enlarged tonsils, and for chronic and callous asperities of the trachea; when applied to the nostrils in a fine powder it acts as a sternutatory; benefits persons in epileptic fits, and rouses those who are in hysterical fits; it is useful in lethargic patients when applied as a cataplasm to the shaved scalp; when mixed up with figs and applied until it reddens, it is fitting for ischiatic disease, and that of the spleen, and in general for all chronic pains, by determining to the surface; it cures alopecia in a cataplasm; clears the countenance, and, with honey, suet, or cerate, removes the spots of extravasated blood; with vinegar it is rubbed in upon places affected with leprosy, and lichen agrius; it is taken in a draught as a powder, when sprinkled like polenta on the drink, for periodical attacks of fevers; it is mixed with advantage in epispastic plasters and those for scabies; when applied to the ear in powder with figs, it relieves deafness and noises in the ears; its juice with honey is suitable in dimness of vision and roughness of the eyelids when rubbed in; the juice of its seed, while still green, is expressed and dried in the sun. (ii, 183.) Celsus recommends it in a variety of cases both externally and internally; as a

COMM. rubefacient, gargle, masticatory, &c. By the way, we have never been able to satisfy ourselves that the late Dr. Milligan was right in setting down the sinapi of Celsus as the *Sinapis alba*. (207.) We remark, however, that it is this species which occurs in the modern Greek Pharmacopœia. Galen and his followers dismiss this article with a very brief notice, like our author. The Arabians do little more than copy from Dioscorides. See particularly Avicenna (ii, 2, 674); Rhases (Cont. l. ult. 644); Averrhoes (Collig. v, 42); Serapion (c. 373); Ebn Baithar (i, 355.) Mustard was much used by the ancient physicians in cataplasms as a rubefacient. Ruffus, as quoted by Rhases (Contin. xxxvii), recommends the seed of mustard as a laxative. Macer directs, upon the authority of Menemachus, a sinapism to be formed by pounding in a mortar mustard seed, with a third part of the crumb of bread, dried figs, honey, and vinegar. He recommends an ointment made of figs and mustard, for alopecia, i. e. *porrigo decalvans*.

Ναρδόσταχυς,

Spica Nardi, *Spikenard*; the root of it is heating in the first degree, and desiccative in the second. It is also somewhat astringent, acrid, and bitterish. It agrees with the liver and stomach both when administered externally and internally. It is diuretic, and dries up internal defluxions. The Indian is stronger than the Syrian, and blacker.

COMM. COMMENTARY. For this article, Dr. Royle informs us that he obtained, in India, the hairy spike-like roots of *Nardostachys Jatamansi*. (Antiq. Hindoo Med. 33.) Dr. Lindley says the *Nardostachys Jatamansi*, or true spikenard of the ancients, is valued in India, not only for a scent, but also as a remedy in hysteria and epilepsy. (Veg. Kingd. 698.) See further, Ainslie (Mat. Ind. ii, 1, 318.) The Syrian kind was unquestionably some species of valerian, probably the *V. Hardwickii*. Our author, in the present instance, borrows from Galen, who in the main draws all his information from Dioscorides. The latter holds the spikenard to be diuretic, stomachic, hepatic, and carminative. (i, 6.) The Arabians treat fully of it, copying freely from Dioscorides. See Avicenna (ii, 2, 640); Rhases (Cont. l. ult. i, 669); Serapion (c. 52.) Avicenna recommends it strongly in affections of the liver, and in jaundice;

and calls it stomachic and deobstruent. Averrhoes joins him COMM.
in giving it these characters. (Collig. v, 42.)

Νάρδος Κελτική,

Nardus Celtica, *Celtic Nard*, is possessed of similar powers to the above-mentioned, but weaker, except with regard to its action on the urine; for it is hotter than the former and less astringent.

COMMENTARY. It is the *Valeriana Celtica*, or French Spike- COMM.
nard. Dioscorides gives an interesting description of it; and, with regard to its medicinal powers, states of it, that it is more diuretic and stomachic than the Syrian, and cures inflammations about the liver, and jaundice and flatulence of the stomach when drunk with the decoction of wormwood; in like manner, that it relieves the spleen, the bladder, and kidneys, and is alexipharmic with wine; and finally, that it is mixed with heating draughts and liniments. (i, 7.) It is the *Nardum Gallicum* of Celsus, who assigns it a place with other aromatics in one of his antidotes. (v, 23.) Galen and the other authorities treat of it in the same general terms as our author. This species of spikenard long held a place in our Dispensatory. See Quincy (161) and Lewis (Dispensatory, ii, 125.) In the modern Greek Pharmacopœia the *Nardus* and the *Phu* are identified with the *Valeriana*.

Νάρδος ὄρεια,

Nardus Montana, *Mountain Nard* (called also *Thylacitis* and *Pyrites*), is weaker than the aforementioned.

COMMENTARY. It would seem to be the *Valeriana tuberosa*. COMM.
Galen and the other authorities state briefly of it, like our author, that it is weaker than the other species already described.

Νάρδος θηξ,

Ferula, *Fennel-giant*; the seed is attenuant and calefacient. The inner part, while still green, is astringent; and, therefore, agrees with hæmoptysis and cæliac affections.

COMMENTARY. All the authorities, including the older and the COMM.
more recent, are agreed that it is a species of *Ferula*; and we are inclined to think that it was the *communis*, more especially

COMM. as its medicinal powers agree well with those assigned to the article in question by Dioscorides. (Compare the latter, *Mat. Med.* iii, 81, with Gray's Supplement to the *Pharmacop.* 80.) Dioscorides says, the pith of it, while green, relieves spitting of blood and cæliac affections, and is given with wine to persons bitten by vipers, and restrains bleeding from the nose when introduced as a tent; that the seed relieves tormina, and produces sweating when rubbed in with oil, but that its stems induce headache, and are prepared for pickles. (*Ibid.*) Our author borrows almost word for word from Galen. We have not been able to discover it in the *Materia Medica* of the Arabians, but can scarcely believe that it had been wholly overlooked by them. Ebn Baithar, in fact, under the head of *Kana*, sets down the descriptions of the *Narhex* given by Dioscorides and Galen.

Νάρκη θαλασσίη,

Torpedo; when applied to the head, while still alive, in cases of headache, it procures relief to the pain, probably by its peculiar property of producing torpor; and the oil in which the living animal has been boiled, when rubbed in, allays the most violent pains of the joints. It is said to remedy prolapsus ani when applied.

COMM. COMMENTARY. Without doubt it is the *Raia Torpedo*, L., or Cramp-fish. See Artedi (*Ichthy.*) Frequent mention is made of this fish in the works of the ancient writers on Natural History. See in particular the poetical descriptions of Claudian (*Idyll.*) and Oppian (*Halieut.* ii.) Galen repeatedly speculates on the nature of the singular power which it possesses of stupefying every animal which touches it. He denies that it has any narcotic effect as a medicine, unless when applied alive. (*De Simpl.* vii.) Serapion copies his account of it. His translator renders it *Piscis stupefaciens*. (c. 437.) See Haly Abbas (*Pract.* ii, 49, 533.) Averrhoes compares its narcotic powers to magnetism. (*Collig.* v.) We have given some account of its application in this way elsewhere. See Book III, 6.

Νάρκισσος,

Narcissus, *Daffodil*; its root is possessed of desiccative

powers so as to agglutinate large wounds, even to the division of tendons. It is also somewhat detergent and epispastic.

COMMENTARY. There seems no reason to doubt that it is the *Narcissus poeticus*. Dioscorides says of it, that its root, when boiled and eaten or drunk, proves emetic; that triturated with honey it is a good application to burns; that in a cataplasm it agglutinates nerves that have been cut asunder; that it relieves sprains and chronic pains about the joints, in a cataplasm with honey; that it clears ephelis and alphas, with nettle-seed and vinegar; that it cleanses foul ulcers, and breaks apostemes which are difficult to ripen; and that in a cataplasm, with the flour of darnel and honey, it extracts thorns. (iv, 158.) Galen and the other Greek authorities give its virtues in brief terms, like our author. The Arabians, as they are wont, copy freely from Dioscorides and Galen. See Avicenna (ii, 2, 503); Serapion (c. 188); Rhases (Cont. l. ult. i, 489); Ebn Baithar (ii, 552.) Rhases and Avicenna ascribe to it strong powers as an uterine medicine, stating of it that it produces delivery of the fœtus either dead or alive; that it promotes the dilatation of the mouth of the womb, and relieves pains of it. The narcissus occurs in the lists of medicines used both by Hippocrates and by Celsus. Our old herbalists, Gerard and Parkinson, repeat the characters of the narcissus given by the ancient authorities; but it has long ceased to have a place in our Dispensatory.

Νευράς,

Neuras (called also Poterium), is desiccative without pungency, so as even to agglutinate divided tendons. The roots have the same effects both when applied externally and when drunk.

COMMENTARY. There are few articles in the *Materia Medica* of the ancients which it is more difficult to determine. Sprengel conjectures that it was the *Astragalus Poterium*. Dioscorides says its roots exude tears like gum, and that they are highly beneficial in wounds of the nerves. (iii, 18.) Galen, and all the other Greek authorities that treat of it, give exactly the same account of it as Dioscorides. We have not been able to find it in the works of the Arabians. Our old English herbalists give a figure and description of it, as being a species

COMM. of tragacantha. See Parkinson (Theatre of Plants, 996) and Gerard (History of Plants, 1328.) It has long ceased, however, to hold a place in any Dispensatory with which we are acquainted.

Νήριον ἢ Ροδοδάφνη,

Nerium, *Rosebay* or *Oleander*, when applied externally is possessed of discutient powers; but when taken internally it proves fatal.

COMM. COMMENTARY. It is the *Nerium Oleander*, L. We have treated of it as a poison in another place. (T. ii, 242.) That the plant actually possesses the poisonous properties ascribed to it by the ancients is now very well ascertained. See Lindley (Veg. Kingd. 600.) Dioscorides assigns it a place in his *Materia Medica*, and says of it that its flower and leaves are destructive to dogs, asses, mules, and most quadrupeds, but are preservative of men, when drunk with wine, from the bites of reptiles, if mixed with rue; but that the weaker animals, such as goats and sheep, when they drink the decoction of it, die. (iv, 82.) Galen, like our author, in treating of this article, does little more than abridge the fuller account of it given by Dioscorides. The Arabians extend the use of this medicine to several cases in which it was not applied by the Greeks. Thus, they say of it, that its leaves form an excellent application to hard apostemes, and are good for prurigo, scabies, and desquamations, more especially the juice of them; that in the form of a plaster they are applied with advantage in chronic pains of the back and knees, and that its flower forms a sternutatory. Rhases (Cont. l. ult. iii, 31) and Avicenna (ii, 2, 522.) We have given the opinions of the Arabians respecting it as a poison in the place referred to above. There is no mention of the oleander, as far as we have been able to discover, in the works either of Hippocrates or Celsus. The term *oleander* is derived from the Arabians. It is treated of by our recent authorities on toxicology, but has long been unknown to our Pharmacopœia.

Νυμφαία,

Nymphæa, the *Water-lily*, is possessed of desiccative powers without pungency. It, therefore, constipates the belly and its seed is desiccative. But that species which has the white

root is stronger, so that when drunk with dark and austere wine, it cures the female flux. But that which has a black root is also somewhat detergent, so as to cure alphas with water, and alopecia, when rubbed in with liquid pitch.

COMMENTARY. It is quite manifest that the plant here described comprehends the two well-known species of the Water-lily, now named *Nymphæa alba* and *Nuphar luteum*. The two species, the one having a white root and the other a black, are no doubt mere varieties. Our author abridges his account of this article from Galen, who, in his turn, borrows freely from Dioscorides. (iii, 138-9.) For the Arabians, see Rhases (Cont. l. ult. i, 493); Serapion (De Simpl. c. 144); Avicenna (ii, 2, 508); Averrhoes (Collig. v, 42.) The Arabians administered it in the same cases as the Greeks, and also recommend the syrup for coughs and pleurisy, and say of the plant that it induces sleep and cures acute vertigo, but is debilitating. They compare the nature of the nymphæa to that of the mandragora. Though the two Water-lilies have long ceased to hold a place in our Dispensatory, they are still used medicinally by the oriental nations. See Lindley (Veg. Kingd. 411.)

Ξάνθιον ἢ φασγάνιον,

Xanthium, *Clutburr*, has fruit of discutient powers.

COMMENTARY. It would seem to be the *Xanthium strumarium*, a plant of the natural order of *Ambrosiææ*. Our author takes his brief notice of it from Galen. Dioscorides gives a minute description of it, but merely mentions its being used for a dye and a cataplasm for swellings. (iv, 136.) It does not occur in the works of Hippocrates or Celsus, nor, as far as we can discover, in those of the Arabians.

Ξηρίς ἢ ξυρίς,

Xyris, *Wild Corn-flag*, is possessed of attenuating, discutient, and attractive powers, and of truly desiccative, especially the seed, so that it is diuretic, and cures scirrhus of the spleen.

COMMENTARY. It is the *Iris fetidissima*. It is still used medicinally in dropsy and scrofula. See Lindley (Veg. Kingd. 161) and Gray (Suppl. to the Pharmacop. 25.) Dioscorides recom-

COMM. mends it as a vulnerary, and application to swellings and boils; and further prescribes it internally in bruises, ruptures, sciatica, and diarrhœa. Its seed, he says, is very diuretic, and reduces enlarged spleen when drunk in vinegar. (iv, 22.) Galen notices it in the same brief terms as our author. We have reason to believe that it is not wholly overlooked by the Arabians, but we cannot find it, while writing this, in their authorities on the *Materia Medica*, not even in the copious list of Ebn Baithar.

Ξίφιον,

Xiphium, *Bulbous Iris*; its root is possessed of attractive, discutient, and desiccative powers.

COMM. COMMENTARY. Dioscorides gives such a minute description of it as clearly identifies it with the *Gladiolus communis*. He recommends it on his own authority as forming an excellent cataplasm with wine and frankincense for extracting stings and thorns, for discussing the tumour called phygethlon, and as an emmenagogue in pessaries; and says it was reported to be aphrodisiac, and a suitable draught in the intestinal hernia of children. (iv, 20.) Galen, like our author, merely states its medicinal virtues in general terms. The Arabians treat of it under the general head of *Lilium*, along with *Iris*. See Serapion (c. 189.) His account of it is made up entirely of extracts from Dioscorides and Galen. It is also briefly noticed by Ebn Baithar. (i, 423.) His German translator sets it down as the *Gladiolus Byzantinus*. We have not had time and patience to hunt out any other notices of it in the writings of the Arabian authorities on the *Materia Medica*. Its name in the barbarous translations of their works is *Kasiflon*.

Ῥόν,

Sorbus, *the Service Tree* (the fruit of which is by some called Ῥα, by others Ῥβα, Sorba); it is possessed of astringent powers, but less than the medlar.

COMM. COMMENTARY. It is the *Sorbus domestica*. All the ancient authorities recommend the fruit as an excellent astringent. Dioscorides prescribes it with this intention both in fruit and in decoction. (i, 173.) Our author's account of it is taken pretty closely from Galen. Avicenna treats of it confusedly

under the head of *Cornu vel Sorbas*. (ii, 2, 315.) Serapion COMM. treats of the *Sorba*, but does not seem to apply the name to the article we are treating of. See De Simpl. (c. 109.)

'Οθόοννα,

Othonna; some say that it is the juice of a herb growing in Arabia, where it borders with Egypt, and others that it is an Egyptian stone. It is detergent and pungent, clearing away everything that obscures the pupil.

COMMENTARY. The *Tagetes Erecta*, African or French COMM. Marigold, seems likely enough to be this herb. Regarding the stone of the same name, nothing is known for certain. Our author borrows from Dioscorides. Galen does not treat of this article at all in his work on Simples. The Arabians appear to have been ignorant of it.

'Ουάινθη,

Enanthe, *the Wild Vine*; ample experience has shown that the flower of the wild vine is considerably astringent, and that it acts as a tonic, particularly in affections of the belly. Dioscorides describes another having powers quite opposite to this; and hence, he says, that it expels the secundines, and cures strangury and jaundice.

COMMENTARY. The former is evidently the flower of a wild COMM. species of the *Vitis Vitifera*, L. It is still used for giving a flavour to wine. Dioscorides gives an ample account of its medicinal virtues. Its power, he says, is astringent, and hence it is stomachic and diuretic, restraining fluxes of the belly and spitting of blood; it acts beneficially when applied dry, as a cataplasm for loss of appetite and acidity of the stomach; it forms an embrocation with vinegar and rose-oil in headache; a cataplasm that restrains inflammation, when applied to recent wounds; to incipient fistula lachrymalis, and ulcers in the mouth, and spreading ulcers in the pudenda, when rubbed in with honey, saffron, rose-oil, and myrrh: it is made an ingredient of pessaries for restraining bleeding, and for defluxions of the eyes and burning of the stomach it is applied as a cataplasm with the flour of wheat and wine: when burnt upon heated coals in a shell it forms an ophthalmic application, and cures whitlow, pterygia, loose and bloody

COMM. gums, with honey. (v, 5.) This account of it is copied literally by Serapion. (De Simpl. c. 35.) See also Avicenna (ii, 2, 723) and Rhases (Cont. l. ult. i, 745.) This would certainly appear to us to be the *Ceanthe* of Celsus, who gives it a place among the diuretics. (iii, 21.)

With regard to the herb of the same name, which, as our author remarks, is described by Dioscorides, various conjectures have been advanced. It is certain that it cannot be the *Ceanthe crocata*, but may be the *O. Pimpinelloides*. We have nothing to add to the account of its medicinal powers given by our author from Dioscorides. In fact, with the exception of Oribasius, whose description of the articles in the *Materia Medica* is professedly taken from Dioscorides, we are not aware that any other ancient authority has noticed it. We may mention, in conclusion, that the *C. Pimpinelloides*, although it has no place in our Dispensatory, is still not unknown to the collectors of drugs. See Gray (Suppl. to the Pharm. 79.) It grows in abundance on a spot in Banchory Ternan, and we have ascertained that it is not wholly innocuous even to cattle when eaten by them.

Oἶνος,

Vinum, *Wine*, belongs to the second order of heating and desiccative medicines. But that which is considerably old belongs to the third, and the sweet wine to the first.

COMM. COMMENTARY. We have treated fully of the ancient *Wines* in Book I. For an ample enumeration of their medicinal properties, the reader is particularly referred to Pliny (H. N. xxxiii, 19 et seq.), and to Dioscorides (v, 1-16.) It being out of place for us to give a long commentary under this head, we shall merely give a succinct exposition of it from Aëtius. Wine, he says, is of the second class of calefacients; but that which is moderately old, is of the third; as in like manner the new and sweet is of the first. Their dryness is analogous to their heat. Since we find many varieties in wine, we shall describe them as briefly as we can. Of all wines, then, those which are at the same time red and thick are the most suited for the formation of blood, requiring but little change in order to be converted into blood. Next in order to these are such as are dark, sweet, and thick at the same time; then

those which in colour are red and black, in consistency thick, and have some acid quality at the same time. Less than these are the white, thick, and austere, in regard to nutritive powers. But of all others the least nutritious are those which are white in colour and thin in consistency, being in so far like to water. But the sweet are sooner digested and more readily diffused over the system than the austere, being of a more heating nature, and they are more laxative of the bowels. But those which are very thick are more slowly digested and more slowly distributed; but when the stomach is strong so as to digest them properly, they furnish more food to the body than any other; and it is clear that they bind the bowels and are not of a diuretic nature, engendering a thick humour in some. And some from them have obstructions of the liver, spleen, or kidneys, and hence those become affected with dropsy or calculus who use them much, and especially old men. But of all wines, the best, and best fitted for persons in good health, and to those who are convalescent from diseases, is that which is red in colour, thin in consistence, and gently astringent. (i.)

᾽Οισυπος,

Æsypum, *Unscoured Wool*, is treated of under wool.

COMMENTARY. The Æsypum was the sordes collected from wool. It was used medicinally in the Hippocratic age (De Morb. Mulier. ii), and continued to hold a place in the *Materia Medica* down to a late date. See Ruttý's *Mat. Med.* (357.) It would appear, from Dioscorides's description of the mode of preparing it, that it was the scum collected on the surface of water by boiling wool in it. (ii, 66.) See also Pliny (H. N. xxix, 2.) The ancients used it frequently in the practice of medicine. See in particular Dioscorides (l. c.) and Avicenna (ii, 2, 355.)

᾽Ολυβοι,

Grossi Ficulnei, *Green Figs*, are possessed of acrid and discutient powers, owing to the juice which is in them. When boiled, therefore, they discuss hard swellings; but when raw they remove myrmecia and thymi.

COMMENTARY. They are the unripe fruit of the fig tree.

COMM. Dioscorides and most of the ancient authorities recommend them as a stimulant application to various tumours. Our author's account of them is abridged from Dioscorides, who further recommends them in a cataplasm with salts and vinegar for achores, furfures, and epinyctis, and as an application to the bites of mad dogs. (i, 185.) They are the *Grossi Ficulæi* of the Arabians, who treat of them under the general head of figs. See Avicenna (ii, 2, 276.)

Ὀλόστιον,

Holostium, is possessed of desiccative powers with astringency. Hence they use it for fractures.

COMM. COMMENTARY. There are few articles in the *Materia Medica* of the ancients about which there is so much doubt. See Parkinson (*Theatre of Plants*), and Sprengel in Dioscor. (iv, 11.) It has been set down as the *Holosteum umbellatum*, but all upon mere conjecture. Our author here copies from Galen, who in his turn borrows from Dioscorides. We are not aware of its being described by any of the Arabian authorities, nor have we found it in any modern Dispensatory.

Ὀμφάκιον,

Omphacium is the *Juice of the Unripe Grape*, being considerably astringent and desiccative in the third degree. Hence it applies to defluxions, and especially those of the stomach.

COMM. COMMENTARY. The juice of unripe grapes is called *Agresto* in Italy, where it is still used in affections of the throat. Dioscorides recommends it in such cases. Pliny says of it, "Prodest dysentericis, sanguinem excreantibus, anginis." (H. N. xxiii, 4.) This is a literal translation from Dioscorides, who recommends it in these cases, and also for various others in which astringents are indicated, such as aphthæ, loose gums, fistulæ, old ulcers, spreading sores, and as an application to asperity and ulceration of the eyelids. (v, 6.) Celsus prescribes the omphacium in a variety of cases, as a cleansing medicine, (v, 5), as one that corrodes (v, 6), and as one that determines outwardly. (v, 12.) None of the other Greek authorities nor the Arabians supply any additional information of interest after Dioscorides.

Ὀνάγρα,

Onagra, *Tree Primrose* (called also *Enothera* and *Enothyris*), is a sort of plant resembling a tree, the root of which, when applied as a cataplasm, proves soothing to the bites of venomous animals.

COMMENTARY. It would appear to be either the *Enothera* COMM.
Onagra, Tournefort, or the *Epilobium angustifolium* L., Narrow-leaved Willow-herb, as Sprengel supposes. Dioscorides describes it minutely, but, like our author, merely recommends it in malignant sores. (iv, 116.) Galen strangely, as we would suppose, says of it, that its juice is of a venous nature, and of the same power as wine. As far as we have been able to discover, it is not to be found in the works of Hippocrates, Celsus, or any of the Arabians. It is worthy of remark that the *Epilobium angustifolium*, although it does not hold a place in our Mat. Med., is still known to the vendors of medicines, and retains the characters which it obtained from the ancients. See Gray (Suppl. to Pharmacop. 84.) This confirms the conjecture that the onagra is this plant. We would further mention, as confirmatory of this opinion, that the *E. angust.* has been cultivated about gardens in this country from time immemorial, so that there is every reason to believe that it had been introduced by the Romans, no doubt on account of its supposed efficacy in medicine.

Ὀνομα ἢ Ὀνομίς,

Onosma, or *Onomis*, *Stone Bugloss* (called also *Phlomis* or *Ononis*), is acrid and bitter, and hence the leaves of it when drunk with wine kill and expel the fœtus.

COMMENTARY. That it was a species of *Anchusa*, or one of COMM.
its congeners, is obvious, from the description of it given by Dioscorides, who says, the stalk, the fruit, and the flower, are very like to the anchusa. It seems probable, then, that it was some species either of *Anchusa* or *Lithospermum*. The *Onosma* of Linnæus, as Sprengel justly remarks (Ad Dioscor. iii, 137), is altogether a plant of a different character. Dioscorides, like our author, says it has great powers in procuring abortion; nay, that it was alleged that if a pregnant woman walked upon the plant she would miscarry. (l. c.) It is said that Aretæus recommends it in nephritic complaints. Pseudo-Dioscor. (Euporist. ii, 112.) Galen and the other authorities who

COMM. notice it, do so in nearly the same language as our author. We have not been able to discover any traces of it in the works of the Arabians.

Ὀνόβρυχις,

Onobrychis, *Cockshead*, is possessed of aromatic and discutient powers. It therefore discusses phymata, cures strangury, and proves sudorific.

COMM. COMMENTARY. Dioscorides describes it as having leaves like the lentil, or a little longer, a stalk a fathom long, a purple flower, and small root, and grows in wet and uncultivated grounds. This description seems clearly to point to the *Onobrychis sativa*, a plant of the tribe *Fabaceæ*. Dioscorides holds it to be diuretic and sudorific, and discussive of tumours. (iii, 160.) It appears to have been generally used as a diuretic. Pseudo-Dioscor. (Euporist. ii, iii.) Galen gives exactly the same account of it as our author; indeed, both borrow from Dioscorides. The Arabians would appear to have rejected it from their Mat. Med. Although it has long ceased to occupy a place in the Dispensatory, the sainfoin, or cockshead, is still known to the vendors of medicines, and retains its ancient characters of being "ripening, discussive, useful in strangury." Gray (Pharmacop. 96.) Our old herbalist, Culpeper, ascribes to it the same virtues. (Complete Herbal, 52.)

Ὀvoί,

Aselli, Millepedes, or *Slaters*; those found under water-vessels, which roll themselves into a ball when touched, are possessed of discutient and desiccative powers. Therefore, when drunk with wine they cure dysuria and jaundice, and in cases of cynanche they are rubbed in with honey: and for earache they are triturated with rose oil, and being warmed in the shell of a pomegranate are injected into the ear.

COMM. COMMENTARY. The *Millepedes* are thus described by Marcellus Empiricus: "In locis humidis et sordidis sub lapidibus inveniuntur bestiolæ multipedes quæ contactæ contrahuntur et rotundantur." (De Medicamentis, c. xxxv.) They are the Porceliones of Cælius Aurelianus (i, 4), who calls them "animalia quæ humectis et aquosis locis sæpe nascuntur, a Græcis appellata onisci." (Tard. Pass.) Almost all the ancient

authorities on the *Materia Medica* from Dioscorides downwards, recommend them in the same cases as our author does. COMM.
 In fact, almost all the authorities take the characters of the millepedes from Dioscorides. (ii, 37.) See in particular Serapion (*De Simpl.* 4, 29), Avicenna (ii, 2, 718.) They particularly commend the use of them in jaundice. In English they are called *Slaters* or *Cheslops*. They held a place in the Edinburgh Dispensatory until after the edition of it in 1811. In fact, the highest modern authorities testify to the medicinal virtues ascribed to them by the ancient authorities. Moses Charas, who makes frequent mention of them, says, that a volatile salt is obtained from them which is highly diaphoretic. Dr. Hill calls them aperient, attenuant, and detergent. Dr. Mead recommends them strongly for their diuretic property. He directs us to put them into wine, and afterwards to strain off the liquor, and sweeten it with honey or sugar. (*Monita et præcepta.*) It would appear that they are still used in France as diuretics. In Dr. Pemberton's edition of the London Dispensatory, 1746, it is directed to inclose them in a thin canvass cloth, and suspend them within a covered vessel over the steam of hot spirit of wine, by which they will be killed and rendered friable. Lister calls them lithontriptic.

^Ονυχες,

Onyches, are the covers of Indian shell-fishes. These, in a fumigation, rouse those affected with uterine suffocation and epileptics. But when drunk they disorder the belly.

COMMENTARY. Dioscorides says of the Onyx, that it is the operculum of a shell-fish, like that of the *Purpura*, being found in India in the lakes that produce nard; and that it acquires an aromatic smell from the shell-fishes feeding on the nard; it is gathered, he adds, when the lakes are dried up by the drought; the kind brought from the Red Sea is different, being whitish and fatty; the Babylonian is black and smaller, but both form a fragrant fumigation, resembling castor somewhat in smell. He concludes with stating, regarding their medicinal properties, that both rouse persons in hysterical convulsions, and also in epileptical, when applied in fumigations; that taken internally, they soften the belly; and that the shell-fish itself, when burnt, has the same powers as the pur- COMM.

COMM. *pura* and *murex*. (ii, 10.) Avicenna gives a very accurate account of this article under the name of *Blacte Byzantie*; but except that he does not attribute the fragrantcy of the shell to the nard it feeds on, his description is nowise dissimilar to that by Dioscorides. The medicinal virtues which he assigns to it are exactly the same. (ii, 2, 78.) Serapion gives a literal translation of the chapter of Dioscorides on the *onyx*. (De Simpl. 443.) One of Rhases's authorities says of the *Blactie Byzantiæ*, that they are of a hot and dry temperament, being possessed of astringency and subtilty of parts, and that they are stomachic, hepatic, emmenagogue, and cordial. (Cont. l. ult. i, 127.) From the above account of this article, it will readily be seen that it is the cover of the *Strombus lentiginosus*.

ὄνονις,

Ononis, *Restharrow*, has a root which is desiccative in about the third degree, but the bark of it is detergent and incisive; and hence it is lithontriptic.

COMM. COMMENTARY. See ἄνωγις.

ὄξος,

Acetum, *Vinegar*, is possessed of mixed powers, namely, cold and hot, both arising from tenuity of parts; but the cold prevails over the hot. It is a desiccant of the third rank.

COMM. COMMENTARY. It is also called γλυκάδιον, as the Scholiast on Nicander says, per euphemismum, from γλύκυσ, sweet. But we are rather inclined to think that it is the diminutive of γλεῦκος, must, vinegar being the juice of the grape which has lost its strength. Hence Pliny calls it "vitium vini." All the ancient authorities maintained that vinegar is at the same time refrigerant and discutient. Galen discusses the question regarding the nature of it at great length and with much ingenuity. (De Med. Simpl. i.) He, Pliny, and Celsus mention the fact that an effervescence is produced when it is poured on earth, meaning, no doubt, certain carbonates. Pliny and Celsus commend it in the strongest terms as an antidote to the sting of the asp. Serapion and the other Arabians copy Galen's account of it. Symeon Seth gives an interesting abstract of the ancient opinions on this subject. Dioscorides and Avicenna recommend it as an application to ecchymosis

of the face; but the latter remarks, if too long continued COMM.
 it renders the part yellow and weakens the sight. (ii, 2, 74.)
 See also Rhases (Cont. l. ult. i, 18.) These two Arabian au-
 thorities say of it, that it congeals the womb; but that a cly-
 ster of hot vinegar and salt proves soothing in the spreading
 ulcers of the intestines. Both the Greek and Arabian autho-
 rities commend it as an antidote in cases of poisoning with
 opium and cicuta. They also recommend an embrocation
 with vinegar and olive oil or rose oil to the head in affections
 of it. Dioscorides recommends vinegar for chronic coughs
 and orthopnoea, and also for defluxions of the throat and quin-
 seys. (v, 21.) The Greek and Arabian authorities further
 agree in recommending it in erysipelas, herpes, and whitlow.

Ὀξύκανθος,

Oxyacantha, *Evergreen Thorn*; the tree is like the wild
 pear in appearance and powers, having also some tenuity of
 parts. The fruit of it resembles myrtles.

COMMENTARY. Matthioli, Dodonæus, and Sprengel agree COMM.
 in referring it to the *Mespilus Pyracantha*, or *Evergreen*
Thorn. The commentators on Mesue make it to be the Berberis,
 i. e. the *Berberry*. See the Appendix to this section. Dioscorides,
 after giving a botanical description of it, says, with regard to
 its medicinal powers, that when pulverised and applied in a
 cataplasm it extracts thorns and prickles, and that its root is
 said to possess the power of occasioning abortions, when the
 abdomen is gently stroked or rubbed with it. (i, 122.) Galen
 says of it, that its root is attenuant and incisive, resembling
 that of myrtles; and that whether eaten or drunk it restrains
 all fluxes. (De Simpl. viii.) Although the similarity of names
 might lead us to suppose that this must be the *Spina acuta*
 of the Arabians, this does not appear to be at all the case.
 See Avicenna (ii, 2, 11.)

Ὀπίον,

Opium, is treated of under poppy.

COMMENTARY. Although we treated of the deleterious COMM.
 effects of opium on the animal economy in the Fifth Book,
 and have given a general description of the medicinal proper-
 ties of the poppy in the proper place, we shall avail ourselves

COMM. of the present opportunity to supply some important information regarding the ancient use of opium in the practice of medicine. Though mention is made of "the juice of the poppy," and of "meconium" as soporifics in the works of the Hippocratists (*De Mulieribus*, ii), it does not appear that these articles were much in use until a later age. "The juice of the poppy" is noticed likewise by Theophrastus (*Fr.* 20, 35), and the process of gathering this juice is briefly alluded to by him (*H. P.* ix, 8, 2); but the nature of his work did not lead him to say anything of its medicinal uses. There can be no question, we presume, that the "*papaveris lacryma*" of Celsus was opium, i. e. the concrete juice of the poppy. He prescribes it on many occasions, both externally and internally. For example, as an ingredient along with hyoscyamus, burnt lead, and other ingredients for an emollient plaster to be applied in arthritic pains (*v.* 18, 29, 35), and as an injection with alum, acacia, and henbane in earache (*vi.* 7); as an ingredient in various collyria for complaints of the eyes (*vi.* 6); as an injection in complaints about the anus (*vi.* 18), and in many other cases. The famous Methodist, Cælius Aurelianus, is very guarded in his use of opiates, and he appears to approve of the opinion of those who held that poppy does not induce sleep, but oppression of the senses; "*papavera autem pressuram non somnum faciunt.*" (*i.* 1.) See also *Pass. Tard.* (*i.* 5.) Dioscorides, then, is the first authority that gives a detailed account of opium and its uses in medicine. Treating of the cultivated poppy, he says, that its juice is very congealing, incrassative, and desiccative, when taken in small quantity, to the size of a vetch, is anodyne, soporific, concoctive, and is useful in coughs and celiac affections. Taken in greater quantity, it proves injurious, inducing lethargy and death; it is beneficial in headache when rubbed in with rose oil; and in earache when injected with almond oil, saffron, and myrrh; in inflammations of the eyes with the roasted yolk of an egg and saffron; and for erysipelas and wounds with vinegar; for gout with a woman's milk and saffron; and when applied as a suppository per anum it induces sleep. The best kind is that which is dense, has a heavy stupefying smell, is bitter to the taste, readily incorporating with water, smooth, white, not rough, nor grumous, nor moulding like wax in the process of straining;

when laid in the sun softening, and when applied to a lamp not burning with a smoky flame, and after being extinguished preserving its powers in its smell. He then mentions several modes of adulterating it which were practised in his time, and then adds, it is roasted for ophthalmic medicines upon a recent shell until it becomes soft and of a tawny colour. Erasistratus says that Diagoras condemned the use of it in diseases of the ears and eyes, as inducing dimness of sight and coma. And Andreas says, that if it had not been adulterated those that rubbed it in would have been deprived of sight by it. But Mnesidemus says, that the only proper use of it is by the smell, as thus disposing to sleep, for that otherwise it proved injurious; but these statements are false, as is proved by experience; for the operation of the medicine is attested by its effects. He concludes by describing the modes by which opium and meconium were prepared, but it will be sufficient for our purpose to state that his description of the former of these is exactly the same as the method now commonly practised. See Kæmpfer (*Amæn. Exost.* 643), and Pereira (*M. M.* 1274.) The meconium was the expressed juice of the leaves and head, and is not now in use. Dioscorides states that it is much weaker than the other. (*iv*, 65.) Pliny's description of the opium and meconium is obviously taken from Dioscorides, or both these authors must have copied from some preceding authority. He thus describes the meconium: "cum capita ipsa et folia decoquantur, succus meconium vocatur, multum opio ignavior." (*H. N.* xx, 76.) Opium it is certain was freely used by the Empirics, and accordingly it will be found that it is a very common ingredient in the prescriptions of Scribonius Largus, and Marcellus the Empiric. The latter gives several formulæ for collyria, in which opium occurs, and he is at pains to state that it is the concrete and not the expressed juice which must be used. (*De Medicamentis*, viii.) He also prescribes it internally for pains of the kidneys (xxvi), as an enema in colic (xxix), and in many other cases. Galen would appear to have had very sound opinions respecting the use of opium in the treatment of diseases. He professes, indeed, never to have had recourse to it when he could help it. (*De Comp. med. sec. loc.* iii); but yet he prescribes it in cæliac and certain stomach affections (*ibid.* viii), and even in intense

COMM. pains of the eyes (Meth. Med. ii), although in general he condemns the application of it in collyria. (Meth. Med. iii; and De Comp. m. s. l. ii.) He often mentions that castor counteracts the prejudicial effects of opium. (De med. sec. loc. iii, and viii.) Of all kinds of opium he pronounces the Theban to be the best. (De Antid. i.) Avicenna, besides treating of opium as a poison, and giving the general properties of poppy, under that head, has a very interesting chapter on opium in his Mat. Med. He defines opium to be the juice of the black Egyptian poppy dried in the sun. He says it proves fatal if given in a larger dose than two drachms; but the proper dose he states to be the size of a tare. He states in parenthesis that opium is also formed from the juice of the wild lettuce (*lactucarium?*). He calls it narcotic and sedative of all pains, whether taken internally or rubbed in. It is useful, he says, in apostemes, especially in those of an inflammatory nature. He says of it, that it dries up ulcers; with the yelk of an egg forms a liniment for gout; it proves soporific if a cloth smeared with it be placed below the head; allays pain if injected into the ear affected, along with myrrh and saffron; allays chronic pains of the head, and sometimes cures them; soothes the pains of ophthalmy, and the apostemes of the eyes, with the milk of a woman; but yet he adds, that many of the ancient authorities had condemned the use of it in such cases as proving injurious to the sight; it allays incessant coughs, and often cures that kind which is noisy; improves the stomach in peculiar cases, when debilitated by excess of heat and humidity, is braced by it; but in many constitutions, opium, so administered, impairs digestion; it stops diarrhœa; is useful in dysentery, and in ulcerations of the intestines. It proves fatal, he says, by congealing the vital powers and extinguishing the innate heat; and its antidote is castor. He concludes by saying, that three times the amount of the seed of *hyoscyamus*, or double of the seed of *mandragora* may be given as a substitute for it. (ii, 2, 519.) Haly Abbas treats of opium more briefly, stating in general terms that it is a soporific and sedative medicine. He seems to say that from half a drachm to a drachm will prove fatal. (Pract. ii, 40, 318.) Serapion's account of opium is mostly made up of extracts from Dioscorides and Galen, with a few brief notices of the opinions held by Arabian authorities, which

do not contain anything of much interest. (c. 374.) Rhases's COMM.
 chapter upon the poppy contains many extracts from the
 Greek authorities on opium, with a few from Arabian writers,
 which, however, contain nothing of much interest after what
 we have given from Dioscorides and Avicenna. Like Serapion,
 he says, from half a scruple to a scruple is a dose, and that two
 drachms will prove fatal. His authority, Mesue, says it forms
 semen. Another of them, Joannitius, seems to say that it
 binds the bowels in general, but yet has some laxative power.
 (Cont. l. ult. i, 533.) In the 'Book of Experience,' as quoted
 by Ebn Baithar, poppy-juice is recommended in complaints of
 the eyes, and in pains of the head when applied to the fore-
 head. One of his Arabian authorities mentions its good
 effects in diarrhœa; and it is also spoken favorably of as an
 application to burns. Ebn Baithar's account of this article is
 otherwise mostly made up from Dioscorides.

'Οπός,

Succus Cyrenaicus, Medicus, and Syriacus, are so named
per excellentiam, being considerably hot and flatulent. The
 Cyrenaic is hotter and more attenuate than any of the others.

COMMENTARY. The high interest which attaches to these COMM.
 articles might well dispose us to wake our classical recollections,
 in order to illustrate the nature of them, if the narrow limits
 to which we feel that we are restricted did not restrain us from
 such an undertaking. We beg, however, to quote the words of one
 of our ablest authorities in illustration of this subject. Dr.
 Lindley, treating of the plants which yield assafœtida, says,
 "assafœtida is the milky juice of various species of *Ferula* in-
 habiting Persia and neighbouring countries. Of these, *F. assa-*
fœtida is the plant described by Kæmpfer. (*Amœn. Exot.* 535);
 but *F. Perscia* and others, are no doubt also the origin of this
 drug. The *Asa dulcis* or *Laser Cyrenaicum* was yielded by a
Thapsia, and probably *Thapsia Garganica*. This drug was
 in high reputation among the ancients for its medicinal uses;
 it had miraculous powers assigned to it—power to neutralize
 the effect of poison, to cure envenomed wounds, to restore sight
 to the blind, and youth to the aged; these were only a part
 of its reputed properties; it was also reckoned antispasmodic,
 deobstruent, diuretic, &c., &c. So great was its reputation,

COMM. that the princes of Cyrene caused it to be struck on the reverse of their coins; and the Cyrenean doctors were reckoned among the most eminent in the world." (Veg. King. 776.) See further Pereira (Mat. Med. 1041), and most especially Sprengel in Dioscor. (iii, 85.) From what we have stated, our readers will readily comprehend that the Median and Syrian juices were varieties of the gum resin of *Ferula assafoetida*; while the Cyrenean juice was the gum resin of a congener, namely (as stated above), the *Thapsia Garganica*, called silphium by the ancients. That the Cyrenaic juice was the product of the silphium, is positively stated by Strabo. (Geogr. xvii, 3.) We shall reserve what we have to say on its medicinal properties till we come to that article. It is the laser and laserpitium of the Roman authors. It occurs in the Hippocratic collection. (De Morb. iv.) By the Arabian authors it is generally treated of under the name of *Assa*, and hence its modern appellation.

'Ορίγανος,

Origanum, *Origany*, or *Wild Marjoram*; all the species of it are possessed of incisive, attenuant, desiccative, and calefacient powers in the third degree.

COMM. COMMENTARY. Apuleius enumerates three species and recommends them for coughs. (c. 122.) Galen and Dioscorides also describe the same number of species, which may be referred—the 1st, to the *Origanum Heracleoticum*, L.; the 2d, to the *O. onitis*; and the 3d, to *O. sylvestre album*. Dioscorides describes the particular uses of these plants so fully that we cannot find room for his separate articles on each. Suffice it to say, that he sets down the first as being laxative, emmenagogue, and expectorant. (iii, 29, 30, 31.) Galen, like our author, merely states the properties of the *Origana* in general terms. The Arabians call the origanum diuretic and vermifuge. They copy, as usual, from the Greeks. See Serapion (c. 310), Avicenna (ii, 2, 526), and Rhases (Cont. l. ult. i, 125.) The *Origanum Smyrnaeum* occurs in the modern Greek Pharmacopœia (121.)

'Ορειοσέλινον,

Apium montanum, *Mountain Parsley*, has powers like those of parsley, but stronger.

COMMENTARY. Dioscorides says of this article (*Selinum* COMM.
Oreoselinum? or *Athamanta Libanotis?*), that it is diuretic
 and emmenagogue, and an ingredient in antidotes, and in
 diuretic and heating remedies. (iii, 69.) Galen and the other
 Greek authorities treat of it in general terms along with
 its congeners; and the Arabians do the same under *Apium*.
 See in particular Avicenna (ii, 2, 55); Serapion (De Simpl.
 290); Rhases (Cont. l. ult. i, 69.) Serapion's Arabian autho-
 rities represent the *Apium montanum* as being laxative, car-
 minative, deobstruent, diuretic, and, in some cases, emetic.
 The *Athamanta Libanotis* is still to be found in the shops of the
 apothecaries, where it retains its ancient characters. Gray
 (Suppl. to the Pharmacop. 81.) Some of the commentators
 on Dioscorides take it for the article we are treating of.

Ὄροβάκχη,

Orobanche, *Holly Rose*, belongs to the first order of the
 desiccative and cooling temperament.

COMMENTARY. It appears unquestionably to be the *Oro-* COMM.
banche Caryophyllea. See Sibthorp. (Fl. Græca. i, 440.)
 Dioscorides merely states of it, that it was eaten as a potherb
 both raw and boiled. The other authorities treat of it very
 succinctly. We have not been able to discover any traces of
 it in the works of the Arabians.

Ὄροβοσ,

Ervum, *Bitter Vetch*, or *Tare*, is heating in the first degree,
 and desiccative in the second. It is also bitter, and therefore
 is incisive, detergent, and deobstruent. When taken in too
 great a dose it occasions bloody urine.

COMMENTARY. It is the *Ervum Ervilia*, Bitter Vetch. COMM.
 Dioscorides enumerates its medicinal virtues at considerable
 length, recommending it as being good for the bowels, and
 diuretic, but in large doses inducing bloody discharges from
 the belly and bladder; as being a cleansing application in ob-
 stinate diseases of the skin, and in carcinoma and gangrene;
 as being alexipharmic and forming a good fomentation for
 chilblains and pruritus. (ii, 131.) Our author copies word for
 word from Galen. The Arabians treat of it at much greater
 length, but add little to what Dioscorides had delivered under

COMM. this head. When drunk with vinegar, they say it relieves difficulty of urine, tenesmus, and acute pain of the bowels; promotes expectoration, and softens indurated mammæ. See in particular Avicenna. (ii, 342.) Though this plant has long been omitted from our Dispensatory, it is still not wholly unknown in the shops. See Gray (Pharmacop. 96.)

Ὠρμινον,

Horminum, *Clary*, is like horehound in appearance, and hot, moderately desiccative, and detergent. It therefore is a provocative to venery; and along with honey clears any thickness of the coats of the eyes, dispels œdema, and extracts sharp instruments. The wild is stronger than the cultivated.

COMM. COMMENTARY. Our author borrows his account of this article (*Salvia Horminum*) from Dioscorides. (ii, 135.) It is not treated of by Galen, Aëtius, nor Celsus. It is fully treated of by the Arabians, who recommend it as an application to cancerous and other sores, as a collyrium in ulceration of the eyes, and as a plaster in cases of gout. They further hold it to be aphrodisiac. See Avicenna (ii, 2, 692); Rhases (Cont. l. ult. i, 727.) Even of late years, it has been reported as possessing the virtues ascribed to it by the ancients. See Ruty (Mat. Med. 238.)

Ὠρυζα,

Oryza, *Rice*, is somewhat astringent, and therefore it binds the belly in a moderate degree.

COMM. COMMENTARY. It is the *Oryza sativa*. Dioscorides, Galen, and the other authorities state its virtues in the same brief terms. For the views of the Arabians, see Serapion (c. 13); Rhases (Cont. l. ult. i, 583); Avicenna (ii, 2, 567.) The Arabians recommend it boiled in milk, which, they say, takes away its astringency, and it becomes more nutritious and forms semen.

Ὠρχις,

Orchis; the herb is also called *Dog's Orchis*, or *Testicle*, having a double bulbous-shaped root. The powers of the greater orchis are humid and heating, and therefore it is a provocative to venery. But those of the lesser are heating and desiccative, and therefore, on the contrary, it restrains venery. That species which is called *Sarapias*, and otherwise

Triorchis, is more desiccative than the former. It therefore discusses œdematous swellings, cleanses foul and putrid ulcers, and cures herpes. When dried it is more desiccative. Owing to its sub-astringency, it binds the belly when drunk with wine.

COMMENTARY. The modern botanists have described many species of it, and it is difficult to determine from among them those which are applicable to the two species described by Dioscorides and our author. Sprengel is pretty confident that the former is the *Orchis papilionacea*. He is undecided respecting the *Sarapias*, but we may venture to refer it to the *Orchis Morio*. Regarding the medicinal virtues of the former of these, Dioscorides merely relates the vulgar belief, namely, that one of its bulbous roots had the virtue of rousing to venery, and the other of blunting the venereal appetite, and that the one promoted the generation of male children, and the other of female. However nonsensical all this may appear, the same properties are ascribed to the orchis by our herbalist Culpeper. (180.) The other orchis he represents as being an ingredient in applications to fistulæ, mortifications, ulcers of the mouth, and so forth. (iii, 31, 32.) Galen attempts to explain the reputed aphrodisiacal virtues of the orchis upon its sensible qualities. Our author copies from him. The Arabians describe these two plants under the names of *Testiculus Vulpis* and *Testiculus Canis*, or *Chasi altaleb* and *Chasi alchelh*. See Avicenna (ii, 2, 706); Rhases (Cont. l. ult. i, 714); Serapion (De Simpl. 90, 91.) They ascribe the same real and imaginary powers to the two species as the Greeks had done.

Ὄσιρις,

Osiris, *Toad-flax*, from which besoms are made, is bitter and removes obstructions in the liver.

COMMENTARY. Dioscorides briefly notices this plant (*Osyris alba?*), and recommends it in jaundice. Our author copies literally from Galen, as does also Aëtius. Oribasius borrows from Dioscorides. It does not appear to be treated of by the Arabian authorities at all.

Ὄσα,

Ossa, *Bones*, when burnt are possessed of discutient and

considerably desiccative powers, especially, they say, those of men. The ankle-bone of a sow when burnt, is said to cure flatulence and tormina. And some cure epilepsy and arthritis by giving burnt bones to drink. The burnt ankle-bone of an ox is said to fasten loose teeth; but if drunk with honey, it removes round worms, and with oxymel it reduces the spleen, and when rubbed in relieves leuce. It is also an aphrodisiac. The burnt thigh-bones of an ox if taken in a draught, stop hemorrhages and fluxes of the bowels.

COMM. COMMENTARY. The other authorities give nearly the same account of their medicinal properties. See Galen (De Simpl. 11); Serapion (c. 464); Avicenna (ii, 2, 528.) The Arabians borrow from Galen and our author.

*Οστράκα,

Testæ, *Shells*, from furnaces, when triturated, are possessed of desiccative and detergent powers. Hence they are used as a dentifrice, and when rubbed in with vinegar cure itch, exanthemata, and gouty complaints, and with cerate dispel enlarged scrofulous glands.

COMM. COMMENTARY. It is now well ascertained that *burnt shells* consist principally of lime. They, may, therefore, be supposed to form a good stimulant application to certain cutaneous diseases and tumours of an indolent nature, as recommended by our author and Dioscorides. (v, 177.) Oribasius says, that they are very efficacious in repressing fungous flesh when sprinkled in the form of a fine powder.

*Οστρεία,

Ostrea, *Oysters*; the burnt shell is possessed of similar powers to the buccina, but is not of so gross a consistence. It is used, therefore, as a detergent to the face, and whitens the teeth. When washed it is freed from pungency, and is useful for incarnating and cicatrizing ulcers attended with a copious discharge.

COMM. COMMENTARY. Galen gives the same account of the burnt shells of oysters or snails. He says, that if a shell be washed and burnt it imparts an empyreuma to the water, which renders it heating and attenuant; whereas, what remains is devoid of pungency and terrene, and it is useful for the filling up

and cicatrization of ulcers. He recommends the ashes of all burnt shells as a dentifrice, in which case they do not require to be finely levigated as they should be when applied to sores. (De Simpl. 11.) This article is not treated of by Dioscorides, the reason of which probably is, that in his time the word *ὄστρακα* was a term applied to the whole class of the *ὄστρακόδερμα*. See Commentary (i, 91.) They are treated of in the same terms by the Arabians as by the Greeks. See Avicenna (ii, 2, 529); Rhases (Cont. l. ult. i, 224); Serapion (c. 443.)

Ὑρρον,

Urina, *Urine*; all kinds of it are hot and acrid, but that of man is weaker than the urine of other animals, with the exception of castrated boars, but it is considerably detergent; and it is said that some who have drunk it in the plague have recovered. It also cures leprosy, putrid ulcers, achores, and furfures; and likewise sprains of the feet when not inflamed. That of boys not come to puberty is stronger, and from it the chrysocolla is formed. The urine of mules suits with arthritic remedies. That of goats and of camels is laxative of the belly, and hence is given in dropsical complaints.

COMMENTARY. The account given by our author of the medicinal properties of *Urine* is abridged from Dioscorides and Galen. Galen rejects, with disgust, the internal use of it. Some, he says, have given the urine of a boy for the cure of orthopnœa; but he justly remarks that there is no want of other remedies for this affection, and that in fact the article in question has no peculiar virtue in the complaint. Most of the other authorities, however, sanction the use of it in this case, as for example, Dioscorides, Avicenna, and Rhases. They also recommend urine to be drunk for the cure of the bite of the viper, for deadly poisons, and incipient dropsies. Dioscorides recommends the sediment of urine as an application to erysipelas; upon which practice Galen remarks that when the affection is still hot such an application must be quite unsuitable; but that when cooled, it or any other discutient is indicated. Those who desire to know more fully the views of the ancients on this subject, are referred to Dioscorides. (ii, 99); Galen (De Simpl. 10); Serapion (c. 448); Avicenna (ii, 2, 716); Rhases (Cont. l. ult. i, 749); Haly Abbas (Pract. ii. 517):

COMM. Ebn Baithar (i, 191.) The last of these is particularly full under this head.

Παγκράτιον,

Pancratium, *Sea-daffodil*, in appearance and powers is like the squill, but is weaker.

COMM. COMMENTARY. There are two varieties of the *Scilla maritima*, or Squill, namely, the white and the red. The *pancratium* would appear to be the red variety. See Alston (*Mat. Med.*); Pereira (*Mat. Med.* 651); and Lindley (*Veg. King.* 203.) Dioscorides, like our author, states of it, that it has the same powers as the squill, but in a weaker degree; and that it is prepared in the same manner, and used in the same affections; for example, in diseases of the spleen and dropsies. (ii, 203.) Galen and Aëtius treat of it in nearly the same words as our author. We are in doubt whether the *pancratium* be treated of by the Arabian authorities, with the exception of Ebn Baithar, who, it would appear, describes it under the name of *Kebal*. He, however, merely gives extracts from Dioscorides and Galen. (ii, 309.)

Παλιούρος,

Paliurus, *Christ's-thorn*; the leaves and root of it are astringent, and hence they stop fluxes of the belly, and discuss phymata when they are not of a very hot nature. The fruit is of so incisive a nature as to break down stones, and relieve expectorations.

COMM. COMMENTARY. It would seem to be the *Paliurus australis*, Gaertn. Dioscorides ascribes to it nearly the same medicinal properties as our author. Thus, he says, it is expectorant, lithontriptic, and alexipharmic, its leaves and root being astringent, so as to stop looseness of the bowels, and that it is diuretic and discutient externally. (i, 121.) Galen and Aëtius treat of it in nearly the same terms as our author. We have not been able to detect it in the *Mat. Med.* of the Arabians.

Πάνακες,

Panaces, *All-heal*; it is from that species called *Heraclium*, from which the substance named *opoponax* is produced, being heating in the third degree, desiccative in the second, emollient

and discutient. The bark of the root being weaker than the juice, is somewhat detergent and incarnative, but the fruit of it is emmenagogue. The species of Panaces which are called *Asclepium* and *Chironium*, are more heating than the former, and hence their leaves and fruit are used for ill-conditioned ulcers and phymata.

COMMENTARY. Dioscorides decides that the *Heraclium* is the tree which produces the famous *opoponax*. It has now got the scientific name of *Opoponax Chironium*, Koch. See Pereira (Mat. Med. 1040), and Lindley (Veg. King. 776.) Dioscorides gives a most excellent account of the process by which the *opoponax* is collected, and describes the marks by which that which is genuine may be recognized. He ascribes to it calefacient, attenuant, and emollient powers, and recommends it in a great variety of cases, such as periodical fevers, rigors, convulsions, bruises, pains of the sides, tormina, strangury, scabies vesicæ; as an emmenagogue, and a medicine which destroys the fœtus; as a liniment in sciatica; a good application to the holes of carious teeth; as forming a good plaster to bites of mad dogs; as an incarnant when applied to ulcers connected with exposure of the bone; and as being alexipharmic, and remedial in hysterical convulsions, and in many other cases. (iii, 48.) Galen also gives an interesting account of *opoponax*, which he represents as being hot in the third degree, and drying in the second. He recommends it particularly in ill-conditioned ulcers complicated with exposure of the bone. He says the fruit of the tree is emmenagogue. Aëtius treats of it in similar terms. The Arabians treat of this article at considerable length, as usual following in the footsteps of Dioscorides. See Avicenna (ii, 2, 521); Rhases (Cont. l. ult. i, 521); Serapion (De Simpl. 252); Averrhoes (Collig. v, 42.) They recommend it in hardness of the spleen, in pleuritic pains, and chronic coughs. They say it softens hardness of the uterus, and is useful in stillicidium urinæ. Both when taken by the mouth and in a suppository, they say it occasions abortion. Avicenna says that galbanum is used as a succedaneum for it, and that gum ammoniac is nearly allied to it.

The authorities are much divided whether the *Asclepium* be *Cachrys Libanotis*, or *Echinophora tenuifolia*. The for-

COMM. mer of these would appear to be the *Libanotis* of the ancient Mat. Med., and therefore the latter would seem to have preferable claims. Dioscorides recommends it externally as a discutient application to ulcers and tumours, and internally with wine as being an antidote to reptiles. (iii, 49.)

Sprengel inclines to think that the Chironium is the *Hypericum origanifolium*, Willd. Why modern botanists have applied the specific term *Chironium* to the first of these plants, we are at a loss to explain. Dioscorides recommends it both internally and externally for the bites of reptiles. Galen and the other authorities treat of it in general terms, like our author. The Arabians in like manner give its medicinal properties under the head of *Panaces*.

Πάπυρος,

Papyrus, when unburnt is only simply the vehicle of other substances. But when burnt it is desiccative like burnt paper, but the ashes of the papyrus are weaker.

COMM. COMMENTARY. It is marked *Cyperus Papyrus* by Linnæus. From burnt papyrus and burnt paper prepared from it, the ancients procured an impure carbonate of kali, which they used as a caustic. It is frequently mentioned by Celsus. Pliny says of it, "Charta quæ fit ex Papyro, cremata inter caustica est." (H. N. xxiv, 51.) See also Dioscorides and Galen. The papyrus was much used by the ancients for dilating fistulæ in the same manner that prepared sponge now is. Avicenna recommends it for this purpose, and also as a styptic to stop the flow of blood. Its ashes, he says, stop the spitting of blood. (ii, 2, 536.) See also Rhases (Cont. l. ult. i, 132), and Ebn Baithar (ii, 244.)

Παρωνυχία,

Paronychia, *Mountain Knotgrass*, is so named because it cures paronychia (whitlow). Its powers are those of an attenuate and desiccative substance without pungency.

COMM. COMMENTARY. The commentators are divided between the *Paronychia Hispanica*, Cand., and the *Draba verna*, or Whitlowgrass. See Sprengel (Ad Dioscorid. iv, 54); Gray (Suppl. to Pharmacop. 105.) Dioscorides and Galen join in commending

it for the cure of whitlow. Galen argues that it acts in this case by being possessed of discutient powers. We have not been able to detect it in the works of the Arabians. Neither Hippocrates nor Celsus has noticed it. COMM.

Πεντάφυλλος,

Quinquefolium, *Cinquefoil*, is desiccative in the third order, but by no means acrid. It is therefore greatly in use.

COMMENTARY. Although this article be minutely described by Dioscorides (iv, 42), Theophrastus (H. P. ix, 13), and by Democritus (Ad Geopon. ii, 6), there has been considerable difference of opinion respecting it. See Parkinson, Sprengel (Ad Dioscor. l. c.), and Rutton (Mat. Med. 382.) We think that the well-known plant *Potentilla reptans*, Angl. common creeping Cinquefoil, answers well to the descriptions above referred to. Dioscorides recommends it for a great many purposes: its decoction for the cure of toothache, and mortifications in the mouth as a wash; for roughness of the windpipe as a gargle; for diarrhoea and dysentery; as a discutient application to many tumours and cutaneous eruptions; in intermittent fevers, epilepsy, and, in short, as our author remarks, it would appear to have been much used in ancient times. Galen, like our author, merely states its general properties as a medicine, without defining the particular cases in which it is applicable. It is the cinquefolium of Celsus, who places it in his list of things which are gently repressing and emollient. (ii, 33.) It occurs in the Hippocratic treatises. It is recommended by Apuleius for pains of the bowels, epistaxis, angina, &c. For the Arabians, see Avicenna (ii, 2, 545); Rhases (Cont. l. ult. i, 544); Ebn Baithar (i, 174.) They do little more under this head than repeat the cases in which it is recommended by Dioscorides. The cinquefoil is highly commended by all our old herbalists, Parkinson, Gerard, and Culpeper, and it held a place in our English Dispensatory down to the time of Quincy, who, treating of it, says, "Schroder runs through most chronical distempers in commendation of it, says that it is astringent and vulnerary, that it cures coughs, &c." (137.) Quincy here does not seem to have been aware that Schroder was merely confirming the character of it as given by Dioscorides and Ebn Baithar. COMM.

Πέπλος.

Peplus, called by some *Papaver spumosum*. And this shrub has a juice and purges like the spurges.

Πέπλιον,

Peplium; this too has a juice, and grows by the sea-side; for the most part, it is of no use, but the seed of it purges flatul like that of the peplus.

COMM.

COMMENTARY. There can be no doubt that they are two species of the *Euphorbia* or *Spurge*; probably the *E. Peplus* and *E. Peplis*, that is to say, the petty spurge, and small purple sea spurge. These articles are frequently mentioned as drastic purgatives in the Hippocratic collection. (*Epidem. vi.*, &c.) Ruffus Ephesius gives them the character of being safe phlegmagogues and cholagogues. (*De Med. Purgant.*) Dioscorides gives them the same characters. (*iv*, 65, 66.) They are also mentioned by Pliny (*H. N. xx*, 20), but are not noticed by Celsus. Galen gives their seed the character of purging, and at the same time of expelling flatulence. All the Greek authorities on the *Mat. Med.* down to Actuarius (*Mat. Med. v*), give them exactly the same character. The Arabians briefly say of them that they purge like the *Tithymallé*. See Avicenna (*ii*, 2, 103, 104.) We may be allowed to mention, that although the *E. Peplis* and *Peplus* be now excluded from our Dispensatory, they are still to be found in the shops of the apothecaries. We concur in the opinion thus stated by Boerhaave while treating of spurge root: "We have declined these rough medicines too hastily." (*Mat. Med.*) See further Ruttý (*Mat. Med.* 520.)

Πέπερ,

Piper, *Pepper*; its root resembles the costus in power. But the fruit of it, while yet germinating, forms the long pepper, being more humid and hot. But that which is as it were the unripe fruit is the white pepper, being more acrid than the black, because it is over-heated. Both are heating and desiccative.

COMM.

COMMENTARY. Solinus gives the following account of it: "Quod incorruptum est Piper album. Quorum cutem rugosam et torridam calor fecerit, Piper nigrum. Qui demum

caducus torretur fervido sole, vocamen trahit de colore. At COMM. quod ex ipsa arbore stringitur, ut est, album Piper dicitur." (Polyhist. 65.) This is not quite a correct account of the matter. Black pepper is the fruit gathered before it is ripe, and dried in the sun. White pepper is the fruit of the same plant, gathered after it is fully ripe and freed of its external coat by maceration in water. Isidorus says further, "quod immaturum est piper longum vocatur." (Orig. xviii, 8.) It is now ascertained that the *Piper longum* is a distinct species. Frequent mention of the peppers is made in the Hippocratic treatises. (De Morb. Mul., &c.) Dioscorides gives an excellent account of the pepper, and on the whole a very correct one, except that he does not recognize the *P. longum* as a distinct kind from the black and white varieties. He says of it in general terms, that it is calefacient, diuretic, digestive, and detergent of obscurities of the cornea, and recommends it in a great variety of cases, beginning with its use as a remedy in intermittent fevers. (ii, 188.) The use of peppers for the cure of intermittents is strongly recommended by Stephanus in his commentary on Galen. (Therap. ad Glauc.) Celsus prescribes pepper for a great many purposes, as being calefacient, diuretic, opening the pores, &c. (v, 4, &c.) Galen, in treating of the pepper in his work on Simples, merely says of its medicinal powers, that it is strongly calefacient and desiccative. Aëtius and the other Greek authorities copy from Galen. Avicenna treats separately of the *Piper* and the *Piper longum*, and although in one place he quotes Galen as saying that the latter is a variety of the former, he speaks of them as if he held them to be distinct plants. He says of the former, that it increases the appetite, promotes digestion; and of the other, that it is aphrodisiac. He says the white kind is the most stomachic; but the long the most laxative. On the whole, he agrees with Dioscorides and Galen as to its medicinal uses. (ii, 2, 549, 550.) See further Serapion (c. 357), Rhases (Cont. l. ult. i, 556), Averrhoes (Collig. v, 42.)

Πέπων,

Pepo, *Pompion*, is possessed of detergent powers. Hence that part which is as it were the flesh of it, cleanses away freckles and the like. But the seed of it removes obstructions of the kidneys.

COMM. COMMENTARY. It appears to be the *Cucurbita Pepo*, L. See Book First, sect. 80. Alexander mentions that the seed of the pepo is possessed of an emetic quality. (vii, 14.) Dioscorides and Avicenna agree in ascribing the same property to its root. The Arabians treat of this article at considerable length, recommending it externally as an application to obstinate diseases of the skin; and internally as an excellent diuretic and laxative medicine. See Avicenna (ii, 2, 89), Rhases (Cont. l. ult. iii, 20), and Serapion (De Simpl. 251.) It is clear from Avicenna's section on the *Pepo*, that the term was also applied to the melon. Indeed, as we have stated more than once before, it is difficult to distinguish the summer fruits of the ancients from one another.

Περικλύμενον,

Periclymenon, *Woodbine*; the leaves and fruit are possessed at the same time of incisive and heating powers, so as to occasion a discharge of blood by urine when drunk for seven days. The seed is desiccative, and if drunk for forty days, relieves affections of the spleen and dyspnœa.

COMM. COMMENTARY. There can be no doubt that it is either the *Lonicera periclymenum*, or the *L. caprifolium*, that is to say, either the Woodbine or the Honeysuckle. Sprengel decides in favour of the latter. Dioscorides recommends it in nearly the same cases as our author, and also says of it, that it accelerates delivery in labour. (iv, 14.) Our author's account of it is condensed from Galen. It is not found in the works of Celsus. The Arabians give rather a confused account along with other climbing plants. See Serapion (c. 41.)

Περιστερεών,

Verbenaca, *Vervain*, is so desiccative and astringent that it agglutinates wounds, and therefore stops hemorrhage.

COMM. COMMENTARY. It is undoubtedly the *Verbena officinalis*. According to Apuleius, it is styptic, agglutinative, and abstergent. He recommends it as an application to the bites of serpents, phalangia, and mad dogs. Dioscorides, and most of the succeeding authorities down to Macer, recommend it internally for the cure of jaundice, and externally for foul ulcers. He describes two species, of which the second is the *Verbena*

supina. (iv, 60, 61.) Galen describes only one variety, and merely recommends it as being a vulnerary herb. Ebn Baithar's description of this plant is entirely made up from Dioscorides and Galen. (i, 498.) We are inclined to think that it is the plant described in the translation of Avicenna under the names of *Pastus columbarum*, s. *palea*. He recommends it as an application to erysipelas. (ii, 2, 551.) See also Rhases (Cont. l. ult. i, 530.) On its use by the Hindoos, see Ainslie (Mat. Ind. ii, 314.)

COMM.

Περσαία,

Persica (*the Peach?*), is an Egyptian tree, the leaves of which are desiccative and astringent, and therefore stop hemorrhage.

COMMENTARY. It has been generally acknowledged as the *peach tree*, but, as Alston and Woodville state, this supposition is attended with many difficulties. Sprengel is by no means decided; but, upon the whole, inclines to the *Cordia Myxa*. With this opinion we are not disposed to agree, as we have stated in another place. See under *Myxa*. We would hesitatingly, then, admit it as the *Persica vulgaris*, Miller. Dioscorides merely recommends the dried powder of the leaves as a good styptic in cases of hemorrhage. Galen and the other Greek authorities give the same character of it. The Arabians, in like manner, follow Dioscorides. See Avicenna (ii, 2, 22.)

COMM.

Πετασίτης,

Petasites, *Butter-burr*, is of the third order of desiccants; hence it is used for ill-conditioned and phagedænic ulcers.

COMMENTARY. Dioscorides's description of this plant with its petasiform leaf, leaves no doubt of its being the *Tussilago petasites*. He recommends it only for malignant and phagedænic ulcers (iv, 106.) Galen and the other Greek authorities say the same of it. We have not been able to find it in the works of any of the Arabians except Ebn Baithar, who, under this head, merely gives extracts from Dioscorides and Galen. It is still used by the country people as an application to foul ulcers. It was retained in the Dispensatory as late as the time of Quincy.

COMM.

Πετροσέλινον,

Petroselinum, *Stone Parsley*; the seed is hot and desiccative in the third degree, being incisive; and hence it occasions copious urinary and menstrual discharges. It is also carminative.

COMM.

COMMENTARY. It is the species of Parsley called the Macedonian, and known by the different botanical names of *Petroselinum Macedonicum*, *Bubon Macedonicum*, and *Athomanta Macedonicum*. As Miller remarks, "the Macedonian parsley is a stranger to our country, and not to be found except in curious botanical gardens." (Gardener's Dictionary.) It is cultivated, however, on the continent, and its seeds are still to be found in the shops of our apothecaries. See Gray (Suppl. to Pharmacop. 79.) It had not wholly disappeared from our English Dispensatory in the time of Quincy (145.) Our author borrows his characters of it from Galen. Dioscorides says its seeds are fragrant, aromatic, diuretic, and emmenagogue; that it is beneficial in flatulence of the stomach and colon, and in tormina, for pains of the side, of the kidneys, and of the bladder when taken in a drink; and that it is an ingredient in diuretic antidotes. (iii, 70.) It occurs in the works of Celsus, who mentions it as an ingredient in a confection for colic, and in other cases. (iv, 14, &c.) Galen has a curious passage on the places where this plant was cultivated for the market in his time. (De Antidot. i.) The Arabians in general treat of it along with other species of parsley under the head of *Apium*. See Avicenna (ii, 2, 55); Serapion (c. 290); Rhases (Cont. l. ult. i, 69); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 388.) The Arabians do little more than repeat the characters of it given by their Grecian masters.

Πευκεδανόν,

Peucedanum, *Hog's-fennel*; we use the concrete juice and sap as being considerably heating, discutient, and attenuant, both when smelled to and in a potion for affections in the lungs and chest occasioned by thick humours, and also for scirrhus spleen. When put into a tooth eaten with caries it straightway allays the pain; and it agrees with nervous affections. The root promotes the exfoliation of scales of

bones, and cures ill-conditioned ulcers, proving calefacient and desiccative in the third degree.

COMMENTARY. It appears to be the *Peucedanum officinale*, COMM.
 Angl. Hog's-fennel, or Sulphur-wort. Dioscorides gives a very correct account of this plant, and of the well-known gum, or rather resin, which exudes from it. He says the gum is possessed of a strong smell, is of a tawny colour, and heats the taste, and when rubbed in along with vinegar and rose oil proves beneficial in cases of lethargy, phrenitis, vertigo, epilepsy, chronic headaches, paralytic attacks, sciatica, and convulsions, and in all nervous affections when rubbed in with oil and vinegar; that when smelled to it rouses from hysteric convulsions, and from catalepsy, &c. He speaks also of its being efficacious in coughs, dyspncea and tormina; says that it loosens the belly gently, reduces swelling of the spleen, and greatly assists in cases of difficult labour; that it is useful in pains of the kidneys and in those of the bladder, and that its root is useful for the same purposes, but is less energetic. (iii, 182.) Galen also has a very interesting section on this article in his work 'On Simples,' explaining its action upon the principles of his system. Aëtius, like our author, follows Galen. Celsus recommends it in pains of the joints as an external application. (211, ed. Milligan.) The Arabians give it the same characters as the Greeks. See Avicenna (ii, 2, 86); Serapion (c. 286.) The root and gum resin of *peucedanum*, although now rejected from our Dispensatory, are still to be found in the shops of the apothecaries, where they retain their ancient characters. See Gray (Suppl. to Pharmacop. 80.)

Πεύκη,

Picea, the Pitch Tree, has similar powers to the pine, but more moderate.

COMMENTARY. We think there is no doubt that it is the COMM.
Pinus Cembro, L., or Apherousli pine. The fruit of it, namely, the Cembro nuts, are called *στρούβιλοι* by the Greek authorities. Dioscorides says when drunk with must or the seed of cucumber they are diuretic, and allay irritation of the bladder, kidneys, and stomach. Taken fresh from the tree and bruised, and boiled in must, he says, they suit old and consumptive coughs. (See further under *πίτυς*.)

Πήγανον,

Ruta, *Rue*; the wild belongs to the fourth order of calefacients and desiccants; but the cultivated to the third, dividing and discussing the thick and viscid humours. It also promotes the urinary discharge, and is composed of subtile parts and carminative; hence it restrains venereal appetites.

COMM. COMMENTARY. The wild rue is the *Peganum Harmala*, L. The other species is the *Ruta graveolens*. According to Florentinus, it kills the foetus in utero (Geopon. xii, 25.) Dioscorides's two chapters on the Peganum are so long that we can scarcely attempt an abstract of them. Both species, he says, are caustic, calefacient, ulcerative, diuretic, emmenagogue, astringent, and alexipharmical. (iii, 45, 46.) It occurs in the Hippocratic treatises, and in the works of Celsus. Our author abridges the interesting account of it given by Galen. The Arabians treat of the two species very elaborately, but in the main follow Dioscorides. See Avicenna (ii, 2, 571); Serapion (c. 300); Averrhoes (Collig. v, 42.) We may just mention that the *Ruta graveolens* still retains its place in our Mat. Med., and that the seeds of the other, *Peganum Harmala*, are still kept in the shops. See Gray (Suppl. to Pharmacop. 116.) The Turks use its seeds as a spice, in like manner as they were used in the time of Pliny. (H. N. xx, 51.)

Πίσσα,

Pix, *Pitch*; dry pitch is desiccative in the second degree, but less calefacient, while the liquid is contrariwise. They have some detergent and digestive powers, and also discutient and acrid. They therefore remove leprous nails, cleanse lichen, and digest swellings. But the liquid is more powerful, so as to be serviceable in a linctus for asthma and empyema. The dry is more agglutinative of wounds.

COMM. COMMENTARY. Pliny says of pitch, "Phthisicis etiam cyathi mensura quidam dederunt, et contra veterem tussim." (H. N. xxiv, 24.) Averrhoes also recommends it in such cases. (Collig. ii, 42.) See, however, more fully on the virtues of pitch, Dioscorides (i, 94), who recommends the liquid pitch in phthisis, empyema, coughs, asthma, and cases of difficult expectoration; also as an external application to leprous nails, hard tumours of the utcrus, fissures of hands and feet, &c.

The liquid pitch of the ancients was evidently tar; the dry COMM.
 was the same boiled until it became hard. The latter is often
 called *παλιμπίσσα*. See Dioscorides (i, 94, 97) and Pliny
 (xxiii, 1.)

Πισσέλαιον,

Oleum picatum, Pitched Oil, is formed from liquid pitch consisting of a more attenuate substance than it.

COMMENTARY. According to Sprengel, the π. of Dioscorides COMM.
 is the same as *Tar-water*, so celebrated as the grand panacea
 by Dr. Berkley in his ingenious work called ‘*Siris*.’ It is
 called *ὄροπίσση* by our author in another place. (iii, 74.) The
Pissaspphaltum of the ancients, according to Dr. Hill, was the
Pix Mineralis, or Earth Pitch of the moderns.

Πιστάκια,

Pistachia, Pistachio Tree; its fruit when eaten is moderately stomachic, and removes obstructions of the liver, and more especially a decoction of the light and aromatic parts of it in wine. It also relieves those who have been bitten by reptiles.

COMMENTARY. We have treated of the *Pistachio nuts* in COMM.
 the First Book. They are the fruit of the *Pistachia vera*. It
 is hardly worth while to give the opinions of the other author-
 ities under this head, as none of them supply any additional
 information to that given by our author. See Dioscorides
 (i, 167.) We may just mention in this place, that the oil of
 pistachio nuts was much used as an application to the cica-
 trices of small-pox. See Rhases (Contin. xxxii, 2.)

Πινυίδες,

Pityides, the Fruit of Pines, being possessed of mixed powers, the astringent and acrid, hence it assists expectoration from the chest.

COMMENTARY. Pliny restricts it to the fruit of the *Pinaster* COMM.
 or Wild Pine, but the Greeks apply it to the fruit of all the
 pine tribe. Pliny, like our author, recommends it as a remedy
 for coughs. Here, however, as is usual with him, he merely
 translates Dioscorides (i, 87.) Our author is principally in-
 debted to Galen. (De Simpl. viii.) Celsus places the “*nuclei
 pinei*” in his list of things which are particularly good for the
 stomach. (ii, 24.) The Arabians treat of these under the

COMM. general head of pinus. See in particular, Avicenna (ii, 2, 301) and Averrhoes (Collig. v, 42.) The latter enlarges on the virtues of them beyond his wont, ascribing to them powerful effects in disinfecting a pestilential state of the air, in resisting putrefaction, preventing impregnation, and procuring abortion. He also calls them vermifuge.

Πιτυοκάμποι.

Erucae pinorum, the *Canker-worms of Pines*, are possessed of the same powers with cantharis and buprestis.

COMM. COMMENTARY. We have treated of the *Erucae pinorum* in the Fifth Book. As they were seldom or never used in the practice of medicine, it is difficult to see why they should have been allowed a place in the Mat. Med.

Πίνυος φλοιός,

Pini cortex, the *Bark of Pine*; its prevailing power is astringency, by which it proves a useful application for intertrigo and burns. In a potion it restrains the belly. The leaves of it are also agglutinative of wounds.

COMM. COMMENTARY. It is the *Pinus Pineæ*, L., *Stone Pine*. Our author would appear to have condensed and abridged the more lengthy account of this article given by Dioscorides. He says it is a species of the same genus as the *picea*, and that the bark of both being astringent, is a suitable application to excoriations, to superficial ulcers and burns, with litharge and the manna of frankincense; that it stops hepatic diseases when pulverized with copperas; in a fumigation promotes the expulsion of the foetus and secundines, and in a draught binds the belly and proves diuretic. The leaves he recommends externally as a soothing application in cases of inflammation and toothache, and internally with hydromel in diseases of the liver. (M. M. i, 86.) Of the fruit of pines, and of the torch prepared from it (*δάδιον*), we have treated in their proper places. Galen's notice of this article is to the same effect as our author's. Frequent mention of the pine occurs in the works of Hippocrates and Celsus. The latter recommends its flowers in diseases of the liver. (iv, 8.) The Arabians treat of the pine, and the virtues of the different parts of it, at great length. See Avicenna (ii, 2, 280, 301, 555, 693); Serapion (De Simpl.

63); Rhases (Contin. l. ult. i, 341); Averrhoes (Collig. v, 42); COMM.
 Ebn Baithar (ii, 137.) They borrow freely from the Greeks, }
 and further recommend the different parts of the pine very
 much in diseases of the kidneys and bladder, especially calculus
 and hæmaturia.

Πιτύουσα,

Pityusa; some say that this is a species of spurge, because
 it has a juice and purges like them.

COMMENTARY. There can be no doubt of its being the COMM.
Euphorbia Pityusa. It is briefly noticed by all the other }
 writers on the Mat. Med. as possessing the same virtues as the
 spurges in general.

Πλάτανος,

Platanus, the *Plane Tree*, is possessed of a humectating and
 refrigerant power. Hence the green leaves are of use in in-
 cipient inflammations. But the bark and spherical balls are
 more desiccative, so that when one has been boiled in vinegar
 it relieves toothache. They also cure burns by fire along with
 fat. The burnt bark is more desiccative and detergent, so as
 to cure leprosy and humid ulcers.

COMMENTARY. It is the *Platanus orientalis*, L. The seed COMM.
 forms into spherical balls, which are called *Pilule* by Pliny. }
 He recommends them for the bites of serpents and for burns;
 also when pounded with acrid vinegar, as a styptic for stop-
 ping bleeding. (H. N. xxiv, 29.) Pliny, however, merely
 copies from Dioscorides, who further recommends the leaves
 boiled in wine in defluxions of the eyes, and as an application
 to swellings and inflammations; and its rind boiled in vinegar
 as a gargle in toothache. (i, 107.) Our author is evidently
 much indebted to Galen, who commends it for the same medi-
 cinal purposes, and warns his readers to guard against the
 down which grows on its leaves, as it may prove prejudicial to
 the windpipe, eye, or ear, if admitted into them. (De Simpl.
 viii.) Aëtius, like our author, copies very closely from Galen.
 Not much additional information can be drawn from the Ara-
 bians, who, under this head, do little more than copy from
 Dioscorides and Galen. See Avicenna (ii, 2, 209); Serapion
 (c. 142); Ebn Baithar (ii, 422.)

Πνεύμων,

Pulmo, *Lungs*; those of lambs and swine are believed to cure the skin which has been chafed by shoes. But the lungs of a fox when dried are said to cure asthmatics. The Pulmo marinus, when fresh and pounded, cures gout and chilblains.

COMM. COMMENTARY. Dioscorides, Galen, and Serapion give nearly the same account of the medicinal properties of *lungs*. The *Pulmo marinus* is the species of *Medusa* which bears this scientific name. Our author and all the others follow Dioscorides in defining its medicinal properties. (ii, 39.)

Πολεμώνιον,

Polemonium, *Greek Valerian* (called by some Philetærium), is attenuate and desiccative. Hence some give the root of it in wine for ischiatic disease, dysentery, and scirrhus of the spleen.

COMM. COMMENTARY. It is the *Polemonium cæruleum*, Greek Valerian. It occurs in the Hippocratic treatises (Hippiatr. 108, ed. Basil), but is not found in the works of Celsus. Dioscorides recommends it to be given for the bites of venomous reptiles, for dysentery, dysuria, sciatica, and diseases of the spleen, and also as a masticatory for toothache. He further mentions that it was used as an amulet for the sting of the scorpion. (iv, 8.) Our author copies from Galen, as does also Aëtius. We have not been able to trace it in the works of the Arabians, with the exception of Ebn Baithar, whose account of it is made up entirely of extracts from Dioscorides and Galen. (i, 186.) Though it disappeared from our Dispensatory long ago, its root is still to be found in the shops of our apothecaries, where it retains the character of being astringent, vulnerary, and anti-dysenteric. See Gray (Suppl. to Pharm. 55.)

Πόλιον,

Polium, *Poley*; the smaller, which we use for antidotes, belongs to the third order of calefacients and desiccants. It therefore removes obstructions of all the viscera, and proves diuretic and emmenagogue. While green it agglutinates large wounds, and when dried it cures ill-conditioned ulcers if sprinkled upon them.

COMM. COMMENTARY. The species indicated by our author is evi-

dently the first species of Dioscorides, namely, the *Teucrium Polium*. The other is the *Teucrium Creticum*. Both these plants retained a place in our Dispensatory down to the days of Quincy (118), and both of them are still to be found in the shops of the apothecaries. Gray (Pharmacop. 49.) See further Parkinson (Theatre of Plants, 23), and Ratty (Mat. Med. 402.) Dioscorides says of both, that their decoction taken internally is beneficial to the bites of venomous reptiles, in cases of dropsy, jaundice, and diseases of the spleen along with vinegar; that it loosens the belly and is emmenagogue, but induces headache and is bad for the stomach; that in fumigations and placed below a couch, that they drive away reptiles; and in a cataplasm are vulnerary. Galen, Aëtius, and Oribasius, give them nearly the same characters. Celsus barely notices it once as one of the ingredients in the celebrated theriac of Mithridates. (v, 23.) The Arabians treat of the two species at greater length than the Greeks. See Avicenna (ii, 2, 537); Rhases (Cont. l. ult. i, 558); Serapion (c. 165); Averrhoes (Collig. v, 42.) They agree with the Greeks in considering it diuretic, emmenagogue, and a gentle purgative, and recommend it further as being anthelmintic and a remedy in cases of protracted fever. Serapion, by the way, quotes Dioscorides as calling the polium aphrodisiacal, but there is nothing in the chapter of Dioscorides on the poley to this effect.

Πολύγαλον,

Polygalon, the *Milkwort*, has leaves which are moderately austere. When taken in a draught it seems to engender milk, being of a hot and humid temperament.

COMMENTARY. That it is the *Polygala amara* seems quite certain. Dioscorides and Galen treat of it in nearly the same language as our author. We have not been able to find it in the works of the Arabians except Ebn Baithar, who merely copies Dioscorides and Galen. (i, 186.)

Πολυγόνατον,

Polygonaton, *Solomon's Seal*, is a mixture of astringency, acrimony, bitterness, and a certain indescribable nauseous principle, and therefore it is not much used. Some sprinkle the root of it upon wounds, and clear away spots on the face with it.

COMM. COMMENTARY. It has been usually taken for the *Convallaria Polygonatum*, which has obtained the same character as a medicine in modern works on the Mat. Med. See Ruty (M. M. 403) and Gray (Suppl. to the Pharmacop. 23.) Our author copies almost word for word from Galen, who, in his turn, borrows from Dioscorides. None of the Arabians have noticed it, as far as we can discover, except Ebn Baithar, who merely gives the descriptions of it by Dioscorides and Galen. It is not to be found in the works either of Hippocrates or Celsus.

Πολύγονον,

Polygonon, *Knot-grass*, has some astringency, but a cold watery principle of the second order is what prevails in it. When applied cold externally, it therefore relieves ardor of the stomach, erysipelas, and hot inflammations. Being of such a nature it repels defluxions, and thereby appears to be desiccative. The male is stronger than the female.

COMM. COMMENTARY. Of the two species described by Dioscorides, the mas is undoubtedly the *Polygonum aviculare*, and the feminine probably the *P. maritimum*. How the latter could be the *Hippuris vulgaris*, as several of the older commentators on Dioscorides had supposed, we are at a loss to comprehend. Two plants so dissimilar as the knot-grass and the mare's-tail, could never have been classed by the ancients as male and female. Dioscorides gives a most interesting exposition of the medicinal powers of the former species, but as our author borrows from him, we need not dwell upon the other. It is possessed of an astringent and refrigerant power, and its juice (decoction) is suited to cases of hæmoptysis, fluxes of the belly, chorea, strangury, and so forth. (iv, 4, 5.) Galen taxes Dioscorides with not stating precisely what the particular cases of strangury are in which it is applicable. Otherwise his characters of this article agree exactly with those of Dioscorides and our author. Celsus ranks "herba sanguinalis, quam Græci πολύγονον vocant," among things which are at the same time gently repressing (astringent?) and emollient. (ii, 33.) The Arabians who treat of the polygonum follow Dioscorides. See in particular, Avicenna (ii, 2, 725) and Ebn Baithar (ii, 195.) Our quaint old herbalist Culpeper, under the head of knot-grass, assigns to it exactly the same medicinal virtues as

Dioscorides does to the *Polygonum Mas* and although the *Polygonum aviculare* was ejected from our Dispensatory more than a hundred years ago, it is still to be found in the shops of our apothecaries, where it has the reputation of being "a vulnerary and astringent herb." Gray (Suppl. to the Pharmacop. 42.) COMM.

Πολύκνημον,

Polycnemon, is heating and desiccative in the second degree, so as to agglutinate wounds.

COMMENTARY. It has been supposed to be the *Mentha arvensis*, but nothing is known of it for certain. Nicander notices it in two places. (Alex. 57, and Theriac. 359.) Dioscorides calls it a vulnerary herb, and a remedy for strangury and inward bruises. (iii, 98.) Galen gives the same account of it as our author. The Arabians do not appear to have treated of it. COMM.

Πολυπόδιον,

Polypodium, *Polypody*, is possessed of considerably desiccative powers without pungency. When drunk it purges downwards.

COMMENTARY. Dioscorides says of the root of the *π.* (*Polypodium vulgare*), that it is purgative, and is given to evacuate phlegm and bile; that it makes a good application to sprains and fissures in the hands. (iv, 185.) Galen and the other Greek authorities merely state its properties in general terms, like our author, with the exception of Ruffus, who treats of it more elaborately. He says it evacuates phlegm, bile, and water; that it should be taken in mulse or water before a meal, when it will purge gently, and thus prove an excellent laxative, especially to children; but that in disease it is not a purgative possessed of much efficacy. (Opera, 14.) The Arabians, and especially Mesue, seem to have attached more importance to it. See Mesue (De Simpl. 5); Serapion (c. 248); Avicenna (ii, 2, 535); Averrhoes (Collig. v, 42); Ebn Baithar (i, 227.) Mesue recommends it in joint diseases, colic, hardness of the spleen, fevers connected with black bile, and fissures of the hands. The polypody retained its place in the Dispensatory with its ancient characters as late as the time of Quincy (137), and even in the age of Lewis it had not been wholly

COMM. rejected. (ii, 244.) There seems no good ground for questioning its efficacy as a gentle laxative. See Gray (Suppl. to Pharmacop. 13.)

Πομφόλυξ,

Pompholyx, is desiccative without pungency, so that it is useful for carcinomatous and other ill-conditioned ulcers. It is also an ingredient in ophthalmic remedies.

COMM. COMMENTARY. What this substance was is well stated by a comparatively recent writer on the Materia Medica. Dr. Lewis, treating of zinc, says, "Moderately pure white flowers sublimed from it in the brass or other furnaces, wherein zinc, or its ores are melted with other metals, were formerly kept in the shops and distinguished by the names of pompholix and nihil album." (Mat. Med. ii, 485.) A still later authority on the Pharmacopœia describes it thus: "*Pompholix Nihil album*. Collected in the smelting furnaces wherein zinc ores or brass are melted; used in ointments for tutty." Gray (Suppl. &c. 234.) It is also distinctly described by Geoffroy (Treatise on Fossil, &c. Subst. 185), and by Quincy (201.) The latter writes as if he had been familiar with this article; but it appears singular that the former says that in his time (that is to say, about 150 years ago) it was unknown in the shops. For the ancient authorities on it, see in particular Pliny (H. N. xxiv, 33), and Dioscorides (v, 85.) The latter calls it styptic, cooling, and to a certain extent escharotic. Galen recommends it in carcinomatous and all ill-conditioned ulcers, for those about the parts of generation and anus, and for ocular collyria. (De Simpl. ix.) The Arabians treat of it under the head of Tutia. See in particular Serapion (c. 422); Avicenna (ii, 2, 695); Averrhoes (Collig. v, 43); Ebn Baithar (i, 217.) Hardly one of them does anything more than copy the description of it given by Dioscorides and Galen, only comprehending under one name what the Greeks had delivered regarding pompholyx and spodium separately.

Πορφύραι,

Purpuræ, when burnt are possessed of the same powers as shells. The part which serves as a cover to them when boiled in oil, strengthens hairs that are falling out. When drunk with vinegar, they cure swelling of the spleen. As a fumiga-

tion, they rouse in cases of uterine suffocation, and expel the secundines.

COMMENTARY. The shell-fishes which supply the purple dye. It is got from various fishes, but more especially the *Helix ianthina*, *Murex brandaris* and *trunculus*. For an account of them, see particularly Aristot. (Hist. Animal. v, 14), and Pliny (H. N. ix, 60.) Our author borrows from Dioscorides (iii, 4), and Galen (De Simpl. xi.) We have not been able to detect this article in the works of the Arabian authorities. COMM.

Ποταμογύτων,

Potamogiton, *Pondweed*, is cooling and astringent, like Polygonum, being possessed of similar powers to it.

COMMENTARY. It is the *Potamogiton natans*, L. Dioscorides says of it, that it is cooling and astringent, and is applicable in cases of pruritus, and in spreading and inveterate ulcers. (iv, 99.) In some of the editions of his works, another species is described and recommended in dysentery, colic, and the red fluor of females. It cannot be so decidedly determined. Galen and the other authorities treat of it in general terms, like our author. Such of the Arabians as treat of it borrow from Dioscorides. See Avicenna (ii, 2, 352.) COMM.

Ποτέριον,

Poterrhium, (called by some Phœnium); its roots when cut into slices agglutinate divided tendons and wounds; and the decoction of it when drunk relieves affections of the nerves.

COMMENTARY. Matthioli confesses his ignorance of it. Sprengel is inclined to think that it is the *Astragalus Poterium*, Pall. But Dr. Lindley holds it to be *Astragalus Creticus*. (Veg. King. 548.) Dioscorides says it has stalks like those of tragacanth, and accordingly Linnæus holds this plant to be a species of tragacanth. He recommends it in exactly the same cases as our author. Galen describes it by the name of *Neuras*. We have not been able to detect it in the works of the Arabians. COMM.

Πράσιον,

Marrubium, *Horehound*, is calefacient in the second degree; but more desiccative. It removes obstructions about the liver and spleen, and those of the chest and lungs. It also pro-

motes menstruation. In a cataplasm it is detergent and discutient, and otherwise it is detergent and incisive.

COMM. COMMENTARY. The *Marrubium vulgare*. Dioscorides has an elaborate section on the virtues of this article, which he recommends particularly in phthisical, asthmatic, and catarrhal complaints, as being an excellent expectorant, for promoting the menstrual and lochial discharges, as an alexipharmic, &c. He adds, however, that it is unsuitable in affections of the kidneys and bladder. (iii, 109.) Galen writes thus of it: "Horehound, as it is bitter in taste, so, by general admission, it has the virtue corresponding to that taste, being a deobstruent of the liver and spleen, clearing away matters about the chest and lungs, and promoting menstruation." He also mentions its use in a cataplasm and in other cases, as stated by Dioscorides. Aëtius and Oribasius state its virtues in nearly the same terms. It is the "Marrubium" of Celsus, who prescribes the juice of it in phthisis (iii, 22), in paralysis (iii, 27), in ulcers of the throat (iv, 4), and for other purposes. For the Arabians, see in particular Serapion (c. 198); Avicenna (ii, 2, 553); Averrhoes (Collig. v, 42.) Avicenna recommends it as deobstruent, emmenagogue, and an application to the eyes. Serapion also praises it as a deobstruent, and recommends it particularly in ulcers of the lungs, asthma, and such like complaints. It would seem to deserve the characters which the ancient authorities give it from Hippocrates down to Macer Floridus and Serapion. See Ruttý (Mat. Med. 309.) Even yet it holds a place in the Dispensatory.

Ποράσον,

Porrum, *Leek*, consists of unwholesome juice and is acrid; but Dioscorides says, that it induces disagreeable dreams, agrees well with the bowels, is diuretic and attenuant. It is also detergent, for it proves expectorant when boiled in ptisan. The seed of it is mixed with nephritic remedies. But the leaves have some astringency, and therefore the juice of it proves styptic.

COMM. COMMENTARY. Without doubt it is the *Allium Porrum*, L. Diphilus, as quoted by Athenæus says, "it is attenuant, nutritious, and flatulent." (Deipnos, ix, 3.) Dioscorides recommends it in the cases enumerated by our author, and also

in several others. (ii, 178.) Galen does not treat of it at all in his work on Simples. The Arabians attach more importance to it, recommending it as being emmenagogue, diuretic, aphrodisiac, and so forth. They say of it that it hurts the eyes, the gums, and the teeth. See in particular Avicenna (ii, 2, 540); Rhases (Cont. l. ult. i, 562); Serapion (c. 361); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 339.) COMM.

Πρίνος,

Ilex, the Holm Oak, has powers resembling those of the oak, but it is much stronger.

COMMENTARY. It is the *Quercus Ilex*, or *Evergreen Oak*. All the authorities speak of it as being a powerful astringent. The *Kermes*, or *Scarlet Grain* is produced upon the ilex by a certain class of insects. It is described by Theophrastus and Pliny, as stated under that head. COMM.

Πρόπολις,

Propolis, *Virgin-wax*, or *Bee-glue*, is calefacient in the second degree and moderately detergent. It is also possessed of attenuant and deobstruent powers.

COMMENTARY. Scribonius Largus calls it, "Propolis quam quidam sacram ceram vocant." Dioscorides and Galen give nearly the same account of *Bee-glue* as our author. It is the glutinous substance with which the working bees block up the holes in their hive. They gather it from poplars and other resinous plants. It occurs frequently in the works of the ancient writers on Pharmacy. COMM.

Πταρμική,

Ptarmica, *Sneezewort*; the leaves are sternutatory; but the whole part, when green, removes hypopion and other kinds of ecchymosis, for it is hot and desiccative. The green belong to the second order, and the dried to the third.

COMMENTARY. Dioscorides's description of it agrees well with the *Achillea Ptarmica*, except that (as is remarked by Sprengel) its favorite locality is meadows, and not mountainous and rocky situations as indicated by Dioscorides. All the Greek authorities, from Dioscorides downwards, give it exactly the same characters as our author. We have not been able to COMM.

COMM. discover any traces of it in the works of the Arabians. Its leaves are still kept in the shops of apothecaries, and are held to be sternutatory. Gray (Suppl. to Pharm. 80.)

Πρελαία,

Ulmus, *the Elm*, is possessed of desiccative and detergent powers, so as to agglutinate wounds; but the bark of it still more, if, when in a fresh state, it be wrapped like a bandage about the wounds. It also cures leprosy with vinegar, and the roots of it are possessed of the same powers, so that fractures which will not unite are to be bathed with the decoction of it.

COMM. COMMENTARY. Most probably the *Ulmus campestris*. Our author's statement of its medicinal virtues is closely copied from Dioscorides (i, 112.) Galen and most of the authorities represent it to be an agglutinative medicine. Pliny, like the others, recommends it as an application to leprosy. No mention of it occurs in the works of Celsus. The Arabians treat of it fully, but in the main follow Dioscorides. See Avicenna (ii, 2, 71, 96, 212); Rhases (Cont. l. ult. i, 250.) They recommend it in all cases requiring astringents and abstergents.

Πτερίς,

Filix, *Fern*, is desiccative in its powers, and bitter. Hence it destroys the fetus, and kills the broad intestinal worm when taken to the amount of four drachms in honeyed water. Because it is moderately astringent, it dries up ulcers without pungency.

COMM. COMMENTARY. Apuleius says, "Græci pterin, Latini filicem nominant." (De Herbis.) We need not hesitate to refer it to the *Aspidium Filix Mas*, which has been long celebrated as a vermifuge medicine. See Book IV, 67, of this work, and Ruttý (Mat. Med. 201.) Dioscorides recommends it merely as an anthelmintic medicine, and as one which is calculated to promote convalescence in diseases of the spleen. For the former purpose he directs it to be given with scammony or white hellebore, along with a diet consisting principally of garlic. (iv, 183.) Galen acutely remarks, that there is no wonder that it should be anthelmintic, seeing it is possessed of a bitter taste with some astringency. None of the other

Greek or Arabian authorities supply any additional information respecting it. See in particular Avicenna (ii, 2, 620); Serapion (De Simpl. 56.) The "filicula" of Celsus (ii, 12) would appear to us to have been rather the Polypodium than the Filix Mas. In the modern Greek Pharmacopœia it is marked as being the *Aspidium Filix Mas*. COMM.

Πυκνόκομον,

Pycnocomon, is possessed of discutient, attractive, and acrid powers. The leaves of it, therefore, discuss phyma and furunculus. The fruit, in addition to these properties, also extracts sharp-pointed weapons. Its root purges yellow bile.

COMMENTARY. Although Dioscorides has given a pretty minute description of it, there are few articles in the ancient Mat. Med. about which there is so much uncertainty. See the Index Latinus to Parkinson's 'Theatre of Plants,' and Sprengel (in Dioscor. iv, 173.) The latter decides that it is neither the *Leonurus Marrubiastrum* nor the *Succisa pratensis* as had been supposed. Whether it may be the *Cephalaria Pycnocomon* we are unable to determine, as we have no acquaintance with this plant. Our author borrows his medicinal characters of it from Dioscorides (l. c.) Galen does the same. The Arabians have not noticed it, as far as we can discover. COMM.

Πύρεθρον,

Pyrethrum, *Pellitory*; the root has caustic powers, and allays the pain of teeth affected with cold; and before the occurrence of periodical rigors it is rubbed in with oil, and relieves those who are affected with torpor and paralysis.

COMMENTARY. It seems to be the *Anthemis Pyrethrum*, although Sprengel is not quite satisfied. It was much used in stimulant embrocations. Dioscorides, Galen, Macer, and Serapion, and, in a word, all the authorities, recommend it strongly as a phlegmagogue for toothache. Dioscorides says further of it, that when rubbed in with oil, it is sudorific, being serviceable in chronic rigors, for parts which have lost their natural heat and are paralysed. (iii, 37.) Celsus also mentions it in a list of stimulants, to be applied externally for toothache (vi, 9), and ranks it among his caustics. (v, 8.) The Arabians treat of it at considerable length, but borrow much COMM.

COMM. from Dioscorides. See in particular Avicenna (ii, 2, 547); Rhases (Cont. l. ult. i, 553); Averrhoes (Collig. v, 42.) They all in particular recommend it as a sialogogue in cases of toothache. We need scarcely remark that the pellitory (now called *Anacyclos Pyrethrum*) still holds its place in the Dispensatory as a sialogogue and masticatory. We see no good reason, therefore, for questioning its identity with the pyrethrum of the ancients, more especially as it still retains a place in the modern Greek Pharmacopœia.

Πυρρός,

Triticum, *Wheat*, is heating in the first degree, but is intermediate between dry and humid substances. It is also somewhat glutinous and emplastic.

COMM. COMMENTARY. Without doubt it is the *Triticum æstivum*. We have treated largely of it among the dietetical articles in the First Book, and have also treated of the farina, leaven, and pollen of wheat separately. We need not, then, enlarge further upon this article at present.

Πιρῶα,

Coagulum, *Rennet*; all sorts of it are possessed of acrid, attenuating, discutient, and decidedly desiccant powers. But that of hares is represented as curing epilepsy if drunk with vinegar, and as curing the female discharge, and proving a solvent of coagulated milk in the bowels, and of blood in like manner. Some say that it restrains spitting of blood from the chest. The rennet of a horse is described as proving serviceable in cæliac and dysenteric affections. That of the seal is said to have the properties of castor.

COMM. COMMENTARY. Our author's account of the medicinal properties of *Rennet* is taken from Dioscorides and Galen. Indeed he has copied from the latter almost word for word. The Arabians treat of the rennets very fully and with much judgment. See in particular Rhases (Cont. l. ult. i, 221); Avicenna (ii, 2, 115); Serapion (De Simpl. 444); Ebn Baithar (ii, 604.) They follow Dioscorides very closely, among other things recommending rennet to be applied on a pessary for promoting the menstrual discharge, and for the hysterical convulsion. All rennets, they say, are alexipharmic, and especially those of

the kid, of the antelope, and of the camel. As stated by us COMM.
 in the Fifth Book, the ancients administered rennet in cases
 of poisoning with curdled milk. It appears remarkable that
 an article unquestionably capable of being applied to so many
 medicinal purposes as rennet, should have been entirely ex-
 cluded from our modern Dispensatories.

Ῥακός,

Panniculus, *Rags*; when those from wool are burnt they
 have similar powers to burnt wool. Linen, when burning,
 sends forth a subtile smoke, so as to prove deobstruent in
 catarrhs, and agree with risings of the womb. When burnt,
 its powers are nearly the same as those of wool.

COMMENTARY. These things are so well known as not to COMM.
 require further illustration.

Ῥάμνος,

Rhamnus, *Buckthorn*, is desiccative in the second degree,
 but cooling in the first. Hence it cures herpes and erysipelas
 when not very hot. Its tender leaves are to be used.

COMMENTARY. This appears to be the first species of COMM.
 Dioscorides, which we may decide to be the *Lycium Europæum*.
 The second is the *Lycium Afrum*. The third is not well ascer-
 tained, but probably is a species of *paliurus*. See Parkinson
 (Theatre of Plants, 1006), and Sprengel (Ad Dioscor. i, 119.)
 Dioscorides recommends the leaves of all the three kinds for
 herpes and erysipelas, and also mentions that the twigs of them
 were placed in doors and windows to avert sorcery. (i, 119.)
 Galen and the other Greek authorities treat of this article in
 nearly the same terms as our author. Pliny recommends it
 as a cooling and refrigerant application. (H. N. xxiv, 76.) The
 Arabians borrow their account of it entirely from Dioscorides and
 Galen. See in particular Serapion (De Simpl. 236); Rhases
 (Cont. l. ult. i, 591); Avicenna (ii, 2, 345); Ebn Baithar (ii,
 223.)

Ῥάφανος,

Rhaphanus, *Radish*, is heating in the third degree, and de-
 siccative in the second. The wild is more powerful. The
 seeds of both are stronger, and therefore they discuss hypopion
 and other lividities.

COMM.

COMMENTARY. Dioscorides, like our author, describes two species, of which the former is certainly the *Rhaphanus sativus*, and the other probably the *R. maritimus*. Dioscorides gives so long a catalogue of the medicinal properties of the former or common radish, that we can scarcely venture upon an exposition of it. He says of it, that its seed is emetic, diuretic, and a cleanser of the spleen, when drunk with vinegar; that it is beneficial in cynanche, and alexipharmic both when taken internally and applied externally. Florentinus (Geopon. xii, 22) and Pliny (H. N. xx, 13) praise the radish as an antidote to poisonous substances and venomous animals. It was much used by the ancients as an emetic, and for this purpose it was taken before a meal as described by Celsus. (i, 3.) See also Dioscorides (l. c.) and Pliny (l. c.) Hence it is frequently prescribed by Nicander, as a remedy in the case of poisoning, as in that by henbane, and in that by mushrooms. It is also recommended in these and similar cases by Scribonius Largus (Compos. 198.) The radish we are confident is the "radicula" of Celsus, who prescribes it for various purposes, as being laxative, diuretic, and, as we formerly stated, emetic. (See Vol. II, 31, &c.) The Arabians attach much importance to this article, but do not supply much information regarding it but what they acknowledge to be derived from the Greeks. See Serapion (c. 307); Avicenna (ii, 2, 574); Rhases (Cont. l. ult. i, 571); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 246.) They agree in stating of it, that taken before other food it renders vomiting easy; and after food that it loosens the bowels. All recommend it in cases of poisoning. They also prescribe it as a deobstruent in obstructions of the liver and in jaundice. The radishes, the garden and the wild, retain their ancient characters in the works of our old herbalists, and even in the time of Quincy they still held a place in our Dispensatory, although, as he says, "little used in medicine." (i, 5, 409.)

Ῥῆον,

Rheum (called by some Rhâ), is composed of a terrene, cold, and subtile substance, and of a vaporous, hot, and slightly acrid one. Hence it relieves sprains and ruptures, and orthopnoea, and also lividities, by its discutient powers; and by its astringency, spitting of blood, cæliac and dysenteric affections. By both it cures hepatic complaints.

COMMENTARY. Our author manifestly copies from Galen; COMM.
 and whoever will carefully compare his account of it with Dioscorides's chapter on Rhâ, cannot fail to come to the conclusion that both apply to the same substance, namely, the *Rheum Rhapsoticum*. We therefore shall confine our attention in this place to it, reserving to the Appendix what we have got to say on the knowledge possessed by the ancients of the purgative rhubarb. Dioscorides says of it, that its prevailing power is astringency, with a certain degree of heat; and he recommends it to be taken in a draught for flatulence of the stomach, atony, all kinds of pain, spasms, diseases of the spleen, liver, and kidneys, tormina, affections of the chest and bladder, distension of the hypochondria, diseases of the uterus, sciatica, hæmoptysis, asthma, hiccough, dysentery, cæliac affections, intermittents, and the bites of venomous animals; also for lividity and leprosy when rubbed in with vinegar, and for discussing all chronic inflammations in a fomentation. (iii, 2.) Galen's account of it, as already stated, is exactly the same as our author's. Oribasius evidently takes his description of it from Dioscorides; and Aëtius, like our author, as clearly abridges Galen. There is no mention of the *Rhâ* in the works either of Hippocrates or of Celsus. Pliny's description of it (he calls it *Rhacoma*) is manifestly imitated from Dioscorides. (H. N. xxvii, 105.) As already stated, we shall reserve our exposition of the views of the Arabians to the Appendix.

Ῥητίνας,

Resinæ, *Resins*, are all calefacient and desiccative; but the turpentine holds the first place, being discutient, emollient, and attenuating, and also detergent, whereby it cures itch; and that of larch is like to it. The resin of the pitch-tree, and still more that of the wild pine, are more acrid, but neither more discutient nor attractive. Those of the pine and fir hold an intermediate place.

COMMENTARY. On the formation of *Resins* see in particular COMM.
 Theophrastus (H. P. ix, 2) and Pliny (H. N. xxiv, 22.) Pliny thus sums up his account of them: "Summæ species duæ; sicca et liquida. Sicca e pinu et picea; liquida e terebintho, larice, lentisco, cupresso." The *Resina sicca pini* is the *Pix arida* of the Old London Pharmacopœia, or the *Pix Abietina*

COMM. of the New. The *Resina liquida laricis* is now generally called by the name of *Venice Turpentine*. The *Resina lentisci* is well known by the name of *Mastich*. The *Colophonian rosin*, which is often mentioned in this work, is the same as the black fiddler's rosin. The Cypress rosin does not appear to be much known now. Pliny correctly observes that all these resins act on the bowels and the urine. The mode of burning or roasting resin is described by Dioscorides. (i, 93.) He gives a very interesting account of the *resinæ* in general, which he represents to be emollient, calefacient, dissolvent, cleansing, suited for coughs and consumptions, in electuaries by themselves or with honey, clearing away matters from the chest; and as being diuretic, digestive, laxative of the bowels; adapted for the operation on trichiasis (see Book VI, 8), and for leprosy, with verdigris, copperas, and natron; for purulent ears with honey and oil, and for itching of the pudendum. They are mixed, he adds, with plasters, liniments, and acopa, and relieve pleuritic pains either when rubbed in or applied by themselves. (i, 91.) All the other authorities prescribe the resins freely, but none give so full a description of them as Dioscorides. See, however, Celsus (pluries), who appears to have been particularly fond of them. He recommends turpentine rosin with butter and honey in phthisis (iii, 22), in dyspnœa (iv, 4, 2), and in various other cases. Our author's account of them would seem to be principally taken from Galen. The Arabians, as usual, copy from the Greeks, and supply little additional of their own. See Avicenna (ii, 2, 242); Serapion (*De Simpl.* 325); Averrhoes (*Collig.* v, 42); Rhases (*Cont. l. ult.* i, 580, &c.); Ebn Baithar (pluries.) All the *resinæ* here described occur in the modern Greek Pharmacopœia (160, 161.)

Ῥόδα,

Rosæ, Roses, are naturally composed of a watery substance, which is heating, astringent, and bitter. The flowers are still more astringent, and hence are desiccative.

COMM. COMMENTARY. It comprehended the *R. lutea*, Derlech, *R. arvensis*, and probably other species of the *Rosa*, L. Dioscorides gives a careful exposition of the particular uses of *Roses* in medicine. He says they are cooling and astringent. In preparing the flowers for use, he directs the nails or white

portions to be clipped off with a pair of scissors, and the remainder compressed and pounded in a shade in a mortar, until they form into a ball. He recommends them in diseases of the eyes, headache, affections of the ears, gums, anus, and womb, &c., also when sprinkled in powder on intertrigo, and as an ingredient in the ointments called *calliblephara*. (i, 130.) We need not devote time to the exposition of what the other authorities have written on this subject. See Celsus (pluries); Galen (De Simpl. viii, et alibi); Avicenna (ii, 2, 568); Rhases (Cont. l. ult. i, 585); Serapion (De Simpl. 108). The Arabians say of rose-water that it is stomachic and hepatic; and of rose-oil, that it relieves inflammation of the stomach and loss of its tone. They recommend rose-water further both in syncope and in hæmoptysis. Like the Greeks, they make it an ingredient in their collyria to the eyes and eyelids. Rhases and Avicenna give particular directions for preparing an ablution with roses to remove fetid perspiration.

Ῥοδία ρίζα,

Rosea radix, is heating in the second degree, and is attenuating and discutient.

COMMENTARY. The older commentators and herbalists are by no means satisfied that it was the *Rhodiola Rosea*, or rose-wood; but the later authorities are pretty much agreed upon this point. See Sprengel (in Dioscor. iv, 45) and Lindley (Veg. Kingd. 631). Dioscorides merely recommends it along with valerian as an application to the forehead and temple in cephalalgia. The other authorities, like Paulus, are content with barely stating its general characters.

Ῥοιὰ,

Mala Punica, *Pomegranates*; the prevailing quality of all the species of them is an astringent power, by which they act as refrigerants and desiccants. But the sweet have this property in a less degree than the others. The austere are more refrigerant, but are of a drier nature and stomachic. Those which are acid are cooling in a greater degree, but have also something incisive in their nature. The kernels are more astringent and desiccative than the juice, but still more so the

outer membrane or rind called *Malicorium*. The flowers called *Cytini* have similar powers.

COMM.

COMMENTARY. It is evidently the *Punica granatum* L. Woodville says, "Hippocrati arbor audit σίδη unde cortex fructus σίδιον." They frequently occur in the Hippocratic treatises. (De Diæta, ii, &c.) Cytini is generally put for the flowers of the cultivated pomegranate, and balaustia for those of the wild. The bark of the root called malicorium by Celsus was much used. Pliny, like the medical authorities, speaks of them all as being excellent astringents. He recommends them particularly in cæliac affections and hæmoptysis. (H. N. xxiii, 57.) The most interesting of the ancient authorities on this head is Dioscorides, who says of the sweet pomegranate that it engenders heat and flatulence in the stomach, and hence is unsuitable in fevers; and of the acid, that it relieves ardor of the stomach, and is more astringent and diuretic, being unsavoury and styptic; that the vinous has an intermediate nature; that the kernel of the acid pomegranate, when dried in the sun and sprinkled on food and boiled with it, restrains fluxes of the stomach and bowels; that when macerated in rain-water and drunk, it is beneficial in hæmoptysis, and in a hip-bath is suitable in dysentery and other fluxes; and that the expressed juice of the kernels, when boiled and mixed with honey, is suitable to ulcers in the mouth, on the pudendum and anus; for pterygia on the fingers, spreading ulcers, fungus, earache, and complaints in the nose, and more especially those of the acid pomegranate. (i, 141.) He also treats separately of the flowers and the bark, recommending the latter as an anthelmintic medicine. Galen and the other Greek authorities treat of the pomegranate in nearly the same words as Paulus. It would exceed our limits to give a notice of the various cases in which Celsus prescribes this medicine. Suffice it to say, that he calls it stomachic, cooling, and styptic, and recommends the flowers, the bark, and the root for these and various other purposes. For the Arabians see Avicenna (ii, 2, 109, 313); Serapion (De Simpl. 129); Rhases (Contin. l. ult. i, 443); Averrhoes (Collig. v, 42); Ebn Baithar (i, 499). One of Serapion's authorities, Ruffus, recommends the acid pomegranate in cardiac disease, and another, Aben Mesue, in cholera and syncope,

which attends it. All praise it as a stomachic, more especially COMM.
 in the loss of appetite attending pregnancy, and in vomiting. Rhases and Avicenna say that pomegranate wine relieves intoxication. Both the sweet and the acid are held to be diuretic, but especially the latter. The flesh of the sweet purges yellow bile and strengthens the stomach. They all represent the rind as being anthelmintic. On this use of it, see Book IV, 58, and Pereira (Mat. Med. 1101). It has been a question, by the way, whether the malicorium or *σιδιον* of the Greeks, was the rind of the fruit or the bark of the root. We used to think it the former, but the examination of a passage in Avicenna (l. c.) has satisfied us that the latter was also sometimes included. In the modern Greek Pharmacopœia both the bark of the root and the rind of the fruit are described, the term *σιδιον* being restricted to the latter.

Ῥοῦς βυρσοδεψικῆ,

Rhus Coriaria, *Sumach*; the fruit and juice of it come principally to be used by physicians, being considerably astringent and desiccative of the third order, but detergent of the second.

COMMENTARY. It is the *Rhus Coriaria*, or *Elm-leaved* COMM.
Sumach. This also was much used as an astringent. Pliny briefly says of it, "vim habet astringendi refrigerandique." The Arabian writers on husbandry mention that in times of famine bread was sometimes made from sumach. Dioscorides says of it that its leaves are astringent, being applicable in the same cases as acacia. He recommends it in dysentery when given by the mouth, in a lavement and hip-bath, as an injection in cases of purulent discharges from the ears, and for many other practical purposes. He concludes with mentioning that it bears a gum which is put into the holes of carious teeth to relieve pain. (i, 147.) Celsus notices it but once, and then as an application to aphthous ulcerations of the mouth. (vi, 11.) It is mentioned as an astringent medicine and condiment in the Hippocratic treatises. (De Mulieb. and de Liquid. usu.) Galen, and the other Greek authorities after him, merely state its general properties as a medicine. The Arabians treat of it under the name of sumach, which it still retains. See Avicenna (ii, 2, 635); Rhases (Cont. l. ult. i. 695); Serapion (De Simpl. 225); Ebn Baithar (ii, 46, 163.)

Ῥύπος,

The Sordes, from copper statues or vessels, in which a considerable quantity of oil has been kept, having also some verdigris, is discutient, moderately desiccative and emollient. It therefore discusses unconcocted phymata. But the sordes in the palestra (which some call paton), has been described under the head of sweat. The sordes in the ears is said to cure whitlows.

COMM.

COMMENTARY. Sprengel gives a long dissertation on the sordes palestræ. (Ad Dioscor. i, 36.) Suffice it to say in this place that it was collected from the bodies of the wrestlers in the palestra, and consisted of oil, sweat, dust, and any powder used for cleansing the skin. Sprengel, from a passage in the works of Theophrastus (H. P. v, 9), infers that the sordes gymnasiorum were collected from statues made of cedar, but he appears to have overlooked the account of it given by our author, from which it must be obvious that it was collected from statues of copper, or rather of bronze. The sordes balneorum, which is treated of by Dioscorides (i, 34), will be readily understood from the description which we have given in another place (Vol. I, 68), of the preparatory process which the bathers went through before going into the bath. It must have consisted then of human sweat and other impurities extracted from the skin, mixed up with soda, flour of beans, or any other substance used in cleansing the skin by means of the comb (strigil.) Dioscorides says it is heating, emollient, and discutient, and is used as a liniment to fissures and condylomata. These articles are treated of by most of the other authorities. On the sordes palestræ, see in particular Galen. (T. ii, 136, ed. Basil.) For the Arabians see Avicenna (ii, 2, 648), and Serapion (De Simpl. 169).

Σαγαπηνόν,

Sagapenum, *Sagapen*, is the juice of a sort of ferula, being hot and attenuate. It is also somewhat detergent, so as to agree with cicatrices in the eyes and suffusions.

COMM.

COMMENTARY. It has never been disputed, as far as we are aware, that the ancient sagapenum was the same substance as the modern. However, it is not even yet well ascertained by what tree it is furnished, but it is generally supposed to be either the *Ferula Persica* or *F. Szowitsiana*. See Lindley

(Veg. Kingd. 776). We know no more about it, then, at the present day than what was known of it by Dioscorides, who describes it as being the juice of a plant resembling the ferula, having a smell intermediate between the juice of silphium (*assafœtida*) and galbanum. He recommends it for various medicinal purposes; for affections of the chest, epilepsy, hysterical convulsions, for promoting menstruation, and destroying the fœtus in utero; as an alexipharmic, and for dissolving films on the eyes, cataracts, &c. (iii, 85.) Galen, Aëtius, and Oribasius give much the same account of it as our author. Galen says it is the juice of a certain ferula resembling panax. (De Antid. i.) It occurs in the works of Celsus as an ingredient in the famous antidote of Mithridates, and also as an ingredient in one of his collyria. (vi, 6, 24.) For the Arabians see Averrhoes (Collig. v, 42); Avicenna (ii, 2, 629); Rhases (Cont. l. ult. i, 631); Serapion (192); Ebn Baithar (ii, 37.) They recommend it in a good many more cases than the Greeks do. For example, they all say that it is a gentle laxative. Modern authorities, however, have denied that it is possessed of this property. See Hill (Mat. Med.) Ruddy, notwithstanding, seems to agree with the ancients. (Mat. Med. 447.)

Σαλαμάνδρα,

Salamandra, *Salamander*; when burnt its ashes are by some mixed with corrosive medicines and remedies for lepra and scabies.

COMMENTARY. It is the *Salamandra terrestris*. The story of the salamander's being proof against the operation of fire is mentioned by Nicander, Aristotle, and Theophrastus; but the truth of it is questioned by Dioscorides. Sprengel remarks that the real fact is, that the salamander is a black ugly lizard, from whose body a cold viscid fluid is secreted, which may be capable of extinguishing a small coal. Agricola says, its body is as cold as ice, and therefore capable of extinguishing a coal. M. l'Abbé Bonnaterre likewise states that the humour which it secretes from its body prevents the operation of coals from affecting it for a short time. (Encycl. Méthod.) Our author borrows his medicinal character of the salamander from Dioscorides, who says it is possessed of septic, ulcerative, and calefacient powers, like cantharides. (ii. 67.) None of the

COMM. other authorities give any additional information of much interest under this head. The Arabians would appear not to have included it in their *Materia Medica*.

Σάμψυχον,

Sampsuchum (a species of marjoram), is calefacient and desiccative in the third degree. It also consists of subtile parts, and is discutient.

COMM. COMMENTARY. Although Galen and our author distinguish the *Amaracus* from the *Sampsuchus*, there seems no reason to doubt their identity. See Needham (*Ad Geopon.* xi, 27); the *Synonymes* of Dioscor. (iii, 41); and Sprengel (*ibid.*) Dioscorides describes it (*Origanum marjorana*) minutely, and says its decoction is drunk with advantage in cases of dropsy, dysuria, and tormina; that its dried leaves, in a cataplasm with honey, remove saggillations; and that in a pessary it is emmenagogue. He also recommends it as an external application to the stings of scorpions, sprains, cedematous swellings, inflammations of the eyes, and as a calefacient ingredient in acopa and malagmata. (*Ibid.*) Galen and the other Greek authorities treat of it in general terms. For the Arabians, see Avicenna (ii, 2, 466); Serapion (c. 286); Rhases (*Cont.* l. ult. i, 439). They recommend it in the same cases as the Greeks; and also in hemicrania, vertigo, earache, in embrocations and injections. They also speak well of the oil of it as an application in cases of paralysis. The "Thymus Cyprius" of Celsus is set down by C. Bauhin as being the *Thymus mastichius*; but whether it be any other than the marjoram seems doubtful, although Celsus certainly mentions them as distinct substances. (v, 11.) Compare our account of this article with what Quincy says of the marjoram in the 'Complete English Dispensatory' (60.)

Σανδαράχη,

Sandaracha, *Red Arsenic*, is possessed of caustic powers like orpiment.

COMM. COMMENTARY. That it was the sub-species of sulphuret of arsenic, called realgar, namely, "the red orpiment" of Jameson, can admit of no question. In our Appendix to this section, we shall have something to say relative to the sandaracha of the

Arabians. Dioscorides says it has the same general powers as arsenic (yellow orpiment), and recommends it externally in alopecia, leprosy, phthiriasis, hard boils, ulcers in the nose and mouth, other exanthemata and condylomata; and also internally in cases of empyema with mulse; in fumigations with resin in chronic cough, when its steam is inhaled into the mouth by means of a syphon. He concludes by saying of it, that in a linctus with honey it clears the voice, and along with dry pitch makes an excellent pill for asthmatics. (v, 121.) Galen, Aëtius, and Oribasius give but a very brief and general account of it. Celsus places it in his lists of cleansing and corroding substances (v, 5, 6), and often prescribes it as a septic and caustic application. Avicenna treats of the white, the yellow, and the red arsenic in the same chapter. What he says of the last, or realgar, is taken from Dioscorides. (ii, 2, 48.) Serapion also treats of the yellow and red arsenic in the same chapter, and merely gives extracts under this head from Dioscorides and Galen. See further Rhases (Cont. l. ult. i, 610); Averrhoes (Collig. v, 43); Haly Abbas (Pract. ii, 48, 503); Ebn Baithar (i, 527.) The last of these gives an interesting description of three kinds of arsenic, namely, the yellow, the red, and the white. The red of course is the article now under consideration. He says of the yellow and red, that when calcined they become white, and when melted with a certain red ore lose their disagreeable smell. The white is said to be a mortal poison. The yellow and the red he recommends in phagedænic sores of the mouth and nose and elsewhere, and as an inhalation in asthma and orthopnoea.

Σάνδυξ,

Sandyx, or Siricon, consists of subtile parts, and has desiccative powers, but not heating.

COMMENTARY. Galen says that when ceruse is burnt, that is to say, calcined, it becomes sandyx. (De Simpl. ix.) See also Pliny (H. N. xxxv, 23.) He calls it burnt ceruse mixed with an equal proportion of rubrica. See also Alston and Sprengel. Dioscorides treats of it under the same head as ceruse, and describes the process by which the latter is converted into sandyx. The Arabian authorities, in like manner, treat of it along with ceruse. See Serapion (c. 378); Avicenna (ii, 2, 117.) From

COMM. what has been said, then, it will be readily seen that it was merely a peculiar preparation of ceruse.

Σαπρότης ξύλων,

Caries lignorum, *Carious Wood*, and especially that of the elm, cleanses and fills humid ulcers.

COMM. COMMENTARY. Our author's account of the *Caries* or *Rot* of wood is taken from Dioscorides, who recommends it in the same cases as Carbo ligni is now applied, namely, to ulcers, but more especially spreading ulcers. (i, 143.) It is the Lignorum marcor of the Arabians, who recommend it in the same cases as the Greeks. See Avicenna (ii, 2, 617); Serapion (c. 48.)

Σάπων,

Sapo, *Soap*, is possessed of detergent powers.

COMM. COMMENTARY. The first author, we believe, who makes mention of *Soap* is Pliny. He calls it an invention of the Gauls. It is made, he says, of suet and ashes. (H. N. xxviii, 51.) Aretæus likewise calls it a Gallic composition, prepared from soda, and used for cleansing clothes. He recommends it as an application to the skin in elephantiasis. (De Curat. Morb. Chron. ii, 13.) Serapion praises it as an application to abscesses. The only Greek authority which he quotes under this head is Paulus. (De Simpl. 368.) See also Avicenna (ii, 2, 650); Rhases (Cont. l. ult. i, 609, ii, 628); and Ebn Baithar (ii, 119.) One of Baithar's Arabian authorities commends soap in leprosy and scabies; also in favus and the cutaneous diseases of the scalp. Ebn Baithar further gives a very curious account of the process of dyeing the beard by means of a mixture of soap and sandyx. This was a very ancient use of soap, and is frequently alluded to by the classical authors. (Ovid. Ars. Amand. iii, 163.) This subject is treated of very ingeniously by Beckmann in his 'History of Inventions.' The author, however, is mistaken in supposing that there is no mention of soap in the works of Galen, with the exception of that work 'De Simplicibus,' universally admitted to be spurious, whereas Galen frequently makes mention of it in works about the authenticity of which there has never been any question. As for example, (Meth. Med. viii); (De Comp. med. sec. loc. T. ii, 225.) In the latter passage he makes distinct mention of Gallic soap.

Σαρκοκόλλα,

Sarcocolla, is the tear of a Persian tree, being emplastie and desiccative without pungency, and therefore it agglutinates wounds.

COMMENTARY. There is not, we presume, the slightest reason COMM. to doubt that the ancient Sarcocol was the same as the modern, } namely, the gum of the *Penæa Sarcocolla*. Dioscorides mentions only its external use in agglutinating wounds and restraining defluxions on the eyes. (iii, 89.) The Greeks confined the use of it to external applications; but the Arabians sometimes administered it internally as a purge. Thus Serapion, Rhases, and Avicenna say that it purges crude humours and gross phlegm, especially from the joints. They recommend it with honey as an application in diseases of the ear. They say it corrodes putrid flesh, and heals recent wounds, and restores parts that are distorted. See Avicenna (ii, 2, 592); Rhases (Cont. l. ult. i, 617); Serapion (c. 15.) Even as late as the time of Dr. Lewis the sarcocol was still retained in our English Dispensatory with the characters assigned to it by the Greeks and Arabians, Of late years it has been entirely omitted.

Σαρξίφαγες,

Saxifraga, *Saxifrage*, is diuretic and lithontriptic.

COMMENTARY. There has been great diversity of opinion COMM. respecting it, as Sprengel has shown in a very learned dissertation. (Ad Dioscor. iv, 15.) It is, therefore, by no means certain that it is the *Pimpinella Saxifraga*, but we incline to this opinion. Apuleius says that it is lithontriptic, and indeed it appears to have derived its name from this real or supposed property. The chapter of Dioscorides on it is of doubtful authenticity. It is not contained in Galen's work on Simples. We doubt also if it is to be found in the works of the Arabians. Not many years ago the Burnet saxifrage held a place in the Dispensatory with the character of possessing the virtues ascribed to this article by the ancients. See Quincy (147.)

Σατύριον,

Satyrium, or Trifolium, is of a humid and hot temperament, and flatulent; hence it is a provocative to venery. Some say

that it cures opisthotonos when drunk with austere wine; but Galen, in his treatise 'De Theriaca,' says, that the trifolium, which is like the hyacinth, when it becomes pregnant with the spring, has a seed like the wild cnicus, and that when the decoction of it is poured upon the bite of the phalangium or viper it cures the same; but when applied to a sound part, he says, that it induces an affection similar to that of those who have been bitten by one of those creatures.

COMM. COMMENTARY. It is very difficult to determine; and it would be useless to mention the variety of conjectures which have been advanced respecting it. Sprengel inclines to think that it was a species of tulip, and suggests that it probably was the *Tulipa Gesneriana*. This is the species which Dioscorides further distinguishes by the name of *Trifolium*. The other named by him *Erythronium* is probably the *Erythronium Dens Canis*. What confirms this conjecture very much is, the circumstance that the *Dens Canis* is still reputed to be aphrodisiac, as the *Erythronium* is reported to be by Dioscorides. (iii, 134.) See Lindley (Veg. Kingd. 204.) Galen gives nearly the same account of it as our author. The Arabians scarcely appear to distinguish it properly from the orchis, but otherwise they give the same characters of these plants as the Greeks. See Avicenna (ii, 2, 706, 707); Rhases (Cont. l. ult. i, 7, 14.)

Σάυρα,

Lacerta, the Lizard; the liver and head have been treated of in their proper places. When an entire one has been cut in pieces and applied, it cures persons bitten by scorpions.

COMM. COMMENTARY. It seems not unlikely that it may have been the *Lacerta Gecko*. See the translation of Ebn Baithar by Sontheimer (ii, 3), where the chapter of Dioscorides on the Saura, is arranged under this head, along with another to the same effect from Avicenna. Dioscorides, and indeed all the authorities who treat of it, recommend it for the bites of scorpions. Pliny recommends it in complaints of the eyes. (H. N. xxix, 38.) The Arabians recommend it in the same cases as the Greeks, and also say of it, that its liver soothes the pains of toothache, and that its urine and blood are useful in the ruptures of children. See Avicenna (ii, 2, 639.) In the East it is still used medicinally. Ainslie (Mat. Ind. ii, 276.)

Σέλινον,

Apium, *Parsley*, is hot to such a degree that it promotes the urinary and menstrual discharges. It is also carminative and especially the seed of it.

COMMENTARY. There seems little or no doubt that it is COMM.
 the Common Parsley, namely, *Apium petroselinum*, which }
 long held a place in our Dispensatory, and retained in it its
 ancient characters. Dioscorides recommends it in a great
 many cases; for inflammations of the eyes in cataplasms; for
 heat of the stomach; as a diuretic and antidote to venomous
 animals; and for various other medicinal purposes. (iii, 77.)
 Galen and the other Greek authorities merely state its virtues
 in general terms. The Arabians treat of it under Apium, not
 distinguishing it very accurately from its congeners. See
 Avicenna (ii, 2, 55); Serapion (c. 290); Averrhoes (Collig. v,
 42); Rhases (Cont. l. ult. i, 69.)

Σερίς,

Seris, *Endive*, is a bitterish potherb, being considerably refrigerant and diluent. It has also some astringency.

COMMENTARY. It comprehends the *Cichorium Intybus* and COMM.
 the *C. Endivia*. It is now known by the names of the Endive, }
 or Garden Succory. We have treated of it as an article of
 food in the First Book, and as a medicine it is not deserving
 of much notice, after what we have said of its congener under
 the head of *Cichorium*. It was generally held to be a good
 hepatic medicine. See Dioscorides (ii, 125); Galen (De
 Simpl.); Avicenna (ii, 2, 229); Rhases (Cont. l. ult. i. 266.)

Σίριφον,

Seriphon, is heating in the second degree, but desiccative in the first, being like wormwood, only it is less astringent and more calefacient than it. It is also anthelmintic, and to a considerable degree bad for the stomach.

COMMENTARY. From Dioscorides's description we may con- COMM.
 fidently refer it to the *Artemisia maritima*, Angl., *Drooping-* }
flowered Sea Wormwood. Dioscorides gives it exactly the
 same characters as our author, namely, that of being bitterish,
 astringent, and a good vermifuge. (iii, 24.) Galen says of it,
 that it is more powerfully anthelmintic than the absinthium.

COMM. The Arabians treat of it along with the absinthium. It is not to be found in the works of Hippocrates and Celsus.

Σέσιλι,

Seseli, *Hard Meadow Saxifrage* (?) or *Hartwort*; the root, and more especially the fruit, is considerably heating with tenuity of parts, and is also diuretic. It agrees with epilepsy and orthopnoea.

COMM. COMMENTARY. Our author, it will be remarked, gives only one species of Seseli, which there can be no doubt is the same as the Seseli Massiliense of Dioscorides (iii, 53), about which, notwithstanding its being long held to be an important article in the Mat. Med., there is considerable difference of opinion. We, for reasons which we have not room to state, were inclined to refer it to the *Laserpitium Siler*; but the authority of Clusius, Lewis, and Sprengel has determined us to recognise it as the *Seseli tortuosum*. The other two species we are quite satisfied are the *Bupleurum fruticosum* and *Ligusticum Peloponnesiacum*. Compare Sprengel ad Dioscor. (l. c.) with Gray (Suppl. to the Pharm. 80.) Dioscorides represents the first species as being a diuretic, expectorant, and uterine medicine. He says it was given not only to women, but to goats and other animals to assist parturition. Of the other two species, he merely says that they are possessed of the same virtues. Galen, Aëtius, and Oribasius merely give the general characters of the first species, in nearly the same terms as our author. This, beyond dispute, is the "Sil" of Apicius (c. 34), and of Celsus (v, 23.) The latter merely mentions it as an ingredient in the celebrated antidote of Mithridates. (Ibid.) We can find little or no additional information respecting it in the works of the Arabians. See Avicenna (ii, 2, 626); Rhases (Cont. l. ult. i, 654); Averrhoes (Collig. v, 42); Serapion (De Simpl. 190.) Aben Mesuai, one of Serapion's authorities, thus sums up its characters: it is hot and dry in the end of the second degree; cuts and dissolves viscid and congealed phlegm, and therefore opens all the pores and passages which are shut up; provokes urine and the menstrua; and is beneficial in asthma and all cold pituitous ailments. The seeds of seseli held a place in our Dispensatory as late as the times of Quincy (158), and of Lewis (ii, 366.)

Σηπία,

Sepia, the Cuttlefish; its shell has powers like those of an oyster, but is attenuant and more detergent; hence, if burnt, it attenuates pterygium along with fossil salts. When unburnt it clears away sycosis when rubbed upon the part, and proves detergent to the skin.

COMMENTARY. It is the *Sepia Loliyo*, L. We need scarcely mention that the shells of fishes consist principally of lime. As represented by the ancients, therefore, they form a detergent application to the skin. All the authorities recommend it in nearly the same cases, namely, as an ingredient in stimulant collyria, and in obstinate cutaneous diseases, and as a dentifrice. See Dioscorides (ii, 23); Galen (*De Simpl.*); Celsus (v, 29); Aëtius (ii, 190.) Aëtius gives the fullest account of this article. (l. c.)

Σησαμοειδές,

Sesamoides; the seed of the white species heats, is detergent, and procures the rupture of abscesses.

COMMENTARY. This article, which occurs in the Hippocratic treatises, and of which two species, the great and the small, are described by Dioscorides, has been the subject of much controversy. See Parkinson, Sprengel, and Dierbach. We are willing to acquiesce in Sprengel's decision regarding them, namely, that they are the *Reseda Mediterranea* and *canescens*. It appears that they were used principally in combination with hellebore, and that the one evacuated upwards, and the other downwards. (Dioscor. iv, 150, 151.) Ruffus treats only of the small, which he represents to be cholagogue and pblegmagogue, when its seed is taken to the amount of an acetabulum. (*De Med. Purg.*) It does not occur in the works of Celsus, and does not seem to have been much in repute. Galen gives nearly the same account of it as Dioscorides. We have not found it in the works of the Arabians, with the exception of Ebn Baithar, one of whose Arabian authorities speaks of its being used in paralysis. (i, 252.)

Σήσαμον,

Sesamum, Oily-grain, is glutinous and fatty in no small degree; hence it is emplastic, emollient, and moderately calefacient.

COMM. COMMENTARY. All the authorities acknowledge it as the *Sesamum orientale*. Pliny ranks it among the summer corn of India. He says, that an oil is procured from it, and that it forms a good application to burns. (H. N. xviii, 22; xxii, 64.) This account of it in fact is condensed from Dioscorides, who recommends both the plant and the oil in various external complaints, including burns, inflammations of the eyes, the bites of venomous animals, &c. (i, 41, ii, 121); Celsus ranks it among his emollients, and recommends it as an hepatic. (iv, 8.) Galen and Aëtius give nearly the same account of it as our author. The Arabians treat of it at great length, both as an article of food and of medicine. See Serapion (De Simpl. 86); Avicenna (ii, 2, 642); Rhases (Cont. l. ult. i, 650); Averrhoes (Collig. v, 42); Ebn Baithar (i, 254.) They all recommend it for the same purposes as the Greeks, and as a good application to fissures and suggillations.

Σῆψ,

Seps (which some have called the *Chalcidic Lizard*), when drunk in wine cures those who have been bitten by it.

COMM. COMMENTARY. It is called ζύγνις by Aristotle. (H. A. viii, 23), and hence it has got the name of *Zygnis tridactyla*. Solinus says of it, "Ictus sepium putredo sequitur." (Polyhistor. c. 40.) Our author's account of it is taken literally from Dioscorides. (ii, 72.) It is briefly noticed by Aëtius, but we have not found it treated of by any of the Arabian authorities on the Mat. Med. except Ebn Baithar, who merely gives an extract from Dioscorides under this head. (ii, 199.)

Σίαλον,

Saliva; that of men in a fasting state is particularly dis-culent and detergent; it therefore clears away the lichen of children when the parts are anointed with it. It also con-cocts furunculus when applied along with wheat that has been masticated in it. It removes hypopion. It is likewise most destructive to those venomous animals which prove fatal to men.

COMM. COMMENTARY. Our author's account of the medicinal prop-erties of *Saliva* is abridged from Galen, who gives a very elaborate disquisition on the virtues of it. Pliny's statement is

fuller, but contains many superstitious notions. (H. N. xxviii, 71.) Serapion copies from Galen. (c. 447.) It was principally as an application to cutaneous eruptions and sores that the ancient physicians made use of saliva, and it would appear to be not ill adapted to that purpose. Dr. Thomson, in his work on Chemistry, has the following remarks on it: "Saliva has a great affinity for oxygen, absorbs it readily from the air, and gives it out again to other bodies; hence, in all probability, the reason that saliva is a useful application to sores of the skin. Dogs and several other animals have recourse to this remedy, and with much advantage." (Book v, c. ii, sect. 13.) Galen contends strongly that human saliva is destructive to animals, and appeals to Nicander in confirmation of this venomous opinion. He further mentions having seen an instance of a scorpion being killed by human saliva alone. All the Arabian authorities ascribe this virtue to it. See in particular Avicenna (ii, 2, 599, 613); Rhases (Cont. l. ult. i, 602); Ebn Baithar (i, 144.) These all, in fact, do little more than copy from Galen. Redi, in opposition to all the ancient authorities, denies that human saliva is destructive to the viper. "Non nostrum inter eos tantam componere litem!"

Σιδηρίτις,

Sideritis, *Ironwort*, the Heracleean, called also Helxine, has been treated of. The Achillean Sideritis is like to it, but more astringent. Hence it agrees with fluxes.

COMMENTARY. This is one of the articles in the ancient *Materia Medica* which has never been satisfactorily determined. See Parkinson (*Theatre of Plants*, pluries) and Sprengel (*Ad Dioscor.*) The first species of Dioscorides, namely, the *Herculia*, is the same as the Helxine of our author, and has been already treated of. The other two we would hesitatingly set down as the *Sanguisorba officinalis* and *Geranium Robertianum*. The reputation which the latter has enjoyed in modern times, as a vulnerary, appears to us strongly confirmatory of the opinion that it was one of the siderites of the ancients. See Hill (*Mat. Med.* 407) and Lewis (*Mat. Med.* i, 464.) So striking and important an article as the Robertianum is not likely to have escaped the observation of the Greek and Arabian Rhizotomi. Apuleius says that the Latins call it

COMM. Ferraria. Dioscorides commends it as a vulnerary medicine. Galen does the same, and further praises it as an astringent application in cases of hemorrhage, dysentery, and female flux. We find difficulty in discovering traces of it in the works of the Arabians, although we incline to the belief that they have not entirely overlooked it. The burnet is still cultivated in gardens. See Loudon (Encycl. of Garden. 744.)

Σίδηρος,

Ferrum, *Iron*; when frequently extinguished in water it imparts a considerably desiccative power to it. When drunk, therefore, it agrees with affections of the spleen. But, if extinguished in wine, it is useful in cæliac and dysenteric affections, cholera, and resolution of the stomach.

COMM. COMMENTARY. Our author's account of *Iron* is mostly taken from Dioscorides. He says the ærugo ferri astringes, and hence it stops the female flux in pessaries, and when drunk prevents impregnation; when rubbed in along with vinegar it cures erysipelas and exanthema; it is very useful for whitlow, pterygia, asperities of the eyelids, and condylomata; it strengthens the gums, is a useful liniment in gout, and thickens the hairs in alopecia; and he concludes with what our author says of the virtues of water in which heated iron has been extinguished. (v, 93.) Pliny, in like manner, says of it: "Calefit ferro candente aqua, in multis vitiis, privatim vero dysentericis." (H. N. xxxiv, 44.) Celsus commends chalybeate water in enlargement of the spleen. (iv, 9.) Cælius Aurelianus mentions it among the remedies for epilepsy. (Chron. i, 4.) Scribonius Largus calls it a wonderful remedy for diseases of the bladder. (Comp. 146.) The Arabians borrow their account of the ærugo ferri almost entirely from Dioscorides. See Serapion (De Simpl. 403); Avicenna (ii, 2, 247); Rhases (Cont. l. ult. 295.) They give nothing original under the present head. The στόμωμα, according to Pollux, is hard iron, that is to say, steel. The scales or rust of the edges of weapons made of steel were much used by the ancient physicians, both internally and externally, as astringents and styptics. See a full account of their medicinal properties in Pliny. (H. N. xxxiv, 66.)

Σκῦρος,

Cucumis, the Cucumber; the esculent, when green, is cooling and diluent in the second degree; and the flesh of it soothes hot inflammations. The seed is detergent and incisive, promotes the discharge of urine, and clears the body. But when dried, both the seed and root prove desiccative in the first order, and more detergent. The juice of the fruit of the wild cucumber is called *Elaterium*. That of the root and leaves is like to elaterium, but weaker. The root is detergent, discutient, and emollient, but the juice is desiccative.

COMMENTARY. We have already stated more than once that the Σ. of the Greeks or *Cucumis* of the Latins was applied to several species of the summer fruits. Our author, we presume, applies it here to the *Cucumis sativus*. His account of its medicinal qualities is abridged from Galen. Dioscorides calls the seed of the *Cucumis sativus* moderately diuretic, along with must answering well in ulcerations of the bladder, and says that its leaves, in a cataplasm with wine, are useful in the bites of dogs. The Arabians give the same account of it, but evidently mix it up with the characters of the gourd, as given by their Grecian masters; it is, therefore, almost impossible to discover when they are treating of the one and when of the other. See Avicenna (ii, 2, 89); Serapion (De Simpl. 143); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 260.) The seeds of the cucumber long held a place in our modern Dispensatories, and were ranked as one of the greater cold seeds. See Quincy (107) and Lewis (Mat. Med. i, 380.) *Elaterium*, or the fruit of the wild cucumber, was much used by the ancient physicians from Hippocrates downwards. Theophrastus and Pliny affirm that it is the most durable of all medicines, and that it had actually been known to retain its virtues for two hundred years. It was given internally as a hydragogue, and applied externally in cases of lichen, scabies, impetigo, and the like. Of it, however, we have treated fully under *elaterium*, as a medicine in this section, and as a poison in Book V (64.) Dioscorides gives an account of the virtues of its leaves and roots, the juice of which he recommends as an external application in leprosy and other cutaneous diseases, and as an hydragogue and cholagogue in dropsy. Galen treats

COMM. of them in more general terms, like our author. Ruffus says its root is suitable to dropsical cases. It is the *Cucumis sylvestris*, seu *asininus*, of the Arabians, who treat of all parts of it at great length. See Avicenna (ii, 2, 177); Serapion (c. 204); Rhases (Cont. l. ult. 143); Averrhoes (Collig. v, 42); Haly Abbas (Pract. ii, 54, 567); Ebn Baithar (ii, 210.) One of Rhases's authorities says, that in a pessary the wild cucumber kills the fœtus. Another of them says an external application of it to the head is of great use in headaches. Haly Abbas recommends it as a purge in paralysis and colic. One of Serapion's authorities is an Arabian, named by him Habix, who gives a very interesting account of the wild cucumber, which he describes as being more sharp and bitter than the wild gourd.

Σίλλυβον,

Sillybum, is a thorny shrub, like the white chamæleon, but edible. The juice of the root of it, when drunk with honeyed water to the amount of a drachm, is emetic.

COMM. COMMENTARY. Matthiolus admits that it was totally unknown to him. Is it not the *Carduus Mariæ*, or *Common Milk-thistle*? See Alston (Lectures) and Parkinson (Theatre of Plants, 976.) Sprengel joins Lobelius in acknowledging it as the *Sillybum marianum*, Gaertn. Harduin makes it to be the *Cardo Marie* of the Italians. (Ad Plin. xxxvi, 25.) Pliny says of it, that its concrete juice evacuates bile. (H. N. xxvi, 25.) Our author's character of it is taken from Dioscorides (iv, 156.) None of the other authorities give any more distinct description either of the plant itself or of its virtues. Galen has omitted it altogether, and we have not been able to find it in the works of the Arabians, unless it be the plant treated of by Serapion. (c. 305.) Though this article (supposing it actually to be the *Carduus Marianus*) has long ceased to hold a place in our Dispensatory, it would appear that it is not wholly unknown to the shops of the apothecaries. See Gray (Suppl. to Pharmacop. 64.) An eminent authority of his day, Crantz, describes the *Carduus Mariæ* as being sudorific, diuretic, and deobstruent, and a remedy to ill-conditioned sores. (Mat. Med. ii, 157.) It must be admitted that this character does not well agree with that of the *Sillybum* as given by Dioscorides.

Σιλουρος,

Silurus, *the Shad-fish*, pickled and eaten, clears the trachea when in a humid state. In a cataplasm it extracts sharp weapons of wood.

COMMENTARY. Artedi calls it, *Silurus cirris quatuor in mento*,—γλανις (Aristot.); *glanus et glanis* (Plin.); Angl. *“the Sheat-fish”* (Descr. spec. pisc.) In the Linnæan arrangement it is called *Silurus glanis*. We have treated of it as an article of food in Book I. Dioscorides recommends it as a medicine in the same cases as our author, and also says of it that its brine is useful in dysenteric affections as a hip-bath, by determining the defluxion to the surface, and that in clysters it cures sciatica. (ii, 29.) We have not been able to find any account of it in the works of the Arabians, with the exception of Ebn Baithar, who gives a pretty full account of it from both Greek and Arabian authorities. (i, 245.)

Σιλφῆ,

Blatta Pistrina, or the moth found in bakers' shops, the entrails of which, when boiled and pounded, cure earache.

COMMENTARY. It is evidently the *Blatta orientalis*. Pliny and Dioscorides also recommend it in cases of earache. (ii, 38.) None of the other authorities make much account of it.

Σίλφιον,

Silphium or Laserpitium, *Laserwort*, is an excellent calefacient medicine; but it is also flatulent and indigestible. When applied externally to the body it is more active, and especially its juice, being possessed of attractive powers. It has also some purgative property.

COMMENTARY. It has long appeared to us that one passage in the works of Dioscorides is of itself quite decisive of the question as to the identity of the ancient silphium and our assafœtida. Treating of the gum-resin, sagapenum, he says, “in smell it is intermediate between galbanum and the juice of silphium.” (iii, 85.) Now, in Duncan's Edinburgh *Materia Medica*, it is said of sagapenum, that “it holds a kind of middle place between assafœtida and galbanum.” (Sixth edition, 387.) Its juice, that is to say, its concrete juice, or gum-resin, was assafœtida, of which the Cyrenaic and Median juices, already

COMM. treated of by us, were varieties. The stalk, the leaves, and the juice are all treated of by Dioscorides, in his chapter on Silphium, wherein he has given so full an account of them that we dare scarcely venture upon an abstract of it. He says of the varieties of the juice, that the Cyrenean is the most fragrant, so that when tasted it scarcely affects the breath, whereas, the Median and Syrian are weaker, and have a more offensive smell. He says of it, that of the different parts of it, the most efficacious is the juice, then the leaves, and then the stalk. He recommends it, both externally and internally, for a great variety of medicinal purposes, in diseases of the eyes, in toothache, as an application to the bites of venomous animals, as an application to gangrene, corns, and callus; in affections of the bronchi, and of the tonsils, in cynanche, catarrhs, pleurisy, jaundice, and dropsy; in rigors, along with pepper, frankincense, and wine, in cæliac affections, and in short, in a great many other complaints. (iii, 84.) But long before his time the silphium had been introduced into the practice of medicine, and used in procidentia and other complaints. See Hippocrates (De Fistulis; de ratione vict. in acut., &c.) It is indisputably the laser and laserpitium of the Latin authors. See in particular Celsus (iv, 2); Pliny (H. N. xxii, 49.) The latter passes an elaborate encomium upon it, founded, however, for the most part on the contents of Dioscorides's chapter on the Silphium. From it the identity of the Greek silphion and the Roman laser is clearly made out. Passing by Galen, Aëtius, and Oribasius, who supply nothing very interesting on this head, we now turn to the Arabians. See Avicenna (ii, 2, 9, 52, 474); Rhases (Cont. l. ult. i, 50); Serapion (De Simpl. 251); Averrhoes (Collig. v, 42); Ebn Baithar (i, 84.) Avicenna describes two varieties of the *Assa seu Laser*, namely, the *fætida* and the *odorifera*, the virtues of which he gives in nearly the same terms as Dioscorides. He says distinctly that the fetid or black kind is not used in the cooking of food. He praises them as procuring eructations and acting as carminatives, and as proving stomachic. There appears to be a disagreement among the Arabian authorities of Serapion regarding the virtues of the assa, some of them representing it as good for the stomach and liver, and others as bad. One of them, Habix, mentions that it was

used as an application to the wounds of poisoned arrows, and to preserve meat from putrefaction. Ebn Baithar's Arabian authorities describe very accurately the two varieties of the assa, namely, the fragrant and the fetid, and commend both very highly as medicines, more especially as carminatives, and as acting very beneficially on the stomach, liver, and uterus. Some of them say that assa promotes menstruation, and even procures the expulsion of the fœtus. The assafoetida still retains the name of *silphion* in the Greek Pharmacopœia. (Athens, 1837.) M. Pacho says that the Arabs call it *derias*, and he proposes to class it as a species of laserwort, under the name of *Laserpitium derias*.

Σίσων,

Sison, *Bastard Stone-parsley*, is heating, diuretic, and digestive. It likewise promotes menstruation and removes obstructions of the viscera.

COMMENTARY. It appears to be the *Sison Amomum*, called by Miller *the Stone-parsley* or *German Amomum*. Our author copies from Dioscorides, who further mentions of it that the natives of Syria, where it grows, use it as a condiment. Galen commends it as being bitterish, and hence proving diuretic, digestive, emmenagogue, and deobstruent. We do not find it in the works of the Arabians.

Σίον,

Sium, *Water Parsnip* or *Celery* (?), is hot, diuretic, and dis-cutient. It breaks down renal calculi and promotes menstruation.

COMMENTARY. It appears to us highly probable that it is the *Sium latifolium*, or Upright Water-parsnip, which once held a place in modern Dispensatories, and not the *S. nodiflorum*, as Dierbach decides the σ . of Hippocrates to be. It is the laver of the Romans, and is recommended by Pliny as a cure for tormina. (H. N. xxvi, 32.) See Harduin (Annot. l. c.) Dioscorides says it is useful in dysentery, and is diuretic, emmenagogue, and lithontriptic. (ii, 153.) Galen gives the same account of it as our author. It does not occur in the works of Celsus. The Arabians, in treating of it, borrow almost everything from Dioscorides. See Avicenna (ii, 2, 556,

COMM. 633) ; Serapion (De Simpl. 290.) The latter describes it as a species of apium which grows in water.

Σίσαρρον,

Sisarum, *Garden Parsnip*; the root, when boiled, is stomachic and diuretic, being heating in the third order. The seed consists of subtile particles, and is powerfully discutient. It is, therefore, given to persons affected with hiccough and tormina, in wine.

COMM. COMMENTARY. It is the *Pastinaca sativa* or *Garden Parsnip*, according to Sprengel. In the translation of Rhases it is said to be the same as *nigella*, but this would seem to be a mistake. (Contin. xxxvii.) Dioscorides briefly says of it, that it is palatable, stomachic, diuretic, and a whetter of the appetite. (ii, 139.) Galen says it is calefacient, with a certain degree of bitterness and astringency. It appears certainly to be the siser of Pliny and Celsus, the latter of whom places it in his list of diuretics. (ii, 31.) The Arabians, in treating of it, copy from Dioscorides and Galen. See in particular Avicenna (ii, 2, 652.) From the account we have given of this article it will be seen that recent authorities hold that it is *not* the same as the *Sium Sisarum*, Skerret, as has been generally held, but the Parsnip. It would follow from this that it is identical with the ἐλαφόβοσκος of Dioscorides (iii, 73), which we must say that we are scarcely prepared to join Sprengel in admitting. After mature deliberation, then, we fear we must rank this with the undetermined articles in the ancient *Materia Medica*.

Σισύμβριον,

Sisymbrium, *Wild Mint*, called also Cardamine, because it is like the Cardamus. When dried, it belongs to the first order of calefacients and discutients; but when in a humid state, to the second.

COMM. COMMENTARY. Dioscorides says of his first species that it resembles the garden mint, and Pliny states that it degenerates into calamintha or wild mint. It would appear, then, to be a species of mint. Stackhouse inclines to this opinion. (Index to Theophrastus.) The other, called also cardamine and sium, can be no other than the *Nasturtium officinale*.

Dioscorides says of the former species, that it is useful in strangury, calculus, tormina, and singultus; and that in a cataplasm it relieves headache, is useful in the stings of wasps and bees, and stops vomiting. His other species he recommends as an application to certain diseases of the skin. (ii, 155.) Galen, in like manner, treats of the two species in nearly the same terms as our author, whose description of the former species, by the carelessness of transcribers, is given under the head of the preceding article, Sisarum. The Arabians treat both of the sisymbrium and the nasturtium, but it is not clear that they apply these terms to the same substances as Dioscorides does. } COMM.

Σκαμμωνία,

Scammonia, *Scammony*, has the properties of heating, discussing, and clearing away bilious matters, more especially the juice of it, which discusses phymata, kills the fœtus when applied in a pessary, and removes leprosy. As an embrocation with vinegar and rose-oil, it cures chronic headaches; and the root, when drunk, acts as a purgative both by itself and in decoction. Boiled with vinegar and barley-flour, it is applied to diseased hip-joints.

COMMENTARY. Without doubt it is the *Convolvulus Scammonia*. Dioscorides likewise describes another species, which Sprengel supposes to be the *C. farinosus*, L. The scammony is called δάκρον κάμωνος by Nicander, and δακρύδιον by Alexander. (i, 10.) All the Greek, Latin, and Arabian authorities who make mention of it, state that it is a powerful purgative, which evacuates phlegm and bile. Marcellus Empiricus correctly remarks, that it does not answer when the stomach is weak. Celsus prescribes it for the broad intestinal worm, and in other cases. (iv, 17.) It also occurs in the Hippocratic collection. This is an article which the Arabians treat of very fully. See Serapion (De Simpl. 303); Avicenna (ii, 2, 628); Rhases (Cont. l. ult. i, 612); Haly Abbas (Pract. ii, 54, 554); Mesue (De Simpl. i); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 27.) The last of these writes of it at very great length. Haly Abbas says scammony purges bile, attracts humours from the distant parts of the body, but is injurious to the stomach and liver. Avicenna and Serapion agree that it hurts the stomach, liver, and heart. They also state that it is a } COMM.

COMM. purgative, but one not in general to be depended upon, as different preparations of it act with different degrees of activity. They recommend it as an external application in cases of leprosy, scabies, and other cutaneous diseases. One of Serapion's Arabian authorities gives a very minute description of the different varieties of it. He says the dose of it is from 6 to 20 grs. In large doses, one of Rhases's authorities states that it brings off bilious and bloody discharges, but in small doses, it is said to be diuretic without acting upon the bowels at all. An overdose, Avicenna remarks, may prove fatal. Mesue treats of it at great length and with much judgment, giving very minute directions about the choice of the different kinds of it, and the correction of any bad qualities they may possess.

Σκάνδιζ,

Scandix, *Shepherd's-needle*, is a wild potherb, heating and desiccative in the second order. It is diuretic, and removes visceral obstructions.

COMM. COMMENTARY. We have treated of this potherb in Book I. It is the *Scandix australis*. Our author takes his character of this plant from Dioscorides. (ii, 167.) Galen infers from its being slightly acrid and bitter, that it is diuretic and deobstruent. None of the Arabians, we believe, treat of it, with the exception of Ebn Baithar. (ii, 23.)

Σκίγκος,

Scincus, *Skink*; the parts about the kidneys are drunk to occasion erection of the privy member. The seed of lettuce, when drunk with water, is supposed to counteract them; and likewise the decoction of lentils with honey.

COMM. COMMENTARY. The Skink is a small animal, like a lizard, of the shape of a crocodile, and from ten to twelve inches in length. It was described by Ray and Gesner under the name of *Crocodylus terrestris*. Its Linnæan name is *Scincus officinalis* or *algeriensis*. Dioscorides calls it a land crocodile, and recommends it in the same complaints as our author. He concludes by saying of it that it is an ingredient in antidotes; and, in fact, its principal use was in the composition of the famous Theriaca. Such of the Arabians as notice it give it the same medicinal cha-

racter as the Greeks, that is to say, they represent it to be strongly aphrodisiac. See in particular Avicenna (ii, 2, 596) and Ebn Baithar (ii, 32.) The latter gives a lengthy and interesting account of it. Rhases briefly notices it without saying anything of its medicinal uses. (Contin. l. ult. ii, 681.) In the East the skink is still eaten as a restorative and aphrodisiac. See Ainslie (Mat. Ind. ii, 278.)

COMM.

Σκίλλα,

Squilla, *the Squill*, is possessed of incisive powers, and is calefacient and desiccative in the second order. It is better to take it roasted or boiled.

COMMENTARY. It is the *Scilla maritima*. It is mentioned by Hippocrates, and was a favorite medicine of the ancient physicians. Dioscorides's chapter on the Squill contains much valuable matter. His description of the process of baking squills is so like that given in Pemberton's edition of the 'London Dispensatory,' that one may take the latter as a translation of it: "*Scillæ coctio*, the baking of squills. Inclose the squill in paste of wheat flour, having first separated the outer skin and the hard part, from which the fibrous roots grow; then bake the squill in an oven till the paste is dry, and the squill is rendered soft and tender throughout." He recommends it in cases requiring a copious evacuation of urine, such as dropsies, diseases of the stomach, those cases in which the food floats on the stomach, in jaundice, chronic coughs, asthma, &c. He also says of it that it is alexipharmic. (ii, 202.) Celsus frequently prescribes "*scilla cocta*," as in tympanites and in anasarca. (iii.) It is frequently recommended and described, in a word, by all the authorities, Greek, Roman, and Arabian, in the same class of cases. See Galen (De Simpl. viii); Aëtius (i); Oribasius (Med. Coll. 12); Apuleius (De Herbis); Columella (De R. Rust. xii, 33); Serapion (De Simpl. 304); Avicenna (ii, 2, 590); Rhases (Cont. l. ult. i, 680); Mesue (De Simpl. vi); Ebn Baithar (ii, 216, 309); Averrhoes (Collig. v, 42); Haly Abbas (Pract. ii, 43). Serapion's account of its medicinal properties is particularly full. It is given, he says, as a laxative in fevers, and in dropsy as a diuretic; as a remedy for indigestion, for jaundice and tormina of the bowels; for an old cough, asthma, and spitting of blood; and for cleansing the breast of gross

COMM.

COMM. humours. It is to be avoided, he says, when there is an ulcer in any internal part. Apuleius recommends it along with vinegar and honey in dropsy. He adds, that it evacuates by urine. Columella gives a receipt for making a *vinum scilliticum*, which is useful, he says, "ad concoquendum, ad corpus reficiendum, itemque ad veterem, tussim et ad stomachum." (l. c.) Mesue particularly commends it as an expectorant, and recommends the vinegar, the oxymel, and the syrup for this and other medicinal purposes. Avicenna treats of it with his wonted accuracy, recommending it in complaints of the gums, teeth, and mouth; for asthma, and all inveterate coughs; in epilepsy, and in melancholy. He moreover particularly commends it in diseases of the spleen, and in dropsy and jaundice. He forbids it to be used in ulceration of the viscera. Ebn Baithar gives very copious extracts from preceding authorities, both Greek and Arabian. He treats separately of the scilla and pancratium. See under the latter.

Σκολοπένδρα,

Scolopendra; the sea scolopendra, when boiled in oil and rubbed upon a part, acts as a depilatory. When burnt it occasions pruritus.

COMM. COMMENTARY. See Book V. The sea scolopendra is the *Aphrodite aculeata*. All the authorities who notice it recommend it for the same purposes as our author. See Dioscorides (ii, 16.)

Σκολοπένδριον,

Scolopendrium, the same as *aspplenium*.

COMM. COMMENTARY. It is the *Asplenium Ceterach*. See under *Asplenium*.

Σκόλυμος,

Scolymus, *Golden Thistle*, is a calefacient and desiccative medicine of the second order. The root of it, when boiled with wine, brings off a quantity of fetid urine, and cures the fetid smell of the armpits and of the whole body.

COMM. COMMENTARY. From the descriptions of it given by Theophrastus (H. P. vi, 4), and Dioscorides (iii, 14), one can scarcely entertain a doubt that it was the *Scolymus Hispanicus*, or Spanish Cardoons, an esculent root, well known in the southern parts of Europe. Compare Sprengel (Ad Dioscor.

iii, 14) with Lindley (Veg. King. 709), and see Beckmann COMM. (Hist. of Invent. under Artichoke). Dioscorides gives exactly the same account of its medicinal virtues as our author. (l. c.) Galen writes elaborately of it, but his conclusions, as to its properties, are the same as those of Dioscorides. We have not been able to trace it out in the works of the Arabians, unless it be their *harsef*. See Avicenna (ii, 2, 332); Rhases (Cont. l. ult. i, 168). The truth is, that the term *scolymus* was a puzzle to the ancient authorities and to their modern commentators, being sometimes, as is supposed, applied also to the *Cynara Scolymus*, or artichoke. See Parkinson (pluries). We have treated of the *scolymus* as a potherb in the First Volume, p. 114. We have hinted our belief that the *harsef* or *harxaf* of the Arabians was identical with the Σ . of the Greeks. We are confirmed in this opinion by a comparison of Dioscorides with Avicenna (l. c.), although we find that Salmasius referred it to the artichoke.

Σκόρδιον,

Scordium, Water Germander, is composed of varied powers, being bitter, sour, and acrid. It therefore at the same time purges and heats the viscera; promotes the urinary and menstrual discharges, warms parts which had been affected with cold, agglutinates and cleanses wounds, and proves incarnative when sprinkled dry.

COMMENTARY. It is clearly the *Teucrium Scordium*, or COMM. Water Germander. Dioscorides commends it for its diuretic, emmenagogue, and expectorant powers, when given internally; and for cleansing foul ulcers. Compare his account of it with its characters as stated by Dr. Hill. Our author condenses Galen's statement of its medicinal properties. Galen remarks that it would appear to have got its name from its resemblance in qualities to the scorodon or garlic. The Arabians would seem to have confounded the *scordium* with the *scorodon*. See Avicenna (ii, 2, 622), and Serapion (De Simpl. 331).

Σκόρδον,

Allium, Garlic, is healing and desiccative in the fourth degree. But the *ophioscordon*, or wild garlic, is stronger than the cultivated.

COMM. COMMENTARY. We are inclined to set down the two varieties of this substance as being *Allium sativum* and *arenarium*. See Parkinson (vii, 29), and Sprengel (Ad Dioscor. ii, 181). Dioscorides gives a lengthy statement of the medicinal virtues of the garlic, which, as Galen somewhere says, was the great theriac of rustics. Dioscorides says it is the best of all medicines in the bites of vipers when taken along with wine, and that it forms an excellent cataplasm for the bites of mad dogs. He also recommends it as an application to various cutaneous complaints, such as leprosy and furfures; as an emmenagogue, both in the form of a hip-bath and fumigation; as a diuretic and remedy in dropsical diseases. (ii, 81.) Galen, like our author, merely states the general characters of the two species. It is frequently mentioned in the works of Hippocrates and in those of Celsus. The latter ranks it among the things "mali succi," and calls it acrid, flatulent, heating, laxative of the bowels, &c. (ii, 21, 26, et alibi.) The Arabians treat of it at great length. See Serapion (De Simpl. 331); Averrhoes (Collig. v, 42); Avicenna (ii, 2, 72); Rhases (Cont. l. ult. i. 36.) They recommend it in eructations, in dropsy as a laxative and diuretic, and as an emmenagogue. They say a clyster of it relieves sciatica, and a gargle of it is useful in toothache, and clears the voice. Avicenna affirms, from personal experience, that it is an excellent medicine in the case of persons stung by venomous reptiles. Ruffus, as quoted by Serapion, says it is hurtful to the ears, the liver, the lungs, and the kidneys. Fresh garlic, he says, is diuretic, loosens the bowels, and is vermifuge. Another of his authorities says, raw garlic is vermifuge, and useful in strangury.

Σκορδόπρασον,

Scordoprason, *Garlic-leek*, in taste and powers is compounded of the garlic and leek.

COMM. COMMENTARY. We are disposed to set it down as being *Allium Scorodoprason*. None of the authorities supply any interesting information under this head.

Σκορπιοειδές,

Scorpioides, *Caterpillar*, is heating in the third order, and desiccative in the second.

COMMENTARY. We suppose it to be the *Scorpiurus sulcatus*, COMM.
L., which is synonymous with the *Scorpioides*, Tournefort. COMM.
Dioscorides merely recommends it as an application to the
bites of scorpions. (iv, 192.)

Σκόρπιος,

Scorpius, the *Scorpion*; the land one, when applied raw, is
a remedy for its own bite, and in like manner, when eaten
roasted. The sea scorpion's bile is useful in suffusions.

COMMENTARY. See Book V. Avicenna recommends the
oil of *scorpions* in diseases of the ear. (ii, 2, 64.) The sea-
scorpion is the *Cottus scorpius*. Dioscorides recommends its
gall in cataracts, albugo, and dimness of sight. (ii, 14.)

Σκωρία,

Recrementum, *Dross*; all kinds are considerably desiccative,
but that of iron more than the others. This, when pulverized
and boiled in vinegar, cures purulent discharges from the ears
in a wonderful manner; and when taken with oxymel, proves
a remedy to those who have drunk aconite. That of lead is
similar to lead itself, but more astringent.

COMMENTARY. It is called recrementum by Celsus. (v, 15.) COMM.
It is the dross of a metal which is collected on the outside of
the furnace while the metal is purified by heat. See Pliny
(H. N. xxxiv, 27) and Matthiolus (Ad Dioscor. v, 54.) Dios-
corides says of the recrementum plumbi that it has the same
powers as burnt lead (v, 97), and of the recrementum ferri,
that it is a remedy in cases of poisoning with aconite. (v, 94.)
Celsus ranks the recrementum plumbi among the emollients.
(Ibid.) Avicenna recommends the recrementum ferri as an
astringent in cases of hemorrhoids and other fluxes. Like
Dioscorides and our author, he says that it is an antidote to
aconitum. One of Serapion's authorities, Adamasti, says of
the recrementum argenti, that it is cooling and desiccative,
and useful in cardiac disease, and another, Alcanzi, says it is
good for scabies and prurigo. His other extracts are from
Dioscorides, Galen, and Paulus. Ebn Baithar gives an inter-
esting exposition of this subject, but it is mostly made up from
the authorities already quoted by us. (i, 348.) Rhases treats
of it in like manner. (Cont. l. ult. i, 234.)

Σμίλαξ,

Smilax or Taxus, *the Yew*, is a tree of deleterious properties.

COMM. COMMENTARY. It is the *Taxus baccata*, L. See Book V. (48.) It appears remarkable that Dioscorides should have allowed this article a place in the *Materia Medica*, seeing that he himself says that he had noticed it merely to guard against it. He says that in Narbonia (Languedoc or Savoy), the yew-tree was possessed of such a power as to prove fatal to persons sitting or sleeping in its shade. (ii, 80.) We have stated, however, elsewhere (v, 48) that great difference of opinion has prevailed regarding this reputed noxious power of the yew.

Σύρρα,

Myrrha, *Myrrh*, is of the second order of calefacients and desiccants. It, therefore, agglutinates wounds of the head when sprinkled upon them. It has also some bitterness; and hence it kills worms and the fœtus; and it is detergent, and, therefore, is mixed with ophthalmic remedies. It is likewise expectorant without roughening the trachea. Bœotian myrrh has calefacient, emollient, and solvent powers.

COMM. COMMENTARY. That this is the same as our myrrh is indisputable, and the best botanical authorities are now pretty well agreed that it is the product of a dwarf shrub, to which they have given the name of *Balsamodendron Myrrha*. See Lindley (Veg. Kingd. 460); Pereira (Mat. Med. 1187.) It is mentioned in what is perhaps the oldest literary production in existence (Genesis xxxvii, 25), and is frequently noticed as a medicine in the works which bear the name of Hippocrates. (De Superfœt.; de Muliebr.) See further 'Econom. Hippocrat.' (347) and Dierbach (Arsn. des Hipp. 224.) In short, this gum-resin was much used in the ancient practice of medicine. According to Dioscorides it is calefacient, soporific, agglutinative, desiccative, and astringent. He recommends it in chronic coughs and asperities of the trachea. He also states that it was used in ulcers of the eye and other complaints of a like nature. He further says of it that it is anthelmintic; that it cures fetor of the mouth, and likewise of the armpits when used as an ointment with liquid alum; that in a gargle with oil it strengthens the gums and teeth. He describes two

kinds of liquid myrrh, which he calls *Stacte*; the finest was COMM.
 that which runs fluid from the tree without cutting. The other
 was a fluid myrrh, taken out of the midst of the larger pieces
 of the solid kind. See Hill (Mat. Med.) The account which
 Pliny gives of myrrh is highly interesting, but does not con-
 tain much that would answer our present purpose. (See H. N.
 xii, 33-6.) Celsus makes mention of the *stacte* (v, 23), and
 prescribes the myrrh frequently as a concocting and aggluti-
 nating substance. Galen describes it in two of his works.
 (De Simpl. 109, and De Antidot. T. ii, 433, ed. Basil.) Our
 author's account of this substance is condensed from the
 former of these works. Aëtius in like manner borrows from
 him, as Oribasius does from Dioscorides. For the Arabians,
 see Avicenna (ii, 2, 468); Rhases (Cont. l. ult. i, 474); Aver-
 rhoes (Collig. v, 42); Serapion (De Simpl. 292); Haly Abbas
 (Pract. ii, 41); Ebn Baithar (ii, 496.) Our limits prevent us
 from venturing upon an exposition of what these authors have
 written upon this subject, but this is the less to be regretted,
 as we do not find that they add anything of much practical
 importance to the information supplied by their Grecian masters.
 They confirm, however, by their authority, all that the Greeks
 had stated regarding the virtues of myrrh as an emmenagogue
 and a medicine capable of accelerating delivery. They are also
 agreed that it is diuretic and expectorant. One of Serapion's
 authorities says it evacuates fluids from the belly when applied
 as a plaster. Another of them says that in a masticatory it
 evacuates the brain.

It would appear that the Bœotian myrrh mentioned by
 Dioscorides, Galen, and our author, was the Alexanders or
Smyrniun Olusatrum.

Σμύριον,

Smyrniun, *Alsander* (called also Hipposelinum and Apium
 silvestre) is heating and desiccative of the third order, being
 stronger than parsley, but weaker than stone-parsley. It is,
 therefore, emmenagogue and diuretic.

COMMENTARY. This, it would appear, is not the *Smyrniun* COMM.
Olusatrum, but either the *Smyrniun Dioscoridis*, or, as supposed
 by Dodonæus, the *perfoliatum*. In another place we have set it

COMM. down as the latter, and treated of it as an article of food. (Vol. I, 114.) All the authorities give it nearly the same character as our author. See Dioscorides (iii, 72); Galen (De Simpl.); Avicenna (ii, 2, 55.) All agree that it is an excellent diuretic and emmenagogue. It is the *olusatrum* of Scribonius Largus.

Σόγγος,

Sonchus, *Sow-thistle*, is astringent and sensibly cooling both when applied externally and eaten. But when dried, it is moderately calefacient.

COMM. COMMENTARY. It would appear to be the *Sonchus oleraceus*, but this is not quite certain. Dioscorides describes three species, of which the first two are, perhaps, but varieties of the *Sonchus oleraceus*, although some of the authorities would refer the first to some distinct species, not well determined. Galen and our author describe only one species, which would certainly appear to have been the *S. oleraceus*, a well-known plant, which held a place in our Dispensatories until a late date. See Quincy (i, 11, 510.) Dioscorides calls it sub-astringent, and recommends it in a cataplasm for heat of the stomach and inflammations, and its juice for stomach-ache and to attract milk; when applied on wool, he says it relieves inflammations of the anus and uterus; and that its root and stem are useful to persons bitten by scorpions. (ii, 158.) Galen merely states its temperament and qualities in general terms. We are not aware that it is described by any of the Arabians, with the exception of Ebn Baithar, who merely gives the descriptions of it from Dioscorides and Galen. (i, 211.)

Σπαργάνιον,

Sparganium; this also is possessed of desiccative powers.

COMM. COMMENTARY. It is the *Sparganium simplex*. Pliny recommends it as an antidote to the sting of serpents. (H. N. xxv, 63.) He, as usual, borrows from Dioscorides. (iv, 21.) Galen treats of it as briefly as our author. Few, if any of the other authorities, notice it. Its congener, the *S. ramosum*, is still kept in the shops with the reputation of curing the bite of the viper. See Gray (Suppl. to Pharmacop. 15.)

Σπαροός,

Genista, *Broom*, by which they bind vines; the fruit and flower of it, when drunk with honeyed water to the amount of five oboli, purge upwards, like white hellebore, without danger. But the fruit also purges downwards. The twigs remedy ischiatic diseases.

COMMENTARY. Without doubt it is the *Spartium junceum*. COMM. It is the genista of the Latins, as Silvius states in his commentary on Mesue. He says that it is a powerful diuretic, and its seeds are still sometimes used with this intention. Mesue further commends it as an emetic in gout and other arthritic diseases. Dioscorides and Pliny give nearly the same account of its medicinal properties as our author. Dioscorides further commends it in sciatica and cynanche, and when given as a clyster in the former complaint. (iv, 155.) It is not easy to trace it in the works of the other authorities, except Ebn Baithar, who copies principally from Galen or Dioscorides. (i. 489.)

Σπεκλάριον ἢ σφεκλάριον,

Lapis specularis, which some use instead of specula in their windows, and hence it has been called diaphanous. Being of the nature of gypsum, it has powers like burnt shells or oysters.

COMMENTARY. It is the Gypsum specularis or Selenite, as COMM. is evident from our author's description of it. Seneca says that in his time it had come to be used in windows from its transparency. (Ep. 60.) See further, Pliny (H. N. xxxvi, 45.) See Book V, 58. The Arabians praise its virtues in the cure of all fluxes; and Agricola mentions that in his time it was frequently given for the cure of dysenteries.

Σπόγγος,

Spongia, *Sponge*; the recent, which still preserves the smell of the sea, when applied with water, wine, or oxycrate, agglutinates wounds; but if burnt, it has acrid and discutient powers. When burnt with asphaltos or liquid pitch, and applied hot, it stops hemorrhages.

COMMENTARY. Aristotle, Pliny, Philoponus, Phile, and Avicenna acknowledge the animal nature of sponges, and yet we find it stated in most of our modern treatises on natural

COMM. history that the ancients supposed them to be vegetables. Ebn Baithar, we believe, stands alone among the ancient authorities in maintaining that there is no truth in the opinion that the sponge is an animal, but that, on the contrary, it is decidedly a vegetable which grows from the rocks. (i, 45.) Avicenna recommends the use of sponge in the same cases as our author does. Serapion gives nearly the same account of it. He says that the stones found in sponges are lithontriptic. Of the two species described by Dioscorides, the hard is the *S. fasciculata*, Pall., and the soft the *S. officinalis*. He recommends sponge tent for dilating fistulous ulcers. He says they may be applied like tents to sores; that with vinegar they restrain hemorrhages; and that burnt sponges are useful in dry ophthalmia, and whenever you want to deterge or astringe; but that when washed, they apply better in ophthalmic remedies; and that, when burnt with pitch, they are suitable in hemorrhages. (v, 137.) In the Hippocratic treatises this term is generally applied to the tonsils or glands of the neck, as at 'Epidem.' (iv.) But in one passage of a work, certainly not genuine, it appears to be used for the sponge. (De Morbis, ii.) Celsus prescribes a sponge squeezed out of oil, vinegar, or cold water as an application to relieve the swelling and heat of the gout (iv), and for other medicinal purposes. Galen gives an interesting article under this head, and describes an ingenious process by which, he says, that he had known a hemorrhage stopped. A sponge dipped in asphaltus, or, in the absence of it, in tar, having been laid on the bleeding place, it was set fire to until it formed an eschar on the surface, while the remainder of it was left as a farther cover to the vessels. (De Simpl. xi.) The Arabians treat fully of the "Spongia maris," and quote what Dioscorides and Galen had written respecting it. Avicenna decidedly says that sponge was supposed to be an animal possessed of motion. He and Rhases recommend it principally for cleansing sores and stopping bleeding. (ii, 2, 595, and Cont. l. ult. 676.)

Σπόδιον,

Spodium has similar powers to the pompholyx.

COMM. COMMENTARY. It is nearly the same as the Pompholyx. Pliny thus states the difference between them: "Etiamnum

in ærariis reperiuntur, quæ vocant pompholygem et spodon. COMM.
 Differentia quod pompholyx loturâ paratur, spodos illota est." {
 (H. N. xxxiv, 33.) The name, in modern times, has been applied to burnt ivory. See Gray (Suppl. to Pharm. 260), and Platearius (De Simp. Med. 250.) The ancient spodium was an impure oxyd of zinc. The term, however, was sometimes applied to other recrements, as we are informed by Pliny (l. c.), and Dioscorides (v, 85.) He gives a more minute description of the preparation of it and of pompholyx. The Arabians treat of both under the general name of *Tucia* or *Tutty*, which was long retained in modern times. They used it very freely in diseases of the eyes, and also in those about the genital organs. See Serapion (c. 422); Avicenna (ii, 2, 695); Rhases (Cont. l. ult. i, 730); Haly Abbas (Pract. ii, 45, 474.) The spodium occurs frequently as an ingredient in the collyria and ointments described by Celsus (v, 6), &c. We need scarcely remind the reader that tutty ointment has continued to be used as an ophthalmic even to our own times. The *spodos* of the Hippocratic writers would appear to have been applied in a more general sense to various recrements of the metals. (De Ulceribus.) The spodium of the Arabians would seem to have been the ashes of the privet. See Avicenna (ii, 2, 609); Rhases (Cont. l. ult. 675.)

Σταφυλῖνος,

Staphylinus, Carrot, is diuretic and promotes menstruation, particularly the seed and root. But the leaves being possessed of detergent powers agree with phagedænic affections when applied green along with honey. The wild is for all purposes stronger than the cultivated.

COMMENTARY. As Sprengel states, it is undoubtedly a COMM.
 variety of the *Daucus Carota*, L., or *Wild Carrot*. {
 Diphilus, as quoted by Athenæus, says that it is acrid, nutritive, moderately stomachic, laxative, flatulent, indigestible, diuretic, and aphrodisiacal. (Deipnos. ix, 2.) Pliny mentions that it proves useful in strangury, dropsy, and several other complaints. (H. N. xx, 15.) Plinius Valerianus says of it that it had been given in diseases of the liver, spleen, loins, and kidneys, in hydromel. (iv, 32.) Our author's account of its medicinal properties is mostly condensed from Dioscorides. He recommends it strongly as a diuretic, emmenagogue, and aphrodisiac, and says of it,

COMM. that applied *per vaginam* it procures the expulsion of the fœtus. (iii, 52.) Galen and Aëtius give nearly the same account of it as our author. The Arabian authorities speak of it in the same terms. See Avicenna (ii, 2, 287); Rhases (Cont. l. ult. iii, 18); Serapion (c. 265.) The commentator Eustathius mentions its aphrodisiacal properties. (Ad Iliad. xviii, 560.) According to Dierbach, the σ . of Hippocrates comprehends both the *Daucus Carota* and *guttatus*. It would appear to us that this is the "Pastinaca agrestis" of Celsus (ii, 31), although his editor, Dr. Milligan, decides otherwise with regard to it. In confirmation of our opinion we refer to Pliny (l. c.), and to Beckmann's ingenious disquisition on our kitchen vegetables in his 'Hist. of Invent.' He seems clearly to make out that the daucus, staphylinus, carota, and pastinaca were all merely varieties of the *Daucus Carota*. He is in some doubts, however, whether the "pastinaca" was not also sometimes applied to the parsnip. See, however, under *Daucus*.

Στάχυς,

Stachys, *Base Horehound*, is a shrub resembling horehound, and is calefacient in the third degree. It therefore promotes menstruation, kills the fœtus, and expels the secundines.

COMM. COMMENTARY. It is the *Stachys Palestina*, or *Base Horehound*. Our author gives exactly the same account of its medicinal properties as Dioscorides and Galen, the latter remarking of it that it not only promotes menstruation, but is a drug used for procuring abortion. Pliny, by confounding *πράσον* and *πράσιον*, says of it that it resembles the *porrum* instead of the marrubium; so that his celebrated editor, Harduin, holds that the stachys of Pliny is different from that of Dioscorides. (Ad H. N. xxiv, 86.) It is quite clear, however, that the plants are identical, and accordingly Pliny, like the other, says of his stachys, that it is emmenagogue. The Arabians do not seem to treat of it.

Στέατα,

Adipes, *Fats*, or *Grease*; all kinds dilute and warm the human body, but their powers vary according to the different temperaments of animals. That of swine, then, is the most humid of all, its powers being like those of oil. Hence it

blunts sharp pains. That of goats is drier and sooner coagulated, and therefore is used as an injection to those who have sharp pains in the rectum. That of geese is hotter and more attenuate; that of domestic cocks and hens being intermediate. That of lions is the hottest of all and the most attenuate, hence it is most discutient. That of oxen has an intermediate temperament between swine and lions. That of bears cures alopecia, that of foxes, earache; as that of vipers is said to remove hairs and prevent suffusions from forming. Upon the whole, that of males is the hotter and more desiccative, and of them those which have their testicles more than those which have been cut, and of those which are full-grown than that of the others. All sorts of grease when long kept become hotter.

COMMENTARY. *Fats.* Our author's account of their medicinal properties is sufficiently ample. For further information, however, the reader may consult Dioscorides and Galen. The former gives very minute and seemingly important directions for the preparations of all these animal fats. We may just mention here a little piece of criticism which Galen bestows in this case upon his much admired predecessor. Dioscorides says of the grease or lard of goats, that it is more styptic (στυπτικώτερον) than that of swine. Upon which Galen remarks that although Dioscorides had written much and well on the *Materia Medica*, he often uses words in a wrong signification, as he does in the present instance, for that the above-mentioned term, which properly signifies astringent, must here be understood to mean acid or pungent. Now we think that Galen is here correct, and that Sprengel's attempt to bring his author, Dioscorides, clear off in the present case is not successful. Indeed, as we firmly believe that a greater master of the Greek language than Galen never existed, we may always feel secure that where the exact meaning of Greek terms is concerned, one may safely trust to him. The Arabians under this head merely give extracts from Dioscorides and Galen. See in particular Serapion (*De Simpl.* 461) and Avicenna (ii, 2, 70.)

Στίγμα,

Antimonium, *Antimony*, in addition to its desiccative powers, has also astringency. Hence it is mixed with collyria for the eyes.

COMM. COMMENTARY. This is evidently the sulphuret of antimony. The native antimony is so rare a mineral that it is not likely the ancients had any acquaintance with it, and the factitious antimony is not described by any ancient author. For an account of the ancient antimony, see in particular Dioscorides (v, 99) and Pliny (H. N. xxxiii, 33.) It was much used by the ancients in the composition of the medicines called calliblephara. "Vis ejus astringere et refrigerare principalis autem circa oculos." Pliny (l. c.) In the Old Testament the Jewish women are censured for this use of it. None of the Greek or Latin authors speak of giving it internally except Serapion, who quotes Badigoros (Pythagoras?) as stating that it proves a remedy for epilepsy and gross superfluities. (c. 249.) In its calcined state it was made into pastils of a square form, and hence the metal itself is called *τετράγωνον* by Hippocrates, as has been supposed by his expositors. See Galen (Exeg.) and Föes (Econ. Hippocrat. 371.) Hippocrates recommends it as a medicine for purging the head (De Intern. Affect.), that is to say, as an ingredient in *caputpurgia*, or errhines, to the use of which he was partial. (See Vol. I, pp. 59, 60 of this work.) But with the authorities subsequent to him its principal use would seem to have been confined to collyria. See in particular Haly Abbas (Pract. ii, 48); Avenzoar (Collig. v, 43.) Celsus frequently uses it for this and other purposes.

Στοιβή,

Stœbe, *Knapweed*; the fruit and leaves are desiccative in the third degree, being possessed of astringent powers. Hence they agglutinate large wounds; and the decoction of them relieves dysentery, hemorrhages, and discharges of pus from the ear; and in a cataplasm it is of use in suggillations of the eye from a blow.

COMM. COMMENTARY. There has been considerable difference of opinion among modern authorities on this head, as is fully stated by Parkinson (Theatre of Plants, 998), and by Sprengel (Ad Dioscor. iv, 12.) We acquiesce in the judgment of those who hold it to be the *Poterium spinosum*. See Galen (De Antidot. 426, T. ii, ed. Basil.) Our author's notice of it is manifestly taken from Galen, who, in his turn, is much indebted to Dioscorides. (iv, 12.) None of the others add anything of

interest respecting it. It does not occur in the works of Hippocrates nor of Celsus, nor have we been able to detect it in those of the Arabians, except Ebn Baithar, who quotes only Dioscorides and Galen under this head. (ii, 19.)

Στρούθιον. It appears singular that our author should have omitted the Struthium, which is noticed in this place by Dioscorides and Galen. This is the celebrated soap-plant used by the fullones or cleansers of cloth in ancient times. The reader will find a very interesting disquisition on it in Beckmann's 'History of Inventions.' We think there is every probability that it was the *Saponaria officinalis*. Dioscorides represents it to be diuretic, emmenagogue, and lithontriptic, a remedy for diseases of the chest, the liver, the spleen, and for jaundice; a discutient application to indolent tumours, a sternutatory, and a masticatory. (ii, 192.) By the way, the famous writer Lucian mentions an amusing example of its use as a masticatory. (De Alexandro.) Galen states its virtues in general terms; he says it is acrid and detergent, and hence it acts as a sialogogue. We have not been able to find it in the works of Hippocrates. See Pliny (T. ii, 341, 161, 410, ed. Harduin) and Celsus (v, 18.) The Arabians treat of it very fully. See Avicenna (ii, 2, 133); Serapion (De Simpl. 362); Rhases (Contin. l. ult. iii, 38.) They all hold it to be emetic, and when it cannot be procured they recommend in its place nux vomica. They also recommend it for all the medicinal purposes enumerated by Dioscorides. The soap-wort has been used medicinally in modern times. See Culpeper (172), Lewis (M. M. 339), and Gray (Suppl. to Pharmacop. 115.) Quincy gives a very confused account of it. (138.) In the modern Greek Pharmacopœia it is still retained. (144.)

Στρούχας,

Stœchas, *Cassidony*, or *French Lavender*; it is deobstruent attenuant, detergent, and strengthens all the viscera and the whole habit of the animal.

COMMENTARY. It appears to be the *Lavandula Stœchas*, or French Lavender. See Tournefort (M. M.) Pliny says that it is an odoriferous herb of a bitter taste. He adds that it promotes menstruation and relieves pains of the breast. (H. N.

COMM. xxvii, 107.) Dioscorides recommends it for diseases of the chest and for antidotes. (ii, 28.) Galen has some very sensible remarks on its qualities as perceived by the taste, and recommends it in the same cases as our author. See also 'De Antidot.' (i.) Avicenna and Rhases recommend it for epilepsy and melancholy. According to the Arabians it is purgative and alexipharmic, but Dr. Hill denies that it possesses these powers in any considerable degree. It still held a place in our Mat. Med. when Lewis wrote. (ii, 389.) It is retained in the modern Greek Pharmacopœia.

Στρατιώτης,

Achillea, Yarrow; that which grows in water is possessed of cold powers, but the land has astringency; hence it agglutinates ulcers. Some use it for hemorrhages and fistulæ.

COMM. COMMENTARY. The land is decidedly the *Achillea Millefolium*, the river the *Pistia Stratiotes*. The millefoil got the name of Achillea from being supposed the herb used by Achilles in dressing wounds. V. Eustathius (ad Iliad. xi, ad finem.) Our author copies almost word for word from Galen, who, however, is equally indebted to Dioscorides for the characters of the yarrow. Regarding the water plant, Dioscorides says that it preserves wounds free from inflammation, and cures erysipelas and œdema in a cataplasm with vinegar. (iv, 100, 101.) These plants are not to be found in the works of Hippocrates, Celsus, nor of the Arabian authorities, as far as we can discover, with the exception of Ebn Baithar, who merely gives extracts under this head from Dioscorides and Galen (ii, 30), and of Rhases, who merely quotes Galen. (Cont. l. ult. 637.) The *Pistia Stratiotes* is still used by the Hindoo physicians as a demulcent in dysuria, and as a cataplasm for hemorrhoids. See Lindley (Veg. King. 125.) The yarrow held a place in our Dispensatory with its ancient character down to a late date. See Quincy (92) and Lewis (M. M. 108.) It still holds a place in the modern Greek Pharmacopœia (109.)

Στρυχνος,

Strychnos, Solanum (?), *Nightshade* (?), or *Alkekengi*, i. e. *Winter Cherry*; the garden and esculent sort is astringent and cooling in the second degree. The halicacabum is like

the garden, having a diuretic fruit like the grape of a vine. The bark of the root of the *Strychnos somnifera* when drunk with wine to the amount of a dram is soporific. And it has a diuretic seed, being of the third order of refrigerants; hence when drunk in greater quantity than twelve clusters it occasions madness. The fourth species is not used internally, but when applied externally it cures spreading ulcers, belonging to the second order of refrigerants and desiccants.

COMMENTARY. We must not venture upon the discussion COMM. of disputed points respecting the *Strychni* of the ancients, for which we beg to refer our readers to the Appendix to Dunbar's Greek Lexicon, and we shall merely state our conclusions so far as they are interesting to the professional reader. Of the four species described by Dioscorides, the 1st, or *Strychnus hortensis*, is the *Solanum nigrum*, or its variety *S. miniatum*; the 2d, or *Halicacabum*, is the *Physalis alkekengi*; the 3d, or *S. somniferum*, is the *Physalis somnifera*; and the 4th, or *Furialis*, is the *Solanum Sodomæum*. Several learned authorities, however, have taken the last for the *Atropa Belladonna*. Our author in the main follows Dioscorides, who treats of the virtues of the *Strychni* at so great length that we dare not attempt to follow him in the present instance. The first he does not administer internally, but recommends it very largely as an external application for erysipelas, herpes, headache, heat of the stomach, affections of the eye, the siriasis of children, earache, the fluor albus, &c. The second, he says, resembles the first in virtue. The third, he says, has the same powers as the juice of the poppy. The fourth brings on phantasies and delirium, and in large doses proves fatal. The best counter-agent to it is undiluted wine drunk and afterwards vomited. (iv, 72-5.) Celsus frequently prescribes "*solanum quam στρούχνον* Græci vocant," and ranks it among those things which repress and soothe. (ii, 33.) He recommends it as an application in phrenitis and various other diseases. (iii, 18.) Galen and Aëtius give nearly the same account of it as our author. Oribasius confessedly borrows his description from Dioscorides. The Arabians treat fully of the *solanum*, of which Avicenna mentions that there are five species. (ii, 2, 646.) See Serapion (De Simpl. 138); Rhases (Cont. l. ult. i, 662); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 212.) The

COMM. characters which they give of these plants agree in the main so well with those given to them by the Greeks, that we need not stop to note slight differences. The Latin writers of the middle ages call solanum by the name of maurella. See Macer Floridus. He says of the strychnos that it is possessed of powerfully narcotic properties. The *Solanum nigrum* held a place in our Dispensatories, and retained the characters transmitted down with it from antiquity as late as the end of the last century. See Lewis (M. M.) All our old herbalists, Gerard, Parkinson, and Culpeper, speak of its virtues in the same terms as Dioscorides. Our toxicologists have decided that it is a powerful narcotic. See Orfila. The *Physalis somnifera* is still used in India as an application to inflammatory tumours. See Lindley (Veg. King. 621.) The *alkekengi* is still admitted to be possessed of a diuretic power, as stated by Dioscorides. (Ibid.) We are not aware of the *Solanum Sodomæum* having ever been used medicinally in modern times, but we need scarcely say that of late years the *Atropa Belladonna* has occupied no undistinguished place in our Dispensatories. On the *Strychnos furiosa* as a poison, see Vol. II, p. 224.

Στυπτηρία,

Alumen, *Alum*; all kinds of it are very sour, and consist of gross particles. But the alumen scissile, or *Stone Alum*, consists of more subtile parts than the others. After it is the *Alumen rotundum*, or *Round Alum*, and the *astragalotum*. The *Alumen liquidum*, or *Liquid Alum*, consists of gross parts; and so also the varieties called *placitis* and *plinthitis*.

COMM. COMMENTARY. After having read much that has been written by the best authorities both ancient and modern upon this subject, we still approach the discussion of it with very great diffidence. Having deliberately considered what Beckmann has written regarding the ancient alum, we cannot agree with him in setting it down as being copperas or the green sulphate of iron. The ancients, indeed, may not always distinguish accurately the latter from "the sulphate of alum and potash," but considering how common this mineral is in the countries bordering upon the Mediterranean, we cannot conceive how the ancients could possibly have remained ignorant of it, and we need scarcely add that it has never been pretended that *it* has

been described by them under any other name. But its varieties differed much from one another. The *Alumen plumosum*, called *τριχίτης* by the Greeks, was no doubt the *Hair salt* of Werner, which, according to the analysis of Klaproth, contains a large mixture of the sulphates of magnesia and iron. Geoffroy remarks that "of liquid alum two kinds are taken notice of by the ancients; the one pure and the other impure. The solid or concreted kind was by the ancients distinguished, according to the figure of its parts, into fissile and round. The fissile natural alum was either in form of a compact, uniform globe, or appeared divided into small hairs or filaments. The round kind was of a more rare texture." The *Alumen Jameni* of the Arabians was the plumose alum. Pliny and Octavius Horatianus recommend alum as an application to burns when pounded with oil. Alum was used in the practice of medicine from the earliest times. Hippocrates prescribes it in ulcers of the womb, diseases of the gums, and for various other purposes. (*Epid. vii, De Mulieb., De Ulcer., &c.*) Our author borrows from Galen. Dioscorides gives a most elaborate description of the different kinds and of their uses in medicine. They are all possessed, he says, of a heating power, and also of an astringent, and hence they clear the obscurities of the cornea, melt down fungous flesh on the eyelids and elsewhere, the schistose being more powerful than the round; they stop mortifications and hemorrhages, repress flaccid gums, strengthen loose teeth with vinegar or honey; are beneficial in aphthæ; and, in short, he states most minutely the various purposes to which alum may be applied. On the *alumen* see also Pliny (*H. N. xxxv, 52*) and Celsus (*iv, 18*), with the note of Milligan. For the Arabians consult Avicenna (*ii, 2, 68*); Avernhoes (*Collig. v, 43*); Serapion (*De Simpl. 420*); Haly Abbas (*Pract. ii, 44*); Rhases (*Cont. l. ult. 38*); Ebn Baithar (*ii, 83*.) All of these authors, even including the last, do little more than copy from Dioscorides and Galen under this head. Geber, however, treats of the subject with some appearance of originality, and describes the kinds of alum with considerable accuracy. (*Invention of Verity, c. 4.*) The process of burning alum for medicinal purposes, which is barely alluded to by Dioscorides, is described by Geber and by Servitor. (i.)

Στυραξ,

Storax, is calefacient, emollient, and digestive. It therefore is useful in coughs, catarrhs, and defluxions; and promotes menstruation both when drunk and applied on a pessary.

COMM. COMMENTARY. It is clearly our officinal storax, or *Styrax officinale*. Dr. Pereira has given the ancient history of this substance so correctly, as to leave us little further to add under the present head. (Mat. Med. 931.) As he states, the storax has been described by Hippocrates, Theophrastus, Pliny, and Dioscorides. The several varieties described by the last of these, Dr. Pereira ingeniously refers to kinds of storax, with which we are still acquainted. The *Styrax Calamita* is mentioned by our author in the eleventh Section; according to him it is but a variety of the amygdaloid storax, which was formerly imported enveloped in a monocotyledonous leaf. Dioscorides's description of its medicinal properties agrees well with our author's, but is considerably fuller. (i, 79.) Galen and the other Greek authorities treat of it like our author. Celsus prescribes it frequently as an emollient, discutient, concoctive, and suppurative medicine. (v, 18, 22, c. &c.) The Arabians treat of it at considerable length, but do not add much of any practical importance to what had been written on it by Dioscorides and Galen. See Avicenna (ii, 2, 423); Serapion (c. 46); Averrhoes (Collig. v, 42); Rhases (Cont. l. ult. i, 687); Ebn Baithar (ii, 428.) Upon the whole, Serapion's account appears to us most interesting. His Arabian authority, Isaac Eben Amram, mentions that it was used by the Christians in their churches for fumigations. Avicenna, according to Dr. Hill, is the only one among the Arabians who distinguishes the solid storax, which we have been treating of from the liquid, or *Styrax liquidus*. It is quite a different substance, being procured from the *Liquid amber orientale*, according to Dr. Lindley. (Veg. King. 253.)

Σύκα,

Ficus, *Figs*; those which are dried possess heating powers in about the second degree. But those which are fatty rather digest hard tumours; those which are more acrid prove detergent and discutient. The decoction of them, when made of the consistence of honey (which some call *siræon*), is similar

in powers to honey. The powers of the green are weaker, but both loosen the belly. The figs of the wild tree are possessed of acrid and discutient powers like those of the cultivated.

COMMENTARY. See Book I (s. 81.) Pliny enumerates the medicinal properties of *figs* at great length. Ripe figs are said to be diuretic, laxative, and diaphoretic. Externally they were used as an application to boils and scrofulous swellings. (H. N. xxiii, 63.) See also Dioscorides and Serapion, both of whom give the characters of figs in nearly the same terms as Pliny. No ancient author, however, has treated so elaborately of figs as Avicenna (ii, 2, 276.) His account of them is so lengthy that we dare not venture upon an analysis of it. COMM.

Συκή,

Ficus, the Fig-tree, is of a heating and attenuating temperament, so that the juice of it and the sap of the leaves are not only pungent and strongly detergent, but also occasion ulceration, open the mouths of vessels, and remove myrmecia. It is also cathartic. The wild-fig, called *caprificus*, is in every respect more powerful than the cultivated.

COMMENTARY. See the authorities referred to in the preceding article. Pliny recommends the juice of the *caprificus* or wild fig-tree (*Ficus Carica*), as an application to leprosy, psora, and lichen. All the authorities, Greek, Latin, and Arabian, praise it as an application to the wounds of venomous animals. The wild fig-tree is the Ἐρίναιος of Homer. V. Eustath. 'Comment. in Iliad.' (vi, 433.) The commentator describes accurately the process of caprification. COMM.

Συκόμορος,

Sycomorus, the Sycomore; the fruit is innutritive, and bad for the stomach. The juice of the tree has powers which are emollient, agglutinative of wounds, and discutient of tumours. It is taken in a draught and rubbed in for the bites of reptiles, for scirrhus spleens, pains of the stomach, and rigors.

COMMENTARY. Of course there can be no doubt of its being the *Ficus Sycomorus*. Galen, Dioscorides, and Serapion detail its medicinal properties in nearly the same terms as our author. Nothing else of any interest can be gathered from the others under this head. COMM.

Σύμφυτον,

Symphytum, *Comfrey*; the rock comfrey is composed of opposite powers. For it has some incisive powers by which it cleanses the pus in the chest and the kidneys; and it has also some constringency which renders it a suitable remedy for hæmoptysis, sprained and ruptured parts, the red flux in women, and intestinal hernia. It contains also some hot humidity, by which it quenches thirst and cures asperities in the trachea. The other species, called the *Great Comfrey*, is glutinous and prurient like squills. It is used for the same purposes as the rock.

COMM. COMMENTARY. The second species is indisputably the *Symphytum officinale*, a plant which the Romans, no doubt, naturalized in this country. The other has been the subject of more controversy. See Parkinson (526) and Matthioli and Sprengel (Ad Dioscor. iv, 9.) We are satisfied that it was the *Coris monspeliensis*. Our author manifestly abridges Galen, who borrows from Dioscorides, but improves what he takes. They all agree in commending both as being possessed of great virtues as expectorant and vulnerary medicines. Dioscorides particularly commends the latter as an application to inflammations about the anus in a cataplasm, with the leaves of senecio. Neither of these plants is mentioned by Celsus, nor, we believe, by Hippocrates. Avicenna writes hesitatingly about them, but in the main agrees with Dioscorides with regard to their medicinal virtues, more especially in hæmoptysis, ulcers of the intestines, menorrhagia, and as an application to external injuries. (ii, 2, 634.) The Arabians in general seem not to have attached much importance to the symphytum, for, after a cursory examination while writing this article, we have not been able to find it in any of the others except Ebn Baithar, who merely gives extracts from Dioscorides and Galen, under the present head. Apuleius mentions that the Latin name of the symphytum is consolidida. De Hill calls it a famous vulnerary both internally and externally, and as such it is highly commended by all our older herbalists. See Parkinson, Culpeper, and Gerard. It would appear also that the other species, the *Coris monspeliensis*, was employed in the medicine of the Spanish monastic orders as an efficacious vulnerary. See Lindley (Veg. Kingd. 645.)

Σφονδύλιον,

Spondylium, *Cow-parsnip*; the fruit and root are possessed of acrid and cutting powers, so as to cure asthma, epilepsy, and jaundice. The root, when stripped of its bark and put into a fistula, removes its callus. The juice of the flowers of it are injected into the ears as agreeing with chronic ulcers.

COMMENTARY. There seems no reason to doubt of its being the *Heracleum Sphondylium*. Dioscorides and Pliny recommend it as an application to fistulous ulcers, and in the other cases mentioned by our author. Galen and Oribasius give it the same characters as our author. We have not met with it in the works of Hippocrates, Celsus, and Aëtius. Avicenna draws the characters which he gives it entirely from Dioscorides. (ii, 2, 643.) Ebn Baithar, in describing it, merely gives extracts from Dioscorides and Galen. (ii, 24.) Rhases does the same. (Cont. l. ult. i, 636.) The sphondylium is described as a medicinal herb, possessed of the virtues ascribed to it by the ancients, in the works of our old English herbalists, but it has long ceased to occupy a place in our Dispensatory. Neither is it to be found in the modern Greek Pharmacopœia.

Σχῖνος,

Lentiscus, *the Lentisk*, in all its parts, belongs to the full second order of desiccants. As to heating and cooling, it holds an intermediate place. It is astringent to such a degree as to approach nearly, in this respect, to the juice of the hypocistis.

COMMENTARY. It is the *Pistacia Lentiscus*, L., according to the admission of all the commentators. We need scarcely mention that it is the tree from which mastich is procured. Hippocrates was well acquainted with the medical use of it. Pliny says that it acts as a diuretic, but occasions constipation of the bowels. He also mentions that it was used in toothache, and that a decoction of its leaves in a gargle fastened loose teeth. (xxiv, 28.) The same is stated of it by Plinius Valerianus (i, 36), and by Dioscorides (i, 89.) Nay, it would appear, from the following epigram of Martial, that peculiar virtues were ascribed to a toothpick made of the mastich tree :

“Dentiscalpium

Lentiscum melius : sed si tibi frondea cuspis

Defuerit, dentes penna levare potest.”—(xiv, 22.)

COMM. Dioscorides is the author who has written most elaborately on this article, which he recommends in hæmoptysis, diarrhœa, dysentery, menorrhagia, prolapsus uteri and ani, in affections of the mouth, as already stated, and, in a word, he concludes by saying of its oil, that it is beneficial in all cases requiring astringency. (l. c.) Galen also gives a very sensible account of this tree, which he represents to be an astringent of the same class as hypocistis. Celsus prescribes it on various occasions, as, for example, a decoction of its leaves to suppress immoderate suppuration. (vi, 18.) He ranks it among the astringent and emollient substances. (ii, 33.) All the Arabians treat largely of it, but copy most of their information from Dioscorides and Galen. See Avicenna (ii, 2, 453); Rhases (Cont. l. ult. i, 457); Serapion (De Simpl. 159); Averrhoes (Collig. v, 42); Ebn Baithar (ii, 518.) In particular all recommend it as a dentifrice and odontalgic, and we need scarcely mention that it still is used in the East for these purposes. See Paris (Pharm. t. ii, 323) and Pereira (1184.) It is stated in the modern Greek Pharmacopœia that it is cultivated in Chios.

Σχῶνος,

Juncus, the Rush; its flower is moderately calefacient, but astringent in a less degree, and is not removed from the nature of attenuating substances. Hence it is diuretic, emmenagogue, and deobstruent in fomentations, potions, and cataplasms. The root of it is more astringent, but the flower hotter. The marsh-rush consists of two varieties. The fruit of the oxyschœnus or *Hard-rush*, as it is called, is soporific, but that of the holoschœnus less so, and it also occasions headache. Both varieties, if toasted and drunk with wine, dry up fluxes of the belly and restrain the female discharge.

COMM. COMMENTARY. It requires some attention not to confound the *Schœni* with one another. The *Schœnanthus*, then, is decidedly the *Andropogon Schœnanthus*, or Lemon-grass. See Dr. Royle (Antiq. of Hindoo Med. 82) and Lindley (Veg. Kingd. 113.) The σ. ἐλεῖα is the *Schœnus Holoschœnus*; the ὀλοσχῶνος, the *Schœnus mariscus*; and the ὄξυσχῶνος, the *Juncus acutus*. The first of these is the species most celebrated as a medicine. Thus it is the schœnus of Dioscorides, who represents it as being useful in vomiting of blood, pains

of the stomach, lungs, liver, and kidneys, and as being possessed of diuretic, emmenagogue, carminative, subastringent, and other powers. Its decoction, he says, is useful as a hip-bath in inflammations of the womb. (i, 16.) Galen gives a similar account of its virtues. (De Simpl. viii, and De Antidot. i.) The other Greek authorities treat of it very succinctly. Is not this the "flos junci rotundi" of Celsus? (v, 24.) According to Dierbach and, indeed, all the best authorities, it is the $\sigma. \epsilon\nu\omicron\sigma\mu\omicron\varsigma$ of Hippocrates (De Mulieb. i, 111), who recommends it along with other aromatics in diseases of the uterus. The Arabians display an intimate acquaintance with the schœnanths. See Avicenna (ii, 2); Rhases (Cont. l. ult. i, 681); Serapion (De Simpl. 103); Averrhoes (Collig. v, 42); Ebn Baithar (i, 19.) The last of these gives a particularly full account of it, mostly from Arabian authorities. They all agree in representing it as being diuretic, emmenagogue, and alexipharmic, and in recommending it particularly in apostemes of the anus, and in scabies. Its oil, they say, is efficacious in removing lassitude. The schœnanth held a place in our Dispensatory as late as the times of Quincy (i, 1, 12) and Lewis (ii, 20.) Upon consulting the modern authors quoted above, it will be seen that it is still well known in the East.

$\Sigma\omega\rho\iota,$

Sori, resembles misy in its powers, consisting of much grosser particles.

COMMENTARY. We feel that we must still add something to what we have said of this substance under the head of *Misy*. The following description of it, by a great modern authority, who appears to have been well acquainted with it, deserves not to be overlooked: "Rusma or Sory. A mixt mineral, blackish, hard, heavy, and of a cavernous or spongy structure, of a disagreeable smell, and nauseous, vitriolic taste; and often covered with dusty efflorescences on the surface. It is composed of vitriol, sulphur, and an earthy matter. The ancients called it *sory*. We have it in our Derbyshire mines, but it is not regarded. It was used as a depilatory by the Greeks, and is so by the Turks at this time. Taken inwardly it vomits instantaneously and very roughly; it contains a cupreous vitriol, and hence its emetic quality."—Boerhaave's

COMM. *Materia Medica*, translated by Goade (227.) See under *Chalcitis*. Dioscorides calls it blackish, fetid, and nauseating, and possessed of caustic powers: he recommends it in tooth-ache, as an application to vari, as an injection with wine in sciatica, &c. (v, 118.) Galen says it is not soluble like misy and chalcitis, but does not materially differ from them in medicinal powers. Celsus prescribes it along with opium, pepper, and galbanum as a stuffing to carious teeth. (vi, 9.) Avicenna, like Galen, says it is insoluble in water, and, like Dioscorides, he prescribes it in sciatica and diseases of the teeth. (ii, 2, 47.) We have stated above that Serapion describes the sory along with the other two under the general head of *vitriolum*, and the specific name of *Zeg rubeum*; and that he merely translates Dioscorides and Galen. (c. 386.) Rhases, in like manner, gives from Dioscorides and Galen a description of misy, sory, and chalcitis under the general head of *vitriolum*. He calls the sory, *vitriolum ruffum*, and, like Dioscorides, recommends it in carious teeth and in sciatica. His only Arabian authority, Bimasui, says of the *vitriolum* that it dries the lungs strongly, and in this way may prove fatal. (Cont. l. ult. i, 747.) It is the *vitriolum rubeum* of Avernhoes. (Collig. v, 43.) In the most barbarous translation of Haly Abbas it is scarcely possible to extract any proper meaning from his description of the three vitriols. (Pract. ii, 48.) The lengthy account which Ebn Baithar gives of them is mostly made up of extracts from Dioscorides, Galen, and Avicenna. (ii, 510.) Some have thought the sory of Pliny different from that of the others, but, as far as we can see, without any good reason. Like Dioscorides, he recommends it in diseases of the teeth and spreading ulcers of the mouth. He says it is a thing so offensive to the stomach, that the very smell of it will sometimes excite vomiting. (H. N. xxxiv, 30.)

Τάρταροι,

Salsamenta, *Pickles*; their flesh is possessed of acrid and desiccative powers. They are given, therefore, to persons bitten by the viper prester, that they may eat as much as possible, and drink of wine freely, and vomit. They also are suitable to the regimen of acrid food; and are applied with advantage to persons bitten by dogs and other reptiles.

COMMENTARY. *Pickled Fish*. It appears from Dioscorides and Xenocrates that the tunny (*Scomber Thynnus*) was accounted the best pickle, and it was accordingly most used in medical practice. Galen recommends the brine of pickled fish as an injection in dysentery, and a stimulant lotion to sores on all parts of the body. Serapion gives the same account of it as Dioscorides and Galen. Symeon Seth forbids us to eat pickles after venesection, as they are apt to occasion alphas and scabies. It seems highly probable that indigestible substances, if taken into the stomach when the veins are empty, may be rapidly absorbed, and give rise to the formation of humours, of which nature may endeavour to free the system by casting them forth by the skin. COMM.

Ταυροκόλλα,

Taurocolla (called by some Xylocolla), is a glutinous substance made from the hides of oxen, and is of considerably detergent powers. Hence, when dissolved in vinegar, it removes lichen and superficial leprosy; and it prevents burns from getting inflamed when dissolved in hot water. It is also a suitable application for wounds when triturated with oxymel.

COMMENTARY. Pliny says of it, "Glutinum præstantissimum fit ex auribus taurorum et genitalibus. Nec quidquam efficacius prodest ambustis." (H. N. xxviii, 72.) Dioscorides and Avicenna recommend it in the cases mentioned by our author. It will readily be perceived that it was a species of gelatin. See Κόλλα. COMM.

Τελλίνοι,

Tellinæ, *Limpets*; when pickled and burnt, their ashes are caustic; when mixed with cedar rosin and applied to the parts from which the hairs of the eyebrows have been torn out by the roots, it prevents them from growing again.

COMMENTARY. According to Matthioli, they are a species of mussels. They are different, however, from the *Mytili edules*, L. Our author's account of them is taken from Dioscorides, and is repeated by Avicenna. COMM.

Τέριμθος,

Terebinthus, *Turpentine*, is heating in the second degree,

and desiccative, when green, in the first, but when dried, in the second. The fruit, when dried, belongs to the third order of desiccants. It is, therefore, diuretic and useful for the spleen.

COMM. COMMENTARY. It is the *Pistacia Terebinthus* L. Dioscorides states that its fruit is hot, diuretic, and aphrodisiacal. He recommends it internally for the bites of the phalanga. Of the turpentine resin we have treated under the head of the Resinæ. The ancients, as we have stated, were very familiar with the *brown* or *black* rosin, called *colophony*. (i, 91.) According to Dr. Hill, the Chian turpentine rosin was the turpentine of the ancients. Pliny likewise recommends it in retention of urine, and as a gentle laxative. He adds, "venerem excitat." (H. N. xxiv, 18.) Our author's account of it is condensed from Galen. The turpentines, and more especially the resin, are frequently prescribed by Celsus. They occur also in the Hippocratic treatises. Turpentine was much used in applications to cutaneous diseases and ulcers. See Avicenna (ii, 2, 303) and Rhases (Cont. l. ult. i, 342.) Serapion treats of this article under the same head with the lentiscus. He copies from Dioscorides. (De Simpl. 153.) See Ebn Baithar (ii, 144.)

Τέττιγες,

Cicadæ; some, having dried them raw, give them to drink in colic affections to the number of three, five, or seven, with an equal number of grains of pepper. Others roast them and give them to drink to those who have affections of the bladder.

COMM. COMMENTARY. The τέττιξ of the Greeks and the cicada of the Romans was not the grasshopper, as has been often represented, but the insect which has been more properly called the tree-hopper in English, namely the *cicale* of the Italians. The species here noticed was most probably the *Cicada orni*. Dioscorides merely recommends them in diseases of the bladder. (ii, 56.) Pliny gives a very interesting description of them, but it contains nothing which, in a medical point of view, would suit our present purpose. (H. N. xi, 32.) Our author follows Galen. (De Simpl. xi.) They do not occur in the works of Celsus, nor have we been able to discover traces of them in any of the Arabians, with the exception of Ebn

Baithar, who, in treating of them, merely gives extracts from COMM.
Dioscorides and Galen. (i, 555.)

Τεῦτλον,

Beta, *Beet*, is of a nitrous nature. Hence it is detergent and discutient, and purges by the nose; but especially the white species. When boiled it becomes anti-inflammatory and slightly discutient.

COMMENTARY. It evidently is the *Beta vulgaris* L. The COMM.
white and black kinds were, we presume, merely varieties; but this does not seem sufficiently clear. See Parkinson (*Theatre of Plants*, 752) and Lewis (*Mat. Med.*) Dioscorides recommends the beet for various medicinal purposes, for clearing the head by occasioning a discharge from the nose, as a remedy for earache; a decoction of its leaves for eruptive diseases and chilblains; and also as an application to exanthemata, burns, and erysipelas. (ii, 49.) Galen gives the same account of it as our author. Aëtius is fuller; he further recommends it particularly as a deobstruent in diseases of the liver and spleen. The beet is mentioned as an edible plant by Hippocrates. (*De Vict. Acut.*) See also Celsus (ii, 18.) Serapion (c. 148) and Avicenna recommend the leaves of beet as an application to burns and impetigo. (ii, 2, 636.) See also Rhases (*Cont. l. ult. i*, 127.) All the authorities say that the beet is possessed of nitrous properties, by which they probably mean saline, the ancient *nitrum* being a species of native soda, resembling salt. It is now well known that beet-root by boiling yields a saccharine salt in considerable abundance. The beet held a place in our Dispensatory as late as the time of Lewis. We have treated of it as an article of food in Book I.

Τεύκριος,

Teucrium, *Tree Germander*, is a calefacient of the second order, and a desiccant of the third. Its powers are also incisive and subtle, and hence it cures the spleen.

COMMENTARY. It is not well decided whether it be the COMM.
Teucrium Marum or the *Teucrium flavum*. Pliny's account of it is very confused, and Harduin thinks that his T. is the hemionitis of Dioscorides. (*Ad H. N.* xxv, 20.) Apuleius, in like manner, identifies the hemionon and the teucrium. (*De*

COMM. Herbis, 56.) Dioscorides, like our author, recommends it for reducing the spleen, both when given internally and when applied externally in a cataplasm, and also as an application to the bites of venomous animals. (iii, 110.) Our author borrows from Galen. We have not been able to discover it in the works either of Hippocrates or of Celsus. Neither have we found it in the works of the Arabians. Dr. Sontheimer, the German translator of Ebn Baithar, identifies the *Teucrium Marum* with the *Chamædryis* of Dioscorides, and the *T. flavum* with his *Teucrium*. (ii, 466.) It is long since the *Teucrium Marum* disappeared from our Dispensatory, but it is still not wholly unknown in the shops of the apothecaries, where it is reputed to be emmenagogue. The *T. flavum* is also to be found in the shops, and has still the reputation of being useful in diseases of the liver and spleen. See Gray (Suppl. to Pharmacop. 49.)

Τέφρα,

Cinis, *Ashes*; all kinds have not exactly the same temperament, but they vary according to the difference of the wood that has been burnt. The ashes, then, of sour things, such as the oak and the ilex, have no small degree of astringency, so that they will restrain hemorrhage when no other remedy is at hand. That from acrid substances, such as the ashes of the fig and the spurge become more acrid and detergent.

COMM. COMMENTARY. These *Cineres* were pearlshes, consisting of the carbonate of potass mixed with various impurities. Galen remarks, that they are the residue of vegetable substances which have been burnt, being composed of contrary qualities, for that they have something terrene in them, and also something of a fuliginous nature. When, then, they have been dissolved in water and strained, what remains is terrene and devoid of pungency. Our author borrows from him his particular characters of the different cineres. They were much used by the ancient physicians as caustic and stimulant applications. Rhases says that they possess an igneous nature, and are useful in dissolving soft tumours. (Ad Mansor. iii, 47.) See also (Cont. l. ult. i, 214.) In the latter work he borrows principally from Galen and our author. Avicenna recommends the ashes of mezereon in quinsy, and as a stimulant to the

sight. The aqua cineris, he says, is one of the septic medicines. (ii, 2, 188.) The burnt lees of wine belong to this class. See *Koviat* and *Τερῦξ ὀίνου*. COMM.

Τηλέφιον,

Telephium, *Orpine*, is a calefacient of the first order, but a desiccant of the second. It is also detergent; and hence it is a suitable application to putrid ulcers, and cures leuce and alphos with vinegar.

COMMENTARY. We think with Sibthorp and Sprengel, that it is *not* the *Sedum Telephium*, but the *Cerithe minor*. See also Parkinson (520.) Dioscorides recommends it principally in the forms of leprosy. (ii, 217.) Galen's characters of it agree with those of our author. It does not occur in the works either of Hippocrates or of Celsus, neither have we been able to observe any distinct traces of it in those of the Arabians, unless, which seems highly probable, it be the *thelopium* of Ebn Baithar, as his German translator conjectures. (ii. 164.) COMM.

Τῆλις,

Fœnum Græcum, *Fenugreek*, is heating in the second order, but desiccative in the first; hence it expedites the progress of all hot phlegmons; and those which are less hot, and such as are scirrhus, it cures by discussing them.

COMMENTARY. Without doubt it is the *Trigonella Fœnum Græcum*. It occurs in the works of Hippocrates. (De Mulieb. i, 617.) It is, unquestionably, the "Fœnum Græcum" of Celsus, who enumerates it as an ingredient in an emollient pessary (v, 21), and in a soothing cataplasm. (ii, 33.) It is prescribed repeatedly by Aretæus, both internally and externally. Dioscorides recommends the powder of it in the form of a cataplasm to various inflammations, both internal and external; as an ingredient in a medicated bath for diseases of the female organs, and as a pessary in the same, an injection of its decoction for tenesmus and fetid discharges from the bowels, and for other purposes. (ii, 125.) Pliny gives a full account of its medicinal virtues, in which a considerable portion but not the whole is derived from Dioscorides. He says that Damon gave its seeds in a draught to promote menstrua- COMM.

COMM. tion. He also mentions its being taken in ulceration of the chest and chronic coughs. (xxiv, 120.) Galen, Aëtius, and Oribasius give its characters in nearly the same terms as our author. For the Arabians, see Avicenna (ii, 2, 246); Serapion (De Simpl.); Rhases (Cont l. ult. i, 294); Averrhoes (Collig. v, 42); Ebn Baithar (i, 333.) Though these authors, and especially Avicenna, treat at great length of this article, it does not appear that they applied it in many more cases than as they had been taught by the Greeks. They recommend it, however, with oil of roses, as an application to burns, and as an ingredient in collyria. They say the oil of it cures fetor of the breath and the perspiration, and of the alvine discharges. They all commend it as being diuretic, emmenagogue, and promoting impregnation. They further represent it as being an excellent expectorant in diseases of the chest. Upon reference to Quincy (i, 4, 219), it will be seen that in his time the fenugreek still maintained the characters assigned to it by the ancient authorities. It has now disappeared from our Dispensatory, but is still retained in the Greek Pharmacopœia. (Athens, 1837.)

Τιθύμαλλοι,

Tithymalli, *Spurges*; all the species of it are of the fourth order of calefacients, with acrimony and strong bitterness; but the root being weaker, when boiled with vinegar, allays the pains of carious teeth. The juices being stronger are applied to the hollow of teeth; but if they touch the rest of the body they burn it; and therefore they remove the hairs if rubbed in for a short time. They also remove myrmecia, acrochordones, and the like, and clear away affections of the skin, and cure ill-conditioned and phagedænic ulcers. There being seven species of this plant, the strongest are the Characias (*Wood Spurge*), and the Myrsinitis (*Myrtle-leaved Spurge*), and that growing upon rocks, Arboreus (*Tree Spurge*); but next in order are, that species which resembles Pettymullein (*Broad-leaved Spurge*), and the Cyparissias (*Cypress Spurge*), and then the Maritimus (*Sea Spurge*), and the Helioscopius (*Sun Spurge* or *Wartwort*.)

COMM. COMMENTARY. That the Tithymalli of the ancients are all referable to the genus *Euphorbia* or *Spurge*, cannot admit of

any doubt. Dioscorides, Pliny, Apuleius, and, in a word, COMM. most of the ancient authorities, like our Paulus, describe seven medicinal species, to which we may venture to give the following names in the botanical nomenclature of the present time. 1. *Euphorbia characias*. 2. *E. myrsinites*. 3. *E. paralias*. 4. *E. helioscopia*. 5. *E. cyparissias*. 6. *E. dendroides*. 7. *E. platyphyllos*. See Sprengel (Ad Dioscor.); Lindley (Veg. Kingd. 277); German Translation of Ebn Baithar (ii, 525); Miller (Gard. Dict.) Besides these, the medical authors treat of several other species of spurge by particular names, as lathyris, peplis, thymelæa, &c. The tithymallus was called "lactuca marina" by the Romans (Celsus v, 7), and also "lactaria" and "lactuca caprina." See Pliny, who gives a full account of the spurges. (H. N. xxvi, 39, 46.) These plants are treated of at so great a length by Dioscorides and the other authorities, that we cannot possibly find space for an exposition of their particular views. All, however, agree in giving them nearly the same characters as our author, who, in the present instance, is indebted in part to Dioscorides, and in part to Galen. Several of them are noticed by Hippocrates. For the Arabians, see Serapion (De Simpl. 360); Avicenna (ii, 2, 421); Rhases (Cont. l. ult. i, 718); Averrhoes (Collig. v, 42); Ebn Baithar (l. c.) They recommend them in the same cases as the Greeks, without supplying any new views of much importance. They prescribe a few drops of the juice of spurge poured upon a fig as a phlegmagogue. They further recommend them in malignant ulcers and those attended with caries of the bones. And here, by the way, we may be allowed to mention that a modern authority confirms what the ancients say of the efficacy of the spurges in this case. See Hildanus (x, c. ii, 2.) In the present age, we have discarded such purgatives as the spurges, whether wisely or not we will not take upon ourselves to say.

Τίρανος,

Calx, Lime; the Calx viva (*Quicklime*) burns strongly so as to form eschars; when slacked, it forms eschars at first, but not so after some days. It contracts, however, and wastes the flesh. When washed it loses its pungency, if this is often done with water; but if in sea-water, it becomes decidedly detergent.

COMM. COMMENTARY. It appears from Dioscorides that the *Lime* used by the ancient physicians, was prepared by calcination from shells, pebbles, or marble, which last is the best of all. Pliny, Vitruvius, and Palladius say, that the best lime is got from hard, white stone. Lime was much used as a caustic and stimulant application. The ἄσβεστος of the Greek Mat. Med. invariably, we believe, signifies quicklime, and is never applied to the mineral which now bears that name. Dioscorides says, all kinds of quicklime have a fiery, biting, caustic, and escharotic power; when mixed with other things as suet or oil, it becomes digestive, emollient, depilatory, and epulotic; and that which is recent and free from water is more efficacious. (v, 132.) Pliny recommends it in the same cases, and also as an application to luxations and strumæ. (H. N. xxxvi, 57.) See also Plinius Valerianus (iii, 20.) Celsus places it in his list of corrosive and caustic substances. (v, 6, 8.) Our author's account of this article is condensed from Galen. Aëtius and Oribasius give nearly the same account of it as Dioscorides and Galen. Quicklime was used as a medicine in the Hippocratic age. (See Erotianus.) For the Arabians, consult Avicenna (ii, 2, 144); Rhases (Cont. l. ult. iii, 20, i, 445); Serapion (De Simpl. 412); Haly Abbas (Pract. ii, 44); Averrhoes (Collig. v, 43); Ebn Baithar (ii, 387.) All these authorities, including even the last, who is by far the most original of their writers on the Mat. Med., borrow under this head almost all their information from Dioscorides and Galen. Avicenna praises it as an application to burns.

Τραγιάκάνθα,

Tragacantha, *Tragacanth*, has similar powers to gum.

COMM. COMMENTARY. The ancient Tragacanth was identical with the modern, which is yielded by *Astragalus verus*, and similar spiny species. See Lindley (Veg. King. 548.) According to Sibthorp, the *Astragalus aristatus* is the one which most commonly grows in the Peleponnesus, and he holds that it produces the T. of Dioscorides. (Prod. Fl. Græc. ii, 90.) Dioscorides, like our author, states, that in virtue it resembles gum, and recommends it in ophthalmic remedies, for roughness of the windpipe, loss of speech, and epistaxis, in a linctus with honey. He also recommends it when allowed to melt be-

low the tongue, for pain of the kidneys and bladder, when mixed with hartshorn burnt and washed, and a little fissile alum. (iii, 20.) Galen and the other Greek authorities state its virtues in very general terms. It is an ingredient in more than one of the collyria of Celsus (vi, 6), and is prescribed by him for various other purposes. Of the Arabians, Ebn Baithar is the one who gives the fullest account of it. (ii, 350.) See also Avicenna (ii, 2, 220.) In the modern Greek Pharmacopœia the *Astragalus aristatus* is described as producing the tragacanth. It is there said to be common in the Peleponnesus.

Τράγιον,

Tragium, *Stinking St. John's Wort*, is a plant in Crete resembling the lentisk, being hot in the third degree, and possessed of attractive, discutient, and attenuant powers. It extracts sharp-pointed weapons of wood, and proves lithontriptic and emmenagogue when drunk to the amount of a drachm. Another species, which is bitterer than this, resembling the ceterach, grows everywhere. It is sufficiently astringent so as to agree with fluxes.

COMMENTARY. From the description which Dioscorides gives of the former species, we need have little hesitation in setting it down for the *Hypericum hircinum*. In the other, the name *Tragium Columnæ* has been assigned from the name of a celebrated botanist. Dioscorides and Galen ascribe to it very nearly the same virtues as our author. Neither of these plants occurs in the works of Hippocrates or Celsus. Neither have we been successful in searching for it in the works of the Arabians, with the exception of those of Ebn Baithar, who merely gives extracts from Dioscorides and Galen under this head. (ii, 155.)

Τραγορίγανος,

Tragoriganon, has powers resembling marjoram, with the addition of some astringency.

COMMENTARY. The two species described by Dioscorides probably are the *Thymus Tragoriganum* L., and the *Stachys glutinosa*. According to him, they are heating, diuretic, and wholesome when the decoction is drunk; they occasion bilious dejections; are useful in diseases of the spleen when taken with vinegar, and also to persons who have swallowed ixia.

COMM. They are emmenagogue, and are given in coughs and pneumonia in a linctus with honey. It makes an agreeable potion, and hence is given to persons affected with nausea, indigestion, and acid eructations, and who are subject to anxiety, nausea, and heat of the hypochondria. In a cataplasm with polenta they also discuss tumours. (ii, 32.) Galen and the other Greek authorities treat of it very briefly. Celsus calls it diuretic and discutient. (iii, 21, &c.) We have not been able to find these plants in the works of the Arabians.

Τρίβολος,

Tribolus, the Caltrop, is moderately refrigerant; the land species is strongly desiccative, but the water slightly so, and it is moistening. Both are befitting remedies in incipient inflammations and other influxes. The fruit of the land caltrop, consisting of subtile parts, breaks renal calculi.

COMM. COMMENTARY. It seems to be clearly made out that the one is the *Tribulus terrestris*, and the other the *Trapa natans*. According to Pliny, their juices are anti-inflammatory, and form a proper application to phlegmons and ulcers; an ingredient in collyria; discuss strumæ, and prove lithontriptic. (H. N. xxii, 12.) He borrows this account of them, however, mostly from Dioscorides. (iv, 15.) Our author manifestly copies from Galen, and both Aëtius and Oribasius do the same. We have not found them in the works of Hippocrates and Celsus. The Arabians treat of them at more length than the Greeks. See Avicenna (ii, 2, 382); Rhases (Cont. l. ult. i, 721); Serapion (c. 112); Ebn Baithar (i, 307.) They recommend both species as being aphrodisiac, lithontriptic, and diuretic. Both the species here described, that is to say, the *Trapa natans* and *Tribulus terrestris*, although they have been long excluded from our Dispensatories, are still not wholly unknown in the shops. See Gray (Suppl. to Pharm. 84, 117.)

Τράγος,

Tragus, a species of Frumentacea, is like far (spelt), but more indigestible and laxative.

COMM. COMMENTARY. The method of preparing it is thus described in the Geoponica. Spelt is to be steeped and stripped of its hull, and dried in the warm sun; then the same thing is to

be done until the skin and fibrous part of the grain drop off. COMM.
 (Geop. iii, 8.) Pliny, however, seems to make it a peculiar species of grain. "Far sine arista est: item siligo. Adjiciuntur his genera, bromos, siligo excepta, et tragos, externa omnia ab Oriente invecta, oryzæ similia." (H. N. xviii, 20.) Galen and Oribasius call it spelt deprived of the hull. Dioscorides also describes a shrub of this name, which there can be no doubt is the *Ephedra distachya*. He describes it as being very styptic to the taste, and recommends it in cæliac affections and in fluor albus. (iv, 51.) It appears singular that none of the other authorities, as far as we can discover, has noticed it, with the exception of Ebn Baithar, who merely gives a translation of the chapter of Dioscorides on it. (ii, 156.) The Asiatic *Ephedras* were formerly kept in the shops as styptics. See Lindley (Veg. Kingd. 234.)

Τρίγλα,

Trigla, the fish *Surmullet*, when frequently eaten, occasions dimness of vision. When cut in pieces and applied raw, it cures the bite of the sea-dragon, of the scorpion, and of the spider.

COMMENTARY. It is the *Mullus barbatus* L. According COMM.
 to Coray (Ad Xenocrat.), it is the *Surmullet*. R. Stephens likewise calls it by this name. It is the "Barbatulus mullus" of Cicero. (Paradox. v, 2.) We have treated of it as an article of food in the First Book. Dioscorides, Galen, and all the authorities that notice it, give it the same characters in a medicine as our author. It does not appear that the Arabians describe it.

Τριπόλιον,

Tripolium; the root is hot in the third degree and acrid.

COMMENTARY. We shall have an opportunity in our COMM.
 Appendix to discuss the question, whether or not this be the Turpeth of the Arabians, as has been often stated. We may just mention in this place, that Sprengel is inclined to refer it to the *Plumbago Europæa*, a plant which seems to agree very well with the characters of the present article, inasmuch as its root is peculiarly acrid. See Lindley (Veg. Kingd. 641.) Dioscorides says of it, that its root is hot to the taste, and that when drunk with wine it discharges water and urine from the

COMM. belly, and that it is used as an alexipharmic. (iv, 133.) Galen and the other Greek authorities call it acrid to the taste and hot in the third degree. For the reason already stated we shall not enter upon an exposition of the views of the Arabians in this place.

Τρίχες,

Pili, *Hairs*, when burnt have similar powers to burnt wool.

COMM. COMMENTARY. Our author follows Galen. The Arabians recommend burnt hairs as an application to foul ulcers, and the bite of a mad dog. See Avicenna (ii, 2, 191), and Haly Abbas (Pract. ii, 52, 552.)

Τρυγών θαλασσίη,

Pastinaca marina; its sting when pressed upon a weak tooth breaks it, and makes it fall out.

COMM. COMMENTARY. We have treated of the *Pastinaca marina* in Book V. Scarifications of the gums with the sting of this fish in cases of difficult dentition are recommended by Marcellus Sideta and Pliny (H. N. xxxii, 26.)

Τρυξ οίνου,

Fæx Vini, the Lees of Wine, when unburnt is compounded, being decidedly desiccative and discutient. But astringency is superadded according to the species of wine from which it is formed. It is, therefore, to be used in complaints of a humid nature and fluxes. It discusses phygethla, and extinguishes the milk in over-distended breasts. The burnt lees become caustic, so as often to be mixed with caustic applications. It, therefore, removes leprous nails with rosin, and dyes the hair yellow, when rubbed for a whole night with oil of lentisk. When washed it is used as an ingredient in the detergent remedies of the eyes; that of vinegar is stronger in every respect than the lees of wine, and more astringent.

COMM. COMMENTARY. The lees of wine and of vinegar are strong preparations of potass, and were among the most powerful caustics with which the ancients were acquainted. Hence Celsus ranks "fæx combusta" among the "adurentia." (v, 8.) Dioscorides is the ancient author who gives the fullest description of this article. He says the best is that procured from

old Italian wine, or, failing it, from any similar wine; and that the *fæx aceti* is possessed of intense powers. Some, he says, burn it upon fresh shells, and some upon heated coals. He says it is possessed of strongly caustic, detergent, escharotic, styptic, very septic and desiccative powers. The *fæx*, must be used when recent, for it soon evaporates, and hence it must not be left uncovered, nor without its vessel. It is washed like pompholyx. The unburnt, he adds, discusses tumours by itself, and with myrtle; when applied as a cataplasm it represses defluxions of the belly and stomach; and when applied in like manner to the lower part of the abdomen and genitals, it mitigates the female fluor; it dissipates hard tumours which are not ulcerated; when rubbed in with vinegar, it represses swelled breasts; the burnt with rosin, removes leprous nails; rubbed in with oil of privet for a whole night, it makes the hairs yellow; when washed, it is applicable in diseases of the eyes, like spodos, and thus clears away cicatrices and clouds on the eye. (v, 131.) Pliny recommends it likewise as an application to various cutaneous diseases, and complaints of the eyes. He commends it as an antidote to mushrooms. The lees of vinegar, he says, are more escharotic. Its strength, he says, is increased by being burnt. When applied on a tent it cleans the genital organ of females. (H. N. xxiii, 32.) See in like manner Plinius Valer. (iii, 51.) Avicenna directs us to keep the lees in a close vessel, and not expose them to the air. He says that the *fæx aceti* is a medicine of great powers, and stronger than any of the others. In short, his account of the lees of wine and vinegar is almost entirely borrowed from Dioscorides (ii, 2, 241.) Rhases, in like manner, copies from Dioscorides and our author. (Cont. l. ult. i, 296.) See Serapion (De Simpl. 36); Ebn Baithar (i, 419.)

Τρωγλοδυτης,

Troglodyta, is a Sparrow, the smallest of all birds, with the exception of the one called regulus; and living principally in hedges. This animal when pickled, and eaten either roasted or raw, breaks down stones in the kidneys; and its ashes when burnt, if taken in a draught, do the same thing.

COMMENTARY. We have mentioned in Book III, that this small species of sparrow was supposed to possess great

COMM. powers as a lithontriptic. Drelincurtius calls it the wren. (Mangeti Bibl. Chirurg. i, 254.) We, however, are inclined to think that it was the *Accentor modularis* or hedge-sparrow. Our author, as far as we have been able to discover, is the only one of the authorities who has included this animal in the *Materia Medica*; but he borrows his description of it from Aëtius, (iii, 3, 11.)

Τυρός,

Caseus, *Cheese*; that which is new made, and soft, has repellent powers, cooling gently, so as when applied to agglutinate wounds. That called oxygalactinus acquires slightly discutient powers in addition, and is more agglutinative of wounds. Old cheese, especially such as is fatty, becomes discutient, so as to be a fit application to topi in arthritic complaints, particularly along with the decoction of swines' flesh pickled and fat.

COMM. COMMENTARY. Our author's account of the medicinal properties of *Cheese* is mostly abridged from Galen. The kind called oxygalactinus is the same, we suppose, as the "Caseus acidus cum oxymelite" of Pliny. (H. N. xxviii, 34.) Galen says that it was used about Pergamus; see also Dioscorides (ii, 79.) According to Avicenna, fresh cheese is a good application to recent ulcers, and old cheese to ill-conditioned ulcers. He recommends cheese with the brine of bacon as a discutient application to arthritic chalk-stones. He speaks favorably of fresh cheese as an application in ophthalmia. (ii, 2, 123.) He treats more fully of this article than any other writer on the *Mat. Med.*, with the exception of Ebn Baithar, who gives a long dissertation on the properties of cheese, both as an article of food and as a medicine. (i, 239.) Serapion merely gives extracts from Dioscorides and Galen. (De Simpl. 157.)

Ἰάκινθος,

Hyacinthus, *Hyacinth*; its root being bulbous-shaped belongs to the first order of desiccants and the second of refrigerants. If applied in a cataplasm with wine, it is believed to keep children long from coming to puberty. The fruit is gently detergent and astringent. It is, therefore, given in

cases of jaundice with wine, being more desiccative but less refrigerant.

COMMENTARY. Without doubt, as Sprengel and Matthiolus state, it is the *Hyacinthus orientalis* L. Pliny, Dioscorides, and Avicenna enumerate its medicinal properties nearly in the same terms as our author. They further recommend it as a theriac and alexipharmic. It has long been unknown to British Pharmacy. COMM.

Υαλος,

Vitrum, *Glass*, when pounded and drunk with a thin white wine is said to break down stones in the bladder.

COMMENTARY. Aristophanes, we believe, is the first writer who makes mention of glass, since the Orphic remains, in which it is noticed, are now generally supposed of a later date. In his comedy of "Acharnenses," an ambassador from the court of Persia is made to say that he had drunk undiluted wine out of vessels of glass and gold. (Acharn. l. 74.) In his "Nubes" he mentions burning mirrors of glass. It is also mentioned in the *Timæus* of Plato. Pliny gives an interesting account of the invention of glass. (H. N. xxxvi, 65.) Glass appears to have been in common use about his time and afterwards, for we find Dioscorides directing to keep certain medicines in vessels of glass; and Actuarius recommends to have *pots-de-chambre* made of glass in order to facilitate the observations upon the urine. From a passage in Pliny it would appear that imitations of the precious stones were commonly made in glass in his time with foil or the like placed under it. (H. N. xxvii.) On the glass cups of the ancients, see Strabo (xvi); Athen. (xviii, 28, ed. Schw.); and Salmasius. (Ad Solin. 769.) From the following passage in the works of Lactantius it appears that glass was used by the ancients in windows: "Manifestius est, mentem esse, quæ per oculos ea quæ sunt opposita transpiciat quasi per fenestras perlucante vitro aut speculari lapide obductas." (De Opificio Dei, 8.) We need scarcely say that glass has been found in the ruins of Pompeii of late much more plenteous than was expected from the ideas which were formerly entertained of its scarcity in ancient times. The *hyalus* or *vitrum*, however, was a term applied COMM.

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COMM.
 to crystal as well as to glass. By the medical authors, we suppose, it is generally applied to the former; for Avicenna says quaintly of vitrum, that it is *among stones* what a fool is among men, that is to say, it is easily made to assume any colour, and is easily broken into pieces. This article does not occur in the Mat. Med. of Dioscorides. Galen prescribes it medicinally on various occasions: thus like our author, he says of burnt crystal or glass, that it is lithontriptic (De Renum Affect.), and recommends the same for drying ulcers (De Comp. Med. sec. gen. iv), and also calls it a good diuretic (De Simpl. v.) Our author borrows his paragraph on this subject from Aëtius. (ii, 31.) It is never prescribed medicinally by any more of the Greek or Roman authorities. It is regularly treated of, however, by the Arabians in their systems of the Mat. Med. See Avicenna (ii, 2, 720); Serapion (De Simpl. 382); Rhases (Cont. l. ult. i, 748); Ebn Baithar (i, 723); Haly Abbas (Pract. ii, 47.) (?) Of these Serapion is the authority that treats most fully of this article. He quotes Galen as saying of it, that it is hot in the fourth degree. He says there are two kinds, the sandy and the stony; that when vitrum is set fire to, and a magnet is mixed up with it, it becomes coagulated owing to its ductility. He says of it that it has various colours, as white, like crystal, which is the colour of the best kind, red, yellow, green, and azure. He then says, like Avicenna, that glass is among stones what a fool is among men, and so forth. He adds that crystal is a species of glass (vitrum) which is found in a mineral state. As to its medicinal properties, he says it is hot in the first degree, and dry in the second; that it removes furfures of the head, and is applied to the head and beard as a depilatory. When pounded and drunk with wine, it is lithontriptic. One of his Arabian authorities, Aben Mesuai, says glass is good for the lungs and for baldness. Avicenna further recommends it as a dentifrice, and as an application to remove albugo of the eye, in which case, he adds, the burnt is most efficacious. There is nothing of any interest further on what is written of it by Rhases, Haly Abbas, and Ebn Baithar (l. c.) We may mention in conclusion that although glass has long been excluded from the practice of the regular physician, we have

often heard of powdered glass having been used by empirics, COMM.
 and certainly in some cases with good effect, to remove opacities of the cornea. See also Gray (Suppl. to Pharmacop. 260.)

Ἰδα,

Tuber Terræ, *Truffle*, is composed of a very terrene substance, with a slight degree of attenuating power.

COMMENTARY. We have treated of *Truffles* in the 77th COMM.
 section of Book I. It is the *Tuber Cibarium* L.

Ἰδράργυρος,

Hydrargyrum, *Mercury*, is scarcely used for medical purposes, being deleterious. But some having burnt it, so as to reduce it to ashes, and mixed it with other articles, have given it to drink in cases of colic and ileus.

COMMENTARY. We have given some account of the ancient COMM.
 opinions on this subject in Book V. From the statement of our author it will be perceived that the Greek physicians made little use of this important article in the practice of medicine. Rhases, Avicenna, Haly Abbas, and Serapion recommend it as an application for scabies, lice, and malignant ulcers. Avicenna says the vapour of it induces paralysis, tremblings, spasms, and contractions of the limbs. He adds that the vapour of it is destructive of sight, and brings on fetor of the breath (ii, 2, 46.) Serapion gives exactly the same account of it. (De Simpl. 385.) See also Rhases (Cont. l. ult. i, 75); Haly Abbas (Pract. ii, 48, 501); Ebn Baithar (i, 553.) Galen admits that he had no experience of it as proving destructive, either internally or externally. (De Simpl. ix.) It is remarked by Dutens that Dioscorides's description of the method of preparing mercury from cinnabar is the first account of the process of *distillation* which we possess. (v, 70.) Pliny copies the same. (H. N. xxxiii, 8.)

Ἰδρόπιπερι,

Hydropiper, *Water-pepper*, is a hot herb, but not so much so as pepper. When applied green along with its fruit it discusses hypopia and scirrhus tumours.

COMMENTARY. It is the *Polygonum Hydropiper*, known by COMM.
 the vulgar name of *Arse-smart*. The other authorities recom-

COMM. mend it as a stimulant application to discuss tumours and suggillations. See in particular Dioscorides (ii, 190), and Galen (De Simpl. viii.) The Arabians treat of it succinctly in much the same terms. See Rhases (Cont. l. ult. i, 551); Avicenna (ii, 2, 551.)

“Υδωρ,

Aqua, *Water*; the best, and that which is unmixed with other matters, is cooling and diluent by its own proper substance. Having got acquired heat, as long as it preserves this it heats, but when it becomes cold, it cools. That which has a certain admixture, such as of natron or bitumen, acquires the property of the substance which is mixed with it. Rain water has some astringency, for which it is mixed with ophthalmic remedies. The qualities of the best water have been enumerated in Book I.

COMM. COMMENTARY. It is fully treated of by us in Book I. See in particular Pliny (H. N. xxxi, 21); Avicenna (ii, 2, 58); and Rhases (Contin. l. ult. i, 706.)

“Υοσκύαμος,

Hyoscyamus, *Henbane*; that species which has black seed, and that which has yellow, are deleterious. The fittest for medicine is that species, the seed and flower of which are white, being of the third order of refrigerants.

COMM. COMMENTARY. Dioscorides describes with considerable precision three species of hyoscyamus, deriving their specific differences from the colour of the seed, the first being black, the second yellow, and the third white. The first two he rejects as being highly dangerous, by inducing delirium and sleep. The first of these we are inclined to think must be *Hyoscyamus niger*, a well-known plant, which was most probably naturalized in this country by the Romans for medicinal purposes. The second was probably a variety of it, or *H. aureus*; and the third the *H. albus*. He gives minute directions for preparing the juice of it, which he recommends as an ingredient in anodyne collyria, for hot and acrid rheums, carache, and complaints about the uterus; and with flour for inflammations of the eyes, feet, &c. Its seed, he says, is applicable for coughs, catarrhs, defluxions, and pains of the eyes; for menor-

rhagia, and other hemorrhages, when taken in a draught with poppy-seed and hydromel. He recommends it as forming an anodyne cataplasm, for gout, swelling of the testicles, or swelled mammæ after parturition. He speaks highly of the leaves in all these cases, and for every kind of pain. Three or four leaves, he says, cure the remittent fever called hepialus. He states that the leaves, if taken internally, and as had been said, when applied as a clyster, induce mental alienation. He concludes with stating that the root with vinegar forms a gargle in toothache. (iv, 69.) The hyoscyamus of Hippocrates was no doubt the *albus*. See Sprengel and Dierbach. The leaves, the root, the seed, and the juice of the henbane are all used by Celsus in the practice of medicine. He gives a formula for a pill consisting of mandragora, parsley-seed, and seed of henbane, which he says is soporific (v, 25.) Pliny describes confusedly four or five species or varieties of henbane. He says not much in favour of any of them as medicines. (H. N. xxxv, 17.) See also Scribonius Largus (c. 181), and Apuleius (c. 4.) Galen and Aëtius treat of it in nearly the same terms as our author. For the Arabians, see Avicenna (ii, 2, 348); Serapion (c. 340); Rhases (Cont. l. ult. i, 377, ii, 380); Averrhoes (Collig. v, 42); Haly Abbas (Pract. ii.) Of these Avicenna is the fullest on this head, and yet he borrows almost everything from Dioscorides. Of the three species which they all describe, he represents the white as being the only one fit to be used as a medicine. Serapion copies closely from Dioscorides and Galen. The ancient characters of the several species of henbane are given to them by Platearius, and by our old herbalists Parkinson and Gerard. It is singular that the black henbane has supplanted the white, which was in common use 200 years ago. See Francisus de le Boe (xx, 34.) It is also worthy of remark, that about 100 years ago the henbane had wholly disappeared from the Dispensatory. Thus Quincy does not treat of it at all, and Lewis represents it as a medicine which had been deservedly expelled from practice. In Greece at the present day the white species is much more common than the black. Both have a place in the Greek Pharmacopœia, published at Athens in 1837 (p. 81.)

Ἑπίρικον,

Hypericum, St. John's Wort, consists of two species, the first of which, called *Androsæmum* or *Ascyron*, has been treated of. The other is heating and desiccative, consisting of a subtle substance. Hence the whole fruit of it is diuretic and emmenagogue. When applied green along with its leaves it cicatrizes wounds. It cures sores when sprinkled dry upon them. It is also given to drink in ischiatic complaints.

COMM. COMMENTARY. There is some difficulty in determining the species. Sibthorp decides in favour of the *Hypericum crispum*. The other authorities, namely, Dioscorides, Galen, and Aëtius, give it the same characters as our author. Celsus recommends it in calculus. (v, 21.) The Arabians in like manner commend it as being emmenagogue and diuretic. See Rhases (Cont. l. ult. i, 371); Averrhoes (Collig. v, 42); Avicenna (ii, 2, 354); Serapion (c. 267.) Rhases says it is called "herba sancti Joannis," and hence the modern term *St. John's wort*.

Ἑπήκοον,

Hypecoon, is cooling in the third degree, being nearly like poppy.

COMM. COMMENTARY. The *Hypecoon procumbens* would seem to answer very well with the characters of it given by Dioscorides and the other authorities. It is a genus closely allied to the poppies. The other writers on the *Mat. Med.* treat of it in the same brief terms as our author. See Dioscorides (iv, 68); Ebn Baithar (i, 63.)

Ἑπόγλωσσον,

Hypoglosson, is a shrub; the root and juice of it are possessed of emollient powers.

COMM. COMMENTARY. It is the *Ruscus Hypoglossum*. It appears to have been little used. We are not sure that it is mentioned at all by the Arabians, except Ebn Baithar, who copies literally from Dioscorides and Galen (i, 98); and the Greeks all treat of it briefly like our author. Dioscorides mentions its being used as an amulet in headache; and that its root and juice formed ingredients in softening plasters. (iv, 130.) It is not even yet wholly unknown to the shops. See Gray (Suppl. to Pharmacop. 24.)

Ἵποκιστὶς,

Hypocistis, is the juice of certain substances like pomegranate-flowers, growing under the roots of the cistus, otherwise called cistharus, being an active remedy for all cases of defluxions by drying and strengthening the parts.

COMMENTARY. *The Undergrowth of the Cistus.* The term COMM. is applied both to the parasitic plant, which grows on the roots of the *Cistus Ladanifera*, and also, as is evident from the words of our author, to the inspissated juice of the same. The plant is the *Cytinus Hypocistis*. Dioscorides describes it accurately, and also the process for preparing the juice of it. He says it is possessed of the same medicinal powers as acacia; but is still more astringent and desiccant, being efficacious in cæliac affections, dysenteries, hæmoptysis, and the female flux, both when taken by the mouth, and in clysters. (i, 127.) Galen Aëtius, and the other Greek authorities state its properties in general terms, like our author. It occurs in one of the Hippocratic treatises (*De Nat. Mulieb.*), and is set down by Celsus as an ingredient of several of his antidotes, but more especially of that most famous one ascribed to Mithridates. (v, 23.) The Arabians assign it exactly the same characters as the Greeks. See Avicenna (ii, 2, 111); Serapion (c. 115); Rhases (*Cont. l. ult. ii, 754, i, 108, ii, 119*); Averrhoes (*Collig. v, 42.*) All concur in giving it the character of being an astringent and tonic medicine, both internally and externally. As late as the time of Quincy, the hypocistis continued to occupy a place in our Dispensatory, and it was retained as an ingredient in the Theriac of Andromachus or Venice Treacle (as it was latterly called), as long as that once-celebrated composition held a place in the Pharmacopœia. See Moses Charras (*R. Phar. 114.*) It still retains in the shops the same character for astringency as it received from the ancients. See Gray (*Suppl. to Pharmacop. 38.*)

Ἵπόφαιστον,

Hypophæstum, is a species of thorn used by the fullers, like the hippophaes. The juice of the head, leaves, and roots of it when dried, and taken to the extent of three oboli with honeyed water, evacuates water and phlegm. It agrees principally with orthopncea, epilepsy, and affections of the nerves.

COMM. COMMENTARY. It is the *ἰππόφαιστον* of Dioscorides and Pliny. They recommend it in epilepsy. Like the whole tribe of *carduinae* it is difficult to define. Sprengel determines it to be the *Cirsium stellatum*, Allion. Our author copies its characters from Dioscorides. (iv, 160.) Few of the other ancient authorities have noticed it and it has been completely lost sight of in modern pharmacy.

Ἵσσωπον,

Hyssopus, *Hyssop*, is calefacient and desiccative in the third degree. It also consists of subtile particles.

COMM. COMMENTARY. Into the much controverted question regarding the hyssopus of the ancients, it is not our present purpose to enter, and we shall content ourselves in a great measure with giving a brief exposition of its characters and medicinal virtues as delivered by the Greek, Roman, and Arabian authorities. It occurs repeatedly in the Hippocratic treatises, as, for example, at 'De Diæta' (ii, 26), where it is said of it that it is hot and purges pituitous matters. Celsus mentions it in various passages; thus he calls it bad for the stomach (p. 83), says it is diuretic (p. 86, 172), rouses the senses (86), is hepatic (86), and useful in coughs (160, ed. Milligan.) The following is an abstract of Dioscorides's important chapter on the Hyssop. It is a well-known herb, of two kinds, for one is the mountain, and the other the garden; the best is the Cilician. It has an attenuant and heating power; when boiled with figs and water and drunk along with honey and rue, it is useful in pneumonia, asthma, chronic cough, catarrh, and orthopnoea; it is anthelmintic, in a linctus with honey; its decoction brings off thick humours from the bowels when drunk with oxymel; it is eaten along with green figs pounded for moving the bowels; but it purges more strongly when cress, iris, or hedge-mustard is mixed with it; it improves the colour of the skin; it is applied as a cataplasm with figs and natron for affections of the spleen and dropsy, and with wine for inflammations; it discusses saggillations when applied with boiling water; it is a most excellent gargle in cases of quinsy with the decoction of figs; it soothes the pains of toothache when the mouth is rinsed with a decoction of it, and it dissolves flatus about the ears in the form of steam. (iii,

27.) Pliny recommends it in angina, asthma, as an application to sores, and, in a word, he gives it the same characters as Dioscorides does. (H. N. xxvi, 11, et alibi.) Our author and Aëtius copy word for word from Galen. Galen, however, in other of his works prescribes it for various complaints, as a medicine which purges the head and nose (De Cathars.), is useful in the decline of inflammation of the liver (Meth. Med. xiii), for discussing tumours (De Arte Cur. ad Glauc. ii), and for other purposes (Meth. Med. viii.) The Arabians treat of it very fully. See Serapion (c. 270); Avicenna (ii, 2, 256); Rhases (Cont. l. ult. i, 758); Mesue (De Simpl. 16); Ebn Baithar (i, 545); Averrhoes (Collig. v, 42.) Avicenna evidently derives his characters of it from Dioscorides; he recommends it as a phlegmagogue, vermifuge, a remedy for asthma, chronic coughs, &c. One of Serapion's Arabian authorities, Isaac ebn Amram, calls it a herb growing in the mountains, having branches in length a cubit or less, and leaves like marjoram. Another of them recommends it in hardness and frigidty of the womb, kidneys, bladder, and liver, and as a purgative which evacuates crude humours. He also copies from Dioscorides and Galen. Rhases and Ebn Baithar follow nearly or altogether the same authorities as Serapion. Averrhoes states its characters in general terms. Mesue, upon the whole, is the most interesting and original of the Arabian authorities on the hyssop. He says there are two kinds, the garden and the mountain; that the former rises above the ground about half a cubit, and that its leaves are larger than those of thyme, and its flower is purple; the latter has much smaller leaves, and its stem is not so round. He states its medicinal virtues with much precision, recommending it as a phlegmagogue, in asthma, and other affections of the chest, and in nearly all the cases mentioned by Dioscorides; and also, he adds, from personal experience, in epilepsy. Two questions now come to be solved: 1st, Is the hyssop of Mesue the same as that of Dioscorides? We answer this question, with little hesitation, by saying, we think it is; Mesue merely defines his plant better, but the agreement of these authors as to its medicinal virtues convinces us that both treated of the same plant. 2d, Was the hyssop of the ancients, then, the same as our *Hyssopus officinalis*? With much deference to

COMM.

COMM. the many eminent scholars who deny this, we hesitatingly answer this question in the affirmative, for the two following reasons: first, the medicinal characters of the ancient hyssop, as given by Dioscorides, Mesue, and the other Greek and Arabian authorities, agree with those of the *Hyssopus officinalis*, as given by modern writers on the *Materia Medica*. See Platearius (*de Simpl. Med.*); Tournefort (*Mat. Med.* 223); Boerhaave (*Mat. Med.* 148); Alston (*Mat. Med.* ii, 152); Hill (*Mat. Med.* 364); Culpeper (*Compl. Herbal.* 95); Ainslie (*Mat. Ind.* i, 177); Rutton (*Mat. Med.* 145); Gray (*Suppl. to Pharmacop.* 47.) But, secondly, it is incumbent upon those who deny the identity of the ancient and modern hyssop to show when and how the *H. officinalis* came to be substituted for a plant, the characters of which it now bears. But, further, no competent judge, we believe, will dispute that the hyssop must have been brought to Britain, and naturalized here by the Romans. Is it likely, then, that they would have brought a plant not described by their learned men at home, and not the one which had the character of being possessed of so many virtues? If, as Sprengel and others have maintained, the *Origanum Ægyptiacum* be the true hyssopus of the ancients, why was not *it* introduced into this country and not the *Hyssopus officinalis*? Since then the *H. officinalis* is what our Roman conquerors brought us for their hyssop, we may be pretty confident that it truly is the ancient plant, the name of which it bears.

Φακός,

Lentes, Lentils, (?) are desiccants of the second order, being intermediate as to cooling and heating qualities. They have also some astringency. They therefore dry the body and bind the belly; but the decoction loosens it. The first water, therefore, is thrown away when it is taken to restrain the bowels. The *Lens palustris*, *Duck-meat*, moistens and refrigerates in the second order.

COMM. COMMENTARY. See Book I, 79. It is, undoubtedly, the *Cicer Lens*. The *Lens palustris* is the *Lemna minor*, Angl. *Duck-meat*. Our author borrows from Dioscorides, who treats of the virtues of the lentil more fully than it would seem to deserve. It is simply a vegetable astringent. (ii, 129.) The

other authorities treat of both in the same terms as our author. COMM.
See in particular Avicenna (ii, 2, 711) ; Serapion (c. 9.)

Φαλαρίς,

Phalaris ; the juice, leaves, and seed, when drunk, relieve pains of the bladder. They are also remarkable for some tenuity of parts, and are of a heating nature.

COMMENTARY. Sibthorp refers it to the *Phalaris Canariensis*. Our author borrows its medicinal character from Dioscorides (iii, 149), and the same is repeated by Galen and all the authorities who treat of it. None of the Arabians, as far as we can discover, have noticed it, except Ebn Baithar, who, in describing it, merely gives extracts from Dioscorides and Galen. It would appear, that in the shops of the apothecaries, it still is kept, and is reputed to be useful in pains of the bladder. See Gray (Suppl. to Pharmacop. 18.) COMM.

Φαλαγγίτις,

Phalangitis, *Spiderwort*, is so named because it is a remedy for the bites of the venomous spiders called phalangia. It also consists of subtile parts, and hence is supposed to prove a remedy in cases of tormina.

COMMENTARY. According to Sibthorp, it is the *Anthericum Græcum*. Our author, like Galen and the other authorities that treat of it, copies almost word for word from Dioscorides. (iii, 112.) Ebn Baithar, in describing it, merely gives extracts from Dioscorides and Galen. It does not appear to be noticed by the Arabians. It has been scarcely known in modern practice, and yet the *Anthericum Liliastrum* is still kept in the shops and retains the name of spiderwort, with the reputation of being useful against the bites of scorpions. See Gray (Suppl. to Pharmacop. 22.) COMM.

Φελλός

Suber, *Cork*, and particularly that from wine-vessels, when burnt has very desiccative ashes. This is mixed up especially with dysenteric remedies.

COMMENTARY. Theophrastus gives an accurate description of the *Quercus Suber*. (H. P. iii, 16.) Cork, as Pliny states, is formed from its bark. He recommends its ashes or char- COMM.

COMM. coal in hemorrhages. (H. N. xxiv, 8.) Q. Serenus recommends it in the same cases. (c. 22.) Dioscorides does not describe this article. Galen also omits it in his list of simples, but briefly notices it in a preliminary book (v), and recommends the burnt cork of a wine-cask as an astringent. (De Comp. med. sec. loc. v.) We have not been able to trace it in the works of the Arabians.

Φιλλυρέα,

Phillyrea, *Mock Privet*; the leaves of the tree are astringent like those of the wild olive. They relieve ulcers in the mouth when chewed, and when the mouth is rinsed with a decoction of them. When drunk they prove diuretic and emmenagogue.

COMM. COMMENTARY. Stackhouse and Sprengel agree that it is the *Phillyrea latifolia* L. Our author copies its medicinal characters literally from Dioscorides. (i, 125.) None of the other Greek authorities on the Mat. Med. have described it. Neither can we find traces of it in the works of any of the Arabians, except Ebn Baithar, who gives nothing of any moment under this head but a translation of the chapter of Dioscorides referred to above. It certainly is not the *Mahaleb* of the Arabians, as we shall show in the Appendix.

Φλόμος,

Verbascum, *Petty Mullen*; there are many species, among which is that called *Thryalis*. The leaves of all the kinds are possessed of desiccative and moderately detergent powers, and especially that with the golden flower. Being sour they suit with all sorts of fluxes. Some also rinse the teeth with them.

COMM. COMMENTARY. It cannot be doubted that the genus is referable to the *Verbascum*, but the species cannot be well determined. See Sibthorp (*Flora Græca*), and Sprengel (ad Dioscor. iv, 102.) The white female *Phlomos* would appear to be the *Verbascum Thapsus*, and the black is indisputably the *Verbascum nigrum*. The *Phlomis Lychnitis* of Dioscorides is probably the *V. Lychnitis*. The other species cannot be determined with any degree of certainty. Our author abridges the medicinal characters given to them by Dioscorides. (l. c.) Galen also, as well as Aëtius and Oribasius, borrow freely from Dioscorides.

The mullein occurs in the Hippocratic treatises (*Morb. Mulier.*), COMM. but we do not find it in the works of Celsus. Pliny describes the verbascum in nearly the same terms as Dioscorides. (H. N. xxv, 74.) See also Apuleius (*De Herbis*, 71.) The Arabians follow Dioscorides in delivering its medicinal properties. See Avicenna (ii, 2, 98); Ebn Baithar (i, 184.) The verbascum held a place in the Dispensatory as late as the time of Lewis. (ii, 447.) The *V. Thapsus*, *nigrum*, and *Lychnitis*, although now rejected from our Dispensatory, are still retained in the shops. See Gray (*Suppl. to Pharmacop.* 91.) It is said that the juice of their leaves, which is acrid and bitterish, is used to poison mice and fish. Lindley (*Veg. King.* 683.) In the modern Greek Pharmacopœia, both the *Verbascum Thapsus* and *thapsiforme* stand for the female phlomos. (166.)

Φοῖνιξ,

(Called by some *Rhus*), is a herb like the *Darnel*. It has astringent powers, and when drunk with austere wine stops all fluxes.

Palma, the *Palm-tree*, has a fruit which, when ripe, is moderately hot, stomachic, and tonic, when taken internally or applied externally. The rest of the palm-tree is sufficiently astringent, and hence is mixed up as an ingredient with stomach and liver remedies. But the most astringent part is the involucre or cover, as it were, of the fruit while growing.

COMMENTARY. The herb is undoubtedly the *Lolium perenne*. COMM. The tree is the *Phœnix Dactylifera*. We would refer to the 'Hierobotanicon' of Olaus Celsius and our own article on this head, in the Appendix to Dunbar's Greek Lexicon, for the general literature of this interesting subject. We need not dwell particularly on the medicinal virtues of the herb, as all the authorities are agreed that it is applicable in such cases as astringents are indicated. See in particular Dioscorides (iv, 43.) A decoction of different parts of the palm-tree was much used by the ancient physicians as an astringent. Pliny recommends it particularly in discharges from the uterus and bowels. (H. N. xxiii, 53.) He borrows, however, from Dioscorides, who recommends it as an astringent in these and various other cases, such as hemorrhoids and wounds; he adds, however, that they

COMM. induce headaches, and when eaten in great quantity intoxicate; and that the dried dates when eaten are useful in hæmoptysis, stomachic and dysenteric diseases, and complaints of the bladder, when applied in a powder as a cataplasm with the quince and cerate of wild vine-flowers. (i, 148.) Celsus recommends a decoction of dates as an astringent gargle. (v, 22, 9.) Galen has a most interesting article on the palm, which he recommends in general as being possessed of an astringent quality, in hepatic and stomachic affections, both internally and externally. Serapion, Mesue, and Rhases likewise recommend it in such cases. Rhases gives a most copious account of this subject borrowed from various sources. One of his authorities says, dates spoil the teeth and create obstructions in the liver and spleen. Another says they create semen, and are useful in phthisis. (Cont. l. ult. i, 531.) Avicenna recommends them generally as astringents, and particularly in fluxes of the womb and in hemorrhoids. (ii, 2, 87.) Ebn Baithar copies mostly from Rhases under this head. (i, 211, 496.) The composition of palm-oil is described by Dioscorides. (i, 54.) It is the only preparation from the palm which is now retained in the Pharmacopœia.

Φόρμιον,

Phormium, is possessed of attenuating, detergent, and attractive powers. Its seed, therefore, attenuates leucoma, and extracts sharp-pointed weapons of wood.

COMM. COMMENTARY. Our author's account of it is taken from Galen. It would appear to be a variety of the *όρμιον*, i. e. *Salvia Horminum* L., Purple-top Clary, as is stated by Sprengel. (Notæ in Dioscor. iii, 135.) We can find nothing interesting regarding it in the other authorities.

Φῶν,

Valeriana, *Valerian*, has a root which resembles the nard, but is weaker for most purposes, only it is more diuretic like Celtic.

COMM. COMMENTARY. It is the *Valeriana officinalis*, or perhaps the *V. Dioscoridis*. We have mentioned already that the ancient nards were various species of valerian. All the ancient authorities describe it as being diuretic and emmenagogue.

See in particular Dioscorides (i, 10.) Galen ascribes to it COMM.
 diuretic powers (De Simpl. viii), and Pliny emmenagogue
 (H. N. xxi, 80.) The Arabians give it the same characters.
 See Avicenna (ii, 2, 255); Serapion (De Simpl. 62); Ebn
 Baithar (ii, 265.) Bergius in like manner states its virtues
 thus: "Virtus: emmenagoga, abortiens, diuretica, sanguinem
 amovens." See also Ruddy (Mat. Med.) Recent authorities,
 however, are not so lavish in its praises. See Pereira (971.)

Φύλλον,

Folium, *Leaf*, the leaf of the Malabathrum, which has been
 already treated of.

COMMENTARY. Apicius, in like manner, uniformly calls the COMM.
 leaf of the Malabathrum by the name of *Folium*. We still
 incline to the opinion which we deliberately formed and ex-
 pressed some years ago, that it was the leaf of the cassia or
 wild cinnamon tree. We refer to a learned disquisition on it
 by Olaus Celsius, in his 'Hierobotanicon,' and to Geoffroy
 (Treatise on Fossil, Veg., and Anim. Subst. 318.) The φ. of
 Dioscorides is quite a different substance, being the same as
 the λωόζωστις, which see.

Φύκος,

Fucus marinus, *Seaweed*, cools and dries in the second
 order, having also a moderate degree of astringency.

COMMENTARY. Various species of *Fuci* are described by COMM.
 Theophrastus and Dioscorides, but so briefly, that it is scarcely
 possible to determine them exactly. It is deserving of re-
 mark, however, that Galen, Aëtius, and Oribasius describe
 a species of Fucus, under the head of Ceruse, which is there-
 fore supposed to have been a preparation of lead. The
 article, however, which our author here treats of is unques-
 tionably the vegetable, as is evident from Aëtius. (p. 24,
 ed. Ald.) Dioscorides says it is possessed of an astringent
 power, which is efficacious in cataplasms for the cure of gouty
 affections and inflammations. These plants are to be used in
 a moist state before they are dried. He adds, that Nicander
 says the purple fucus is theriacal, and that some persons took
 its root to be the fucus which women use for painting their
 faces. (iv, 98.) Pliny gives a very similar description of the

COMM. "Phycos thalassion, id est, Fucus marinus." (H. N. xxvi, 66.) Galen treats of it in nearly the same language as our author. It would appear to be the *Muscus marinus* of Avicenna, who borrows the description which he gives of it from Dioscorides, (ii, 2, 452, and 711.) Our old English herbalists, Parkinson and Gerard, repeat the characters given to the fuci by the ancients, but these articles were long omitted from our Dispensatories, until of late some of them were readmitted, when it was ascertained that they contained iodine. We have known old practitioners, who used the *Fucus vesiculosus*, or Sea Wrack, very extensively as an application to scrofulous sores. See further Pereira (562), and Gray (Suppl. to Pharmacop. 7.) Beckmann gives a very ingenious disquisition on the *Phycos thalassion* of the ancients, which he makes out to have been our Archil or *Lichen roccella*, a sea-weed which has been extensively used, both in ancient and in modern times for the dyeing of wool. (History of Inventions.) It must be to it that Horace alludes when he speaks of "lana medicata fucō," in his famous ode on Regulus.

Φυλλιτιής,

Phyllites, *Hart's Tongue*, is somewhat sour, and from this quality it naturally proves a remedy for diarrhœa when drunk.

COMM. COMMENTARY. There seems little reason to doubt that it is the *Scolopendrium officinale*, or Spleenwort. It is the *Lingua Cervina* of Parkinson (Theatre of Plants, 1047.) Both Galen and Dioscorides, like our author, recommend it in fluxes of the bowels, as being possessed of astringent powers. It is not met with in the works either of Hippocrates or Celsus. It was retained in the Dispensatory in the time of Quincy (88, 123), and even at the present day it is not an entire stranger to the shops. See Gray (Suppl. to Pharmacop. 12.)

Χαλβάνη,

Galbanum, is heating almost in the third degree, and is desiccative almost in the second, being possessed of emollient and discutient powers.

COMM. COMMENTARY. Dioscorides says of Galbanum, that it is the juice of a *Ferula* growing in Syria, by some called metopium. Pliny describes it thus: "Quod maxime laudant, cartilaginō-

sum, purum, ad similitudinem Hammoniæci." Now, in Dr. COMM. Duncan's edition of the Edinburgh Dispensatory (1811), it is said in like manner that "Galbanum agrees in virtue with gum ammoniac;" and from this casual coincidence in the descriptions of the ancient and modern galbanums, we infer their identity. It would appear to be now settled, that galbanum is the product of different umbellifers, the most common of which is the *Opoidea galbanifera*. See the late publications of Royle, Lindley, and Pereira. Dioscorides describes it as being possessed of a heating, fiery, epispastic, and discutient power, in pessaries and fumigations as promoting menstruation and the expulsion of the fœtus; he recommends it externally, for furunculi and other complaints of the skin, and internally for chronic coughs, dyspnœa, asthma, ruptured and sprained parts; its vapour rouses in cases of epilepsy, hysteria, and vertigo, and drives away venomous animals. It is used in toothache for filling the hollow of the teeth. (iii, 87.) Galen and the other Greek authorities treat of it in general terms, like our author. It occurs in the works of Hippocrates, and in those of Celsus, who recommends it in nearly the same cases as Dioscorides, as in furunculus, difficulty of breathing, and so forth. (See v, 18, et pluries.) For the Arabians, see Avicenna (ii, 2, 312); Serapion (c. 320.) They borrow their account of its medicinal virtues from Dioscorides, recommending it as an alexipharmic, an application to tumours, and a remedy in certain diseases of the chest. Avicenna says it is less powerful than sagapenum. The Arabian authorities of Ebn Baithar do not supply anything of much importance in addition to what is furnished by Dioscorides and Galen.

Χαλκίτις,

Chalcitis, is possessed of astringent, acrid, caustic, and escharotic powers. In subtilty of particles it is intermediate between misy and sori; but when burnt its parts become still finer.

COMMENTARY. We will first give an abstract of the information furnished by the ancient authorities themselves regarding this much-disputed article in their *Materia Medica*, and reserve what we have to say as to the substance itself to the conclusion. Galen is the author who has given the fullest account COMM.

COMM. of the nature and formation of the *misy*, *sori*, and *chalcitis* (see Opera, ed. Basil, T. ii, 127); but as his description of them is lengthy, we prefer giving the abstract of the same furnished by Aëtius. It is to be borne in mind then that what follows is upon the authority of Galen, who visited the copper-mines of Cyprus for the express purpose of ascertaining the nature of the *misy*, *sori*, and *chalcitis*. "At the mine in Cyprus, in the mountains of the Soli, there was a great cave dug in the mountain, at the right side of which, that is to say, on our left hand as we entered, there was a passage into the mine in which I saw certain specimens of the three substances stretched upon one another like zones, the lowest being that of *sori*, upon it *chalcitis*, and then that of *misy*. In process of time the *chalcitis* changes into *misy* by degrees, and the *sori* can change into *chalcitis*, but requires a much longer space of time. So that it is no wonder that these three substances should be possessed of homogeneous (similar) powers, as differing from one another only in tenuity and density of their parts, the grossest being the *sori*, and the finest the *misy*, whereas *chalcitis* possesses an intermediate power. When burnt they become more attenuant, but less styptic." (p. 30, ed. Aldi.) Galen (l. c.) states distinctly that the *misy* is an efflorescence which forms upon the *chalcitis*, similar to the verdigris which forms upon copper (or bronze), and that the three substances in question are convertible into one another. He also states that a specimen of *chalcantnos*, when long kept, turns to *chalcitis*. Pliny gives a very confused account of the *misy*, *sori*, and *chalcitis*, which betrays evident marks of a very imperfect acquaintance with the subject; but it is quite obvious that he meant to describe the very same substances as those which Dioscorides and Galen describe under these names, as is obvious from his ascribing the same medicinal powers as they do to each of these articles. (See H. N. xxxiv, 29, 30, 31, with the notes of Harduin.) Dioscorides gives but a very brief description of these substances, with the origin of which he most probably was not so well acquainted as Galen. He describes the best kind as being like bronze or copper (*χαλκοειδῆ*), friable, free of stones, not old, and having long and glancing fibres. He says of it that it has styptic, heating, and escharotic powers, and that it clears away impurities about the

canthi and eyes; that it is one of the mild septics; is useful COMM.
 in erysipelas, herpes, hemorrhages of the uterus and nose, with
 the juice of leeks; that when dried it is useful in epulis,
 spreading sores, and diseases of the tonsils; that when burnt
 it is more useful in ophthalmic remedies in the form of a
 powder with honey; that it melts down and cleanses callus and
 asperity of the eyelids; and removes fistulæ when introduced
 in the form of a collyrium. (v, 115.) It occurs in one of the
 Hippocratic treatises (De Ulceribus), but its meaning there is
 not well defined. By *blue chalcitis* is probably meant chal-
 canthos, or blue vitriol. Celsus prescribes it frequently as a
 caustic and escharotic application. (v. 9, et pluries.) As stated
 already (see *Misy*), Avicenna gives an account of these sub-
 stances under the head of "Atramentum sutorium," the chal-
 citis being further distinguished by the name of *colcotar*. He
 refers to Galen's description of them already given, but either
 he or his translator evidently misinterprets the original, for he
 represents Galen as saying that the *atramentum rubeum* (*sori*)
 is formed from the *colcotar*. He says of all the three sub-
 stances that they are caustic, escharotic, and styptic; and he
 recommends them in the same instances as Dioscorides and
 Galen do. (ii, 2, 47.) Serapion, as already stated, describes
 them under the name of *vitreolum* or *zeg*, including also the
 chalcantnos in the same chapter. It may be interesting to
 our readers to see his version of the passage of Galen given
 above from Aëtius. "Vidi in mineris tres venas extensas unam
 super aliam per longum spacium, et vena inferior erat zeg
 rubeum (*sori*?), et secunda quæ erat super eam erat colcotar
 (*chalcitis*?), et tertia superior erat zeg viride (*misy*?), et hoc
 est quod zeg rubeum convertitur et fit colcotar et colcotar fit
 zeg viride." He afterwards gives Galen's account of the medi-
 cinal powers of chalcitis, which does not differ materially
 from our author's. (De Simpl. 386.) Rhases, under the head
 of *vitreolum*, gives, in abridged extracts from Dioscorides and
 Galen, their descriptions of *sori*, *chalcitis*, and *misy*, which he
 calls *vitreolum ruffum*, *colcotar*, and *vitreolum viride*. (Contin.
 l. ult. 747.) Averrhoes quotes Galen's account of the origin
 of the three vitriols which he calls *vitreolum rubeum* (*sori*?),
v. viride (*misy*?), and *cholcotar* (*chalcitis*?). (Collig. v, 43.)
 And now, respecting the nature of the three metallic substances

COMM. *misy*, *sori*, and *chalcitis*, we have to state it as our deliberate opinion, that, provided the authority of Galen be held decisive of the question, there can be no hesitation in coming to the conclusion that they were merely varieties of the chalcantum, arising principally from age or differences in the proportion of the ingredients entering into its composition. (See below.) Probably then the *chalcitis* was a specimen of pure sulphate of copper which had contracted an efflorescence from age. The *misy* or *zeg viride* of the Arabians no doubt owed its colour to a predominance of the sulphate of iron; while in the *sori* we may suppose that zinc or other impurities gave it its peculiar characters.

Χάλκανθος,

Atramentum Sutorium, *Copperas* or *Vitriol*, is water concreted in the metal mines of Cyprus, having a very strong astringency with no contemptible degree of heat; and of all substances it is the most effectual for pickling and drying humid flesh. In process of time it changes to *chalcitis*.

COMM. COMMENTARY. No person who reads the account of this substance given by Dioscorides and Pliny can doubt of its being blue vitriol, or an impure sulphate of copper procured by the evaporation of water found in mines of copper. Pliny's description of it is quite characteristic: "Color est cœruleus, perquam spectabili nitore vitrumque esse creditur." He also states that it is the same as the "atramentum sutorium." (H. N. xxxiv, 32.) Celsus says the same of it, and ranks it with styptics (v, 1); with corrosive substances (v, 6); with caustics (v, 7, 8); with escharotics (vi, 11); and recommends it when strongly heated or roasted to remove callus (v, 28, 12), and for other purposes. Whether the *blue chalcitis* of Hippocrates (De Ulcer. 13), alluded to in the preceding article, be blue vitriol as some have supposed (Pereira, Mat. Med. 494), we cannot pretend positively to determine, but we think it probable. Galen describes most graphically his visit to the copper mines of Cyprus, where, among other strange sights, he witnessed the process of procuring chalcantum. He mentions that a specimen of it which he carried with him in the course of twenty years was converted into *chalcitis* on its surface, while its centre remained chalcantum, and that he meant to

keep it until its centre should change likewise, and until the chalcitis should be converted into misy. Dioscorides describes several varieties of the chalcanthum, one of which is called *pectum*, being procured by natural evaporation; and another *ephton* or *coctum*, as being procured by boiling. The best kind, he says, is blue, heavy, compact, and translucent. He says it is astringent, heating, and escharotic; kills the lumbricus latus when taken to the amount of a drachm; that it is emetic, cures those who have swallowed mushrooms when drunk with water, and that it purges the head when a piece of wool smeared with it is introduced into the nostrils. (v, 114.) Oribasius gives a minute description of the chalcanthum, but it is confessedly taken from Dioscorides. (Med. Coll. 13.) Aëtius says distinctly that the water running from the copper mines of Cyprus concretes into chalcanthum, and that it changes into chalcitis. He, in fact, evidently borrows from Galen. Avicenna, as formerly stated by us, gives a description of this substance along with misy, sori, and chalcitis, under the general head of "atramentum sutorium." (ii, 2, 47.) He also treats of it separately under its proper name, but his account of it is entirely made up from Dioscorides. (166.) Serapion's, in like manner, is copied from Dioscorides. (c. 386.) Haly Abbas's chapter on the vitriols is so barbarously translated, that we cannot pretend to unfold his account of this substance. (Pract. ii, 47.) Though, as we have stated above, we think there can be no doubt that the chalcanthos of Dioscorides and Pliny was an impure sulphate of copper procured from the "waters of cementation" issuing from copper mines, it is proper to mention that after mature consideration of the subject, with the assistance of an esteemed authority on the *Materia Medica* in London, we have arrived at the conclusion that either the term must have been applied loosely to other metallic sulphates, or the ancient sulphate of copper must have contained a very large admixture of the sulphates of iron and of zinc. Probably, then, the term chalcanthos was used anciently in as loose a manner as the terms vitriol and copperas have been in modern times. (See Tournefort's *Mat. Med.*) It is further deserving of remark under this head, that the description of the impure sulphate of copper, which is given in the modern Greek *Pharmacopœia*, corresponds exactly

COMM. with Dioscorides's description of the chalcanthos. In the Pharmacopœia it is directed that the sulphate of copper should not contain *much* of the sulphates of zinc and iron. And now, in conclusion, as this is one of the most important subjects connected with ancient pharmacy, we shall briefly state our reasons for holding, contrary to the opinion of many recent authorities of high reputation, that the chalcantum either consisted principally of copper, or at least contained a large proportion of that metal in its composition. 1st. The name implies that the Greeks thought it a cupreous substance, and Pliny seems to say that the name had been properly given. (l. c.) 2d. Pliny's description of it applies exactly to blue vitriol. (l. c.) 3d. Dioscorides's description of it tallies with the description of the sulphate of copper given in the modern Greek Pharmacopœia. 4th. The chalcanthos was indisputably formed from the evaporation of waters issuing from mines of copper, that is to say, from "waters of cementation." Compare Galen (l. c.) with Pereira (Mat. Med. 495.) 5th. It was administered as an emetic. See Dioscorides (l. c.) 6th. It was used externally as a powerful escharotic. See Dioscorides, Celsus, and Galen (pluries.) 7th. It was ranked among the poisons. See Cicero (ad Familiares, ix.) and the Arabian authorities on Toxicology.

Χαλκός κεκαυμένος,

Æs ustum, *Burnt Copper*, is acrid, with a share of astringency. It therefore is the best of remedies for the cicatrization of ulcers upon dry bodies; but if washed it agrees better with tender bodies.

Χαλκῶν ἄνθος,

Æris flos, *the Flower of Copper*, is possessed of more subtle powers than burnt copper, or than the squama æris. Wherefore, when added to collyria, it clears away asperities and sycoses of the eyelids.

COMM. COMMENTARY. Though there can be no doubt that this term is generally used by the Greek classical authors to signify *bronze*, or a combination of copper and tin in the proportion of from 2 to 14 per cent. of the latter, it is also certain that it was frequently applied to native copper, as it is in general

by the authorities on the *Materia Medica*. The ancients, it may be proper to remark cursorily in this place, were acquainted with the formation of *brass*, which they made by compounding together copper and cadmia. See Watson's 'Chemical Essays,' and Beckmann's 'History of Inventions.' Brass was their *aurichalcum* or *orichalcum*. The *Æs ustum*, according to Geoffroy, "is copper reduced to a calx or crocus, either by itself or mixed with sulphur or salt, by a long calcination in a reverberatory furnace." "The *Squama æris*, or flake of copper," he adds, "is little different from the *Æs ustum*, being only the particles of burnt copper which fly off when it is hammered." He says of the *Flos æris*, "it is nothing but copper reduced to small grains like millet seed, which is done by pouring cold water upon melting copper, which thereupon immediately flies every way into grains." In short it was fine granulated copper. These preparations of copper are described by all the ancient authorities. See in particular Dioscorides (v, 87, 88), who describes the process of making the *flos æris* very minutely. He recommends it as a detergent and caustic medicine for various purposes, such as removing dimness of the cornea, wasting polypi in the nostrils, and protuberances about the anus; and also for the cure of deafness when blown into the ear with a syringe in the form of a powder, and in complaints of the gums and tonsils. He also says that given to the amount of three oboli it evacuates thick humours. He also describes several processes for burning the copper, and recommends the *æs ustum* as a cleansing and detergent medicine for various ulcers, especially those of the eye, and also as an emetic when taken in a draught with hydromel, or in a linctus with honey. None of the other Greek authorities treat so fully of these preparations as Dioscorides. Celsus prescribes them frequently as caustic and corrosive substances. (v, 6, 7, et pluries.) The Arabians used these articles not only as external applications, but as emetics and purgatives. See Avicenna (ii, 2, 231); Serapion (c. 414); Rhases (Cont. l. ult. iii, 48); Averrhoes (Collig. v, 43); Haly Abbas (Pract. ii, 48); Ebn Baithar (ii, 551.) The flowers of copper, and burnt or calcined copper, are noticed in the works of all our earlier writers on medicine, and recommended to be administered

COMM. both internally and externally. See Platearius (De Simpl. Med.) The process of preparing calcined copper is minutely described by Moses Charras in his 'Royal Pharmacopœia,' published at Paris in 1676. They are briefly described by Dr. Hill, who says of the *æs ustum* that "it was much used externally by the ancients." (Mat. Med. 32.) Neither of these preparations of copper occurs in the Complete English Dispensatory of Quincy, published in 1763. They are omitted also in Pemberton's London Dispensatory, published in 1746. They would appear, however, to have been longer retained in use by the Continental physicians, since a formula for preparing the *Calx æris* is given in Crantz's Mat. Med. (ii, 91. Vienna, 1765.) He says that the *Flos æris*, and *Squama æris*, were preparations not in use. Ruttty ranks them among the obsolete medicines of the ancients. A formula for *Æs ustum* is given in Gray's Suppl. to Pharmacop. (p. 242.) It is the same as that of Dioscorides. (v, 37.)

Χαμάδρυς,

Chamædrys, *Germander*, is heating and drying in the third degree. It therefore melts down enlarged spleens, proves diuretic and emmenagogue, and removes visceral obstructions.

COMM. COMMENTARY. It clearly is the *Teucrium Chamædrys* L. Theophrastus says that its fruit purges bile. (H. P. ix, 10.) Dioscorides commends it in spasms, scirrhus spleen, dysuria, and incipient dropsy; and as an emmenagogue; and, by the way, Dr. Hill confirms this account of it. Galen and all the other authorities treat of it in nearly the same terms. We have not been able to find it in the works of Hippocrates. For the Arabians, see particularly Serapion (c. 180); Avicenna (ii, 2, 132); Rhases (Cont. l. ult. i, 152.) One of Serapion's Arabian authorities recommends the syrup in chronic coughs, dyspepsia, and incipient dropsies, and the decoction in black jaundice. Avicenna joins both Dioscorides and Serapion in regard to the virtues which they ascribe to it. Whether or not this be the "trixago" of Celsus (iv, 6) has never been satisfactorily determined. The Arabian translators adopt this name. It has still the reputation of being a pectoral medicine. Lindley (Veg. Kingd. 661.)

Χαμαίκισσος,

Hedera, *Ground Ivy*; the flower being considerably bitter, removes obstructions of the liver. It is also given in ischiatic diseases.

COMMENTARY. We see no good reason for disputing its identity with *Glechoma hederaceum*, or *Ground Ivy*, which we believe to have been introduced into this country by the Romans for the *Chamæcissos*. Dioscorides gives it nearly the same characters as our author, that is to say, he recommends it in sciatica and jaundice. (iv, 124.) Galen and the other Greek authorities treat of it in nearly the same terms as our author. The Arabians notice it under the same head with the other species of ivy. See Serapion (De Simpl. 41); Avicenna (ii, 2, 169); Rhases (Contin. 190.) The ground-ivy maintained a place in the Dispensatory with a high reputation as a hepatic, splenic, diuretic, and nephritic medicine in the days of Quincy. (117.) In the modern Greek Pharmacopœia the *glechoma hederaceum* stands for the χαμαίκισσος. (75.)

Χαμακέρασος. This occurs in the "Euporiston" generally ascribed to Dioscorides. It is referred by Sprengel to the *Convallaria majalis*, or *Lily of the valley*.

Χαμαιλένκη,

Chamæleuce, *Ground Poplar*, is calefacient in the third order and desiccative in the first.

COMMENTARY. Sprengel maintains that we should read χαμαιπένκη, and refers it to *Stachelina Chamæpeuce* L. In Dioscor. (iv, 125.) Dioscorides merely recommends it in lumbago. All the other authorities assign it the same general characters.

Χαμαιλέον,

Chamæleon; the root of the black chamæleon is calefacient and desiccative in nearly the third order. It is also a detergent application to the skin, and a discutient and emollient one to indurated tumours. When applied in a cataplasm it cures phagedænic ulcers. But when taken internally it is poisonous. The root of the white chamæleon is like that of the black, but more bitter. When drunk with austere wine

to the amount of an acetabulum, it kills the broad intestinal worms. It is also useful in dropsical complaints.

COMM. COMMENTARY. We stated in the Fifth Book, Sections 37, 46, that we were inclined to refer the black chamæleon to the *Carthamus corymbosus*, and the white to the *Carlina acaulis*, and we see no good reason for changing this opinion. Some good authorities, however, prefer the *C. gummifera*. See Lindley (Veg. Kingd. 708.) The virtues, however, which Dr. Lindley ascribes to the *C. acaulis*, agree very well with those of the ixia, or white chamæleon, as stated by the ancient authorities; whether, however, it produces the gum resembling mastich, as the white chamæleon is described by Dioscorides as doing, we are not so sure. Parkinson says it produces such a gum "sometimes, and in some places." (Theatre of Plants, 968.) See also Gerard (1157.) Dioscorides recommends its root as a vermifuge; in dropsy and dysuria when taken in wine. (iii, 8.) The root of the black chamæleon he recommends with other articles for the cure of lichen, for toothache, and various other purposes. (9.) Our author borrows mostly from Galen under this head. Aëtius remarks that the root of the black species is poisonous, and hence is to be applied only externally in scabies, lichen, leprosy, and the like. This species is noticed in the Hippocratic works. (De Ulcer.) The other occurs in the works of Celsus, who prescribes it as an ingredient in a malagma for gout. (v, 18, 33.) The Arabians treat elaborately of both species. See Avicenna (ii, 2, 197, 455); Serapion (c. 274, 275); Rhases Cont. l. ult. ii, 208); Averrhoes (Collig. v, 42.) Upon the whole their characters of them agree with those by Dioscorides and Galen.

Χαμάμηλον ἢ Ἀνθεις,

Chamæmelum, or Anthemis, Chamomile, heats and dries in the first order. It is also attenuant, discutient, relaxant, and aromatic.

COMM. COMMENTARY. It certainly applies to the *Anthemis nobilis*, but probably is not restricted to it. It appears to be the *ἀνθεμον* of Theophrastus. (H. P. vii, 8, 14.) It is the *ἀνθεις* of Dioscorides, who describes three species, which it has been found very difficult to distinguish and identify. He says the

roots, the flowers, and the stem are calefacient and attenuant, that both when drunk and in a hip-bath they promote the evacuation of the menses, fœtus, calculi, and urine; that they are drunk for tympanitis and ileus: cure jaundice and diseases of the liver; and that the decoction is used in a fomentation for complaints about the bladder. He says the chamomiles cure fistula lachrymalis in a cataplasm, and aphthæ as a masticatory, and that the oil prepared in a manner described by him, is useful in intermittent fevers when the body is rubbed with it. (iii, 143.) Aëtius strongly recommends the whole body to be rubbed with oil of chamomile in such cases to promote perspiration. According to Galen this is the *ἐυάνθεμον* of Hippocrates. (Morb. Mulier., i, 625.) We cannot find it in Celsus. Galen, in the preliminary dissertation to his 'Mat. Med.,' strongly eulogises the oil of chamomile as being calculated to soothe pain, relieve contracted parts, soften hardened, and to dispel fevers not accompanied with visceral inflammation. (iii, 133, ed. Basil.) The Arabians appear to have been very partial to this plant, of which they treat at great length. See Avicenna (ii, 2, 118); Serapion (De Simpl. 22); Rhases (Contin. l. ult. ii, 154, i, 156); Averrhoes (Collig. v, 42); Haly Abbas (Pract. ii, 34.) In a word, they entirely concur in the characters given to the chamomiles by Dioscorides and Galen.

Χαμαπίτυς,

Chamæpitys, *Ground Pine*, heats in the second order, but dries in the third. It is therefore a cathartic and detergent of the viscera, especially of the liver. It is diuretic and emmenagogue, agglutinates large wounds, and cures putrid ulcers. It also discusses scirrhus swellings, and the decoction of it is useful in ischiatic diseases.

COMMENTARY. It appears probable that our author's plant is *Ajuga chamæpitys*, but here commentators are by no means agreed. It is briefly mentioned by Nicander (Alex. 65), and by Celsus as a medicine which opens the pores or mouths of vessels (v, 4), but it does not occur, we believe, in the Hippocratic treatises. Of the three species described by Dioscorides, the first is probably this plant, the second is a species of *teucrium*, and the third *ajuga iva*. His characters of the first agree in the main with those given to it by our author, who, as well as Galen,

COMM. Aëtius, and Oribasius, evidently copy from him. The other two species, he says, are possessed of similar powers. All the Arabians concur in representing it as being diuretic, emmenagogue, a medicine that expels the fœtus, and a laxative. See Rhases (Cont. l. ult. i, 153); Avicenna (ii, 2, 131); Serapion (c. 179); Averrhoes (Collig. v, 32.) Avicenna in particular recommends it for the cure of sciatica and gout, and for this virtue it was celebrated as long as it retained a place in our Dispensatory. See Quincy (116.) It was an ingredient in the famous Portland powder. It is still to be found in the shops, where it bears the names of *Iva arthritica* and *Teucrium chamæpitys*. See Gray (Suppl. to Pharmacop. 49.)

Χαμάιδρωψ,

Chamædrops; some call this plant Chamædrys, and some Teucrium, being possessed of similar powers to the Chamædrys.

COMM. COMMENTARY. According to Dioscorides it is the same as the Χαμάιδρους.

Χαμαισύκη,

Chamæsyce, *Ground Fig*, has detergent and acrid powers, so that the twigs and juice of it remove myrmecia and acrochordones. They therefore clear away thick cicatrices in the eyes with honey, and cure dimness of vision and incipient suffusions.

COMM. COMMENTARY. From the place assigned to it by Dioscorides it was evidently a spurge. It is acknowledged to be the *Euphorbia chamæcyce*. Our author appears to have borrowed the characters which he gives it from Dioscorides. (iv, 167.) Galen and the others do the same. It does not occur in the works either of Hippocrates or Celsus, nor have we been able to find it in those of the Arabians. We are not aware of its having been used by modern authorities.

Χαμέλαια,

Chamelæa, *Mezereon*, or *Spurge Olive*, is possessed of detergent powers. It therefore cleanses foul ulcers and eschars with honey.

COMM. COMMENTARY. Notwithstanding the difference of opinion which has prevailed among the commentators regarding this plant, we see no good grounds for doubting that it was the

Daphne Mezereon, which we believe to have been naturalized in this country by the Romans for its medicinal uses. Dioscorides says of its leaves that they are like to those of the olive, but more slender and thick, biting to the taste and scarifying the trachea. Its leaves, he adds, purge phlegm and bile downwards, especially if taken in a pill with double the quantity of southernwood mixed with one part of the *chamelæa*; let it be taken in water or honey as a pill; but it is insoluble, for it is evacuated as it was taken; the powdered leaves mixed up with honey cleanse foul ulcers, and such as are covered with eschars. (iv, 169.) We do not meet with it in the works of Hippocrates nor of Celsus. Galen and the other Greek authorities treat of it in very general terms like our author. Beyond all doubt is this the *mezereon* of Serapion, who commences his chapter on it by giving extracts from the descriptions of the *chamelæa* given by Dioscorides, Galen, and our author. He then gives a very lengthy account of it from Arabian authorities, first from Alcanzi and next from Aben Mesuai, which we regret that our necessary limits prevent us from giving a proper abstract of. He says that persons of a gross constitution, and more especially old men, bear this medicine best, and he recommends us to administer it with myrobalans, or tamarinds, or prunes. He further directs it to be given in water that has been boiled. Altogether there is not a more important chapter in Serapion than the one on *Mezereon*. (c. 373.) Mesue also gives a very interesting account of the *mezereon*, which he illustrates with extracts from Dioscorides and Galen on the *chamelæa*. He assigns to it powers to purge yellow and black bile, and says that its greatest use is in dropsy. It is also, he says, anthelminthic. He recommends tents smeared with it for fistulæ and sinuous ulcers. (De Simpl. 22.) Haly Abbas also gives an excellent account of it, representing it as a medicine which purges phlegm, yellow and black bile. (Pract. 2, 54, 564.) Rhases describes the two *chamæleons* and the *chamelæa* together under the head of *Laureola*. He quotes "the Book of Poisons" as stating that in the dose of two drachms it proves fatal. He gives quotations from Dioscorides, Galen, and our author. (Cont. l. ult. i, 413.) Avicenna, in like manner, describes the two *chamæleons* and the *chamelæa* under the head of *mezereon*, but evidently recognised the dis-

COMM. tinction between the last and the first two. He commends the mezereon particularly in dropsy. (ii, 2, 455.) The above sketch, it will be remarked, clearly proves the identity of the *χαμέλαια* of the Greeks, and the Mezereon of the Arabians. We admit, however, that it does not prove their identity with the *Daphne Mezereon*. To us it appears, however, that the physiological effects of the mezereon, as described by our best authorities of the present day, correspond very well with the effects of the *chamelæa* or mezereon as described by Dioscorides and Serapion. In particular compare Pereira (805) with Serapion (l. c.) It is proper to mention, however, that Sibthorp held the χ . to be *Daphne oleoides*. Both the *Daphne Mezereon*, and *D. Gnidium* are retained in the modern Greek Pharmacopœia. (108.)

Χελιδόνιον,

Chelidonium, *Columbine* or *Celandine*; the great is caefacient in the third order, and powerfully detergent. The juice of it contributes to acuteness of sight. The root when drunk with anise removes icteric obstructions, and also when taken with wine. When masticated it cures toothache. The smaller species, which belongs to the fourth order of caefacients, is more acrid, so as to ulcerate the skin in a cataplasm. It also removes leprous nails. The juice of it purges by the nose.

COMM. COMMENTARY. That the first species is the *Chelidonium majus* L. admits of no dispute. The other would seem to be the *Ranunculus Ficaria*, or Fig-wort. Pliny praises it as an application to strumous tumours, and a remedy for impairment of sight. From the experiments of Orfila, it appears that the *C. majus* acts as a very acrid poison. Dioscorides describes the great celandine very minutely, and recommends it in jaundice and toothache. (ii, 201.) He gives the same character of the less as our author. (ii, 212.) Galen and Aëtius treat of them like our author. Neither of them is to be found in the works of Hippocrates. Celsus prescribes the juice of the "chelidonia" as an application to enlarged tonsils. (vi, 14.) Both species are distinctly treated of by the Arabians. See Avicenna (ii, 2, 295, 727); Serapion (c. 196); Rhases (Cont. l. ult. i, 200.) They all recommend the juice of the

greatercelandine in jaundice, in toothache, and in affections of the eyes. It long held a place in our Dispensatory, retaining its character for curing jaundice and removing films from the eyes. See Quincy (117.) Even at the present day rustic farriers use the acrid juice of thecelandine for removing films from the eyes of cattle. The chelidonium majus occurs in the modern Greek Pharmacopœia. (46.)

Χελιδόνες,

Hirundines, *Swallows*; when burnt their ashes, if rubbed in with honey, cure inflammatory cynanche. They also contribute to acuteness of sight.

COMMENTARY. It is the *Hirundo rustica*. Celsus also recommends the ashes of swallows in cases of cynanche and diseases of the eyes. (iv, 4.) Dioscorides speaks of their use in these and in other cases. (ii, 6.) Galen gives the same account of them as our author. The Arabians repeat the descriptions given by Dioscorides and Galen. See Serapion (c. 443); Avicenna (ii, 2, 347); Rhases (Contin. l. ult. i, 741); Ebn Baithar (i, 375.)

Χολή,

Fel, *Bile*, or *Gall*, is the hottest of all animal juices, but differs according to the colour, for the yellow is hotter than the pale, and the violet-coloured than the yellow; and also according to the difference of the animals which produce it; forasmuch as that of swine is the weakest of all, so that it agrees with ulcers in the ears, and does not prove pungent; but that of sheep is more acrid, and still more that of goats, to which the galls of bears and oxen are allied. But the gall of bulls is stronger, and still more so that of the hyæna, next that of the fish called callionymus, and that of the scorpion which answers in suffusions, dimness of vision, and leucomata, and likewise that of the sea-tortoise. The gall of the wild goat is believed to cure nyctolopia. The gall of all fowls is more acrid and desiccative than the gall of quadrupeds. But of them the best is the gall of cocks and partridges. Those of hawks and eagles are in so far more acrid and corrosive, and of a violet colour, but sometimes black.

COMMENTARY. Our author's account of the medicinal pro-

COMM.
 perties of *bile* is abridged from Galen. Bile is an article which, although now excluded from the British Pharmacopœias, still holds its place in the Continental. Scarpa recommends the gall of certain animals for the removal of albugo. Pliny thus states its virtues as a medicine: "Vis ejus exalfacere, mordere, scindere, extrahere, discutere. Minorum animalium subtilius intelligitur, et ideo ad oculorum medicamenta utilius existimatur." (H. N. xxviii, 40.) See Dioscorides (ii, 96.) Avicenna calls it a hot, abstergent medicine. Of quadrupeds, he says, the strongest is that of a calf, and the weakest that of a sheep. He treats largely of the subject, but draws liberally from Dioscorides and Galen (ii, 2, 250.) See also Serapion (De Simpl. 459); Haly Abbas (Pract. ii, 50); Rhases (Cont. l. ult. i, 291); Ebn Baithar (ii, 510.) The gall of a bull is retained in the modern Greek Pharmacopœia.

Χονδρίλη,

Chondrile, *Gum Succory*, being a *species* of *Endive*, is bitterish, and is therefore so far more desiccative than it.

COMM.
 COMMENTARY. Without doubt it is the *Chondrilla juncea*, or *Gum Succory*. It produces a gum similar to *Lactucarium*, for which it is still cultivated in Lemnos. See Lindley (Veg. Kingd. 708.) Dioscorides describes another species which is supposed to be *Apargia tuberosa*. Dioscorides describes accurately the gum of the former species which he compares to mastich, and says of it that when applied on a linen cloth with myrrha to the size of an olive it is emmenagogue; that along with natron it cleanses mild leprosy; that the gum is used for glueing the hairs of the eyelashes; that the fresh root does the same when a needle is dipped into it and applied to the hairs; that it is beneficial in the bites of the viper; and that its juice is an astringent of the bowels. He describes the second species as being also glutinous. (ii, 160.) Galen and the other Greek authorities treat only of the former species, and that in very brief terms. Neither of them are described either by Hippocrates or Celsus. We find difficulty in discovering traces of it in any of the works of the Arabians, except Ebn Baithar (i, 395.) The *Chondrilla juncea* is still not wholly unknown in the shops. See Gray (Suppl. to Pharmacop. 63.)

Χόνδρος,

Chondrus, is like wheat, but more glutinous than it.

COMMENTARY. In the First Book we have explained its nature. (Vol. I, 123.) It would appear to have been the article now called *Farro*, being prepared from the spelt wheat, exactly as pearly barley is from barley. See Gray (Suppl. to Pharmacop. 16.) COMM.

Χρυσόκολλα,

Chrysocolla; one kind of it is found in metal mines, and another is prepared in a mortar of red copper with a pestle of the same, it being triturated with the urine of a boy not come to puberty during the heat of the dog days. It therefore is detergent, having discutient and desiccative powers greater than those of the kind found in metal mines, so that it consumes flesh without being pungent. It therefore agrees with ill-conditioned ulcers. By burning it you may render it less pungent.

COMMENTARY. In order to understand this very complicated subject, it will be necessary in the first place to give an exposition of what the ancients themselves have written upon it. Dioscorides writes thus of the Chrysocolla: "The best is the Armenian, which is of an intense leek colour; the second in quality is the Macedonian; and then the Cyprian, of which the kind that is pure must be selected; but that which is full of earth and stones must be rejected. The aforesaid article is to be worked thus: Having pounded it, throw it into a mortar, and having poured in water, rub strongly with the flattened hand to the mortar; then allowing it to settle, strain; and pouring in more water, again rub, and do this alternately until it becomes clean and pure; then having dried it in the sun, lay past for use. But if you wish to burn (calcine?) it, do so in the following manner: Having triturated it sufficiently, put it into a pan, place upon the coals, and do otherwise as we previously said in the former cases. The chrysocolla has the power of deterging ulcers, repressing and cleansing fungous flesh; is styptic, calefacient, mildly septic, with a certain amount of pungency. It belongs to the class of medicines which excite vomiting, and which may prove fatal to life." (v, 104.) This chrysocolla is evidently the same as that which COMM.

COMM. Theophrastus has described as "being found in great quantity in gold mines and the parts around them." (De Lapid. 47.) Now we may here say at once that every person conversant with mineralogy, must recognise the chrysocolla, described above, as being the mineral called "common copper-green" by Jameson, being an impure carbonate of copper. For a clear description of it, see Cleaveland (Mineralogy, p. 570.) This, it will be remarked, is the only substance to which Dioscorides applies the name of Chrysocolla; but in a preceding chapter, treating of the varieties of verdigris, he says, "There is a certain kind of verdigris made by the goldsmiths, by means of a mortar and pestle, of Cyprian copper and the urine of a young person, *with which they solder gold.*" (v, 92.) Now to this variety of the verdigris, as we shall soon see, the name Chrysocolla (from its being used in soldering gold) was also applied by the writers subsequent to Dioscorides. Thus Pliny (H. N. xxxiii, 26, 27, 28) first gives a very elaborate description of the true chrysocolla; and then in the following chapter he briefly notices the other kind, which he says was also called "santerna," and was prepared from Cyprian verdigris, the urine of a boy, with the addition of nitrum (soda?) pounded in a Cyprian mortar with Cyprian copper *or* bronze. This, he adds, forms a solder to gold. This, however, he does not say was ever used in medicine. The former kind or true chrysocolla of Dioscorides, he says was used in medicine for cleansing wounds along with wax and oil, and also in a dry powder; that it was given in a linctus with honey for orthopnœa and angina; that it was used as an emetic; was added as an ingredient to collyria for specks on the eyes, and to green plasters for relieving pain and contracting cicatrices. This chrysocolla, he says, in conclusion, the physicians call *acesis* (a term, by the way, synonymous with medicinal), and was different from the *orobitis* which he had previously described as being artificially tinged with a herb called by him "lutum," meaning thereby, we suppose, woad, or the *Isatis tinctoria*. (l. c.) Galen describes the two kinds together, and treats of their medicinal powers as follows: This medicine, chrysocolla, is one of those that consume the flesh, and is not strongly pungent; but it is moderately discutient and desiccant. Wherefore some call only the fossil by this name, but

some also the substance which is prepared in a bronze (copper?) mortar with a copper pestle by means of the urine of a boy, which some value according to the differences of the verdigris. But it is better to prepare it in summer, or at least in hot weather, pounding the urine in the mortar. And it answers more excellently if the bronze, of which you make the mortar, be red, and the pestle too, for more is thus rubbed off by the turning round of the pestle when the bronze is of a softer nature. This medicine is most suited to malignant sores, both by itself and mixed with other substances. He concludes by saying of the fossil chrysocolla, that the more desiccative the less stimulant it is, as being so much the more attenuated; and that when burnt (calcined), it becomes still more attenuated. (De Simpl. ix.) It is clear from this statement that Galen included under his list of Simples both the fossil chrysocolla and the kind prepared from verdigris. Aëtius merely abridges the account of the chrysocolla given by Galen. (ii, 81.) And as Oribasius professedly copies his descriptions of the fossils used in medicine from Dioscorides, we need not say anything further of his account of chrysocolla, than that it coincides entirely with that of Dioscorides. (Med. Coll. xiii.) Celsus ranks it with the corrosive (v, 6) and the caustic substances. (v, 8.) We now turn to the Arabians. Avicenna, in the first place, treats of this substance under the name of chrysocolla, of which he describes two species; the one, the artificial, made with the urine of a boy in a bronze mortar, as already explained; the other the fossil, of which he says he will now treat. He describes its general characters, namely, that it is abstergent, caustic, septic, and so forth. Referring to Dioscorides and Galen, he calls it an emetic and astringent medicine, and good for malignant sores. (ii, 2, 358.) He there refers to sect. 696, where he treats of tincar, of which he says that it consists of two kinds, the fossil and the factitious, the latter of which is called the gold-solder (capistrum auri). It is useful, he says, in toothache and carious teeth. Averrhoes describes it under the names of Laçacolaap, i. e. Consolidatura auri; in Arabic, *Cumbar*. He gives exactly the same account of the two species as Galen. He says the factitious kind is best prepared in a mortar of red bronze with the urine of a young person; which species is more efficacious than the other.

COMM.

COMM. (Collig. v, 43.) Serapion in the portion of his work devoted to minerals, writes thus of *Tincar*, i. e. *Borax*. "Ebn Amram says of it, it is of the species of salts, and is found with the taste of *baurach* (nitrum?), and has some bitterness; and it is either fossil or factitious. And the fossil is in the banks of the sea; it is hot, dry, and subtle; is useful in toothache, and kills the worm in them, and in stopping the throbbing in them it has wonderful powers. Rhases and Aben Mesuai say of it, that the basis (radix) of it is the urine of a boy, we mean of the factitious, and it is the solder of gold (chrysocolla.) It would appear to be the chrysocolla which is described by Haly Abbas (Pract. ii, 48, 495), but we must admit ourselves incapable of interpreting correctly his meaning as expressed in the barbarous translation of his works. Ebn Baithar first treats of chrysocolla under the name of Tankâr in an extract from the works of Ebn Amram which we have given above as quoted by Serapion. (i, 214.) And again in the 2d volume (434), he first gives descriptions of the chrysocolla in extracts from Dioscorides and Galen, and concludes with the remark that some people called it the tankar chrysocolla, but that the chrysocolla of Dioscorides and Galen was a totally different article from the tankar. Rhases gives merely extracts from Dioscorides and Galen. (Cont. l. ult. i, 25.) He calls it *adhesio auri*. From what has been stated above, we now draw the following conclusions regarding the matters treated of under this head:

1. That the mineral known by the names of "copper green," "mountain green," "native carbonate of copper," was the true chrysocolla of Dioscorides, the said term signifying *Gold solder*.
2. That Dioscorides further describes a preparation of verdigris which was also used for soldering gold, to which the name chrysocolla was likewise applied by Pliny, Galen, and others.
3. That under the names of *Tincal*, *Tankar*, and *Borax*, the Arabians described a species of salt, which most probably was our *Sodæ Biboras*, to which they sometimes applied the name chrysocolla from its being used in the soldering of gold, but their best authorities (as for example, Avicenna, and Ebn Baithar) were well aware that this borax was a totally different substance from the chrysocolla of Dioscorides. The name borax is probably a corruption of *Baurach*, which is the term applied by the Arabians to the nitrum of

the Greeks and Romans, that is to say, *natron*, or soda. If COMM. the reader will take the trouble to read what has been written on the chrysocolla of the ancients by many learned men in modern times, as, for example, Alston, Hill, Geoffroy, Quincy, Sprengel, and Kidd, he will be the better able to judge whether or not we have succeeded in illustrating what has always been considered a very obscure subject.

Χρυσοκόμη ἢ Χρυσίτις,

Chrysocome or Chrysitis; its root has at the same time acrid and astringent powers, and therefore is not much used. Only in peripneumonia and hepatic affections it is given boiled in honeyed water. It also promotes menstruation.

COMMENTARY. Pliny complains that it had no name in COMM. the Latin language; and Anguillara and Matthioli were unable to make out what it is. It now holds a place in the Linnæan system by the name of *Chrysocoma Linosyris*. Our author borrows his characters of this article from Dioscorides (iv. 55.) Galen describes it in almost the same words. It is not to be found in the works of Dioscorides or Celsus, nor, as far as we can discover, in those of the Arabians.

Ψευδοβούνιον,

Pseudo-Bunion, *Bastard Rape*; its properties being like those of rape, it is heating, discutient, and detergent. It, therefore, removes tormina, stranguries, and pains of the sides. It also discusses scrofulous swellings when applied along with salts and wine.

COMMENTARY. It would appear that it is the *Pimpinella* COMM. *tenuis* or *Slender Burnet*. Our author copies from Dioscorides. Galen treats very lightly of this article. It does not appear that it is treated of by the Arabians.

Ψευδοδίκταμνον,

Pseudo-Dictamnium, *Bastard Dittany*, has the powers of weak dittany.

COMMENTARY. We are inclined to join those who refer it COMM. to the *Marrubium Pseudodictamnium*. Galen and Dioscorides join in representing it as an article of little consequence.

Ψυθήιον,

Cerussa, *White Lead*, is refrigerant and emplastic.

COMM.

COMMENTARY. We have treated of it as a poison in Book V. § 59. Alston says: "Our white lead is certainly the Ψυθήιον of Dioscorides and the Cerussa Plinii" (xviii.) The ancient ceruse consisted of the carbonate of lead which had been exposed to the vapours of vinegar, and was, therefore, little or nothing different from the modern ceruse. Geoffroy's description of the process is taken, in fact, from Dioscorides. It would appear to have been sometimes administered internally, if, as Dr. Hill remarks, it is an ingredient in the *Trochisci albi* of Rhases. We have not been able to find, however, this trochisc in Rhases, nor in any of the ancient authorities. Perhaps Dr. Hill confounded it with the Emplastrum album, of which ceruse is an ingredient. (See Galen, De Comp. Med. sec. gen. vi, and Celsus, 222 ad Milligan.) Galen in fact expressly says that ceruse ought not to be administered internally (Meth. Med. iv.) He recommends it as an anodyne collyrium in pains of the eyes (Comment. in App. vi, 31), and as an astringent and soothing application in general. (De Simpl. Med. ix.) Dioscorides describes minutely the preparation of ceruse, and the different kinds of it, but gives its medicinal properties in brief terms like our author. (v. 103.) Celsus recommends it in burns and ulcers (vi, 7), but internally taken he treats of it as a poison (v, 27, 15.) All the other Greek and the Arabian authorities after Galen give ceruse exactly the same characters as we have stated them above. See in particular Serapion (De Simpl. 378); Avicenna (ii, 2, 117); Haly Abbas (Pract. ii, 48); Ebn Baithar (i, 63.) The last of these says of it, that it is useful in the same class of cases as Minium; that dissolved in vinegar, and more especially when mixed up with rose-oil, it is a good application in cephalalgia; that it forms a proper ingredient in collyria for inflammations of the eyes,—and dissolved in a woman's milk or mixed up with the white of an egg,—that it is dropped into the eye with advantage in such cases.

Ψύλλιον,

Psyllium, *Fleawort*; the seed belongs to the second order of

refrigerants. With regard to heating and moistening powers it holds an intermediate place.

COMMENTARY. Sprengel remarks, that there can be no difficulty about it; it is the *Plantago Psyllium* L. Dioscorides and Pliny recommend it pounded with hog's lard as an application to malignant ulcers; Pliny also says that its seed is a good application to the bites of serpents. (H. N. xxvi, 66.) Dioscorides says it cures tumours, arthritic diseases, intestinal hernia, and other complaints, with rose-oil, vinegar or water. It is, he says, a powerful refrigerant. (iv, 70.) Galen and the other Greek authorities give its characters succinctly like our author. Celsus puts it in his list of agglutinative substances (v, 2.) The Arabians recommend it for the same purposes as the Greeks, and also for allaying the inflammation of acute fevers. See Avicenna (ii, 2, 533); Serapion (De Simpl. 230); Ebn Baithar (i, 132); Rhases (Cont. l. ult. i, 567); Mesue (De Simpl. 20.) We have treated of it as a poison in Book V. § 40. According to Crantz its poisonous qualities have been exaggerated by Dioscorides. (Mat. Med. iii, 117.) Accordingly we do not find it treated of by the late writers on toxicology. Although it has long ceased to occupy a place in our dispensatory, it has been celebrated in modern times for its medicinal virtues. Platearius commends it highly as a cooling and astringent medicine, in acute fevers, dysenteries, hemorrhages, &c. (De Simpl. Med.) Prosper Alpinus mentions that the modern Egyptians make frequent use of its mucilage as a medicine, and hence he finds fault with Dioscorides and Mesue for setting it down as a poison. (De Med. Ægypt.); and Rutty (Mat. Med. 415.) Its seeds form with boiling water a rich mucilage, which it appears is still much used in India, in catarrh, gonorrhœa, and nephritic affections. Lindley (Veg. Kingd. 643.) A recent authority on pharmacy says of it that its seeds are mucilaginous and purgative. Gray (Suppl. to Pharmacop. 44.)

Ψωρικόν,

Psoricum, is formed by mixing two parts of chalcitis with one of litharge, triturating them in vinegar, and, having put them into a new pot, by burying them in dung for forty days. It becomes more desiccative, more subtile, and less pungent than chalcitis.

COMM. COMMENTARY. Dioscorides and Pliny call it a mixture of cadmia and chalcitis; Galen, Aëtius, and our author say of litharge and chalcitis. Avicenna follows Dioscorides. (ii, 2, 273.) Celsus also directs it to be made of chalcitis and cadmia. (vi, 6, 31.) It derives its name from its being used as an application to parts affected with scabies (psora.) The psoricum has been long unknown in the practice of medicine.

'Ὀv,

Ovum, *An Egg*; the white and thin part is free from all pungency, being moderately cooling. It is to be used for the eyes, ulcers in the pudendum, and all ill-conditioned ulcers. It is also mixed up with the medicines which form styptic plasters. And the yolk of an egg being possessed of similar powers, is mixed up with anti-inflammatory remedies. When roasted it becomes more desiccative but less soothing. If a whole egg be boiled in vinegar, and eaten, it dries up alvine fluxes. But if, having received the addition of some sour substances, such as galls, sumach, or the flowers of the wild pomegranate, it be fried, it becomes considerably more drastic. A whole egg applied raw immediately relieves burns. When taken in a supping state, it concocts and soothes affections in the chest, and proves demulcent for asperities of the trachea. New eggs are to be preferred to old, and those of hens to the eggs of all other animals.

COMM. COMMENTARY. Galen gives, in his usual copious and elegant style, a somewhat lengthy dissertation on the medicinal properties of eggs, but the narrow limits to which we are necessarily restricted, prevent us from transferring the substance of it to our pages, although it contains much that is highly interesting. (De Simpl. xi.) Galen recommends eggs for various medicinal purposes; and in particular he says that wool dipped in the white of an egg proves a serviceable application to burns. Dioscorides states their virtues more briefly, and to him our author is more particularly indebted. (ii, 54, 55.) He recommends the white of an egg in a tepid state for severe pains of the bladder and ulceration of the kidneys, roughness of the windpipe, vomiting of blood, catarrhs, and defluxions of the chest. Pliny, Dioscorides, and Sextus Platicus say that eggs pounded with oil form an excellent application in cases of

erysipelas, the leaves of beet being laid on the place. Pliny COMM. and Dioscorides recommend them for affections of the eyes. Avicenna recommends the white of an egg with melilot in ulcers of the intestines. He says eggs boiled in vinegar are useful in diarrhœa and dysentery. He recommends a suppository of the albumen of an egg in prolapsus ani, and other affections of the fundament. Like the preceding authorities he speaks favorably of it as an application to the eyes. (ii, 2, 520.) See also Ebn Baithar (i, 193); Serapion (c. 446); Rhases (Ad Mansor.; Antid. iv.)

Ὠκμῶν,

Ocimum, *Basil*, belongs to the second order of calefacients, and has also some recrementitious humidity, hence it is of no use when taken internally; but when applied externally, it is discutient and digestive.

COMMENTARY. It most probably is the *Ocimum Basilicum*. COMM. Dioscorides not only recommends it for many medicinal purposes externally, but also says of it that it loosens the bowels, is carminative, diuretic, and creates milk, but is of difficult digestion; the seed, he adds, when taken in a draught, is beneficial in melancholy, dysuria, and flatulence, and it is also sternutatory. (ii, 170.) Our author follows Galen very closely. Aëtius also condemns the internal administration of basil, but praises highly a decoction of it as a fomentation to the eyes, and particularly those of children. Oribasius as usual follows Dioscorides, and, therefore, like him approves of the internal use of it. It occurs in the works both of Hippocrates and Celsus, the latter of whom says of it that it moves the bowels, and is diuretic. (ii, 29, 31.) The Arabians treat of it still more fully than the Greeks. Avicenna says it is a cordial medicine, that it generally binds the bowels, but also moves them, if there be humours in them, that it is useful in hæmoptysis and in difficulty of breathing. (ii, 2, 101.) See also Serapion (c. 167); Ebn Baithar (i, 110); Rhases (Cont. l. ult. ii, 121.) The basil held a place in our English dispensatory down to the times of Quincy and Lewis. It holds a place in the modern Greek Pharmacopœia, where it is stated that it is indigenous in Persia, and only cultivated in gardens in Greece. (p. 27.)

Ὠκιμοειδές,

Ocimoides, which some call *Philetærium*. Its root is useless, but the seed is composed of subtile matter, and is desiccative without pungency.

COMM. COMMENTARY. Matthioli held it to be a species of *lychnis*, but this opinion is rejected by Dodonæus. Sprengel agrees with Lobelius and Dalecampius in referring it to the *Saponaria ocimoides*. This is one of the most disputed articles of the ancient Mat. Med. Of the conjectures which have been made respecting it, the most probable then is that it was either a species of *Lychnis* or *Saponaria*. See Parkinson (*Theatre of Plants*, 630, 760.) We are disposed to acquiesce in opinion with those who hold it to be the *Saponaria ocimoides*. Dioscorides says of it, that its seed when drunk in wine is calculated to benefit those who have been stung by scorpions, and is useful for the bites of all other kinds of reptiles, and that it is given in sciatica with myrrh and pepper. (iv, 28.) Galen states its character in nearly the same terms as our author. It is not described by Aëtius, by Hippocrates or Celsus, nor, as far as we can discover, by any of the Arabians, with the exception of Ebn Baithar, whose notice of it is entirely made up from Dioscorides and Galen. (i, 93.) It has been long unknown to our Dispensatory, and does not occur in the *Pharmacopœia* of the modern Greeks.

APPENDIX TO THE THIRD SECTION.

On the Substances introduced into the Materia Medica by the Arabians.

HAVING thus given a brief account of all the Simple Substances described by the Greek and Roman writers on the *Materia Medica*, we are now called upon to supply what information we can procure regarding the additions made to their list by the Arabians. This, we need scarcely say, is a field of research, which, having been hitherto but little cultivated, is attended with difficulties of a particularly formidable nature; for, although we have been enabled to avail ourselves of the learned labours of Professor Sprengel, Dr. Royle, Dr. Ainslie,

and of certain other oriental scholars who have touched cursorily upon these matters, we have been more thrown upon our own resources on the present occasion than at any other stage of our progress in executing this work. We trust, then, that our readers will receive with peculiar indulgence our present essay, which, however imperfect, will be found, if we mistake not, to have opened up a mine of valuable knowledge from which some more skilful labourer in the same line will yet draw additional stores of information to the profession. Of course it will be readily seen, that we do not pretend to give an account of all the articles introduced into the practice of medicine by the Arabians; that, even if we were possessed of the requisite knowledge of the oriental languages, would evidently be out of the question within our narrow limits. For Ebn Baithar alone, if his laborious work were properly explored, would furnish a large volume of new matters added by his own individual exertions to the accumulated treasures of his predecessors; but, of the articles first treated of by him there are unfortunately many which are but very doubtfully determined, and not a few which are left wholly undetermined by his translator Dr. Sontheimer. And here it is but right that we should acknowledge that the translation itself would have been to us "a sealed book" if our learned friend, Professor Blackie, of Aberdeen, had not come to our assistance, and in so far made up for our own very imperfect acquaintance with the German language. But, besides the stores of Ebn Baithar, there is much in those of Avicenna, Serapion, Rhases, and Haly Abbas, which still remain to be unfolded by some fortunate *savant* who is acquainted both with the languages of the East and the sciences of the West.

It may be proper to mention, that the articles which are here described are set down in the same order as the notices of them were composed, because we could not satisfy ourselves with regard to any methodical arrangement which would conveniently apply to them and be in unison with the general plan of this work.

Ambra grisea.

A recent writer on the *Materia Medica* gives the following description of Ambergris: "The substance called *Ambergris* (*ambra grisea*) is procured from the Cachalot or spermwhale.

In this country it is used as a perfume only; on the continent it is employed in medicine. It appears to be the indurated fæces (perhaps somewhat altered by disease) of the animal. Mr. Beale collected some of the semi-fluid fæces, and found that the dried mass had all the properties of ambergris. It is a solid, opaque, grayish, striated substance, having a pleasant musk-like odour, and which is derived from the squid (*sæpia moschata*) on which the animal feeds." Pereira (Mat. Med. 1392.) No one who compares this account of ambergris with what is said of it in the extracts we have given from Serapion and Avicenna under *Electrum*, can entertain a doubt that these authors were well informed as to the nature of this substance. Ebn Baithar gives a similar account of the origin of ambergris. He says, it is furnished by sea monsters which swallow it and vomit it up again. It swims on the surface of water, and the blackish kind is of little value. He calls it the most excellent of all aromatics, and praises it for strengthening the heart and brain, and for curing cramp and similar complaints. Among other powers which it possesses, it is said to be intoxicating. (i, 210, 405.) See also Haly Abbas (Theor. v, 33.) The Greeks and Romans would appear to have been unacquainted with this species of Amber until after the Arabian period. It is accurately described by Symeon Seth, as we have already stated above in the commentary on *Electrum*. He holds it to be a good cordial and stomachic medicine.

Bezoar.

As this article is now but little known in this country, it may be proper to prefix some account of it from recent authorities. Lewis writes of it thus: "*Lapis Bezoar orientalis*, oriental Bezoar stone, supposed to be produced in the pylorus or in a cavity at the bottom of the fourth stomach of an animal of the goat kind, which inhabits the mountains in different parts of Persia." (Mat. Med. 217.) But Bontius is, perhaps we may say, the most accurate of the modern authorities who have described the oriental bezoars. He describes them as being alvine concretions which form in goats or gazelles, and have generally a little piece of chaff as a nucleus. He had also seen them taken from the bodies of monkeys. (Med. Ind. c. 45.) See further Gray (Suppl. to Pharmacop. 179, 186.) Now,

it is certain that these Bezoars were much used in medicine by the Arabians as they are in the East at the present day; and yet, as far as we have been able to discover, they are not described in any of the Arabian works on the Mat. Med., with the exception of Ebn Baithar, and his account of them is very indistinct and unsatisfactory. We may gather from his description, however, that the term was applied to more substances than these alvine concretions. One of his authorities speaks of the best kind being found in the heart of the stag. Like all his countrymen, he recommends the bezoar as an amulet and an antidote to poisons. (119.) Indeed the term Bezoar would appear to have been used as signifying alexipharmical. See Avicenna (ii, 2), and Serapion (c. 441.) Frequent mention of it occurs in the works of the Arabians. See Haly Abbas (pluries); Rhases (Cont. l. ult., and xxxv, 6, 8, 1); Avicenna (iv, 6, 1, 4.)

Camphora.

This article is so important, that we shall be excused if we dwell upon it at some length. It is well known to be a secretion procured from several trees of the genus *Laurus* in the East; but more particularly from the tree which has been named *Camphora officinarum*. Serapion is the ancient authority who gives the fullest account of Camphor. In the first place, owing no doubt to his using some interpolated translation of Dioscorides into Syriac, he quotes him as stating that it is procured from India and China and is produced in most abundance during seasons when there is much thunder. One of his Arabian authorities, Isaac Ebn Amram, gives a distinct account of the origin of camphor and a description of the qualities of the different kinds of it, with a brief notice of the mode of clarifying it by sublimation, which is the process by which it is still produced. As to its medicinal virtues, he holds it to be cold and dry in the second degree, and says it is applicable in cases of inflammations, vertigo, and cholera; in fumigations with myrrh, rose-oil, and sandal-wood; that it is anaphrodisiac, induces premature hoariness of the hair; that in a masticatory with lettuce, it cures the hot intemperament of the brain and induces sleep; removes vertigo; stops hemorrhages from the nose and all fluxes in general; and, in short,

that it is a common ingredient in all fumigations and ointments. Rhases, as quoted by him, pronounces camphor to be cold and attenuate (volatile ?); says it is calculated to remove hot intemperaments in the head and the whole body; when too much used that it induces insomnolency; that it brings on coldness of the kidneys and bladder; coagulates the semen, and engenders coldness, and principally in the colder members of the body. Another Arabian authority, Meseab, calls it cold and dry in the third degree, and recommends it in epistaxis as a masticatory with raisins. Mesarugie, another authority, says, in large doses it induces indigestion and stops the formation of semen. Another of his Arabian authorities, Aben Mesuai (Mesue the elder ?) says, it is astringent of the bowels, induces premature hoariness of the hair, and is useful in hot apostemes. Aben Amram, as quoted by him, says, Camphor is cold in the third degree, and is useful when applied to inflamed parts with rose-water, and comforts the members of the body and the senses; and is useful in cholera along with other astringents. He gives a quotation from the 'Medicina Antiqua' to this effect, that camphor is an astringent of the bowels, and that its use induces hoariness of the hairs. (De Simplicibus, 344.) Avicenna's account of it is much more succinct; he describes several species of it; says it is procured from a very large tree capable of giving shelter to a multitude of animals; that he had often seen the wood of it, and that it was white, brittle, light, and contained in its pores some vestiges of camphor. He holds that its nature is cold and dry in the second degree. He recommends it in exactly the same cases as Serapion does, namely, in inflammatory complaints, epistaxis, hot vertigo, and acute ophthalmia. He also, like Serapion's authorities, holds that it is anaphrodisiac and represses fluxes. (ii, 2, 130.) Rhases gives a brief account of camphor upon the authority of Misib, Mesarguil, and Bimasui; the first of whom merely recommends it in fluxes; the next relates of it that an acquaintance of his took six drachms of camphor at one dose, which impaired his digestion and brought on impotence without inducing any other complaint; the third, like some of Serapion's authorities, represents it to be cold and dry in the third degree, and recommends it for fluxes, and further says that it induces premature hoariness of the hair. (Contin. l. ult. i, 147.) In

another work he calls it cold, humid, and subtile (volatile ?), and gives it the same characters as the other authorities. (Ad Mansor. iii, 22.) Mesue gives a formula for troches of camphor, which he recommends in ardent fevers, heat of the bile and of the blood, hot intemperaments of the stomach and of the liver, for intense thirst, jaundice, phtthisis, and hectic. (De Trochiscis. i.) Haly Abbas frequently recommends camphor in the course of his works, but we have not been able to discover any distinct account of it in the very barbarous translation of his *Materia Medica*. Ebn Baithar gives a very circumstantial account of the formation of camphor on the tree which produces it, and describes its characters very accurately. He says it is cold and dry in the second degree, and is useful in hot intemperaments and bilious headaches. Like some of the others quoted above, he says it is produced most abundantly in times of thunder. In an over-dose, he says, it is anaphrodisiac, and induces sleeplessness, and relates a case in which it destroyed the tone of the stomach, and occasioned impotence. He says it is used in collyria, and as a sternutatory, and to stop the hole in a carious tooth. Symeon Seth is the only one of the Greek authorities that treats fully of camphor. (*caphura*.) He says it is cold and dry in the third degree; that it is the gum or tear of a tree growing in India; that the tree which produces it is said to be very large, so that a hundred men could be sheltered by its shade; that it is produced on the mountains near the sea; and that the wood of the tree is light and fistulous. He recommends camphor as being most useful in acute diseases, in headaches from heat, and in inflammations, especially those of the liver; says that it induces coldness of the kidneys and spermatic vessels, and coagulates the blood. He mentions a test of its purity. (De Alimentis.) Myrepsus in one place mentions the herb camphor, but it is doubtful whether he means the substance we are treating of;—most probably not. (De Unguent. iii, 46.)

Cassia Fistula.

Serapion, in the first place, gives a pretty accurate description of it, and states the localities from which it is procured, namely, India, Babylonia, and Arabia. Upon the authority of Aben Mesuai he states it to be of a sweet taste, and laxative

of the bowels, and says it has virtues to extinguish the sharpness of the blood, that it relieves apostemes and boils in the mouth, and is useful in jaundice and pains of the liver. In a dose of three to ten drachms he says it is cholagogue and laxative. Abengnefit, as quoted by him, says it purifies the nerves. Rhases, as quoted by him, says it is laxative and efficacious in apostemes, especially those of the throat. (De Simpl. xii.) Avicenna's account of it is but little different from that of Serapion. Having described it, he says it is of an equal temperament as to heat and cold, but is of a moistening nature, and that in action it is resolvent and laxative. It is useful, he says, in hot apostemes of the bowels, and especially of the throat when a gargle of it is prepared with a decoction of nightshade. He praises it in a liniment for gout and arthritic pains. He speaks well of it in dyspnoea. He says it cleanses the liver, and is of use in jaundice and pain of the liver. He says it is a gentle laxative, bringing away heated bile and phlegm, and opens the bowels safely without griping. (ii, 2, 192.) Badagorius, as quoted by Rhases, says of cassia fistula, that it is alterative, an evacuant of bile, and a cleanser of the blood. The son of Mesue, as quoted by the same, recommends it, like Serapion, in jaundice, pain of the liver, of the throat, &c. Priscianus, as quoted by Rhases, says it is a safe purgative to pregnant women, brings away bile, clears away jaundice, and is efficacious in pain of the liver and throat. Marsennce (?) recommends it in the same affections of the throat as the others. (Contin. l. ult. i, 187.) Of all the ancient authorities, Mesue the younger gives the fullest account of it, but it is in nearly the same terms as Serapion's. His description of it is full and accurate. Any injurious action which it has, he says, may be removed by the mixture of myrobalans, rhubarb, the water of mastich, and spikenard; and in dryness of the bowels by mixing almond oil with it. Diuretics also are said to determine it to the urinary passages. He says it is useful to add some laxative to it. As to its virtues, he says it cleanses the blood, allays all sharpness in it, assuages thirst, with the juice of endive, &c., clears the stomach, brings away yellow bile and phlegm, and that safely, also purges the breast and throat, and is useful in heat of the kidneys, when taken with diuretics and the infusion of liquorice,

that it prevents the formation of stones, and is useful in ardent fevers. (De Simpl. vi.) Ebn Baithar also gives a very elaborate and correct account of this article, but as it is nearly the same as that of Mesue, we need not say much about it. He calls it a well-known tree growing in Egypt; says in moderate doses it is a safe purgative, even to pregnant women, but in large doses occasions hypercatharsis. If the root is not sound, it is apt to produce disturbance of the bowels. He says it purges hot bile, softens the breast, and cleanses the nerves, &c. (i, 401.) Actuarius describes it by the name of the Black Cassia, and recommends it as a gentle purgative both alone and with other medicines. (Meth. Med. v, 2.) It occurs among the ingredients in the antidotes of Myrepsus. See Antidot. (i, xi.) Of course the article we have been treating of will be recognised as being the *Cassia fistula* L., the pudding-pipe tree, or purging cassia. The pulp of the pods is still sometimes used in medicine as a gentle purgative. See Paris (Pharmacol. i, 271); Pereira (M. M. 1172); Gray (Suppl. to Pharmacop. 150); Royle (M. M. 355.)

Senna.

If the work of Serapion (De Simplicibus) which we possess, be the production of the elder Serapion (and after being long familiarly acquainted with it we are inclined to think so), he is undoubtedly the first author who has described senna as an article of the Materia Medica. First on his own authority he describes very accurately the pods, stalks, and seeds of the plant. On the authority of Isaac Ebn Amram he recommends it for removing the inquietude accompanying melancholy, for aches and disturbances of the nerves, for alopecia, phthiriasis, chronic headache, scabies, pustulæ parvæ, pruritus, and epilepsy. Abix, another authority, declares it to have great power of purging black and yellow bile, and of acting as a cordial when mixed with suitable medicines such as violets. His last authority under this head is Rhases, who says that senna and fumitory purge adust humours, and prove useful in scabies and pruritus. (De Simpl. 58.) Under the head of *sahane* Avicenna briefly notices an article which he recommends as being abstergent and desiccant in pruritus and scabies, in pain of the neck, fetid breath, and watery stomach (waterbrash?).

This account we are inclined to think must refer to senna. (ii, 2, 651.) Rhases gives almost exactly the same description of the *sahane*. (Contin. I. ult. i, 596.) In his work 'Ad Mansor.' (viii, 54), he gives the account of *Sene* quoted above from Serapion, and again at 'Divis.' (i, 144.) Haly Abbas describes it accurately in his chapter on Purgatives. (Pract. ii, 54.) He recommends it as a medicine which purges both yellow and black bile, and is useful in gout and rheumatism, and in colics when mixed with raisins, oil of almonds, &c. Mesue describes senna as the folliculus of a plant resembling the tare. The best part of the plant, he says, is the folliculus (legume?), and next the leaves; and both these parts are said to be best when of a green colour. As senna has a tendency to weaken the stomach by its operation, he recommends it to be mixed with ginger, sal gem, Indian salt (sugar?), and cordials. He quotes Galen (through some mistake, as is generally supposed) as recommending it boiled in the soup of fowls. He also speaks of giving it in whey, or in milk, or in must, that is to say, the fresh juice of the grape. The last of these preparations he praises as cleansing the brain and senses, and creating joy. He also speaks favorably of a decoction of it with prunes and spikenard. As to its virtues, he says it readily purges black and adust bile, cleanses the brain, heart, liver, spleen, the senses, and lungs, proves deobstruent and dispels sorrow. He also speaks favorably of the leaves when applied to the head in the bath as improving the senses of sight and hearing, and as proving a remedy to fevers arising from black bile, and to chronic fevers. (De Simpl. xv.) Ebn Baithar gives an interesting description of it. He says in Arabia it is used as a dye, and that its leaves are mixed with those of the plant now called *Lawsonia inermis*. He calls it cholagogue and melanagogue, says it penetrates the inferior extremities, and purges them in cases of gout. He also praises it in scabies, epilepsy, and a great many other diseases. By some mistake he quotes Paulus. He says it is better in decoction than in powder. The dose of the latter is from two to three drachms, of the former from four to seven drachms. (i, 57.) Actuarius says of *sene*, that it purges moderately in doses of one drachm. (Meth. Med. v, 8.) *Sene* occurs as an ingredient in several of the antidotes of Myrepsus, as c. 112, 465, 472. Under

this head we would beg, before concluding, to refer the reader to Ainslie's *Mat. Ind.* (i, 205). It will be there seen that in *Æthiopia senna* is still used as a dye.

Berberis.

Rhases gives extracts from Badigorius, Oribasius, Mesue, and others on the virtues of this substance, which he represents as being lithontriptic, styptic, and alexipharmic. He says it is called *calmuris* in Greek. (*Contin. l. ult. i*, 121.) Serapion gives extracts from Dioscorides and Galen under this head, but there seems no reason to suppose that they were at all acquainted with this article. He recommends it as being cooling and incisive, and a strengthener of the stomach and liver. He also praises it in all fluxes. (*De Simpl.* 229.) Ebn Baithar calls it astringent, stomachic, and hepatic, and says it binds the bowels and quenches thirst. He recommends it in diarrhœa connected with weakness of the liver, and in diseases of the stomach and uterus. See also Avicenna (vi, 9.) The berberry (*Berberis vulgaris*) is recommended by Gerard, Parkinson, and all our old herbalists as an astringent medicine in diseases of the stomach and liver. Even at the present day it is admitted to possess these virtues. See Gray (*Suppl. to Pharmacop.* 102) and Lindley (*Veg. Kingd.* 438.) The former of these seems to acknowledge it as the *Oxyacantha* of the Greeks, but we think incorrectly. Dr. Royle supposes the *Lycium Indicum* of Dioscorides to be the berberry. It seems to us more probable, however, that the berberry was but the succedaneum of the lycium. See Schröder (*Chemical Dispensatory*, 475.)

Galanga.

Rhases calls it stomachic. (*Antid. iii.*) Serapion having described it, upon the authority of Isaac ebn Amram says of it, that it is hot and dry in the third degree, is useful to phlegmatic persons, and in humidity of the stomach (water-brash?); promotes digestion by its heat and the solution which it occasions in the stomach, and thus relieves colic, gives fragrance to the breath, and warms the kidneys: it sets the semen in commotion, and when a piece of it is held in the mouth, it occasions erections of the *membrum virile*. The same virtues in the same cases are assigned to it by Aben Mesuai, and also

Aben Mesabah, who recommends it in flatulent colic and eructations. (De Simpl. 332.) Avicenna, having described it, delivers the same account of its medicinal powers as Serapion, that is to say, he holds it to be hot and dry in the second degree, of subtile parts and carminative, says that it renders the breath fragrant, is good for the stomach, promotes digestion, is useful in colic and pains of the kidneys, and is aphrodisiacal. (ii, 2, 314; v, 2, 6.) The same account of it is given by "the Son of Mesue," in the 'Continens' of Rhases (l. ult. i, 323.) In the pharmaceutical work of Myrepsus there is an "antidotus a Galanga," which is said to be beneficial in affections of the stomach and spleen, and in indigestion; also for singultus, acidity of the food in the stomach, cachexia, dropsy, and coldness of the whole body: it contains cloves, ginger, cinnamon, galangal, &c. (i, 63; also, 222.) Ebn Baithar ascribes the same virtues to it as Serapion; thus he says it is a wonderful aphrodisiac, promotes digestion, cures colic, is carminative, and so forth. Although now little used, galangal root is not yet wholly unknown to the writers on the Materia Medica. Dr. Pereira says of "*radix galangæ officinalis*; its odour is agreeably aromatic, its taste peppery and aromatic. It is the rhizome of the *Alpinia Galanga* Roxb." (Mat. Med. 698.) See also Lewis (Mat. Med. 452); Hill (Mat. Med. i, 447); Quincy (72); Gray (Suppl. to the Pharmacop. 26); Lindley (Veg. Kingd. 166.) There are two species of galangal, which Dr. Lindley refers to the *alpinia racemosa* and *galanga*. He says of them, "the warm and pungent roots of the greater and lesser galangals are not only used by the Indian doctors, but are considered useful in coughs, given in infusion." (Ibid.) On the Galangal see further Ainslie (Mat. Ind., i, 140.)

Zeduaria and *Zerumbeth*.

In order to understand this subject it will be necessary in the first place to see the descriptions of these substances given by modern authorities. Dr. Pereira says of the former of these: "The Zeduary root (*Radix Zeduarie officinalis*) of English druggists appears to me to agree with Professor Guibourt's description of round Zeduary (*Zeduaria rotunda*). It is the sliced tuber of *Curcuma Zeduaria* Rox. It has a warm, aromatic, bitter taste, and an

aromatic odour." (Mat. Med. 698.) And of the Zerumbet the same author says: "*Cassamunar root* is considered by English druggests to be identical with *Zerumbet root*. (Private information; also, Gray, Pharmacop.) It appears to me to be the *Turmeric-coloured Zeduary* of Ainslie (Mat. Ind. i, 490.) Is it the product of *Zinziber Cassamuniar* Roxb.? The Zerumbet root which I received from my friend Dr. Royle is very similar in shape to a curved and arched piece of long turmeric." (Mat. Med. 698.) Dr. Ainslie gives an interesting disquisition on the Zeduary of which he describes three species: 1. Zeduary Kæmpferian (*Kæmpferia rotunda*.) 2. Zeduary Zerumbet (*Curcuma Zerumbet*.) 3. Zeduary turmeric-coloured (*Curcuma* and *Amomum Zeduaria*.) We shall now be better able to ascertain the meaning of the ancient descriptions of these substances. Serapion describes separately the *Zerumbet Zeduaria* and *Zerumbet*, but in such terms that one is at a loss to see any real distinction between them. (De Simpl. 172, 271.) He calls Zeduary an odoriferous tree for which cinnamon is often substituted. He refers to Galen and Paulus, but what passages in their works he alludes to it is not easy to discover. He describes it as being a great tree which grows on Mount Lebanon, and produces no fruit, but has the odour of citron, and is hot and dry in its nature, and is astringent so as both to open and astricture the bowels. Mesarugie, one of his authorities, compares its virtues to those of nutmeg; praises it as being sternutatory, and also stomachic and hepatic. This, without doubt, is the Zeduary, and the *Zarnabum* of Avicenna, who describes it separately from the Zerumbet, but mentions that the latter is much the same as the Zeduary. (ii, 2, 736, 738.) Rhases, in like manner, compares the Zerumbet to the Zeduary as being possessed of similar powers. He treats most fully of the former, recommending it as being alexipharmic, a good application to apostemes, &c. (Contin. l. ult. ii, 765.) Ebn Baithar treats fully of the Zerumbeth, which he describes minutely, and compares it to the great Cyperus. He says it is called camphor-root in the West. He calls it alexipharmical, cordial, intoxicating; an excellent medicine in inflation of the uterus, and possessed of emmenagogue and diuretic powers. He says it is good in affections of the liver and surrounding parts. It is said to determine downwards when applied to the

soles of the feet in complaints of the head, to prove useful in leprosy when rubbed into the part affected, and to remove impotence. He also treats separately, and at considerable length, of the *Zeduaria nigra*. (ii, 95.) From the above account it will be seen that these two substances were nearly allied to one another, and in fact there is no doubt that the one was often taken for the other. See further Moses Charras (Royal Pharmacop. 68); Gray (Pharmacop. 26.) The Zeduary was often used as a succedaneum for the costus (Pemberton, Dispensatory, 340) in the composition of the Mithridate, and hence these two substances have been sometimes erroneously taken for the same. See also Manardus ad Mesue (De Trochiscis, 154); and Quincy (English Dispensatory, 483.)

Amomum Grana Paradisi.

There seems to be no doubt that this is the article which Ebn Baithar means to describe (i, 272). He calls it a spicy plant which comes out of Yemen and India. He describes two kinds, and says of them that they are hot, fragrant, and astringent, and hence prove stomachic and promote digestion. He says they are useful in epilepsy and faintings, and cure headaches in a sternutatory. He describes the smaller kind as being weaker but more attcnuant than the larger. We are not aware of the grains of paradise, or Guinea grains, as they are sometimes called, being described by any other of the ancient authorities. We need scarcely remark that they are now well known, and occasionally used in the practice of medicine. See Gray (Suppl. to Pharm. 27); Pereira (Mat. Med. 697); Lindley (Veg. Kingd. 167.)

Macis and Nux moschata.

We have shown in the proper place that the *Macer* of the Greeks and Romans was not mace. The Arabian authorities, it is true, in describing *Mace* quote what the Greeks had written on *Macer*, but this does not prove their identity, for many such instances of confused reference occur in their works. Avicenna says, upon the authority of Mesue, that mace is the cortex (meaning, of course, the involucre) of *nux moschata*. He recommends it as a good stomachic, hepatic, and uterine medicine, and says it proves an astringent in fluxes of the

bowels and in dysentery (ii, 2, 448.) The nutmeg, or nucleus of the *myristica officinalis*, he says, is of the size of a gall, brittle, having a fine rind (involucre), and a sharp smell. He recommends it as a styptic in complaints of the liver, spleen, and stomach, and in difficulty of urine. In oils he says it is a sedative of pain, and also in pessaries, and it stops vomiting. (ii, 2, 495.) He quotes no Greek authorities under this head. Rhases, in his 'Continens,' says briefly of the *nux moschata*, that it resembles cloves, and is good for the stomach and liver. (l. ult. 507.) In his other work (Ad Mansor. iii, 30,) he calls it hot and dry, and recommends it as an astringent in coldness of the stomach and liver. Mesue, in his electuary of lignum aloes, which he recommends for affections of the heart, stomach, and coldness of the liver, mentions nutmeg and mace as two of its ingredients. (De Electariis, i.) The ancient writer, however, who gives the fullest account of these articles is Serapion, who under this head quotes only from Arabian authorities, namely, Aaron, Isaac ebn Amram, Aben Mesuai, Miseaben, Albasari, and Rhases. They all agree in representing them to be aromatic and astringent, useful in flatulence and other complaints of the stomach, in fetid breath, indigestion, and enlargements of the spleen and liver. (De Simpl. 161.) Ebn Baithar's extracts under this head are principally from Rhases and Avicenna. He evidently disapproves of the opinion of those that held *Macer* and *Mace* to be identical. On the nutmeg and mace we would beg to refer to Ainslie (Mat. Ind. 202, 249.) It will be there seen that the Hindoos still use these articles as cardiac, hepatic, and stomachic medicines. It appears doubtful to us whether the Greeks and Romans were at all acquainted with the nutmeg. For we have always suspected the genuineness of the last chapter but one of Aëtius, which contains a number of Indian aromatics not to be found elsewhere in the works of the Greek authorities. Our suspicions, which are of old date, have been much strengthened by the discovery that many of the formulæ contained in that chapter as given in the Latin translation are wanting in the two MSS. of Aëtius in the Bodleian Library at Oxford. This we have positively ascertained through the kindness of Dr. Greenhill, who examined this part of these MSS. at our request to ascertain the fact. It may be well to take this opportunity of

stating that with the original of the last eight books of Aëtius we have no personal acquaintance further than from a cursory examination of these MSS. during a very brief visit to Oxford in 1845. In the MS. named 'Canon. Gr.' (109), the nuces Indicæ are called *κάρυα Ινδικά*. From what we have stated above, it must now be obvious that we have arrived at the positive conclusion that the *νάσκαφθον* of the Greek Mat. Med. was not mace. (See the Commentary on this article.)

Nux Indica.

According to Sprengel (R. H. H. i, 268) the first mention of the *Cocos nucifera*, or cocoa-nut, occurs in the Itinerary of Abuzeid and Wahab. No mention of it is made in the works of the Greek writers on medicine. The Arabians describe it minutely as an article of food, so that it ought to have been noticed by us in our Commentary on the 81st sect. of Book I. Rhases treats of it very fully as a dietetical article, and also as a medicine, saying of it that it purges away the tapeworm, that the oil of it is useful both internally and externally in pains and flatulence of the back, loins, knees, and in hemorrhoids; and he further quotes Bemasuy in confirmation of this character of it. All his authorities held it to be a hot and dry medicine. (Cont. l. ult. i, 506.) Avicenna gives, almost word for word, the same account of it. The flesh of the cocoa-nut, he says, is intensely white, and its juice sweet; and when there is not much juice in it, we are to understand that it is old. The inner bark, he says, is to be taken off, as being wholly indigestible. He recommends it in exactly the same complaints as Rhases does, only as a vermifuge he does not say that its oil brings away the tapeworm, but ascarides and lumbrici. (ii, 2, 498.) Serapion gives a somewhat fuller description of the cocoa-nut, which he knew to be the fruit of a palm-tree, but otherwise his account of it is the same as that of the two authorities already quoted. Of his Arabian authorities, one says that it is laxative, and another that it is astringent. (De Simpl. 228.) Haly Abbas recommends the *Nux Indica* as a comforter of the nerves in hemicrania, paralysis, and epilepsy. (Pract. ii, 38, 248.) Mesue notices the "*oleum ex nuce Indica*," which, he says, is useful in nervous pains, purges the lungs and chest, clears the voice, fattens, and engenders semen. (De Oleis, i.) Ebn Baithar

gives an interesting account of the cocoa-palm both as a medicine and an article of food. He says its milk is at times intoxicating and aphrodisiac, and that it is useful in certain complaints of the urine, in tænia and other intestinal worms. The reader will find it interesting to compare the above account of the cocoa from the ancient authorities with what Ainslie says of it in his work, 'Materia Indica,' i, 451; and Dr. Lindley in his late admirable publication on the 'Vegetable Kingdom,' (136.)

Bdellium.

It has been supposed that under this head Avicenna (ii, 2, 112), and other oriental writers, have included either that species of Palm called *Borassus flabelliformis*; or another congener, *Hyphæne Thebaica*. See Sprengel (R. H. H. i, 272); Ainslie (Mat. Ind. i, 452); Royle (Antiq. of Hindoo Med. 90); Lindley (Veg. Kingd. 136.) The term, however, was applied to other substances, as we have stated under the proper head.

Tamarindi.

There is no doubt that we are indebted to the Arabians for our first knowledge of this important medicine. Serapion, in describing this article, quotes only from Arabian authorities, which implies that he held the Greeks to have been unacquainted with it. Its leaves are said to resemble those of the willow. His first authority, Abohanifa, says it grows in Cæsaria; and his next, Aben Mesuai, says its fruit, which is of a ruddy colour, and has much pulp, is brought from India. In temperament it is said to be cold in the third degree, and has the power of purging yellow bile gently, and of repressing its pungency; of stopping vomiting, and removing pruritus. His other authorities, Abugerig, Mesebab, and Mesarugie, give a similar account of it. (De Simpl. 348.) Rhases writes of it in nearly the same terms: thus, he says, it extinguishes yellow bile, opens the bowels, removes thirst and vomiting, and strengthens the stomach. Its action is said to be similar to that of prunes. (Contin. l. ult. i, 699.) On his own authority Rhases says of Tamarinds in another place, that they are of a cold nature, loosen the bowels, repress intense bile and blood. (Ad Mansor. iii, 49.) Avicenna calls Tamarinds cold and dry in the second degree, says they are laxative, and more attenuant

than prunes, and contain less juice: that they stop excessive vomiting, and thirst in fevers, and brace the stomach when it is relaxed. They are beneficial, he adds, in syncoptic fevers, and other disorders in which it is necessary to open the bowels gently. (ii, 2, 691.) Mesue describes Tamarinds as being acidulous dates, or the fruit of wild palms growing in India. He gives a very minute description of them, which we need not copy. As to temperament he says, they are cold and dry in the second degree; and in order to correct their bad effects in cold affections of the stomach, he directs them to be mixed with mace, spikenard, mastich, fennel, parsley, endive, &c. He further directs their action to be increased by giving them in the whey of goats, the infusion of fumitory or of hops. He gives very minute directions for preparing Tamarind whey, both simple and compound. As to its virtues, he says, it brings away bile, represses the ebullition of it, and the heat of the blood, is beneficial in inflammation of the liver and stomach, quenches thirst, removes all heat connected with it, is useful in jaundice, stops vomiting, and is a good medicine in acute fevers which require to be repressed. Being of a weak nature, Tamarinds, he says, require to be given to the amount of from two to five ounces. (De Simpl.) Ebn Baithar's description of Tamarinds is full and accurate, but does not contain anything of importance in addition to the information which we have extracted from the other authorities who preceded him. (See Vol. I, 212.)

Myrobalani.

We have stated under the head of *Balanus*, that the Greek authorities before the Arabian period were entirely unacquainted with the stone fruits which now bear the name of *Myrobalans*. As these substances are now scarcely known in this country, we shall find it convenient again, in the present instance, to give, in the first place, a brief account of them from modern authorities. They are well described by Geoffroy, Alston, the Commentators on Mesue, and many other writers on the Mat. Med. They held a place in the British Dispensatory as late as the time of Quincy, and are described by Boerhaave in his Mat. Med. They have not lately been used in the practice of medicine either in Europe, or by our English physicians in the East Indies, as far as we have been able to learn. Five species are

described by all writers on them, both ancient and modern, namely, the Citrine, Belleric, Chebulic, Emblic, and Indian. For a particular description of them see Sprengel (R. H. H. i, 262); Ainslie (Mat. Ind. i, 236), and Royle Antiq. of Hindoo Med.) According to the last of these authors, the Black or Indian, the Yellow or Citrine, and the Chebulic, are the product of the *Terminalia Chebula*; the fourth or Beleric, of the T. Belerica, all belonging to the natural tribe of medicines now called Combretaceæ; while the fifth or Emblic is the fruit of the *Phyllanthus Emblica*, now called *Emblica officinalis*. See Lindley (Veg. Kingd. 280.) We shall now be able to apprehend the descriptions of the ancient authors.

Rhases quotes several Arabian and Indian authorities on Myrobalans. The Citrine or Yellow, according to Badigorias (Pythagoras?), is cholagogue, and the Black stomachic. The other authorities quoted by him agree in generally holding that myrobalans are cholagogue and stomachic, and that they are useful in hemorrhoids and palpitation of the heart. Sarac, the Indian, recommends them as purgative and stomachic medicines in mental diseases, hemorrhoids, headache, dropsy, and diseases of the spleen. They all seem to be agreed in holding that myrobalans are possessed of a purgative power compounded with astringency. (Contin. l. ult. i, 473.) In his other works he recommends myrobalans for purging yellow bile, and melancholy or black bile, and also as astringents. (Divis. i, 144, and Ad Mansor. viii, 54.) In the latter work he says, that in order to purge, the proper dose of citrine myrobalans is from ten to twenty drachms. Avicenna describes four species of myrobalans, namely, the Citrine, unripe, the black Indian, the Kebulic, and the Chinese, meaning by the last, we suppose, the Emblic, or fruit of the *Emblica officinalis*. He describes minutely their specific differences, and states of their general virtues as medicines, that they are cold in the first degree and dry in the second; that they all extinguish yellow bile, and are useful in bilious complaints; that the black brightens the colour, and all kinds are useful in leprosy. He recommends them in diseases of the eyes, and in those of the chest accompanied with palpitation and sorrow. He also states several minute distinctions among them as to medicinal powers, which we do not think it necessary to enter upon. (ii, 2, 449.)

Serapion writes very elaborately on myrobalans, of which he describes four species, the Citrine, the Black or Indian, the Kebulic, and the Chinese citrine (Emblie?). The authorities quoted by him are generally agreed, that myrobalans possess astringency with bitterness, purge bile and whet the stomach; are cordial, and prove useful in melancholy, &c. Sarac, the Indian, as quoted by him, maintains of myrobalans, that they are hot and astringent, and at the same time eccoprotic, that they strengthen the senses and the nerves, are useful in leprosy, colic, old hemorrhoids, vertigo, and dropsy, and that they induce nausea and vomiting. Honain gives minute directions for the preparation of them, but these we shall not enter upon. Some apothecaries, he says, fall into the mistake of selling Kebulic myrobalans of a black colour for the true black kind. For the true black myrobalans, he says, are brought from India, whereas of the Kebulic, some are yellow and others black according to the time of their growth at which they are gathered from the trees. He gives very minute directions for administering them with other substances, such as prunes, Sebesten plums, jujubes, and the like; but as most of these substances are not now much known, it would not be interesting to most readers to learn his remarks on this subject. (De Simpl. 107.) Mesue also gives a very elaborate and circumstantial account of myrobalans, which our necessary limits prevent us from giving at full length. He ranks them with the Blessed Medicines (*medicinis benedictis*); for, he adds, in loosening the bowels, they do not weaken but strengthen the stomach, heart, liver, and the whole body. The only bad effect, he says, which they ever produce, is obstruction. Their operation, he adds, is wonderfully increased by combining them with scammony. He says, of all the kinds, that they are cold in the first degree and dry in the second. His directions for correcting any bad effects from the use of them, and for increasing their operation, are most circumstantial, and bespeak an intimate acquaintance with the subject. He eulogises them in the strongest terms, declaring that they restore youth, improve the complexion, the breath, and the perspiration, impart joy and hilarity, strengthen the stomach, heart, and liver, are useful in palpitations, cleanse the stomach, are useful in hemorrhoids, extinguish heat in cholera, and this more especially the citrine. He also speaks favorably of them in a

prescribed preparation for complaints of the eyes, and for tertian and bilious fevers. The Kebulic, he says, are phlegmagogue, and especially the prepared kinds; they improve the sight, cleanse and comfort the stomach, and are useful in dropsy and chronic fevers. The Black bring away black and adust bile, are useful in melancholy and palpitations, clear the colour, cure leprosy, remove sadness, and are beneficial in quartans. The dose from two to five drachms. (De Simpl. ii.) He treats separately of the Emblic and Belleric, but we need not enter upon his account of them. And here we would refer our readers to Costa's commentary on this part of Mesue, as containing all the interesting information which can be gleaned from ancient authors on the subject of myrobalans. For the other Arabians, see Haly Abbas (Pract. ii, 54); Averrhoes (Collig. v, 42); Ebn Baithar (pluries); and Avenzoar (Antidot.) None of these supply much that is important after what we have given from the other authorities. Of the Greek writers on medicine, Actuarius is the only one that gives any distinct account of myrobalans, and he professes to derive his information from "the wise barbarian doctors," meaning the Arabians. He first describes the Citrine, the Kebulic, and the Black or Indian, and represents them as possessing purgative powers, combined with some astringency and tonicity. Besides these three kinds he mentions, as possessing purgative powers of a like nature, two medicines, which he calls *empelitez* and *empletze*, by which he no doubt meant Emblic and Belleric. (Meth. Med. v, 8.) The five kinds of myrobalans, namely, the Citrine, the Kebulic, the Indian, the Belleric, and the Emblic, occur in one of the antidotes of Nicolas Myrepsus, who recommends them in various remittent and intermittent fevers. (i, 24.) Myrobalans have always been much esteemed by the Hindoo physicians. See the Susruta, and Wise's Book on Hindoo Medicine (pluries.)

Manna.

Though the Arabians would certainly appear to have been the first to introduce the substance now used medicinally under this name, it is impossible to believe that the Greeks and Romans can have been wholly unacquainted with it. It, we need scarcely inform our professional readers, is procured principally from the *Ornus Europæa* or flowering ash, either by incision,

or the puncture of an insect. The ancients, however, applied this term to a variety of the *thus*, as we have stated in the preceding commentary on this section, and also to the *honey-dew* described in Vol. I, pp. 178, 179 of this work. We have further mentioned under the head of *Elæomeli*, that it probably was some species of manna. Altogether then the term we are now considering is often a puzzle in reading the works of the ancient authorities. See further Ainslie (*Mat. Ind.* i, 209); Sprengel (*R. H. H.*); Pereira (*M. M.* 928); Lindley (*Veg. Kingd.* 547, 617, 737, 341, 342.) Even the Arabians, who appear to have been perfectly well acquainted with its medicinal properties, confound it with the honey-dew, and seem to say that it falls from heaven upon the trees. Serapion describes it by the name of *Tereniaben* or *mel roris*, and says it falls from above upon certain trees, and resembles granulated honey. Its virtues he states, upon the authority of Isaac ebn Amram, to consist in opening the bowels, and moistening the chest, and he adds that it suits with persons of a hot temperament, especially when dissolved in water of jujubes, or of prunes. His other authorities recommend it in the same complaints, and also in the inflammation of ardent fevers and for quenching thirst. The dose is said to be from ten to twenty drachms. (*De Simpl.* 10.) We may mention that Serapion and all the other authorities mention that manna is found most abundantly on thorns. Avicenna's account of this subject is so like to that of Serapion that it would be superfluous to give any abstract of it. (ii, 2, 694.) Rhases also gives nearly the same description of manna upon the authority of Abinerog, Mesaurice, Mesue, and Chuz. (*Contin. l. ult.* i, 711.) All these authorities represent it as being a gentle purgative and expectorant, and as being useful in acute and intermittent fevers. In another of his works (*Ad Mansor.* ix, 14), treating of hoarseness and coryza, he prescribes an expectorant decoction, one of the ingredients of which is "*manna, quam aërium appellant.*" In his chapter on angina (ix, 51) he prescribes a laxative medicine containing tamarinds, cassia fistula, and "*manna quam veteres mel aërium appellant.*" Mesue gives an elaborate account of the origin, characters, temperament, and virtues of manna, which is well worth consulting, although it contains nothing of any

great importance in addition to what is stated above on the authority of Serapion, Avicenna, and Rhases. He would appear moreover to confound the *manna thuris* with the manna of the ash. Like the other authorities, he holds manna to be a gentle cholagogue, and says it softens the throat, the chest, the bowels, and quenches thirst. The dose from six to fifteen drachms. (De Simpl. 8.) We have not found anything further of interest in the works of Averrhoes, Haly Abbas, and Ebn Baithar. The last of these says the Ros Melleus is a substance which falls upon trees in Chorasán; that it is useful in ardent fevers, moistens the chest, proves more detergent than sugar, cools thirst, improves the memory, purges yellow bile, &c. He evidently alludes to the true manna of the ash. Actuarius mentions cassia fistula and manna as two purgative medicines which may be safely given to children and pregnant women. (Meth. Med. v.)

Turpeth.

There can be no doubt that it is the *Convolvulus Turpethum*. Rhases recommends turpeth for purging crude and recrementitious humours from the knees and other joints. His two authorities, Mesue the elder, and Chuz, give it the same character. (Contin. l. ult. i, 729.) Avicenna, after describing it, represents it as being efficacious in diseases of the nerves and joints, as being phlegmagogue, and if mixed with ginger, as bringing away crude humours. (ii, 2, 701.) Serapion confounds it with the tripolium of Dioscorides and Galen, as we have stated under that head. Upon the authority of Aben Mesuai he assigns it the property of purging viscid phlegm, but says that it brings on mental depression by its horrid taste, and, therefore, it ought not to be taken alone. Other Arabian authorities, quoted by him, give it the same character. He describes the medicine very minutely, and the marks by which we may determine whether it be sound or not. The dose is from one to two drachms. (De Simpl. 337.) Haly Abbas treats of it in his chapter on purgatives, but confines himself principally to a description of the medicine itself. (Pract. ii, 2, 557.) The ancient author who has treated most fully of turpeth, is Mesue the younger in his work 'De Simpl.' (11.) He gives a circumstantial description of it, and full directions

for correcting its bad qualities by mixing it with other substances, such as scammony, dates, ginger, almonds, &c. He recommends it principally as a phlegmagogue, and an evacuant of gross humours in diseases of the joints, and as a preservative from leprosy and other diseases of the skin. It has been much disputed whether or not the turpeth of Mesue be the same as that of the other Arabians. (See his Commentators l. c.) We see little reason for questioning their identity. We have not found anything additional of much interest in the great work of Ebn Baithar under this head. The turpeth of Actuarius is the root of the pityusa, that is to say of the *Euphorbia pityusa*. (Meth. Med. v, 9.) Dr. Ainslie, treating of the *Convolvulus turpethum*, says: "Our present article had long a place in the Mat. Med., but of late years has fallen into disuse. Alston (M. M. ii, 530) speaks of turpeth as being a strong resinous cathartic, recommended in his days in gout, dropsy, and leprosy." (Mat. Ind. ii, 384.) It is still known in the shops as a rough purgative. See Gray (Suppl. to Pharm.) We are satisfied that it was not known to the Greeks before the Arabian period, that it was neither the Tripolium, as we have already stated, nor yet the Alypias, as some have supposed. It has been long used as a purgative medicine by the Hindoo physicians. See Wise (Hindoo Med. 145.)

Dende.

Serapion gives a very lengthened account of the *Dendhayse*, and describes two species of it. He speaks of part of it being poisonous, and states that it purges strongly, and induces tenesmus. A person who has taken of it is directed to vomit, to take butter and milk in drink with astringents of a demulcent nature, such as purslane, gum Arabic, &c. He mentions that it is a medicinal herb much used in India and Babylonia, along with other purgatives, but he adds that it induces great debility in that hot and dry country, whereas in Yemen, where the heat is attended with great rains, no class of medicines answer so well as that which possesses astringent and laxative powers combined, such as turpeth, myrobalans, manna, and the like. But *dend*, he says, answers only in cold countries like Seni (China?). When it brought on hypercatharsis, he says, he directed his patient to sit in a cold hip-

bath, and to get cold water dashed over his body. (De Simpl. 388.) Avicenna's description of *dende* is mostly taken from Serapion. He directs it to be administered only in a cold country, and along with substances calculated to restrain its violent operations, such as starch and saffron. He says it purges humours and phlegm from the joints. (ii, 2, 215.) We have not been able to discover any traces of it in the works of Haly Abbas, Rhases, Mesue, nor Averrhoes. Ebn Baithar, however, treats of it fully. He says, or at least his German translator makes him say, that it is the *Ricinus*, and not an *Euphorbia*, as some had supposed. He gives a minute description of three kinds—the Chinese, the Indian, and the Arboreus; and of these the first is said to be the best and strongest in its purgative operation. It is said to be hot, sharp, and oily, and to purge the body effectually, especially the humours in the joints. It is not given, he says, in hot countries, such as Irak, the sea-coast, the land of Egypt, and Yemen, because fluxes in these countries are common, and owing to the relaxation of the body, it cannot bear this violent medicine. One of his authorities, Honain, wisely remarks that in all hot countries severe medicines ought to be avoided. Minute directions are given for counteracting its deleterious effects. It is said to act as a hot drastic purgative, and to excoriate the intestines. Its bad effects are best counteracted by an emetic, butter, gum lac, and other demulcents. We used to think there could be little or no doubt but that Sprengel was right in referring it to the *strychnos colubrinus*; but of late, certain authorities, for whom we feel much respect, have held it to be the *Croton Tiglium*. See Royle (Antiq. Hind. Med. 36; Mat. Med. 552); Pereira (739); and Sontheimer apud Ebn Baithar. We still think that the *lignum colubrinum* is at least as applicable to the *dende*. It has been used medicinally in modern times. See Hill (Mat. Med. 693); Gray (Pharmacop. 58); and Pereira (922.) Pereira mentions that he had analysed it, and found that it contains nearly the same ingredients as St. Ignatius' Bean. Dr. Lindley calls the tree, which furnishes the *lignum colubrinum*, the *Strychnos ligustrina*, and mentions of it that it had been used in paralysis of the extremities, and as an anthelmintic. (Veg. Kingd. 603.) Dr. Royle mentions (M. M. l. c.) that when in India the seeds of

the croton tiglium were given him as the *dund* of the Arabians. Is it not more probable that they were merely meant as the *succedaneum* of the *dende*?

Fel.

Serapion treats of this substance under the same head with two others, *bel* and *sel*. The *bel* has never been well ascertained, but Sprengel and Ainslie are agreed that the *sel* is the *Ægle marmelos*, on which see Lindley (Veg. Kingd. 458.) And now with regard to the *Fel*, Serapion describes it as a fruit having an external covering like a filbert, containing a grain like that of the larger pine, its colour being intermediate between yellow and white, and it, he adds, is the part which is administered. He says it relieves the inflation of hemorrhoids. (c. 261.) Avicenna gives exactly the same account of *Fael*, which in the glossarium is described as being "radix seu fructus nenufaris Indi." He calls it a well-known Indian medicine, useful in relaxation of the nerves, and in inflation of hemorrhoids. He says his virtues are like those of the apples of mandragora. (ii, 2, 251.) Rhases, in like manner, says briefly of *Fel* that it is a well-known Indian medicine, having powers like those of mandragora. (Contin. l. ult. i, 298.) Dr. Ainslie writes of it thus: "The croton nuts were known to the Arabian physicians by the name of *fell* (Serapion 261), and were formerly brought to England under the name of *Molucca grains*." (Mat. Ind. 106.) Sprengel also in his R. H. H. refers the *Fel* to the *Croton Tiglium*. Dr. Hill says of the *Molucca grains*: "The grana tiglia are of the ricinus kind; they are the *nucula cathartica quarta Moluccana purgatoria*," &c. See further p. 540, and Geoffroy (iii. 5, 30.) Certainly it appears to us that the medicinal virtues of the *Fel*, as given above by Serapion, Rhases, and Avicenna, do not agree well with the known powers of the croton tiglium. We cannot, however, pretend to determine what substance the *Fel* was.

Santalum rubrum.

Avicenna describes the two kinds of sandal wood (*lignum pterocarpi santalini*) still well known in practice. He says it is a cold and dry medicine, which repels determinations to parts, and this more especially the red. The diseases he most

particularly recommends it in are, palpitation of the heart, fevers, weakness of the stomach, and this both in liniments and in draughts. The white, he says, is useful in hot fevers. (ii, 2, 649.) He quotes Galen under this head, but his translator is sensible of this being a mistake. Serapion describes the white, the yellow, and the red kinds of sandal-wood, and gives a very circumstantial account of them. He says sandal-wood is brought from Sini (China?). The various authorities quoted by him concur in giving the different kinds of sandal-wood the same characters as Avicenna, representing it as being useful in complaints of the stomach, and in cardiac disease; and mixed with camphor and rose oil as an external application in hot vertigo when rubbed into the temples. They also agree in representing it along with other cooling plants as being serviceable in gout. The sandal-woods, in short, they all hold to be cold in the third degree and dry in the second. (De Simpl. 346.) Rhases gives a brief account of the red and white sandal-woods, which his authorities recommend in weakness of the stomach, and pain of the head; and also for palpitation of the heart in fevers, when rubbed over the stomach, and for erysipelas when rubbed into the face. (Contin. l. ult. ii, 1, 609.)

Azedarach.

Avicenna describes it as being a well-known tree, having fruit like the Lotus Arbor (*Celtis Australis*?). He says it is a very large tree, and that its flower is hot in the third degree, and dry in the end of the first, and that it is possessed of deobstruent powers; and the decoction of its leaves kills lice in the hair and strengthens it. Its fruit is bad for the stomach and chest. It is anthelminthic, and useful in colics and in pituitous fevers along with fumitory and myrobalans. (ii, 2, 17.) Rhases gives the same account of the *assedarach*. (Contin. l. ult. i, 89.) It is barely mentioned by Serapion as being a large tree, but we have not been able to discover it in his Mat. Med. The Arabian authorities of Ebn Baithar give an elaborate account of it, representing it as being dangerous to persons who take it in large doses, but in smaller ones useful for various purposes, and more especially for promoting the growth of the hair. (i, 30.) There can be no question that it must have been the *Melia azedarach* or "bead tree." Dr. Ainslie says of it that "in

India the bark of the melia azedarach has been ascertained to possess powerful tonic and antifebrile virtues," and that "it is ordered for almost every purpose that the cinchona is in Europe." (Mat. Ind. i, 70, ii, 454.) See further on the tree, Miller (Dictionary); Lindley (Veg. Kingd. 464); and Crantz (Mat. Med. iii, 40.) The last of these says of it, that he had "read in the *Encyclopedia* (!!) that it kills lice, &c." The azedarach is frequently noticed in the Susruta. See also Wise's Book of Hindu Medicine. (119.)

Anacardium.

On this see Serapion (De Simpl. 356); Rhases (Cont. l. ult. i, 47); and Avicenna (ii, 2, 40.) Of these authorities Avicenna describes it most minutely. They all recommend it in mental diseases, and especially in loss of memory, and say it is useful in coldness of the nerves, in paralysis, and spasms. Avicenna recommends it as a fumigation to hemorrhoids. Without doubt it is the *Semicarpus Anacardium*, or "marking nut tree" of commerce. It has been used in modern practice, but has now fallen into disuse. See Hill (Mat. Med. 490.) Rhases quotes Galen on the *anacardium*, referring, as we suppose, to his χρυσοβάλανος. (De Comp. Med. sec. gen. viii.) That the latter was the *semicarpus anacardium* seems not unlikely. See Sprengel (R. H. H. i, 209.) It is briefly noticed also by Myrepsus and Actuarius under the name of ξανθοβάλανος. And further, it is deserving of remark that *anacardia* occurs as an ingredient in one of our author's antidotes (c. 170, Ed. Basil.) To say the least then, it appears doubtful whether the Greeks were wholly ignorant of these substances as stated by Matthioli. (Comment. in Dioscor. 189.)

Diudar.

Avicenna says of it that it belongs to the genus *abhel* (sabina?) and is called the Indian pine; that it is pungent, and contains a milk which is hot and occasions thirst. He adds that it is good for relaxation of the nerves, paralysis, &c., also for cold apostemes (chronic inflammations?) of the brain, apoplexy, and catalepsy. He concludes by stating of it that it is lithontriptic, binds the bowels, and that its decoction removes relaxation of the anus. (ii, 2, 213.) In the Glossarium of Avicenna (l. c.)

reference is here made to Rhases (Cont. l. ult. iii, 31), but we can find no notice of the Diudar there, nor in any part of the works of Rhases. Ebn Baithar's account of this article is taken literally from Avicenna. Dr. Royle has ingeniously pointed out the correspondence both of name and characters between the *Diudar* of the Arabians and the *Pinus Deodara*. (Antiquity of Hindoo Med. 36.) See also Lindley (Veget. Kingd. 228.)

Sandaracha, or Gum vernix.

It is to be remarked, on the outset, that Serapion and Avicenna in treating of the vernix do not make any reference to Dioscorides and Galen, as is their wont, from which it may be inferred that they did not recognise it as one of the articles which had been described by their Grecian masters. Serapion's Arabian authorities on this head are, Albugerig, Aben Mesuai, Badegoras, Mesarugie, Abrix, Alabari, Rhases, and Isaac Eben. They agree in recommending it in fumigations for catarrhs, for stopping immoderate menstruation, drying fistulæ; as an anthelmintic, and remedy for hemoptysis and hemorrhoids. One of his authorities (Isaac Eben) describes it as being a gum of a yellow colour, like the *karabe*, and says it is brought from the land of the Christians. He adds, respecting the *karabe*, that Galen says it is the gum *haur romane* (populi Romanæ [?]). Whether by this he meant amber, we shall inquire presently. Avicenna says of the *sandaracha* or *vernix*, that it is hot and dry in the second degree, and that it has some astringency, and the power of stopping hemorrhages. He says it is used for removing obesity, for drying fistulæ, that the smoke of it cures catarrhs, and is the best of all remedies for toothache; that it cures palpitation as well as the *karabe*, stops fluxes of blood, cures humid asthma, and is used by wrestlers to strengthen the breath. It is good, he concludes by saying of it, in diseases of the spleen, and its fumes cure old sores and hemorrhoids. (ii, 2, 619.) It may be proper to remark here, that although Avicenna applies the term *sandarach* both to *realgar* and *gum vernix* he does not fall into the mistake of confounding these substances with one another. This will be clearly seen by comparing ii, 2, 48, with l. c. The Latin translation of the chapter in Rhases's

'Continens,' on Sandarach, is so particularly barbarous, that some passages of it are scarcely intelligible to *us*, albeit we have spent more time than most people in poring over these most *unclassical* productions. It is clear, however, that his Arabian authorities recommend vernix in exactly the same cases as Serapion and Avicenna do, namely, in fumigations for asthma and coryza, as a drying application to fistulæ and hemorrhoids, as a stimulant in diseases of the eyes, and as a remedy for defluxion and fluxes of blood from the womb. (Contin. l. ult. i, 610.)

Dr. Lewis, treating of the Juniperus, says, "In the warmer climates, particularly on the coasts of Africa, there exudes from a larger species of juniper a resinous juice which concretes into semi-pellucid, pale, yellowish tears, resembling mastich, but larger; the *sandaracha* and *gummi juniperi* of the shops, called by some, from the use to which it is principally applied, *vernix*. It has been given internally against hemorrhages, old fluxes, and ulcerations; but is principally employed externally in corroborant, nervine, and traumatic applications." (Mat. Med. ii, 24.) Recent authorities have decided that the gum sandarach is not the product of the juniperus communis, as usually supposed, but of the *Callitris quadrivalvis*. See Pereira (Mat. Med. 727); and Lindley (Veg. Kingd. 229.) On the vernix see further Gray (Suppl. to Pharmacop. 201.)

Is this the same as the *Cedria* of the Greeks and Romans? See Dioscorides (i, 105); Galen (De Simpl. vi.) We are inclined to think that it either was the same, or, at all events, that both were procured from trees of the same genus. See the description of the *Cedria* given by Pliny (H. N. xxiv, 11) with the notes of Harduin. We have stated under *Cedrus* that it generally signifies a large species of juniper. And further, upon comparing the medicinal uses of the *cedria* as given by Pliny (who follows Dioscorides closely) with those of the Sandarach as given above from the Arabians, no one can doubt that they must apply to the same thing, or at least to substances of a like kind. The *cedria* must not be confounded with *cedrium* described by Pliny. (H. N. xvi, 21.) The latter would appear to have been a liquid procured from the wood by distillation or boiling. There appears much probability in the conjecture of Berzelius that the *cedrium* was a sort of pyrolig-

neous acid. Pliny says it was used for embalming dead bodies. (l. c.)

Karabe, or Populus.

Avicenna describes it as being the gum of a tree called *haur romana* (populus Romana?), resembling vernix, of different colours, and when of a ruddy colour attracting chaff and other small objects. He says the gum is like the flower of the tree in virtues but colder, being astringent in the case of all fluxes, especially bleeding from the nose, and hemoptysis. He agrees with Rhases and Serapion that it is a good periaipt in cases of hot apostemes. He recommends it as a good cordial medicine, and one which is useful in affections of the stomach and bowels. (ii, 2, 364.) He treats of the other parts of the poplar separately, and also gives a distinct chapter on *Ambra*, and in his work 'De Med. Cord.' he treats separately of *Ambra* and *Karabe*. Serapion under the head of *haur romi* first gives abbreviated translations of Dioscorides's and Galen's descriptions of the black poplar (*ἀιγείρος*), and then a translation of an extract said to be from Paulus, but which we cannot trace in the works of our author. In that extract *Karabe* is called the gum of the *haur romi*; it is said to be astringent, and to be confounded by some with the sandarach, and that it was called the funeral gum because the Latins used it in burials. He concludes by giving extracts from several Arabian authorities regarding its medicinal characters, which agree in the main with those given above from Avicenna. (De Simpl. 276.) He gives a perfectly distinct chapter on *Ambra* (c. 196.) Rhases has a chapter on the "*haur seu fagus*," which, except that it does not contain the pretended extract from Paulus, is made up from almost the same authorities as the one of Serapion which we have just discussed. *Karabe*, it is said, is the gum of the tree. (Contin. l. ult. i, 256.) Although there is a good deal of confusion in the accounts of *Karabe* contained in these extracts, we think it impossible to avoid drawing the conclusion that the authorities meant to apply it to the resin of some *balsam poplar*, probably some variety of the *Populus nigra*, or *dilatata*. It would be a great mistake then to identify the *Karabe* with amber. Indeed, Ebn Baithar distinctly says that amber is *not* the gum of the black poplar as had been supposed, which he clearly establishes by showing that the

characters of the gum poplar, as given by Dioscorides and Galen, by no means accord with those of amber (*succinum*.) See further under *Electrum*, *Sandarach*, and *Ambra grisea*. It is proper to mention that although our opinion with regard to the *Karabe* be as we have stated, most of our modern authorities have set it down as being indetical with the *succinum*. See Gray (Suppl. to Pharmacop. 215); Royle (Mat. Med. 648); Pemberton (Dispensatory, 102.) We are persuaded, however, that whoever will carefully read the ninth chapter of the first part of Avicenna's work "on Cordial Medicines," must agree with us that he held the *Karabe* and *Ambra* to be totally different substances, and a careful study of Mesue (De Electariis) will confirm this conclusion. The gum or resin of the black poplar is mentioned by Schroeder. (Chemical Dispensat. 442.)

Tembul and *Faufel*.

We treat of these substances under one head for a reason which will become apparent before the conclusion of our article upon them. *Tembul*, according to Avicenna, is cold in the first degree and dry in the second; it is astringent and desiccant; it strengthens the gums, and for this purpose is constantly chewed by the Indians; it also strengthens the stomach, and for this purpose also is frequently chewed by the same people. (ii, 2, 699.) Haly Abbas gives a very similar account of it; he says it is brought from India, and that seafaring men made much use of it, because they lived much upon fish. (Pract. ii, 36, 207.) Ebn Baithar treats of it at great length. One of his authorities, Abuthanifa, says it improves the state of the mouth. Elmasudi gives an interesting description of it; he says it renders the breath fragrant, improves the mouth, and even the mind, and he says further of it that it reddens the teeth. Elgafaki says it cures bleeding and swelling of the tonsils, being of an astringent and desiccant nature. Elscherif calls it hot in the first, and dry in the second degree, and says it produces exhilaration of spirits, and cures flatulence. He describes minutely the Indian mode of using it. The author himself under this head warns his readers not to confound the plant used in his time for the *tembul*, with the true *tembul*, which he says was seldom brought from India in his days because it lost its virtues by being carried to a distance. (ii, 200.)

Faufel, or *Avellana Indica*, is described by Serapion's authorities as being like the nutmeg, and as having a slight degree of heat with some bitterness. Its virtues are said to be like those of the sandal tree. It is recommended as an application to hot apostemes. Some of his authorities call it hot and dry, and all seem to agree in holding it to be astringent. One of them, Mesarugie, says that it suits with toothache and scabies of the eyebrow. Mesue says it strengthens the teeth, represses the gums when swelled, and is useful in swelling of the eye. (De Simpl. 345.) Avicenna describes it as being cold with some astringency, and as being useful in hot apostemes of a gross nature, and inflation of the eye. (i, 2, 256.) Ebn Baithar calls it a palm, and says of it that it is a gentle purgative, makes the breath fragrant, is a cordial, and strengthens the gums and teeth. (i, 267.)

Now there can be no doubt that the former of these is the *piper betel*, and the latter the *areca catechu*. The nuts of the latter, which modern authorities describe as resembling the nutmeg, are cut into slices, and along with the leaves of the betel constitute the famous masticatory of the East called *betel*. For an account of these two substances, consult in particular Ainslie (Mat. Ind. i, 268, 465); Royle (Antiq. of Hindoo Med. 85); Pereira (M. M. 616); Lindley (Veg. Kingd. 137); Meyen (Geograph. of Botany, as edited by the Ray Society.)

Chubabe, or Cubebæ.

Avicenna under this head refers to the *carpesium* of Galen, but it evidently was a different substance. Some, he says, had called it refrigerant with some heat, but he holds it to be truly hot and dry in the second degree. He calls it aperient and attenuant, and recommends it in putrid ulcers of the members and gums, as a medicine which clears the voice when held in the mouth, and as a deobstruent of the liver in *engorgement* thereof; as a cleanser of the urinary passages, as a diuretic medicine which promotes the discharge of gravel and stones of the kidneys, and of the bladder, and he adds, "Sputum masticantis eam delectat eam cum qua habetur coitus." (ii, 2, 134.) Rhases also, through some mistake, quotes Galen under this head, and gives exactly the same account of its

medicinal powers as Avicenna. (Contin. l. ult. i, 242.) Serapion under this head gives Dioscorides's description of the wild myrtle with further references to Galen and Paulus, but concludes by saying that he was sensible Dioscorides had not treated of cubebs. (De Simpl. 288.) Ebn Baithar mentions that certain of the authorities had taken it for the *carpesium*. He says it renders the breath fragrant and cures affections of the bladder. He further quotes Ebn Sina (Avicenna?) as stating that it enhances the delight of coitus. (i, 344.) By the way, Dr. Pereira mentions that the Indians still take them to excite the sexual feelings. We would beg to refer for further information on this subject to his excellent account of the *Piper Cubeba*. (754.) See also Lindley (Veg. Kingd. 204), and Royle (M. M. 562.)

Usnen.

See Avicenna (ii, 2, 713); Serapion (De Simpl. 257); Rhases (Contin. l. ult. i, 753.) This term is used rather vaguely by the Arabian authors, but there can be no doubt that it comprehended the *salsola fruticosa*. They call it abstergent, cleansing, and aperient, and recommend it as an emmenagogue, and in difficulty of urine and dropsy. Rhases says it is of a hot and dry nature, and is purgative, deobstruent, and corrosive. (Ad Mansor. iii, 22.) The *confectio de usnen* of Serapion containing fourteen other ingredients mostly of an aromatic nature, is recommended by him for debility of the stomach. (De Antidot. 71.)

Fagara, or Fagre.

See Serapion (De Simpl. c. c.); Avicenna (ii, 2, 260); Rhases (Cont. l. ult. i, 312.) Serapion's authorities compare it to the vetch, and say of it that it is hot and dry in the second degree, and is stomachic. Isaac ebn Amran describes it as having a small, black, round grain within, and a red one without, as forming a good gargle in fætor of the mouth, and entering as an ingredient into powders and ointments. Avicenna's description of it is to the same effect; he says, however, that it is hot and dry in the third degree. He recommends it as an astringent, stomachic, and hepatic medicine. Rhases's account

of it is very short, but not far different from the others. Dr. Lindley describing the *Xanthoxylon hostile*, says of it, "that its capsules and seeds are employed in Northern India for intoxicating fish; they are also given as the faghuret of Avicenna. The *X. piperitum* and Avicennæ are used in China and Japan as antidotes against all poisons; they would undoubtedly in many cases be of considerable use as a stimulant remedy." (Veg. Kingd. 473.) See further Sprengel (R. H. H. i, 270), and Royle (M. M. 326.)

Artamita.

Avicenna gives such a description of it as fully justifies Sprengel in deciding it to be the *Cyclamen Persicum*. He recommends it in diseases of the joints, as a sternutatory, and for the cure of hiccup, and says of it that it is alexipharmic and produces abortion. (ii, 2, 61.) It is in use with the Hindoo physicians. See Wise (System of Hindoo Med.)

Vertz.

From Serapion's account of it there seems no doubt that it is the *Memecylon tinctorium*. He gives a very minute description of three species which grow in Arabia and India, and mentions that some held the root of one of the species to be the curcuma. They are all remarkable for containing colouring matter. He recommends them for the cure of leprosy, pruritus, and pustula. (De Simpl. 170.) Rhases briefly describes it by the name of *vars*. He says two kinds, the yellow and the red, are brought from Yemen, and that they are collected upon trees like pounded saffron. (Contin. l. ult. iii, 110.) Avicenna describes it by the name of *gures*. (ii, 2, 291.) His description is very similar to that given by Rhases, and he recommends it in the very same cases as Serapion. Ebn Baithar gives a very full and interesting description of it both as a dye and as a medicine, but we need not enter into an exposition of his views, since they scarcely differ at all from the account of it given above from Serapion. We may just mention that he says clothes dyed with it are aphrodisiac. See Vol. I, 585. The memecyls constitute a genus of plants still well known in India as dyes and articles of food and medicine. See the works of Royle and Lindley.

Mahaleb.

See Serapion (De Simpl. 44); Rhases (Contin. l. ult. i, 442); Avicenna (ii, 2, 471.) It appears to be undoubtedly the *Prunus Mahaleb*, that is to say, the *Cerasus Mahaleb* of Miller, Angl., "rock," or "perfumed" cherry. Serapion applies to it what Dioscorides and Galen had written on the *phillyrea*; after which he gives the opinions of several Arabian authorities who recommend it as a medicine to expel the superfluities of the system and intestinal worms, and as being useful in gout, and as a lithontriptic. One of them, Isaac ebn Amram, describes the varieties of it very circumstantially. Avicenna and Rhases give a similar account of it.

Jesemin and Zambach.

See Serapion (De Simpl. 176); Rhases (Contin. xxii, 838; l. ult. i, 369); Avicenna (ii, 2, 611); and Ebn Baithar (591.)

Serapion describes them under the same head, the one as having a white flower, and the other a yellow, of which the latter is the weaker in its powers. It is got, he says, from Babylonia, where there is another species which has a sky-blue colour. His authorities recommend it principally in phlegmatic complaints, and more particularly in those of old persons, and as an application in impetigo and other cutaneous diseases of a like nature. He says it induces headache when administered to persons of a hot temperament. Avicenna gives a very similar account of these two plants, and neither Rhases nor Ebn Baithar supplies any additional information regarding them; the latter, however, gives a very interesting account of them. He says of the yellow species that it was used for dyeing the hair. Like the others, he speaks favorably of it, and especially of its oil in complaints of a cold nature. The latter species, in all probability, was the *jasminum sambac*, still well known in the East as a perfume. See Lindley (Veg. Kingd. 651); Gray (Suppl. to Pharmacop. 59); and Sprengel (R. H. H. i, 242.) Whether the other be the *humile* or *officinale*, we are unable to determine.

Secacul.

See Serapion (De Simpl. 89) and Avicenna (ii, 2, 663.) From the description which they give of it, there can be no

doubt, we think, that it is the *pastinaca secacul*, Russel; that is to say, the *Tordilium orientale*, *secacul dictum* of Miller. (Gard. Dictionary.) They agree in saying that it is decidedly aphrodisiac, more especially when preserved with honey. Avicenna concludes his notice of it with stating that *buzeiden* is used instead of it. In another part of his work he gives very sensible directions for preparing *secacul conditum*, that is to say, "preserved secacul." (v, 1, 8.) Although, as we have stated above, we think there is little or no doubt that the secacul was a species of tordylium, it is proper to acknowledge that the learned commentators on Mesue are much divided in opinion respecting it. (De Electariis, i, 95.)

Buzeiden.

See Serapion (De Simpl. 260); Avicenna (ii, 2, 95); and Ebn Baithar (ii, 183.) Avicenna describes it as being an Indian medicine possessing virtues resembling those of beer. He says it is hot in the second degree, and dry in the first; is attenuant, proves serviceable in pains of the joints and in gout; is aphrodisiacal and alexipharmic. (ii, 295.) Serapion calls it a species of satyrion (orchis?). He calls it an Indian medicine, little used in his country. He says it resembles hermodactyls in the cure of arthritic diseases or of gout, and that it engenders semen, but hurts the testicles. Its bad effects are best corrected by mustard; its dose two drachms. Ebn Baithar, in this instance, supplies no additional information. After what we have stated of it, we need have no hesitation in agreeing with Sprengel that it is the *orchis morio*, or at all events some species of that genus. As Serapion does not quote any Greek authorities under this head, it may be inferred that he held it to be distinct from the *orchis* of Dioscorides and his followers. Several species of this genus are still used in India as medicines. The famous *salep* is procured principally from the *O. mascula*. See Royle, Lindley, and Pereira.

Mial, or Storax humida.

The liquid Storax is described distinctly by Avicenna, who states that one species of it exudes from the tree and the other is got by boiling; that the former is of a lighter colour and is highly valuable, whereas the other is darker and is less

esteemed. Some, he says, held it to be beneficial in cerebral diseases, but this opinion he rejects, as it induces vertigo. See under *Storax*. He quotes only from Arabian authorities. (ii, 2, 423, 615.) Both kinds of storax are treated of largely by Serapion. (De Simpl. 46), and are noticed by Rhases. (Contin. l. ult. i, 687.)

It is still disputed what tree it is which produces the Liquid Storax. According to Sprengel and most modern authorities, until of late, it was held to be the *Altingia excelsa*. Dr. Pereira, however, shows that this is a doubtful point, and mentions that Dr. Lindley holds that the liquid storax of the shops is produced by the *liquid ambar orientale*. But in his recent publication on the 'Vegetable Kingdom,' Dr. Lindley says, "Liquid storax is thought to be yielded by the Dammar pine." (p. 229.) Landerer has recently shown that it is obtained from *Storax officinale*. (Pereira, Mat. Med. 1325, 2d ed.)

Kadi.

It is described by Serapion as being a plant which grows in Arabia, from which the aromatic oil of Kadi is formed. He gives a curious description of it, but does not mention any medicinal purposes to which it was applied. (De Simpl. 40.) It would appear that it is also described by Ebn Baithar (i, 337.) He describes it as being a species of palm, which it resembles in all respects, and says that a fragrant oil is prepared from it. Its country is Arabia. He quotes on it Rhases, in his 'Continens' and 'Treatise on Smallpox,' but we have been unable to discover the passages which he refers to. His authorities describe, in glowing colours, the virtues of this substance, and more especially of its wine, in smallpox. What species of palm it was we are unable to say decidedly.

Meizaragi.

Serapion gives a full account of it upon the authority of Abugerit and Abir, who agree in recommending it in arthritic diseases. They give minute directions for using it in electuaries, pills, and decoctions. Its dose with sugar is one drachm. They mention that, when put into rivers, it intoxicates fish. (De Simpl. 365.) Avicenna describes the *Mehezeheregi*, as being a tree like esula (*spurge* ?); and says it is hot and dry in

the third degree, and intoxicates fish when thrown into a river. He adds, that it is carminative and phlegmagogue, and is useful in gout, sciatica, and arthritis. (ii, 2, 480.)

We need have no hesitation in agreeing with the best authorities, that it is *cocculus indicus*, or the seed of *Menispermum cocculus* L., i. q., *Anamirta cocculus* of Lindley. (See Veg. Kingd. 309.) He says of it, that it contains a most venomous principle, the picrotoxine, and that in its pericarp is found the not less formidable alcaloid menispermine. See also Gray (Pharmacop. 119), and Ainslie (Mat. Ind. ii, 132.) Both these authors mention of it, that it is used to intoxicate fish. See, further, an excellent account of the *cocculus indicus* in Pereira (M. M. 1326.) It was used by the Hindoo physicians for the cure of nervous diseases. See Wise (System of Hindoo Med. 557.) Dr. Royle is somewhat doubtful whether the *cocculus* was known to the Arabian physicians, but upon the whole inclines to this opinion. (Mat. Med. 249.)

Nux Vomica.

We have briefly treated of the *Nux Vomica* as a poison in another place (Vol. II, 241.) We have now to say of it, that it was also used medicinally as an emetic. For example, Haly Abbas treats of it in his chapter on Medicines which procure Vomiting. (Pract. ii, 65; see also Pract. x, 12.) Serapion, in like manner, treats of it in his chapter on Emetic Medicines. (vii, 36.) Thus he gives the following formula for an emetic: "R. Concerned (cardamomi?), nucis vomicæ, seminis raphani, omnium ān ʒj. Terantur et dentur in potu cum aqua mellis et decoctione anethi." Serapion treats of it also in his work 'On Simples,' where he states, that "easy vomiting" may be induced by administering it agreeably to the formula which we have just quoted from his other work. He adds, that perhaps it will also loosen the bowels. Abram, another of his authorities, likewise says, that given to the amount of two drachms, with two drachms of dill or of fennel seed, and drunk with warm water, it will produce vomiting and loosen the bowels. (De. Simpl. 163.) Ebn Baithar's authorities give an interesting account of the *Nux Vomica*, from which it is clear that it was frequently used as an emetic, along with fennel, natron, mustard, &c. in hydromel.

Dr. Pereira, upon the authority of Dale (Pharmacol.), decides that the *Strychnos Ignatia* was the *nux vomica* of Serapion. But, notwithstanding our great respect for his opinions, we cannot agree with him in the present instance. For, considering how common the *nux vomica* is in Persia (Ainslie, *Mat. Ind.*), there is a strong presumption that the Arabians cannot have been unacquainted with it, and it is not pretended that the *nux vomica* is treated of by them by any other name unless it were the *methel*, which we will presently show it not to be, nor is it attempted to be shown when and how the misapplication of the term originated. See, however, in support of Dr. Pereira's views, Parkinson (*Theatre of Plants*, 1601.) It is also proper to mention, that the learned Geoffroy calls the *Faba sancti Ignatii* the *nux vomica legitima*. But as it is admitted by the best authorities on toxicology, that St. Ignatius bean is much more energetic in its action than *nux vomica* (see Christison, 644, and Orfila, ii, 276), there is still less probability of its having been used medicinally than the other. See further in support of the views we are advocating, Sprengel (*R. H. H.* i, 250.) We may mention also in conclusion, that the *nux vomica* was used as an emetic by the Hindoo physicians, more especially in the case of poisoning. See Wise (*Hindoo Med.* 402.)

Nux Methel.

We have briefly alluded to this substance (*Datura Methel*) as a poison elsewhere. (Vol. II, 241.) Serapion, quoting from Arabian authorities, compares its nut to the *nux vomica*, and its seed to that of mandragora: its bark, he adds, is rough, its taste pleasant and unctuous, and its virtues cold in the fourth degree; if given in a small dose (*kirat* or *siliqua*?) it intoxicates strongly, and if two drachms are given it proves fatal at once. Rhases, as quoted by him, says it is a narcotic, a sedative, and perhaps emetic medicine, and that it proves fatal in large doses, and in small intoxicates. He directs its pernicious effects to be counteracted by taking warm butter, and thus producing vomiting, and otherwise treating the case in the same manner as in poisoning by mandragora. (*De Simpl.* 375.) Rhases, in his work entitled '*Ad Mansor.*,' says of the nut methel, that it is a dangerous medicine, which induces stupor, nausea, vomiting,

and inebriety. (iii, 30.) His account of it in his 'Continens' is very brief. Avicenna describes it in his 'Mat. Med.' as being a nut similar to the nux vomica, and having seed like the citron (?). Like the others, he says it inebriates, induces stupor, and is inimical to the brain and heart. In the dose of a drachm he says it proves fatal. (ii, 2, 501.) Ebn Baithar's authorities give a full account of it, but differing little from the others already given. One of them says, that a drachm will kill on the spot, and in small doses it induces stupor, vomiting, and loss of sense. They direct these bad effects to be counteracted by the administration of an emetic of natron (soda), by giving wine and pepper, and keeping up the heat of the body. The Hindoo physicians held that it is alexiterial. See Susruta and Wise (Hindoo Med.)

An excellent modern authority says of the *Datura Metel*, that "its seeds are narcotic, more powerful than the *Datura Stramonium*, and produce temporary idiotcy." Gray (Suppl. to Pharm. 52.) Dr. Lindley, after describing the *Datura Stramonium* as a violent narcotic, says of the *Metel*, that it has a similar action. (Veg. Kingd. 619.) Comparing, then, the effects of the *Nux Methel*, as described by the ancient authorities with those of the *Datura Methel*, as given by those recent authorities, we cannot hesitate in recognising their identity.

Rachaba, or Nux Mechil.

One of Serapion's authorities states that an Arab had told him that it is a great tree, like the nut-tree, having leaves like a great fig, and fruit like small pomegranates, and speaks very indistinctly about its being Pharoah's nut; but it is difficult, from his language, to make out what he says on that point. He says it is sweet, has a pleasant smell, and is eaten by shepherds and others. He mentions that some had confounded it with the nux vomica; but he concludes by saying that whoever will compare the descriptions of the rachaba and nux vomica must see the difference. (De Simpl. 164.) From this description it is quite clear that this cannot be the nux vomica, but rather one of the eatable figs, probably the *ficus benjamina*.

Nux Henden, or Banden.

See Serapion (De Simpl. 79) and Avicenna (ii, 2, 496.)

According to the latter it is a grainy mass, like the vetch, white, inclining to yellow, which is brought from Barea and Chorasán, and of which a wine is made with honey. He quotes Paulus (by some mistake we suppose) as saying of it that it is refrigerant, extinguishes inflammation, and is slightly desiccant. It suppresses fluxes of blood, fattens, cures impetigo, and is aphrodisiac. Serapion's authorities give a more lengthy description of it, but do not supply many more particulars. Rhases, one of them, calls it the fat of the earth, and the rock of the earth, and another calls it pigeon's root. They all agree that it makes an excellent wine, which forms semen, fattens the body, and is aphrodisiac. They also state that it stops fluxes, and causes vomiting. Ebn Baithar's account of it is nearly the same as Serapion's. He says it is called honey earth in Andalusia. (i, 274.) Sprengel suggests—how correctly we leave it to our readers who are better acquainted with the productions of the East than we can pretend to be, to determine—that it is the *Garcinia Mangostena*, or Mangosteen, a fruit which has the reputation of being the finest in the world. The description of it, given by Serapion, as far as we can judge of it from the barbarous Latin translation, would certainly seem to agree in some striking points with that of the mangosteen. Compare it with 'Loudon, *Encycl. of Gardening*, 1531.

Meisce, or Mes.

See Serapion (De Simpl. c. 116); Avicenna (ii, 2, 481); Ebn Baithar (ii, 465.) It is described at some length, and in nearly the same terms by all these authors. They call it a small grain like a vetch, of a green colour, and say that some used it for fasils, and that it was wholesome but not very nutritious. They say of it that it is cold, and rather desiccant, useful in catarrhs and coughs, and as a plaster to bruised and torn parts. In our edition of Serapion it is marked as *mango* in a very old looking hand-writing, and it is recognised as the *Phaseolus mango* by Sprengel (R. H. H. i, 266), and by the German translator of Ebn Baithar.

Horon, or Bombax.

See Serapion (De Simpl. 66) and Ebn Baithar (i, 305.)

Abuhanifa, one of Serapion's authorities, says that some medical men had informed him that cotton grows on trees like quinces. So at least we understand the passage; but as it is very curious, and also very obscure, it may be well to give the Latin translation: "Dixerunt mihi quidam medici de kelbe quod *coton* nascitur inter eos in arboribus quæ sunt sicut arbores antipsicorum." Compare Pliny (H. N. xii, 10.) The next of Serapion's authorities, Aben Mesuai, recommends the juice of it in the diarrhœa of children. Mescha says its seed is beneficial in coughs and good for the breast. Albasari says of it that it is good for clothes, and that its juice is an excellent application in cutaneous diseases of the face. Rhases also, as quoted by him, recommends it in the same cases, and further says of it that it is aphrodisiac. Ebn Baithar's authorities also give an interesting account of it, recommending it in much the same cases as those of Serapion, namely in infantile diarrhœa, and as an application to cutaneous diseases; and he further states that it was used to burn warts, no doubt like the raw flax, often mentioned in the works of Hippocrates. The leaves are said to have been useful in uterine complaints, and in gout mixed with rose-oil. Clothes prepared from it are much praised by the author. There can be no doubt from what we have stated, that it must have been the *Gossypium arboreum* or *herbaceum*, most probably the latter. See Meyen (Geogr. Botany.) From Ainslie's Mat. Ind. it will be seen that oil prepared from the former is still used for cleaning the skin of spots, and that the leaves are given for the cure of diarrhœa. (ii, 284.)

Musa.

See Serapion (De Simpl. 84); Avicenna (ii, 2, 484); Ebn Baithar (ii, 535.) According to Serapion's first authority, Aben Mesuai, it is hot in the middle of the first degree, and moistening in the end of it, little nutritious, and has the property of being useful in heat of the breast, lungs, and bladder, and softens the bowels; if much used, it creates a load on the stomach, and obstruction in the liver, and if taken by a person of a cold temperament in great quantity, he ought to take hydromel, oxymel, or prepared ginger with it. Another of his authorities, Sindaxar, says it promotes the

growth of the foetus in utero. A third, named Alchalebemen, says it is a good medicine for the chest and the kidneys, and is diuretic. The book on ancient medicine, as quoted by him, says of it that it is aphrodisiac, and heavy on the stomach; and Avicenna's account of it is so similar that it would not be worth while to give an exposition of it. Ebn Baithar describes it minutely as being a species of Palm. Its medicinal characters, as stated by him, are nearly the same as those given above from Serapion. There can be no doubt that it is the *Musa paradisiaca*, or common plantain tree. On it the reader may find it interesting to consult Ainslie (Mat. Ind. 316), and Loudon (Encycl. of Garden. 1530.) The plantain tree is briefly noticed by Theophrastus (H. P. iv, 5), but does not occur in the works of the Greek and Latin physicians.

Granum Kelkel, or Alkelkel.

See Avicenna (ii, 2, 302); Serapion (De Simpl. 275); Rhases (Contin. l. ult. i, 378); Ebn Baithar (ii, 315.) Serapion's authorities say of it that it is hot and moistening, increases the secretion of semen, especially when taken with the oil of sesame; that when taken in too large a dose, it induces cholera, and after other food occasions vertigo. The account of it given by Rhases and Avicenna is little different. The latter says of it that it is fattening, and comforts relaxed bodies. Ebn Baithar gives a very minute description of it; he says he planted it in his own country, and that it produced fruit. He ascribes the same good and bad effects to it as Serapion. When roasted, he says, it does not engender bad chyme. Its seeds are said to be aphrodisiac. We suppose there is little or no doubt that it is the *Cassia tora*. On the modern use of it by the Hindoos, see Ainslie (Mat. Ind. ii, 405.)

Lehibach, or Lahiba.

See Avicenna (ii, 2, 425); Rhases (Contin. l. ult. i, 389.) Rhases quotes Galen as saying of it that it has powers like horehound. We are at a loss to say what substance he alludes to among the Simples of Galen. Another authority quoted by him seems to say that a portion of it flung into a lake containing fish, will make them swim on the surface, and Avicenna confirms this statement. Avicenna further says it

is emetic and hydragogue. We would refer it with Sprengel (R. H. H. i, 249) to the *Mussaenda frondosa*.

Gilbenee.

Avicenna compares its seed to turbith, and its operation to hellebore. He says when given to the amount of half a drachm it operates as an emetic, and that one drachm may prove fatal. He mentions the case of a paralytic person who took it, and having vomited was thereby cured. He adds of it that it also acts as a purgative (ii, 2, 282.) It is evidently the *gilbeuce* of Rhases, who in like manner describes it as a powerful emetic, the operation of which resembles hellebore, and is useful to paralytics. More than a drachm of it, he says, given in a dose, may occasion death. (Ad Mansor. iii, 30.) It appears decidedly to be the *Cerbera manghas* L., i. e. *Arbor lactaria*, Rumphius. See Sprengel (R. H. H. i, 252); Ainslie (Mat. Ind. ii, 261.) Dr. Lindley says of it: "The kernels of *Cerbera manghas* are emetic and poisonous; the milky sap is purgative; the leaves and bark are used in Java as a substitute for senna." (Veg. Kingd. 600.)

Kustberkush.

Avicenna gives a description of it which appears to us very unsatisfactory, but which determines Sprengel to refer it to the *Tamarix orientalis*. He calls it hot and dry in the second degree, and attenuant. (ii, 2, 371.)

Nefrin, or Nerfin.

See Avicenna (ii, 2, 506); Serapion (De Simpl. 187.) Avicenna compares it to the narcissus, and says it resembles the jasmine in virtue, but is weaker than it. He recommends it in coldness of the nerves, and as a cure in noises and pains of the ears, and in toothache. He also recommends it externally in headache, inflammations of the throat and tonsils, and for stopping vomiting and hiccup. Serapion compares it to the rose and jasmine, and recommends it in pleurisy and pains of the womb. Rhases, as quoted by him, says that in Chorasán he had seen it given to the extent of two drachms as a purgative. It seems highly probable that it is the *Narcissus orientalis*.

Muluchia.

Avicenna (ii, 2, 194); Serapion (De Simpl. 149); Ebn Baithar (ii, 537.) Avicenna's description of this article, which he also calls "Olus Judaicum," would seem to decide that it is the *Corchorus olitorius* or Jews' mallow. The other two authorities quoted above are not so precise in their description of it. It is more properly an article of food than of medicine. See Lindley (Veg. Kingd. 372), and Ainslie (Mat. Ind. ii, 387.)

Moschus.

Musk, the inspissated secretion of the follicle in the prepuce of the *Moschus moschiferus* L., would appear to be first mentioned in the works of Aëtius (xvi, 122), who gives formulæ for various fumigations (suffumigia) containing a great many aromatics, and among them musk. But as we have already had occasion to state, we entertain strong suspicions that the concluding chapters of this author may be spurious. Indeed, as this important article is not noticed by authors subsequent to Aëtius, such as Oribasius, it would appear to us that this circumstance is the strongest possible presumption, that the passage in Aëtius had been added after the Arabian period of medicine. There is one notice of it also by our author, but it also has a suspicious appearance. (p. 292, ed. Basil. See also 296.) Serapion gives a long account of it, first upon the authority of Abuhanifa, who calls the animal the musk gazelle, and says its habitat is in the countries of *Tumbasci* and *Sini*, by which he probably means Thibet and China. Of these the better kind, he says, is that procured from Thibet, as the animal in that country lives on fragrant herbs, and the inhabitants are better acquainted with the process of extracting it from its follicles. And, moreover, he says, the Sinenses (Chinese?) are apt to adulterate their musk. The animal which produces musk, he adds, does not differ in figure, colour, nor horns from other gazelles, and the best musk is procured after it is full grown. He then gives an anatomical description of its canine teeth, and of the modes of catching it by snares, gins, and by shooting it with arrows; and also the manner of extracting the musk from the animal after its death. But the best musk, he says, is procured from the animal when it is in a state of orgasm, and rubs its follicles against a rock

until the musk drops out of them. The inhabitants of Thibet (homines de Thebeth) know the places where the animal feeds, and collect the musk thus procured from them. This, he remarks, is the finest musk of all, and is reserved for royal personages and held in high esteem. This authority concludes by saying that in the region of *Thebeth* there are many cities, but that the one, from which musk is procured, is that city which is properly called *Thebeth*. His next authority is Alcholabama, who calls musk hot in the second degree, and dry in the third. The following one, Aben Mesuai, says of it, that it comforts the heart and internal viscera, both when drunk and when applied externally in plasters. His next authority is Honain, who recommends musk in diseases of the eyes. The others supply little additional information on it, but in general recommend it in diseases of the brain. He says the Persian doctors applied the oil to the member as an aphrodisiac. (De Simpl. 185.) Rhases recommends musk in headache, and all cold affections of the head, and also as a stomachic. (Ad Mansor. iii, 22.) In his 'Continens' he quotes from several Arabian authorities, all of whom give it the characters already stated, and recommend it most especially in diseases of the brain and eyes. (l. ult. i, 483.) Avicenna gives an accurate description of it, as far as we can judge from the wretched translation of his works. He recommends it in errhines with saffron, and with a little camphor for vertigo, and other affections of the brain. He also thinks favorably of it as a cordial in affections of the heart, and in melancholy. He concludes by saying of it that it is alexipharmic, especially in cases of poisoning with napellus. (ii, 2, 452.) See also his treatise (de Med. cordial., ii.) There does not appear any distinct mention of it in the works of Mesue the younger. It occurs frequently as an ingredient in the antidotes of Myrepsus. Ebn Baithar gives a very full description of it and its medicinal virtues, but it agrees so well with the description of it by Serapion, that we need not enter much into particulars. He recommends it particularly in diseases of the eyes, and says that the oil of it is a useful application to piles, and when rubbed into the genital member, is strongly aphrodisiac. It is, moreover, said to be an excellent cordial. Of the Greek authorities Symeon Seth is the only one that

gives anything like a distinct account of musk. He describes three kinds, of which the best is procured from a city east of Chorasán called *Trepet* (Thibet?). The next in quality is the Indian, and the worst is that which is procured from the Sines (Chinese?). All the kinds, he says, are formed in the umbilicus of an animal with one horn, resembling the gazelle. Like Serapion he states that it is got from the animal while in a state of sexual orgasm. Musk, he says, is hot and dry in the third degree, and of a volatile nature. As to its medicinal powers, it strengthens weak parts, and is beneficial in cold intemperaments of the head, but injurious in hot. It is adapted for the recovery of persons in a fainting fit, in loss of strength, and in affections of the heart. (De Alimentis.) An antidote of musk occurs in Actuarius. (Meth. Med. v, 6.)

Volubilis.

This name is loosely applied by the Arabian authorities to several genera of the climbing plants. For example under this head Serapion describes the *lebleb* or *cussus*, the *acfn*, the *atthin*, and *lebleb maju*. Of these the first is unquestionably the *κισσός* or ivy, and is described in extracts from Dioscorides and Galen. Of the *acfn* he says that it is laxative, and quotes Dioscorides as saying that it loosens the bowels. He says the *atthin* is styptic, and quotes Dioscorides and Galen as recommending it in rheums of the eyes, and fluxes of the bowels. The last or *lebleb* he describes upon the authority of Aben Mesuai, who says it is hot in the middle of the first degree, dry in the beginning of the same, of a cutting nature with some saline properties, and purges adust bile. Afterwards he describes its medicinal powers in the same terms as Dioscorides and Galen describe the *cissus*, that is to say, he represents it as being rather a medicine than an article of food; says it purges bile in doses of from one third to two thirds of a pound, when clarified without boiling, by means of ten drachms of sugar or penidia. His next authority, Isaac ebn Amram, says it is deobstruent. Alkanzi says it is cold and dry, is purgative and useful in indurations. His last authority, Abix, says the *lebleb* is cold and moistening, cholagogue, and along with cassia fistula and oil of almonds it proves useful in clearing out the bowels, and relieves coughs. (De Simpl. 42.)

Avicenna under the head of *Volubilis*, i. e. *hedera* (ii, 2, 724), and under *Cussus* (ib. 169), describes the *κισσός* of Dioscorides, but the former of these rather confusedly so as to create suspicions that he used the term in rather a lax manner. Mesue is the ancient author who treats most elaborately of the *volubilis*, applying the term to five distinct species, or rather genera, of which the first is probably the *Hedera*, the second the *Helxine*, and the third the *Clematis* of the Greeks; the fourth, which he calls *lupulus*, is acknowledged to be the *Humulus lupulus*, and the fifth the *Convolvulus scammonium*. See his learned commentator Costa (c. 24.) As all the others have been already treated of, we shall confine our attention at present to the account which he gives of the medicinal powers of the *hops*. He says the *lupulus* brings away some yellow bile, clears the blood, allays its inflammation, and that its infusion or whey is of great use for this purpose, and its syrup, he adds, cures jaundice. He says it was little used by the physicians of his time. He recommends it as a deobstruent of the liver, and of other internal viscera, as a remedy in asthma, and protracted fevers; and as a plaster to the head with rose oil or oil of chamomile, &c. (i, 24.) He treats of *scammony* separately in the next chapter. The character thus drawn of the *lupulus* does not seem at first sight to agree well with the acknowledged virtues of the *Humulus Lupulus*. But, as Ruttj remarks, he probably alludes to the stem and not to the flowers of the plant, as being a medicine which purges yellow bile. (M. M. 296.) The *Humulus Lupulus* is not noticed by any Greek writer, nor by any Roman, with the exception of Pliny. (H. N. xxi, 50.)

The *lebleb*, noticed above, there is every reason to suppose, was the *dolichos lebleb*. It is also treated of by Avicenna as well as Serapion. They represent it as containing saltish juices which purge adust bile. It is a well-known article in Hindoo Medicine. See Wise (Book of Hindoo Medicine, 104.)

Abrong, or Abrugi.

Serapion describes it as a round grain, spotted with black and white, which is brought from Seni (China?), having a bitter taste, hot and dry in the second degree, a laxative of the bowels, and vermifuge. (De Simpl. 153.) According to

Dodonæus and Parkinson, it is the pea which the latter describes and represents under the name of *pisum cordatum vesicarium*. See Theatre of Plants (1378.)

Ribes.

This has been supposed the ribes or raspberry, but it is now well ascertained that it is a species of *Rheum*, namely the *Rheum Ribes*. See Sprengel (R. H. H. i, 257.) Serapion gives a full account of it; he represents it to be a cold, astringent plant, and recommends it in various complaints, such as cholera, smallpox, measles, and in hemorrhoids. (De Simpl. 241.) Avicenna briefly recommends it in nearly the same complaints. (ii, 2, 581.) See also Rhases (Cont. l. ult. i, 582.) Ebn Baithar gives a full and very interesting description of it. He says it grows in alpine localities in Syria, and in the northern countries, but not in Spain; that it has large, broad, round leaves, and tender reddish spots. He calls it bitter and astringent, and recommends it in palpitation of the heart, vomiting, and marasmus. He also praises it in hemorrhoids, and the red flux (menorrhagia) of women; and further commends it in measles, smallpox, and plague. Dr. Royle says (M. M. 521) that the *Rheum Ribes* is "the *Riwas* of Serapion, who mentions it as making a good sherbet." Does he allude to the chapter on the *Ribes* quoted above?

Aurantium.

When we stated in another place (Vol. I, 134) that no ancient author had noticed the *orange*, we were unacquainted with the works of Ebn Baithar, and of D'Hanvantare, the author of the Susruta. In the latter work the orange is enumerated with acid fruits, of a somewhat indigestible nature. (140 et alibi.) Ebn Baithar says of the orange that it produces an oil which is useful in flatulence and pains of the joints. The rind of the fruit, he says, is carminative and anthelmintic, an antidote to poisons, and removes spots from clothes. The Hindoos have been long familiar with the *Citrus aurantium*. See the Susruta and Wise's Hindoo Medicine (p. 191.)

Limon.

We are now inclined to think that we were mistaken in

stating (Vol. I. 137) that the lemon was mentioned by Avicenna (ii, 2, 433.) His description is probably to be referred to the *Statice limonium*. However, beyond all doubt, the *Citrus medica Limon* is fully described by Ebn Baithar. He says the rind is bitter, acid, astringent, and aromatic, excites the appetite, improves digestion, renders the breath fragrant, is cordial, and an antidote to poisons. He recommends it particularly in fevers, exanthemata, palpitation of the heart, vomiting, &c. It appears also to be noticed several times in the Susruta. (See p. 142 et alibi.) Lemons are likewise noticed by the Persian writers on the Materia Medica by the names of *Leemoo* and *Neemboo*. See Royle (Mat. Med. 297.) They have been long known to the Hindoos. See Wise (Hindoo Med.)

Margaritæ.

Though the Greeks and Romans were well acquainted with pearl-mussels, as is obvious from several passages in the classical authors, it does not appear that they ever used these articles in the practice of medicine. They were used by the Arabians as an ingredient in their celebrated Electuarium *de Gemmis*, (*Mesue de Elect.*) and were reckoned among their cordial medicines. Avicenna says of pearls, that they resemble *karabe* in medicinal powers, but are more powerful in their operation. (*De Med. Cordial.*) Serapion gives a fuller account of them upon the authority of several Arabian writers, who describe pearls as being cold, desiccant, and attenuant, and recommend them in diseases of the eyes, and in hemorrhages, as dentifrices in diseases of the teeth, but more especially as cordials in palpitations and other affections of the heart. (*De Simpl.* 397.) We could have wished to have given in this place, since we have had no convenient opportunity to do so elsewhere, an exposition of the views of the Arabians respecting the operation of *cordial medicines*; but as this subject could not be understood without a fuller explanation of certain parts of the higher philosophy of the ancients than is consistent with our limits, we are reluctantly obliged to dismiss it with a very brief notice. We would beg leave to refer our readers to Avicenna's elaborate treatise 'de Medicinis Cordialibus.' He there gives an ingenious disquisition on medicines which operate upon the animal spirits

and dispel vapours, and first advocates views which have formed the basis of many a modern hypothesis on this subject. Among the cordial medicines described by him we would remark amber, gold, silver, citron, coral, cinnamon, camphor, myrobalans, hyacinth (the gem), lapis lazuli, myrtle, musk, mace, frankincense, silk, sandal-wood, tamarinds, zerumbet, zeduary, &c. One important class of cordials consists of medicines which evacuate black bile, namely, melanogogues, which we will have to treat of in a subsequent section of this work.

In imitation of the Arabians, Paracelsus and the modern alchemists have attributed great virtues to the precious metals and stones as cordial medicines. See Schröder (Chemical Dispensatory, pluries.) He says of pearls, that "they are an excellent cordial, that strengthens the balsam of life, resists poison, pestilence, and putrefaction, and clear the spirits." (167.) Pearls and other precious stones have always been highly esteemed by the Hindoo physicians. See the Susruta and Wise's Hindoo Medicine (124.)

Sericum.

We have mentioned above, that silk is one of the cordial medicines treated of by Avicenna. Silk, and especially raw silk, he says, is attenuant and desiccative, acts as a cordial, improves the memory, proves useful in affections of the eyes, in obstructions of the liver and other complaints. (De Med. Cord. ii, 3.) The silkworm (*bombyx mori*) and the uses of silk in medicine, are described with considerable accuracy by Serapion. Like Avicenna he ranks it with the cordial medicines, and recommends it in this capacity along with pearls, karabe, corals, and musk. (De Simpl. c. 28.) Silk forms one of the ingredients in the electuary of Mesue, to which he gives the following imposing title, "Electuarium ex granis tinctoriis ad cordis palpitationem, syncopem, mentis alienationem, seu desipientiam, moerorem sine causa manifesta, facultates enim nostrum corpus dispensantes mirifice roborat." See f. 89, and the interesting Commentary of Costa. It is also an ingredient in several of the Antidotaria of Avenzoar. Ebn Baithar says, that various Arabian authors had written on the medicinal properties of silk. One of them quoted by him describes the use of it in medicine by burning it, and using its ashes for collyria

and other purposes. He remarks, that Ebn Sina (Avicenna) says, that silk as an article of clothing prevents the formation of lice. Raw silk has been used as a medicine in modern times. Moses Charras, in his 'Royal Pharmacopœia,' writes thus of it: "Many writers have attributed great virtue to raw silk. But although the use thereof had been at all times unknown in physic, my judgment is that it is too fragrant, that it has too much beauty, that it affords too many conveniences to human life, that there are too many wonders in the first original, progress, labour, and metamorphosis of the worm which produces it, to be despised." He adds, "that is called raw silk which was never boiled, but is still as it were in the grain, out of which the worm has been but newly taken." He says further of the composition, whereof raw silk is an ingredient, namely, *Confectio alkermes regia*, "This confection is, without question, one of the best cordials that ever Galenic physic invented. For it repairs and recreates the vital and animal spirits, it ceases palpitations of the heart and swooning-fits; it fortifies the brain, &c." (R. P. 149.) A still more recent authority on pharmacy, says of raw silk, *Sericum*, that it is "cordial, restorative, one drachm in powder." Gray (Suppl. to Pharmacop. 215.)

Hyacinthus.

This is one of the precious stones which often occurs as an ingredient in the Arabian formulæ for antidotes. Ebn Baithar remarks, that it is not described by Dioscorides nor Galen. He mentions three kinds, a yellow, a red, and a black, of which the red is the noblest. Its powers, he says, are increased by fire. It was used as an amulet, and was held to be cordial and alexipharmic; and, in fact, Ebn Baithar says it is possessed of many virtues. From his mentioning of it, that, when rubbed, it attracts straw, there seems every reason to suppose that it was tourmaline. Some have taken the hyacinth of the Greeks and Romans for the same, but Heeren rather supposes it to be the ruby. It is briefly noticed as a cordial by Avicenna, Mesue, and Serapion. The last of these gives nearly the same account of it as Ebn Baithar; that is to say, both had copied from the same authorities. He particularly mentions it as being an excellent phylactery to guard the body during thunder-storms. (De Simpl. 398.) The *Confectio de Hyacintho* has been very

celebrated in modern times. See Moses Charras (Roy. Pharmacop. 147.)

Hager Albuzedi.

It is thus described by Serapion: "Hager albuzedi is a red stone, but less so than the hyacinth, the redness of which is more agreeable to the eye, as there is no obscurity in it. The mines where this stone is found are in the East. When taken from the mine it is opaque; but when divested of its outer coat by a lapidary, its goodness is discovered and it becomes transparent. When this stone has been strongly rubbed against the hair of the head, it attracts chaff, as the magnet does iron." He speaks of its being useful to the eyes when they are rubbed with it, and says that as a seal it dispels frightsome dreams. (de Mineral. 399.) According to Beckmann this is most probably not the tourmaline, although it bears some resemblance to it in properties, but belongs rather to the hyacinths. (History of Inventions.) In fact, it would appear to us highly probable, that this article like the preceding was a variety of the ruby.

Hager Salachil, or Lapis Carneolus.

Several species of it are described by Serapion, of which the best he says is the red. They are brought, he adds, from the mines of the Romans, and were used principally as an amulet and dentifrice. It must have been the same as the *Sardion* of Theophrastus (De Lapidibus), and of Plato (Timæus.) The term would appear to have been used in a general sense for several of the finer kinds of agates. (De Simpl. 400.) A modern authority thus describes it: "The Sarda or Cornelian. It is a gem half transparent, like the water wherein flesh is washed, or like bloody flesh: hence it is called Carneolus or Cornelian. The best cornelians are found in Sardinia." Schröder (Chemical Dispensatory, p. 160.)

Tincar, or Borax.

We have treated of this article already under the head of *Chrysocolle*, with which it has been often confounded. It was introduced into medical practice by the Arabians, and there appears to us no doubt that it was the same as our borate of soda. It was very much used for the cure of toothache. See

the authorities quoted under *Chrysocolle*. It was used medicinally by the Hindoo physicians. See the Susruta (pluries), Wise (Hindoo System of Medicine, 117); Ainslie (Mat. Ind. 576); Royle (Mat. Med. 97.)

Hager Alcazaha.

It is difficult to determine precisely what this precious stone was, although it is pretty minutely described by Serapion. He says it is brought from Yemen, and is of divers colours, from white to black, and that it occasions disturbed dreams when worn as an amulet: he recommends it, however, to be thus used by infants, and says a vessel prepared from it, if used for holding any article of food or drink, prevents sleep. (De Simpl. 401.)

Lapis Lazuli.

We have in so far treated of this substance under *Cyanus* in the preceding Commentary. It was used, like the other precious stones, as an amulet, but was more particularly celebrated as a melanogogue medicine. It was further said to be useful in asthma, and as an emmenagogue. See Serapion (De Simpl. 369); Avicenna (ii, 256). A modern authority describes it thus: "It is a stone like a sapphire, or the flowers of cyanus adorned with golden stones or flowers, harder than the Armenian stone. It is in virtue like the Armenian stone, but weaker; it purgeth chiefly melancholy. It is worn about the neck for an amulet to drive away frights from children," &c. Schröder, (Chymic. Dispensat.)

Berengemish, or Ozimum Gariofilatum.

Serapion, after quoting a description of it from Isaac ebn Amram, says of it, that it is hot and dry in the end of the second degree, is useful in coldness of the stomach, promotes digestion, is a hepatic and cordial medicine, dispels melancholy, renders the eructations fragrant, &c. His other authorities recommend it in similar cases. (De Simpl. 156.) Avicenna gives a similar account of it in all respects. (ii, 2, 254.) We suppose there is no doubt that it is the clove basil, or *Ocimum gariofilatum* of Miller; or, according to Sprengel, the *O. monachorum*.

Behen.

Serapion briefly describes two varieties of it consisting of fibrous roots, being brought from Armenia, and having a good smell with some viscosity. Both kinds, he says, are hot and humid, and increase the secretion of semen. (De Simpl. 223.) See also Avicenna (ii, 2, 82), and Rhases (Contin. l. ult. iii, 29.) Avicenna holds that it is also cordial in addition to its power of forming semen. It is the *Centaurea Behen* L.

Spinachia.

We have already treated of the spinach (*Spinachia oleracea*) as a dietetical article introduced by the Arabians. (Vol. I, 113.) According to Avicenna it is laxative of the bowels, useful in orthopnœa, and other diseases of the chest. It is noticed in like terms by Serapion (De Simpl. 140); by Rhases (Contin. l. ult. i, 671.) Ebn Baithar says of spinach that it is an excellent potherb, and useful in diseases of the neck and chest, being much used for this purpose by the inhabitants of Nineveh, who are very subject to such complaints.

Rhabarbarum.

We have stated under *Rheum* in the preceding Commentary (317), that it was the *rheum rhapsonticum*, which is the only species of the *rheum* described in the regular treatises on the Mat. Med. of the Greeks and Romans. Our author, however, would seem to allude to the *Rheum barbarum* or purgative rhubarb, at Book I, 43, and VII, 11. Although it is stated by some learned authorities that the rheum of Trallian (viii, 3) was a species of the *Rhabarbarum*, we are satisfied from a careful examination of the passage, that it was the rhapsonticum. There can be no doubt that the general use of the purgative rhubarb was introduced by the Arabians, of whom Ebn Baithar is by far the most copious and instructive under this head. He states decidedly that there are four species of rhubarb, three of which are perfectly distinct. On the first species, by which he evidently means the *R. Rhapsonticum*, he gives extracts from Dioscorides, Galen, Oribasius, and Paulus. He says the older physicians knew nothing of the virtues of the purgative kinds of rhubarb until they were discovered near to his time. He says the purgative rhubarb acts as a deobstruent and strength-

ener of all the internal viscera, is useful in mental diseases, dropsy, jaundice, marasmus connected with obstructions, especially when combined with gum lac. He says it is most useful in chronic diarrhoea when taken in an aromatic wine and with Indian spikenard, and also in uterine fluxes, dyspepsia, and other complaints of a similar nature. He praises it most especially as a stomachic. He states, that of all the kinds of rhubarb, the Turkish possesses the purgative quality in the highest degree. Of the other Arabian authorities, Averrhoes is one who gives a very distinct account of the true purgative rhubarb. (Collig. v, 42.) Mesue describes three species of the Rhabarbarum, or Rhaued, namely, Indianum, Barbarum, and Turcicum, to all of which he ascribes purgative powers, and recommends them as being possessed of hepatic, stomachic, and deobstruent properties, which render them particularly serviceable in dropsy, obstructions of the spleen, and jaundice. The dose of the infusion, he says, is from one to ten drs.; and of the pounded, from one to three. He appears not to have been acquainted with the Rhaponticum (De Simpl. v), whereas Avicenna and Serapion would seem not to have known the other. It may be proper to mention, in conclusion, that the Rheum rhaponticum is the common culinary or tart rhubarb of this country. According to Loudon, it was introduced in 1573, but it is most probable that we owe the introduction of it to the Romans.

But it is time that we should draw this Appendix to a close. And now we trust it will not be thought out of place to conclude with Professor Beckmann's eloquent eulogy on the Literature of the Arabians in his celebrated work on the 'History of Inventions and Discoveries.'

"What a noble people were the Arabs! We are indebted to them for much knowledge and for many inventions of great utility; and we should have still more to thank them for were we fully aware of the benefits we have derived from them. What a pity that their works should be suffered to moulder into dust, without being made available! What a shame that those acquainted with this rich language should meet with so little encouragement! The few old translations which exist have been made by persons who were not sufficiently acquainted

either with languages or the sciences. On that account they are for the most part unintelligible, uncertain, in many places corrupted, and besides, exceedingly scarce. Even when obtained, the possessors are pretty much in the same state as those who make their way with great trouble to a treasure, which, after all, they are only permitted to see at a distance through a narrow gate. Had I still twenty years to live, and could hope for an abundant supply of Arabic works, I would learn Arabic. But *ὁ βίος βραχύς, ἡ δὲ τέχνη μακρὴ.*"

SECT. IV.—ON SIMPLE PURGATIVE MEDICINES.

Give of aloe one drachm, with honeyed water, in the morning. But they who administer it in the evening or after food occasion mischief, for it makes the food spoil. It evacuates yellow bile, less if given to the extent of three oboli, for in that case it proves solely and entirely eccoprotic. But purgative medicines being generally bad for the stomach, aloe alone is stomachic. Those who cannot endure the bitterness of it may take it formed into pills. It is manifest that purgative medicines do not evacuate by any one simple temperament such as heat (for then all hot things would be evacuants, such as pepper), but by some specific property of their whole substance in like manner as the magnet attracts iron. Of purgative medicines those which are simply laxative have been treated of in the First Book. We are to use drastic purgatives either in order to transfer some matter, or to dislodge and remove an indurated diathesis, or as an alterative to the system, and in order to change the temperament of it, or to displace any offending humour. There are certain mixed modes complicated of the afore-mentioned. Purgative medicines are to be given to those whose powers are firm and their understanding strong; to such as have passed the first stage of life, and have not yet come to the last; to those who have a strong stomach, and have collections of superfluous matters in the body, and are not very sanguineous. The best seasons for purging, if there be no urgent necessity, are the spring and the autumn.

On those things which evacuate bile. We may give cholagogue medicines at any season except winter, to persons in the vigour of life and in the decline; to persons of dry and muscular habits, and who are of a dark or ruddy complexion; to men rather than to women; to those whose food is apt to spoil on their stomachs, and whose bellies are constipated; to such as abound in bitter bile, are irascible, pass little urine, and use hot and dry food: in icteric, hepatic, and pleuritic affections; in phrenitis, cynanche, mania, cephalæa, ophthalmy, erysipelas, leprosy, fevers, and to such as are troubled with collections of bile. Aloes is given to such as are troubled with heaviness of the head, with ophthalmy, with thirst, with disturbed dreams without fever; to such as have a sensation of departing rigor; to those who pass acrid flatus, and have gnawing pains of the intestines; to those who are seized with burning heat about the stomach, or nausea producing eversion of it; and to those who being troubled with a collection of excrementitious matters cannot bear evacuations by clysters. For it evacuates the whole body, and does not occasion disorder of it unless given in very great quantity, and brings along with it any bile lying in the intestines, stomach, and gullet.—Hellebore agrees both with those in acute diseases and those in chronic requiring a cholagogue medicine, such as maniacs, those troubled with hemicrania, and such as have defluxions of the eyes and complaints in the chest. But it suits most with such viscera as the uterus and bladder when they require a cholagogue remedy. It is also proper for chronic affections of the trachea, for jaundice, exanthemata, lichen, herpes, erysipelas, and leprosy. Black hellebore evacuates bile, especially yellow, from the whole body and without trouble. Hence it is given to those not affected with heavy fever, and more especially to such as are free from fever, in the quantity of one drachm of the roots triturated in honeyed water or plain water, while fasting, or with honey made into pills. Some mix with it pennyroyal, savoury, or some of the volatile stomachics.—Scammony purges like hellebore, and more especially yellow bile, but of all purgative medicines it is the most prejudicial to the stomach. It is, therefore, to be given to those who are free from fever, and such as have strong stomachs, to the amount of four oboli, with salts, pepper, ginger, or some one of the volatile sto-

machics, or along with honey. It is also formed into pills with gum.—The medullary part of the fruit of the Colocynth evacuates especially bile and mucous matters, not from the blood like hellebore and scammony, but from the nerves and nervous parts, when given to the amount of one drachm in two cyathi of honeyed water which has rue boiled in it. But it is to be triturated for a long time, because otherwise its rough particles sticking in the internal parts produce ulcerations and nervous affections by sympathy. It is to be given to those who have affections of the head, namely, when the meninx or the pericranium is affected, such as those labouring under vertigo or hemicrania, or those troubled with cephalæa; also in epilepsy, apoplexy, cynic spasms, chronic defluxions on the eyes, orthopnœa, asthma, and chronic coughs; likewise in arthritic cases to those who have affections about the kidneys or bladder.—Elaterium evacuates like scammony. Such as is green like leeks, light, and not older than a year, is to be chosen; and it is to be given to the amount of three oboli, triturated with one hemina of milk.—Tithymallus, *spurge*, evacuates bile like elaterium and scammony. Four or five drops of the juice are given, mixed with polenta and quickly swallowed. For if retained long in the mouth they ulcerate the tongue and surrounding parts.—Lathyrides (a species of spurge) purge bile like hellebore and scammony. They are to be given to the amount of seven, eight, or as many as fifteen grains to such as are robust and require much purging, who are to be directed to chew them. But those who are weaker and have bad stomachs, must swallow them whole.—The dried tops of the Peplium are to be given to the amount of eight oboli in honeyed water. They evacuate bile like hellebore, and occasion the breaking of wind.—Agaric has similar powers to the colocynth, but acts slowly and is not prejudicial to the stomach. It is given to the amount of two drachms with honeyed water. It should be very white, brittle, and not very woody nor carious.—Illyrian Iris purges in like manner when given to the amount of eight oboli in honeyed water. It ought not to be old nor carious.—The small Centaury by purging bile and mucus is particularly adapted for cases of ischiatic disease. The decoction is to be drunk of a drachm and a half of centaury, boiled in a hemina of water until it be reduced to

the half.—The flower with the fruit of *Tragoriganum* is given to the amount of two drachms, in honeyed water, to the same class of persons as the black hellebore. It is more stomachic than the hellebore, but less purgative.—Four drachms of *Chamelæa* (*mezereon*?) boiled in two heminæ of honeyed water, until reduced to a fourth part, purge like hellebore. Some administer *chamelæa* by making it into pills with a double quantity of wormwood.—*Aristolochia*, *birthwort*, purges like *colocynth*, one drachm of the species called *clematis* being given in honeyed water.—The dried root of *Polypody* when pounded and sprinkled on honeyed water, or triturated along with it, has the same effects as *colocynth*.

Medicines which evacuate black bile. Medicines which evacuate black bile are to be given in an especial manner to melancholic persons, to such as are easily moved to paroxysms, to passionate persons, to misanthropists, to persons of solitary habits, or to such as during convalescence require purging, during the heat of autumn, in dry habits, and to such as are not muscular.—*Epithymum*, *dodder of thyme*, is the best of those medicines which evacuate black bile. It is to be given to the amount of five drachms triturated with a hemina of milk.

Epithymum, or the substance which grows upon savory, evacuates in like manner with the *epithymum*, but is weaker. *Pennyroyal*, when taken to the amount of an acetabulum, in honeyed water, evacuates black bile.—The *Heracleatic Tragoriganum* in the same dose evacuates like *pennyroyal*. But both must be dried. *Alypum*, the seeds of it have been said to purge black bile when given in the same quantity as the *epithymum* with salts and vinegar; but, as *Dioscorides* says, it occasions slight ulceration of the intestines. It is, I think, that substance which is now called *alypias*. It is to be given in honeyed water.—*Parthenium* (*matricaria*?), *feverfew*, when dried and drunk in like manner, evacuates the same humours. *Alypon*, *madwort*, drunk with salts, purges in like manner.

Medicines which evacuate phlegm. We are to administer *phlegmagogues* in cold habits; to aged persons, in winter; in paralytic and apoplectic cases; for loose œdematous swellings; to such persons as have great collections of phlegm in the

belly, chest, or stomach; and in cases of the female flux. They agree also with those who have a copious running from the nose and thick expectoration, with cases of anorexia and ischiatic disease when the joint becomes mucous or puitous; but they are particularly adapted for those cases of dropsy which are called anasarca.—One drachm of white Storax, drunk with an equal quantity of turpentine rosin, evacuates phlegm.—The bark of the root of Olive to the amount of one drachm, with wine or water; nine oboli of Pellitory, with water; two drachms of the seed of *Lychnis (campion)*; one drachm of the root of Sow-bread, with hydromel; two drachms of Garlic, with honey; ground Pine, triturated and given in the form of pills; half a drachm of the flakes of copper, with an equal quantity of rosin, in pills, purges bile strongly.—A drachm and half of the green leaves of Bay; two oboli of the bark of the root of the wild Cucumber; forty seeds of that species of ricinus called Crotones stripped of their bark and eaten, do the same. A half of that part of Parsley connected with the root (which some call *chamæraphanus*), when eaten; two drachms of Bdellium, with hydromel; but Gum is particularly adapted for defluxions on the eyes.

Medicines which evacuate water. We are to give hydragogues in that variety of dropsical disease called ascites; to women troubled with the whites; and to those who have ulcers accompanied with a copious discharge.—One drachm of the flakes of Copper, when drunk with honeyed water evacuates water; but a little vinegar must also be swallowed lest it be vomited.—The *Granum Cnidium* when stripped of its bark, triturated, and drunk with boiled honey, that it may not touch the orifice of the stomach, evacuates water. Twenty, twenty-five, or thirty grains are to be given, and to those who are stronger, as many as forty.—One drachm of Euphorbium, drunk with boiled honey, evacuates phlegm, but more especially water.—Eight oboli of the seed of rough Spleenwort, with honeyed water, evacuate water.—*Cneorum*, in like manner, purges water when drunk with polenta.—Five drachms of the seed of *Cnicus*, when triturated together in ptisan, are swallowed with a small quantity of salts.—One drachm of Ammoniac perfume, drunk in honeyed water, evacuates water. Some give

it in affections of the spleen with oxycrate.—The juice of the bark of the root of the Elder-tree, when drunk to the amount of two ounces with wine, evacuates water.

COMMENTARY. The philosopher Aristotle thus explains his ideas respecting the action of purgatives: "When purgatives are conveyed to the stomach, and are there dissolved, they are carried by the same passages as the food, and when they cannot be digested, but their prevailing power remains unsubdued, they return, and carry with them whatever opposes them, and this is called purging." (Problem. 43.) See also Alexander Aphrodisiensis (Probl. ii, 58.) COMM.

Hippocrates administered purgative medicines freely and boldly, but at the same time he cautions against the unseasonable and rash administration of them in several parts of his works. We do not find any theory, however, of the *modus operandi* of purgatives, nor any general remarks on the cases in which they are applicable, in any of the Hippocratic treatises which are now acknowledged to be genuine. Some ingenious remarks, however, may be found on this subject in the work 'De Nat. humana.'

Celsus has a chapter on purgative medicines which contains much curious and valuable matter. He says the more ancient physicians gave various purgative medicines very freely, such as black hellebore, polypody, squama æris, the milky juice of lactuca marina (*euphorbia paralias*?), the milk of asses, with a little salt; but he holds that purgatives hurt the stomach, and are not to be given when any fever is present. The rules, which he lays down for the administration of them, are highly judicious, and deserving of consideration. He approves of them when the head feels heavy, when the eyes are misty, when there is obstruction of the bowels, and when there is pain there or in the hip-joint, when the stomach is oppressed with bile or phlegm, and when there is dyspnœa, when venesection is indicated, but the powers of the system will not admit of it, and in several other cases. (v, 12.) He mentions that Asclepiades totally rejected the use of purgative medicines. (i, 3.)

Galen has devoted a complete treatise to the discussion of the question regarding the *modus operandi* of purgatives. He decidedly inclines to the theory that every purgative by some

COMM. specific property attracts, and as it were, sucks to it the humour to which it has a natural alliance, in like manner as the magnet attracts iron. He divides Purgatives into Cholagogues, Melanagogues, Hydragogues, and Phlegmagogues. He rejects the hypothesis of Erasistratus, who maintained that each medicine converts the juices presented to it, into its own specific nature: thus that cholagogues convert them into yellow bile, melanagogues into black bile, and so forth. Although Galen flatters himself that he effectually demolishes this hypothesis, we have long looked upon it as a very plausible one, and believe that at the present time the prevailing opinion in the profession inclines much in that direction. For example, the green and dark discharges which are brought off by mercurial purgatives, are now generally supposed to be occasioned by the fluids in the secretions entering into combination with the medicine administered. It is to be regretted that no ancient author has given us a clear exposition of the hypothesis of Erasistratus. Galen gives a long list of cases, in which purgatives prove beneficial, such as erysipelas, epilepsy, apoplexy, gout, rheumatism, melancholy, and many chronic complaints. He insists strongly on the benefit derived from cholagogues for the cure of jaundice. (*De purg. Med. vi.*)

Antyllus, in an extract preserved by Aëtius, espouses the theory which maintains the specific operation of purgatives, and that they act by attracting the humours to which they are allied. He recommends them for various complaints, as malignant cutaneous diseases, spontaneous ulceration, and rheumatic affections. (iii, 23.)

The account of this subject, given by Oribasius, is taken from the works of Galen and Ruffus. It is too lengthy for our limits. Ruffus directs the surgeon to consider well the patient's constitution, and regulate the dose of the medicine accordingly, as there is a great difference in the susceptibility of persons to be acted upon by purgatives. The following is a list of the purgatives described by Ruffus in this fragment: Polypody, iris, colocynth, phacoides (a species of spurge olive?), peplos, peplium, aloe, hippophaes, hippophæstum, clematis, pycnocomon, vines, thyme, epithyme, marjoram, Greek savory, poppies, cucumber, the smaller heliotrope, the lesser sesamoides, the tithymalli or spurges, the chamelæa, lathyris,

agaric, and euphorbium. His description of the operation of each medicine bespeaks a good acquaintance with the subject. (Med. Collect. vii, 26.) See also Actuarius (Meth. Med. iii, 7.)

Haly Abbas makes some acute remarks on the action of Cathartics. Every purgative, he says, attracts the humour, to which it is allied. Different opinions, he adds, have been entertained regarding the *modus operandi* in this case. Some maintain that, when such a medicine is swallowed, it goes to the members where its cognate humour is lodged, from which both are expelled by the expulsive faculty of the part, and return to the bowels together. This theory, however, he rejects. He mentions further that others maintain that the medicine attracts its peculiar fluid, as a magnet does iron; and of this theory he adopts a modification. He states it as his opinion that, when such a medicine has been swallowed, it attracts its cognate fluid from the surrounding parts, to which all the similar fluids in the body are afterwards determined, being conveyed thither by the veins. He gives a full account of all the purgatives known in his time. (Pract. iii, 53, 54.) Much the same theory is advocated, and fully explained by Serapion. (De Antidot. vii, 10.)

Avicenna and Rhases object to the doctrine of Galen that he appears to have maintained that there is a peculiar alliance between a purgative medicine of a certain class and the fluid or humour which it attracts, whereas they argue that, as there is no alliance between the magnet and the iron which it attracts, so is it in like manner with purgatives and the peculiar fluids which they evacuate. This, however, is only a more precise exposition of the theory advanced by Galen. Rhases (Cont. xii, 1); Avicenna (i, 4, 4.) The ancient theory is very acutely stated by Averrhoes (Collig. v, 21.) See also Mesue (Canones universales.) There appears to be some originality in the theory of Mesue. He says that a purgative medicine operates by occasioning a preternatural increase of the vital, or, as it is now called, animal heat of the part to which it is applied, whereby its attractive powers are increased. He maintains very ingeniously that purgation is an act of Nature, that is to say, an operation of the *vis medicatrix naturæ*, and that the medicine is merely the instrument of Nature in this case, for, he adds (as Hippocrates says), it is Nature, and not the physician, that cures diseases. A pur-

COMM. gative medicine, then, he argues, acts by rousing the expulsive power of Nature. He joins the preceding authorities, however, in illustrating the attractive power of purgatives, by comparing it to the property which the magnet has of attracting iron, and amber of attracting straws. Purgative medicines, he says, have the faculty of clearing away the humours from the different parts of the body; from the stomach and intestines they do so readily; from the meseraic veins less easily; still more difficultly from the liver, and with the greatest possible difficulty from the joints, especially when the humours are impacted there. He forbids purgatives to be given in the extremes, either of hot or cold; in this practice observing the rule of Hippocrates. In hot weather, he says, emetics, and not purgatives, are indicated. The directions which he gives for correcting the noxious qualities of purgative medicines are highly important, but they are too lengthy for our limits. Aromatics added to purgatives, he says, dispel flatus; bitters do the same, and strengthen the stomach; saltish things increase their purgative powers; unctuous, by lubricating the intestines, accelerate their operation, and render it easier; and sweet substances render them less nauseous, and diminish their acrimony.

On the ancient arrangement of purgative medicines Dr. Paris makes the following pertinent remark: "It is impossible to concede to the opinion of Dr. Hamilton, that the different species of purgative medicines do not possess distinct powers over the different species of matter to be evacuated; on the contrary, there is reason for reviving the ancient theory, too inconsiderately abandoned, and which acknowledged these different distinctions in the operations of cathartic medicines under the appropriate names of hydragogues, cholagogues, &c." (Pharmacop.) Dr. Alston likewise writes thus: "We have a very learned essay in confirmation of the ancient doctrine of the specific operation of purgatives by Dr. G. Martyn (Lond. 1740, in 8vo.) I shall not enter into the controversy, but only observe that there is nothing impossible, yea, nor improbable in the theory." (Lectures.) See a learned dissertation on the action of purgatives in Mangeti 'Bibliotheca Anatomica,' i, 159. We may mention further that Dr. Murray in his *Materia Medica* inclines to the Galenic theory of the specific operation of purgatives. (c. viii.)

On Cholagogues. Most of these medicines are sufficiently well known, and therefore do not require to be treated of at greater length. See also Aëtius (iii) and Oribasius (M. Col. vii.)

The Arabian author Mesue gives the following table of Cholagogues :

<i>Clementer.</i>			<i>Valenter.</i>	
Cholagoga	Aloe . . .	} Trahendo et } astringendo, } flavæ: nam aliæ } aliud vacuant.	Radices	Agaricus.
	Absinthium . . .			Asarum.
	Rosa . . .			Aristolochia.
	Rhabarbarum . . .			Bryonia.
	Myrobalani . . .	Cyclaminus.		
	Pruna.	Cucumer agrestis.		
	Tamar Indi . . .	Dracunculus et arum.		
	Cassia . . .	Eilleborus.		
	Manna.	Esula.		
	Viola nigra . . .	Hermodactylus.		
Psyllium . . .	Iris.			
Adiantum etiam phl.	} Lubricando.	Scilla.		
		Turbith.		

It will be perceived that this list contains several articles with which the Greeks were unacquainted, namely, myrobalani, tamarindi, manna, and turbith. Of all these substances we have already given some account in the Appendix to the Third Section. Mesue calls the *tamarinds*, the fruit of an Indian palm-tree, the word *tamur* signifying a *date*. He says, that they are excellent medicines for repressing the acrimony of the humours, purging bile, cooling the heat of the blood; that they prove useful in hot fevers, jaundice, inflammation of the stomach and liver, and that they stop vomiting. He calls them refrigerants and desiccants of the second order. To prevent them from hurting the stomach by their coldness, he recommends to give them with spikenard, mace, mastich, wormwood, fennel, or any such calefacients. Avicenna states their medicinal characters in the same terms. Serapion says, that they are desiccants and refrigerants in the third degree. Averrhoes ranks them among the refrigerants of the third, and desiccants of the second order. We have already mentioned, that the earlier commentators are decidedly of opinion, that the tripolium of the Greeks was *turbith*, but this is now generally acknowledged to have been a mistake. Mesue calls it the root of a milky herb, having leaves like a *ferula*, but smaller. Probably, however, as his commentator Manardus remarks, there is some

COMM. mistake in the comparison of it to the ferula, as there is no resemblance between them. An accurate modern author, Moses Charras, calls it the bark of a milky root, which is chosen by its weight, dark-coloured without, white within, and clear from its pith, which is hard and fibrous. Mesue represents it to be a hot, nauseous purgative. It is given in powder, he says, to the amount of from one to two drachms.

Serapion recommends Cholagogues particularly in jaundice, inflammatory affections of the brain, mania, epilepsy, erysipelas, herpes, and tertian fever. He describes the following medicines as cholagogues: aloes, southernwood, black hellebore, scammony, colocynth, agaric, elaterium, two species of mezereon, lathyrus, the root of the lily, centaury, polypody, birthwort, myrobalans (the yellow, the black, and the chebulic), pomegranate, cassia fistula, violet, ivy, and two Arabian substances *anabac* and *alterariabin*. We are unable to determine what the last two were.

A modern writer, Christianus Margravius, in his 'Materia Medica Contracta,' thus enumerates the cholagogues of his time.

Cholagoga,

Cassia, manna, tamarindi, succusque rosarum,
Scammonium, myrobalani, rhabarbarum, aloë.

Professor Alpinus gives an accurate account of the ancient cholagogues. (Meth. Med. iii, 9.) The following medicines are said to be used as purgatives by the Hindoos; we give the scientific names as given by Dr. Wise: 1. *Convolvulus turpethum*. 2. *Panicum frumentaceum*. 3. *Croton polyandrum*. 4. *Anthericum tuberosum*. 5. *Abrus precatorius*. 6. *Cessampelos hexandra*. 7. *Asclepias geminata*. 8. *Clotoria ternata*. 9. A kind of convolvulus. 10. *Shabraba*. 11. *Cassia fistula*. 12. *Plumbago zeylanica*. 13. *Acheranthes aspera*. 14. *Poa cynosurides*. 15. *Saccharum spontaneum*. 16. *Jelaka?* 17. A variety of the convolvulus turpethum. 18. *Ramaka*. 19. *Bignonia suaveolens*. 20. *Terminalia chebula*. 21. *Indigofera tinctoria*. 22. *Ricinus communis*. 23. *Costus speciosus*. 24. *Euphorbia*. 25. *Suptachetta*. 26. *Calotropis gigantea*. 27. *Halicacabum cardiospermum*. Of these the turbet, myrobalans, and castor oil, are particularly commended. (On Hindoo Medicine.)

On Melanogogues. The other Greek authorities treat of nearly the same number of Melanogogues. They are treated of methodically by Galen, Oribasius, and Aëtius. The *Alypias* is supposed by Bernard (Nota in Nonni Epit.), and Prosper Alpinus, to have been the turbith; but, as is now maintained, erroneously. See Sprengel's Notes on Dioscorides (iv, 177) and the preceding *Appendix*.

The following is Mesue's list of Melanogogues:

		<i>Clementer.</i>			<i>Valenter.</i>
Melanogoga	{	Stæchas.	Fructus et Flores	{	Balanus Myrepsica.
		Aqua lactis.			Centaurium.
		Fumaria.			Colocythis.
		Epithymus.			Cocccum Gnidium.
		Thymus leviter, magis phleg.			Genista.
		Polypodium.			Ricinus.
Jus gallorum phleg. cum phleg.	melanogogum cum melanogog.	Senna.			
			Terrea	{	Armenus lapis.
					Cyanus lapis.
					Nitrum.
					Salis genera.

Of these medicines, the only one which we owe to the Arabians is *Senna*. Mesue, it is true, quotes Galen as an authority on it, but this is most probably a mistake, as no mention of it is now to be traced in any part of his works. Averrhoes, accordingly, ranks it among the newly-discovered medicines. He says, that it is both phlegmagogue and cholagogue. Serapion and Rhases give nearly the same account of it. They state the minimum dose of the powdered leaves at one drachm, and of the decoction at five drachms. Mesue directs us to prepare a vinous tincture by infusing the leaves in musk. He recommends us to correct its nauseousness and unpleasant effects by the addition of ginger, and other cordials. He says that it cleanses the liver and spleen. Actuarius briefly notices it. He says it evacuates bile and phlegm. (Meth. Med. v, 8.) See Appendix. The Arabian authors represent the lapis lazuli to be the same as the lapis armenus of the Greeks. We have stated what we believe to be the truth of the matter in the preceding commentary. Margravius, in his enumeration of melanogogues, makes a distinction between them:

Melanogoga—

Sunt Indiæ balani, lazuli lapis, armenusque,
Senna, polypodium queraum, helleborusque, epithymum.

COMM. Averrhoes states that the lapis lazuli is the most potent medicine of this class. (Collig. v, 43.)

On Phlegmagogues. Mesue's list is as follows :

	<i>Clementer.</i>		<i>Valenter.</i>	
Phlegmagoga	{	Cnicus.	{	Euphorbium.
		Lupulus.		Opoponax.
		Hyssopus.		Scammonium.
		Eupatorium etiam cholag.		Sagapenum.
		Lachryma		

Serapion directs us to administer these medicines to persons of a cold habit, in cold seasons of the year, to those affected with anasarca and apoplexy, in sciatica and hemorrhages. His list is little different from our author's. Margravius enumerates the phlegmagogues as follows :

Phlegmagoga—

Carthamus, agaricus, turpeth, mechoaca, jalappa,
Emblica, belliricæ, chebulæ, colocynthis, amara,
Hermodactylus, euphorbium, opoponax, sagapenum.

On Hydragogues. The hydragogue properties of the elder-tree are commended by Boerhaave and Sydenham. See the section on Dropsy in the Third Book.

There is some difficulty in determining what the cneoros was. We are inclined to think that it was the *cassia fistula*, the medicinal characters of which, as stated by Mesue among the Arabian, and Prosper Alpinus among the modern, authorities, correspond with the account of cneoros given by our author.

Gum ammoniac is an ingredient of the purgative salt, a receipt for which is given by Apicius. It also enters into the sales purgatorii of Myrepsus. (ii, 9 and 10.) See the commentary on the next Section.

Prosper Alpinus says of the *coccum gnidium*, or fruit of the thymelæa, that in doses of fifteen grains it is a strong purgative, and evacuates principally serous humours in dropsy. He reckons the squama æris among the drastic purgatives.

Serapion's account of the hydragogues is nearly the same as our author's. The following is Margravius's list of them :

Esula, gratiola, atque ireos succus, mechoaca,
Post ebuli semen, et succus, cortexque elaterium,
Soldanella virens, et gummi gutta, jalappa.

SECT. V.—ON COMPOUND PURGATIVES.

Pills from aloes. Of the medullary part of colocynth, p. j; of the juice of wormwood, p. j; of aloes, p. j; of scammony, p. ij; make with water pills of the size of a chick-pea. The dose xj grains.

The oxymel of Julian. Of rue, oz. iij; of marjoram, oz. iij; of the hair (capillary-leaves?) of thyme, oz. iv; of dill, oz. iss; of iris, oz. j; of the root of mandrake, oz. iss; of agaric, oz. ij; of fatty dead pines, oz. xij; of the granum Cnidium, oz. iv; of lathyrides, oz. iij; of alypias, oz. iij; of polypody, oz. ij; of the cassia-leaf (malabathrum), oz. j; of costus, oz. j; of spikenard, oz. j; of rha Ponticum, oz. iss; of squills, oz. iij; of the tops of the elder-tree, oz. iij; of canopus, which is the bark of elder, oz. iij; of asarabacca, oz. j; of pennyroyal, oz. iij; of dodder of thyme, oz. ij; of hellebore, oz. ij; of sweetflag, oz. ij; of water-parsnip, oz. j; of amomum, oz. j; of St. John's wort, oz. j; of cumin, oz. j; of anise, oz. ij; of vinegar, ten sextarii; of honey, five sextarii: macerate the herbs in the vinegar for three days; then, having boiled it until more than one half be consumed, add the honey, and having strained, add the lathyrides, the costus, the granum Cnidium, and the spikenard triturated, and, if you please, after it is fully boiled, the oxymel. The full dose is oz. j; or according to the patient's strength. It is useful in gouty affections and epilepsies; and when we require at the same time to evacuate or dislodge thick humours.

The purgative hydragogue from cloves. Of aloes, of dodder of thyme, of cloves, of granum Cnidium, of stone-parsley, of rha Ponticum, of each, oz. ss; of euphorbinm, scr. iv; of honey, q. s. The dose is one spoonful.

The purgative medicine from rhodomel, of Alexander. Of the juice of roses, two sextarii; of honey, one sextarius; of scammony, oz. iv. A full dose is five spoonfuls, a small, two, a medium dose three spoonfuls.—*Otherwise:* of honey, lb. j; of the juice of roses, lb. j; of pepper, dr. ij; of scammony, dr. viij; of mastich, dr. iv; and of ginger, dr. ij.—*Otherwise,* one which I use: of spikenard, of asarabacca, of dodder of thyme, of each, oz. ss; macerate in a hemina of water for three days; and having boiled it to a moderate degree, mix with the water

of the juice of roses, half a sextarius; of honey, half a sextarius; and having boiled it until it acquire consistence, add scammony to the amount of oz. iss.

A purgative medicine from quinces. Of roasted quinces, oz. iv; of pepper, oz. ss; of scammony, dr. j; of honey, oz. v. Having triturated it, give one spoonful, according to the strength.

The stomachic purgative from citrons. Boil of the bark of a citron, and of the flesh of the same, lb. j, in a sextarius and a half of water, until a third be left; add half a sextarius of honey, and having boiled until it acquire the consistence of honey, sprinkle of the powder of long pepper, oz. j; of scammony roasted in leaven, oz. j.

The purgative called Buccellatus. Of baked scammony, oz. j; of pepper and of parsley-seed, of each, scr. j; of fennel, of anise, of each, oz. j; of honey, lb. j; having roasted it moderately, give in hippocras to the amount of one ounce.

Purgative olives. Of scammony, oz. j; of pepper, oz. j; of dodder of thyme, of toasted cumin, of stone-parsley, of rue, of the green leaves of mint, of each, dr. iv; of laserwort, dr. j; of dates, oz. v; of honey, oz. v; of vinegar, two heminæ; of pickled olives (namely of schistous), one sextar. Some add a moderate quantity of fish-sauce. The dose is v, vij, or ix.

A purgative trochisk. Of scammony, dr. iv; of euphorbium, dr. iv; of the cassia-leaf (malabathrum), dr. ij; of pepper, dr. ij; of honey, lb. j. The dose is oz. j.

A purgative and stomachic posca. Of cumin, of fennel, of each, oz. j; of pennyroyal, of parsley, of anise, of each, oz. ss; of dodder of thyme, of scammony, of each, oz. j; of salts, oz. ij. The full dose is two scruples in the oxycrate. Some add also of euphorbium, scr. iv.

A purgative wine for dropsical cases. Of squills, oz. iij; of parsley-seed, oz. vi; of pepper, dr. j; of the root of capers, dr. iv; of the granum Cnidium stripped of its bark, dr. j; of the leaf malabathrum, two balls; of wine, twelve heminæ; of honey, oz. iij. Having pounded the squills, macerate in wine, and mix the other things when triturated.

Purgative salts. Of common salts toasted, dr. vj; of parsley-seed, of ginger, of dried bread, of each, scr. vj; of anise, of pepper, of each, oz. ss; of scammony, of dodder of thyme, of each, oz. j. The dose is one spoonful.

The podagric purgative from hermodactylus. Of hermodactylus, oz. iij; of anise, of Ethiopian cumin, of bishop's weed, of the clusters of thyme, of white pepper, of ginger, of each, scr. iij; of dodder of thyme, oz. ss; the dose is scr. iv; some give scr. vj. It is administered in the morning with hippocras, honeyed water, or strong wine heated.

The same purgative otherwise. Of hermodactylus, oz. j; of Ethiopian cumin, of anise, of agaric, of ginger, of each, scr. vj; of mastich, scr. ij; of spikenard, scr. ij; of musk, one siliqua; of cnicus, scr. ij. The dose is scr. iv with hydromel. We reject scammony, because it is bad for the stomach. But if more evacuation be required, mix with the dose three siliquæ of scammony; give after the bath.

Pills from the lapis Armenicus, given principally in arthritic cases. Of aloes, oz. iv; of scammony, oz. vj; of agaric, oz. j; of dodder of thyme, oz. j; of lapis armenicus, scr. xij; of cassia, oz. j; of spikenard, oz. j; of baked squills, oz. ij; of saffron, scr. xij; add to rhodomel. The dose is scr. ij.

The purgative from coronopodium, applicable in the same cases as that from hermodactylus, a stomachic. Of ginger, scr. ij; of pepper, scr. j; of agaric, scr. j; of the internal part of cnicus, scr. iv; of the root of buckthorn plantain (coronopodium), scr. vj; the dose is scr. iij, but to those persons whose belly is difficult to move, twenty-three siliquæ, which make altogether seven oboli, or nearly eight. After evacuation, having bathed, let them take eggs and bread for food.

That from Cyrenaic juice, for quartans. Of Cyrenaic juice, of pepper, of ginger, of the leaves of rue, of each, dr. j. The dose is the size of a filbert.

A purgative pap, useful in cases of œdema and aggravated elephantiasis, and when one wishes to dislodge a thick and viscid humour. Having cut up two colocynths, evacuate the seed, and allowing the medullary part to remain, fill them with sweet oil, and covering them up with their proper covers allow them to remain a night and a day. On the following day, having evacuated the oil, boil the colocynths in water until they are reduced to a soft consistence; then throw them away, and the oil being mixed with water, add to it three oboli of black hellebore, and of scammony, dr. j; but boiling along with them a pap of similago, or dried bread pounded, and then give

of it to the patient, who has been formerly restricted to a simple diet, to the size of eight, ten, or at most fourteen filberts; and let him drink hot water.

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COMMENTARY. It may be proper in this place to apprise the reader of the reason why he will not find the remainder of the work so copiously illustrated by notes as the preceding parts of it. The combination of simple medicines in pharmaceutical preparations is so arbitrary, and so little regulated by any fixed principle, that it is seldom we can find any two authors exactly agreeing as to the ingredients which enter into any one preparation. Now to follow all the ancient writers on pharmacy through all their complex formulæ, and point out every little difference which prevails among them, would be a very wearisome task, and one which would scarcely recompense us or our readers for the time and attention which such an undertaking would necessarily demand; and neither is it much required, since, as will be seen, our author's system of pharmacy is sufficiently copious and accurate for all practical purposes. We shall therefore be content with giving a general explanation of each class of these medicinal preparations, and only offer some occasional remarks on a few of the more important articles.

Under this head we shall give some account of the *Halatia Cathartica*, or *Purgative Salts* of the ancients. The ἅλας κοινὰ πεφρυγμέναι are the same as the sal commune frictum of Apicius. Humelbergius thus explains it: "*fricti*, id est cremati et torrefacti." The following is Apicius's receipt for the "*Sales conditi ad multa*:" Of common salt roasted, lb. j; of sal ammoniac roasted, lb. ij; of white pepper, oz. iij; of ginger, oz. ij; of bishop's weed, oz. iss; of thyme, oz. iss; of parsley-seed, oz. iss. The purgative salts of Aëtius contain sal ammoniac mixed up with many purgative and cordial medicines, such as scammony, laserwort, parsley-seed, ginger, pennyroyal, spike-nard, and pepper. (iii, 109.) These are the ingredients of a sal purgatorius recommended by Actuarius. (Meth. Med. v, 10.) Myrepsus gives prescriptions for various purgative and stomachic salts. They all consist of sal ammoniac, or common salt mixed with scammony and aromatics in different proportions. (Sect. ii.) See also Haly Abbas. (Pract. x, 10.)

SECT. VI.—ON THE MANAGEMENT OF THOSE WHO TAKE PURGATIVE MEDICINES; AND WHAT IS TO BE DONE TO THOSE WHO ARE NOT PURGED BY A PROPER DOSE OF PURGATIVES.

In general when any of the drastic purgatives is to be taken, the medicine is to be given to the patient with an empty stomach, and after digestion has been performed; and he is to be prevented from sleeping until it has been wholly purged off, and if possible he should make moderate motion, and abstain during the time from all food and drink, until the purging is over.

From the works of Philagrius. But if he cannot endure abstinence from food, either because the mouth of the stomach is troubled with bile from long fasting, which has preceded, or any such cause, we must give him bread out of diluted wine, or the juice of ptisan, or of chondrus, not after the evacuation has begun, lest it spoil in the stomach, but straight-way after the medicine has been taken; for in this way by its weight it contributes to the speedy evacuation of the medicine. But if, after taking any of the laxative medicines, one does not purge nor evacuate, provided the case be not at all serious, we need not be very solicitous about it; but if the greatness of the disease be urgent, or the patient experiences acute tearing pains with distension of the belly, we must necessarily administer a clyster. But if even thus the belly is not evacuated, and there is a pungent pain and disorder of the body, he is to be bathed and rubbed freely with oil; or if he feels full and heavy, a vein must be opened, more especially if he is of a sanguineous habit of body, and if his eyes be red and prominent, not naturally but incidentally, owing to his having drunk the medicine. When none of these symptoms trouble him, but he experiences a gnawing and lancinating pain, he may take food immediately after the bath, and drink wine freely, and in the meantime he is to receive a clyster, if he does not settle; and again he is to be bathed. The oil used in the clyster, should be that of rue or prepared from some other of the carminative medicines.

COMM. COMMENTARY. Hippocrates, as Galen mentions, recommends a draught of ptisan to be swallowed immediately after taking a purgative medicine, in order to facilitate the operation of the medicine and wash away any particles of it which may lodge in the intestines. Both forbid it to be given after the operation has commenced, as it tends only to blunt the powers of the medicine. Galen remarks, that sometimes a purgative does not operate, either from idiosyncrasy of the patient, or from the smallness of the dose, or from the intestines being blocked up by indurated feces, which must be removed by means of a clyster before the medicine can operate. At other times, he adds, the medicine is determined to the kidneys, or is digested and converted into food. As all purgatives are bad for the stomach, he recommends us to weaken the impression of them by the mixture of aromatic seeds, which possess attenuating and cutting powers—*Quosnam oportet purgare, &c.*

Oribasius treats fully of this subject in two extracts from the works of Galen and Ruffus. Ruffus directs us, when the bowels are difficult to move, to give beforehand a soup of shell-fish, with mallows, beet, and the like, or to administer a clyster. He forbids us to give purgatives to persons who are apt to vomit. (Med. Collect. vii, 26.)

Mesue has treated more fully of all the circumstances connected with the administration of purgatives than any other ancient author. When the operation of the medicine is retarded by flatus, or the bad state of the humours, he recommends us either to administer a clyster or give an emetic. When this arises from debility of the expulsive faculty of the intestines, he directs us to give, first, a moderate draught of cold water, and then some astringent potion, such as one from quinces, or pears. When the passage is obstructed, he directs a clyster to be administered; and in this case he forbids cold water to be given, as it will increase the contraction of the intestine. When violent pains are excited in the stomach by the medicine, he recommends an emetic, and if in the bowels, a clyster. (Canon. Univers. iii.) See also Avicenna (i, iv, 8), and Rhases (Contin. xii.)

SECT. VII.—ON THE TREATMENT OF HYPERCATHARSIS.

In cases of hypercatharsis the body is to be rubbed and bathed in hot water, and before the bath a thin, pale-coloured and yellow wine is to be given (for such is the most speedily distributed), and bread soaked in it, and pomegranates. But if the evacuation continue, the limbs are to be bound with ligatures, extending from above downwards, and tightened so as to intercept the blood and spirits. A moderate quantity of the theriac from the flesh of vipers is also to be given. For it soon passes to the skin, and quickly gives a counter-determination to the defluxion of fluids upon the belly, and blunts the poisonous and deleterious property as it were of the cathartics. When in want of it we may use the theriac trochisks, and also that from seeds, and the antidote called Philonius. Cupping-instruments are also to be applied over the stomach, and cataplasms from polenta, and wine and honey; after which we must use the astringent epithemes. But they will derive the most sensible advantage from frictions of the whole body, and draughts of the aforesaid medicines. They must abstain from very cold and very hot air; for the one occasions a determination from without inwards, and increases the discharge, and the other dissipates and reduces the strength. But if the evacuation is increased by irritation in the bowels, we must apply cataplasms of the afore-mentioned things, and injections of emollients, such as the fat of geese, sweet wine, nard, and the like.

COMMENTARY. Oribasius remarks, that when an overdose COMM.
of a purgative medicine has been taken, it purges first yellow bile, then black bile, and at last blood. He recommends us, in cases of hypercatharsis, to give a hot draught, to apply tight ligatures and violent friction to the extremities, and cupping-instruments to the hypochondrium and back. When the patient can readily be made to vomit, he directs us to produce this operation by the administration of a copious draught of tepid water, and by putting a feather or the fingers down the throat. This is in accordance with Celsus's rule of practice: "Longas dejectiones supprimit vomitus." (ii, 8.)

COMM.

Hippocrates and Aëtius, in cases of excessive purging from the administration of medicine, recommend the bath and a light-coloured wine before and after it.

Avicenna lays down the rules of treatment with great precision, but they are mostly the same as our author's. After friction, cupping, tight ligatures, and restorative draughts have been tried, should the excessive purging continue he recommends us to administer narcotics. (i, 4, 7.) See, in like manner, Rhases (Contin. xiii, 1, 2), and Serapion (de Antid.) But Mesue is the author who has treated of all the symptoms connected with hypercatharsis at the greatest length. He recommends us to reserve narcotics as an *ultimum remedium*, as from the unseasonable administration of them much harm might result. He directs us to add cordials and aromatics to the narcotics. When the tenesmus is severe he directs us to stop it by suitable enemata and suppositories. For the debility and lassitude occasioned by too great purgation he recommends a tepid bath of sweet water, and friction with warm oils. (Canones Universales.)

SECT. VIII.—ON THE ANTIDOTES CALLED HIERA.

The hiera of Antiochus. Of germander, of agaric, of the medullary part of colocynth, of cassidony, of each dr. x; of opoponax, of sagapen, of stone-parsley, of the species of birthwort called clematis, of white pepper, of each dr. v; of cinnamon, of spikenard, of troglodytic myrrh, of the leaves of saffron, of each dr. iv; of honey, q. s. — *Another hiera.* Of the medullary part of colocynth, dr. xx; of baked squills, of agaric, of ammoniac perfume, of the bark of black hellebore, of scammony, of St. John's wort, of each dr. iij; of dodder of thyme, of dried polypody, of bdellium, of aloes, of germander, of horehound, of cassia, of each dr. viij; of troglodytic myrrh, of opoponax, of sagapen, of stone-parsley, of the common long, and white pepper, of cinnamon, of saffron, of castor, of the long birthwort, of each dr. iv; of honey, q. s.

The hiera of Justus. Of dodder of thyme, dr. xij; of horehound, of cassidony, of germander, of black hellebore, of scammony, of agaric, of long pepper, of baked squills, of each

dr. xvj; of euphorbium, of the medullary part of colocynth, of aloes, of saffron, of gentian, of stone-parsley, of ammoniac perfume, of sagapen, of each dr. viij; of opoponax, of poley, of cinnamon, of myrrh, of spikenard, of the flower of the rush, of pennyroyal, of each dr. iv; of long and of round birthwort, of each dr. ij; of honey, q. s. The dose is two, three, or four scr., with honeyed water and salts.

The hiera of Galen. Of germander, of long pepper, of white pepper, of cassidony, of black hellebore, of scammony, of spikenard, of baked squills (and some of dodder of thyme), of each dr. xvj; of myrrh, of saffron, of ammoniac perfume, of euphorbium, of each dr. viij. Mix with honey.

The hiera of Ruffus. Of sicyonia, or the medullary part of colocynth, dr. viij; of germander, dr. x; of sagapen, dr. viij; of stone-parsley, dr. v; of round birthwort, dr. v; of white pepper, dr. v; of cinnamon, dr. iv; or of cassia, dr. viij; of base horehound, of saffron, of poley, of myrrh, of each dr. iv; of honey, q. s.

The hiera of Archigenes. Of horehound, of agaric, of germander, of the medullary part of colocynth, of cassidony, of each dr. x; of opoponax, of sagapen, of stone-parsley, of round birthwort, of white pepper, of each dr. v; of cinnamon, of spikenard, of myrrh, of the cassia leaf (malabathrum), of saffron, of each dr. iv; pound the dry things together, and strain. The opoponax, sagapen, and myrrh, being bruised, are to be put into a mortar to macerate with honeyed water for one night; then triturate and add the dry things; then mixing them with the finest honey lay them up in a glass or leaden vessel. This is the common method with all the hieræ. The full dose of them is dr. iv. Add to it also of salts, dr. j; of honey, two cyathi; of water, q. s. If we wish to make those compositions of this class which have not scammony more purgative, we must add to each of them an obolus of it.

COMMENTARY. The hieræ, for the most part, consist of COMM.
drastic purgatives, combined with aromatics. There is a great variety of these compositions described in the works of the ancient writers on pharmacy. Galen makes mention of an aloetic hiera, which was much used by the celebrated Archigenes. The following is his prescription for it: "R. Aloes, dr. c;

COMM. cinnamomi, nardi, xylobalsami, mastichæ chiæ, asari, croci, ā ā dr. vj." Galen remarks, however, that the proportion of aloes is too great, and recommends us to substitute xc or lxxx dr. instead of the quantity directed. (De comp. Med. acc. loc.) Mesue describes the composition of 6 hieræ, Haly Abbas of 5, and Serapion of a much greater number. But for variety, Myrepsus surpasses all the other authorities. He describes the composition of 30 hieræ. The following is his receipt for the *Hiera Picra Galeni*: "R. Aloes flavæ, dr. xivss.; cinnamomi, croci, costi, floris junci odorati, xylobalsami, cassiæ fistulæ puræ, mastiches, asari, rosarum, amomi, absinthii, ā ā dr. j; Tere subigendo cum mellis Attici q. s." Moses Charras's receipt for it is very little different. (Royal Pharm. i, 20.)

SECT. IX.—ON LINIMENTS TO BE APPLIED TO THE ANUS, AND PURGATIVE APPLICATIONS TO THE NAVEL.

A liniment to the anus for the discharge of flatulence. Rue is triturated with honey so as to form one juice, and the inner parts of the fundament rubbed with it. It becomes more efficacious if a small quantity of cumin and natron, or the juice of sowbread be added. It is daubed upon flocks of wool and introduced; or a suppository is formed with the addition of honey. For the flatus escapes freely, affording relief.

A liniment to the anus, evacuating the belly; called Chezananche. Alum being triturated with honey is to be boiled until it become yellowish, and the anus is to be rubbed with it. It forces a free evacuation of many things, but not without trouble.

An application to the navel as a laxative of the bowels. Of sowbread, dr. iv; of natron, dr. iij; of black and white hellebore, of each, dr. ij; of colocynth, dr. iij; of scammony, dr. ij; of the juice of elaterium, dr. iv; of granum Cnidium, dr. iv; of fatty dried figs, oz. ij; of the gall of bulls, oz. j. *Another* very excellent one: of elaterium, of lathyrides, of galbanum, of sowbread, of black hellebore, of each, dr. iv; of the medullary parts of colocynth, dr. viij; of fresh wild cucumber, of

scammony, of granum Cnidium, of each, dr. ij ; of spurge, dr. ij ; of turpentine, dr. iij ; mix these with the gall of bulls, and use as a liniment. Some, by mixing with them of wax, oz. vij, and of Sicyonian oil, q. s., make it of the form of a plaster.

COMMENTARY. It is clear that the liniments applied to the anus were a sort of suppositories. The *Chezananche* is described in much the same terms as our author's by Myrepsus. The rest of his compositions of this class are also very similar to our author's. (xxvi, 2.) Actuarius gives a full account of them. (Meth. Med. v, 9.)

Purgative applications to the navel were much trusted to by the ancient physicians as laxatives, but they are now seldom used. The late Dr. Kerr, of Aberdeen, however, sometimes had recourse to them, and spoke highly of their efficacy.

SECT. X.—ON EMETICS, AND THE MODE OF ADMINISTERING HELLEBORE.

Persons in health have recourse to emetics when the system is loaded with too much food or humours, and those in acute diseases, when troubled with phlegm or the like. But neither persons in health nor those in acute diseases should be permitted to use emetics, but only in chronic affections, more especially in cases of indurations, and for such matters as require to be dislodged by forcible means, as in gout, epilepsy from the stomach, elephantiasis, dropsy, melancholy, and the like. They are improper in spittings of blood, weakness of the stomach, and suffocative complaints. The readiest of the emetics is the oil of privet (oleum Cyprinum), the fingers or some feathers being dipped in it and pushed down the throat. And dr. vij of Celtic nard taken in honeyed water evacuate upwards powerfully. In like manner v or vj dr. of betony drunk in honeyed water, and three green leaves of the daphnoides pounded and eaten. And an obolus of elaterium taken in a draught of water, purges phlegm and bile upwards ; and fifteen grains of stavesacre with thick honeyed water. Of plants with bulbous roots, those usually eaten if taken raw, and the boiled

roots of narcissus purge upwards. And the upper part of the root of parsley, namely, that which is exposed to the air, when eaten, purges upwards. Some call it chamæraphanum. The under part of the root purges downwards. When the whole is eaten it purges both upwards and downwards. Radishes purge less than the aforementioned, but more usefully. They are to be taken when very acrid and fresh, and cut into small parts; and having allowed them to soak in oxymel for two or three hours, as many of the pieces as possible are to be swallowed, so that one may vomit three or four times after supper, and once if fasting. But after, large draughts of oxymel are to be swallowed; and after walking about for two hours, and drinking tepid water, one may compel one's self to vomit by inserting the fingers or some feathers into the throat.

Modes of administering hellebore. Hellebore is to be given in protracted and severe complaints, and when all hope from other remedies is precluded, because the disease has proved stronger than them all. It is to be given in continued diseases, as dropsy, elephantiasis, cachexia, paralysis, and the like; and in certain complaints which attack at intervals, as epilepsy and gout. There being many modes of administering hellebore, the simplest, and rather the preparative for a course of hellebore, is this method: having perforated radishes with a reed, pieces of the dried roots of the finest white hellebore are to be inserted into the perforations, and having been allowed to remain for one night they are to be removed. Having cut the radishes in pieces they are to be given with oxymel, in the manner described, to the patient who has been accustomed before to emetics, and after an interval of the number of hours mentioned, he is to be forced to vomit. The established mode of administering hellebore is as follows: having allowed two ounces of the best hellebore to macerate in a hemina of water for five days, boil until only a third part of the water remain, and having expressed the hellebore, mix with the water an equal quantity of honey, and boil it until it thicken; and after the patient has been exercised with vomits in the manner described, give it to him when fasting, and after digestion has been performed, and the contents of the bowels evacuated,

either spontaneously or by one or two injections, according to his strength. But the most efficacious mode is this: having cut the roots of the hellebore into pieces resembling the seeds of Indian corn (for when reduced to a downy powder it occasions suffocation by its powerful action), give to those who are of a weaker constitution dr. ij, at most, or, at least, dr. j of the hellebore, in the juice of ptisan, of halica, or the like; but to those who are stronger, it is to be given in hot water or honeyed water. The purging begins after three or four hours; but when it is longer of commencing, it operates more effectually. When the vomiting is slow of beginning, give honeyed water to drink, and let the patient be compelled to vomit by inserting feathers dipped in oil into the throat. If even thus he will not vomit, let him be put into the bath. When vomiting commences, if it go on properly, we need not interfere; but if lancinating pains or convulsions supervene, we must give a mixture of water and oil to drink. For thus is an evacuation downwards occasioned (which otherwise sometimes takes place when hellebore has been administered), and they bear the concentration of the medicine better. When the patient falls into deliquium animi he is to be resuscitated by strong-smelling things and the like. Any other symptoms which may happen to occur are to be treated in a suitable manner. When the purging is excessive, they are to be allowed to take food and sleep, and do otherwise as mentioned in describing the treatment of hypercatharsis. But if it continue, cupping-instruments are to be applied over the stomach, and ligatures tied round the limbs. When the evacuation proceeds properly we must give to drink a moderate quantity of honeyed water, in order to wash away the superfluous particles of the medicine. After a little while, give some food of easy digestion. When apprehensions are entertained of the administration of hellebore by the mouth, and the medicine is by all means required, Antyllus uses the following injection: having allowed two drachms of white hellebore to macerate in a sextarius of water for a day and a night, on the day following we are to boil the hellebore in the water until but a half remain. Then we are to inject it by the anus so as to produce vomiting. It purges upwards somewhat more feebly than when the medicine is drank. After sufficient purging, an acrid suppository is to be

introduced so as to occasion the discharge of the injection and stop the vomiting. After the discharge of it, an injection of honeyed water is to be given once or twice in order to wash out the gut. The same person says: A suppository is made of white hellebore, pounded and strained, and mixed with boiled honey, which purges like the injection of hellebore. But the following is a better method; for we have it in our power to regulate the purging: The quantity is to be dr. ij of hellebore, and the suppository is to be wrapped round, or bound with some flocks of wool firmly. The head of this ball of wool is to be allowed to hang out of the anus, in order that after sufficient purging it may be in our power to remove the suppository. This method purges effectually, and neither occasions convulsive suffocation nor any other dangerous symptom.

COMM. COMMENTARY. The gentle emetics used by the ancients on ordinary occasions have been treated of in Book I. We have now to give some account of the more drastic emetics.

Galen and Oribasius recommend, as effectual emetics, the bulb of the narcissus, the seed of the anagyrus, and the fleshy part of nut ben. The Unguentum irinum and the U. cyprinum are stated by Aëtius and most of the other authorities to be safe and effectual emetics. Aëtius also commends the decoctions of hyssop and of thyme, the seed of bastard saffron pounded with oily grain, the oils of sesame, radishes, and narcissus, and the leaves of the daphnoides. Nitre or an impure carbonate of soda was also a medicine in general use as an emetic. The Lemnian earth was often given as an emetic, being a sort of red ochre. Avicenna and Rhases make mention of a species of black turbith, called *gilbenec*, which they describe as an effectual emetic, but somewhat unsafe. See the Appendix. Avicenna says that tickling the throat with a feather, smeared in the oil of sesame, readily excites vomiting. He remarks that vomiting is promoted by motion and stopped by rest. The *bulbus emeticus* was in general use to produce vomiting. Serapion directs us to give it boiled along with honey. He also commends the *nux vomica* as an emetic when given along with a small quantity of salt. We need scarcely say that it is now seldom or never given for this purpose, although it still holds a place in some of the continental

systems of *Materia Medica*. The earlier modern writers on medicine recommend it freely as an emetic. See Guido de COMM.
Cauliaco. (vii, 1.)

But of all the medicines of this class the *white hellebore* was undoubtedly the most powerful, and in important cases was the most generally used. We must, therefore, take this opportunity of describing the forms in which it was administered. Hippocrates appears to have been familiarly acquainted with it as a medicine, and to have administered it very freely. Aretæus concludes his work with a spirited eulogium on hellebore; "But in all inveterate chronic diseases, when other remedies have failed to produce the effect, this alone is to be depended upon for the cure. For, in power, white hellebore resembles fire, and with still greater powers hellebore, by pervading the inward parts, produces freedom of respiration from obstruction, a healthy colour from paleness, and plumpness of body, in place of emaciation." But on the modes of administering hellebore, the fullest and most accurate of the ancient authorities is Oribasius, whose interesting account of it we shall now attempt to give in an abridged form. His description is mostly taken from Archigenes, Herodotus, and Antyllus. He sets out, then, with giving directions about preparing the patient for entering upon a course of hellebore. This consists principally in putting him upon a regulated diet, and administering occasionally some of the gentler emetics, especially the one from radishes. He, then, describes at considerable length the marks by which good hellebore may be recognised. When broken, he says, it ought to be white in the inside; and when taken into the mouth it ought to be felt hot and acrid, but at first of a sweetish taste; thereafter gradually becoming more stimulant, and provoking a great flow of saliva, and that frequently attended with vomiting. He recommends the following preparation of hellebore as being efficacious and perfectly safe: A pound of hellebore is to be macerated for three days in six heminæ of water, which we are to boil at a gentle fire until a third part of the water is consumed, when the hellebore is to be expressed; then two heminæ of honey are to be added to the decoction, which is to be again boiled until it no longer stain the finger. Of this preparation, the dose, to those who do not require strong purging, is two cochlearia,

COMM. but to robust persons, the quantity called a mystrum. Another of his authorities, Antyllus, directs us to allow five drachms of the shavings of hellebore to macerate for three days in half a hemina of rain-water, after which it is to be strained and heated in a double vessel. Oribasius also mentions that the medicine may be given in a coarse powder. He afterwards lays down the rules of treatment when the action of the medicine superinduces dangerous symptoms. We need not go over this part minutely. Suffice it to say that, according to circumstances, he directs us to provoke vomiting by tickling the throat with feathers dipped in one of the emetic oils; to open the bowels with oily clysters; and to rouse the patient when in a state of stupor, by stimulants, restoratives, shaking him, pinching him, or tossing him in a garment. He recommends hellebore in cases of mania, melancholy, inveterate pains of the hip and other joints, epilepsy, catalepsy, vertigo, chronic headache, lethargy, leprosy, and other cutaneous diseases. He also praises it as a remedy in hydrophobia. (Med. Collect. viii.)

Aëtius states that hellebore is given in infusion, in decoction, and in substance, either cut into pieces or pounded and sifted. When administered in pieces it soon begins to act as a purgative, generally within two hours, bringing away bile and phlegm without much trouble, and after four or five hours the medicine itself is generally vomited up, and the purging stops. When given in a fine powder it acts violently but slowly, so that four or five hours have generally elapsed before its operation commences. He adds that in all its forms it evacuates bile and phlegm, but that it is attended with danger of bringing on convulsions or hypercatharsis. On the infusion he remarks, that it suits with old persons and children, to those who have a feeble constitution, and for the cure of elephantiasis. Five drachms of cut hellebore are to be allowed to macerate for three days in half a hemina of rain-water, after which it is to be strained and heated, when the whole of the infusion is to be taken. The decoction he recommends to be given to persons of a firmer habit of body, and in cases of mania and melancholy. It is to be thus prepared: A pound of hellebore, cut into pieces, is to be allowed to macerate for three days in two sext. of rain-water; after which it is to be

boiled gently upon the coals until only a third remain; then, having strained it, we add to the decoction two pounds of scummed honey, and boil to the consistence of honey. It may be given as a linctus to the amount of a large spoonful, or mixed with hot water in a draught, when it will not superinduce spasms, contractions, or hypercatharsis. To those who stand in need of more violent concussion, who are of a strong habit of body and possess fortitude, and vomit readily, it is given cut into pieces; and to persons of still greater determination, or who have been accustomed to it, in the form of a sifted powder. It is to be cut into pieces of the size of malt or bran, and taken in ptisan or barley-water, a draught of mead or plain water being swallowed after to wash it away. The maximum dose of it is *dr. iiss.* Hellebore may also be pounded and sifted in a fine sieve, when the larger particles may be given in halica (barley-water?) or pottage; but the smaller particles may be formed into pills with boiled honey. (iii, 131.) Macer Floridus concludes that *scr. ij.* is a sufficient dose of the white hellebore. (De Herb. vir.)

The Arabians give this medicine in the same forms and under the same circumstances as the Greeks. They estimate the dose of it at from *dr. j* to *dr. ij.* Mesue forbids it to be given in the form of a powder. He and Haly Abbas, however, recommend it in pills with hiera, colocynth, agaric, and various aromatics for the cure of elephantiasis and melancholy. Serapion states that there is great danger of its inducing convulsions if improperly administered. Avicenna's account of the modes of giving it is very interesting.

Upon this subject we shall give the observations of the celebrated Prosper Alpinus: "*Elleborus albus inter medicamenta vomitoria perpetuo apud omnes gentes præcipuum locum obtinet, fuitque in usu elleborismus, id est, purgatio per elleborum album, admodum familiaris apud antiquos, ad morbos sanatu difficillimos tollendos, cujus quidem usu complures ab affectibus ferè prorsus insanabilibus sanabantur, atque ita cito, et probè, ut eæ sanationes miracula viderentur; unde olim antiquorum illorum medicorum laus insigniter augebatur. Nunc vero non sine ægrotantium damno, atque magno artis medicæ dedecore, ipsius usus apud omnes ferè medicos obsolevit, qui nunc neque audent, neque sciunt, quomodo veratrum*

COMM.

COMM. album exhibendum est." (Med. Meth. iii, 10.) He gives the following prescription for making a preparation of hellebore: "Nonnulli ex recentioribus parant elleborum accipientes, ʒiiss; vini dulcis aromatici, lb. j; turis, ʒiiss; hyperici, ʒj; sacchari, ʒij; bulliant ad consumptionem mediatatis. Cujus decocti dant uncias tres." He likewise approves of giving hellebore by boiling it in oil. (Ibid.)

The following is a very simple receipt for the preparation of the mel helleboratum or honey of hellebore: "Take of the roots of white hellebore, dried and sliced, one pound; of clarified honey, three pounds; of water four pints. After steeping the roots three days in the water, boil them a little while, then boil the liquor, well pressed out and strained, with the honey to a due consistence." Dr. Pemberton (London Dispensatory, A. D. 1746.) By due consistence is meant the consistence of honey.

SECT. XI.—ON THE DIFFERENT KINDS OF ANTIDOTES.

The Preface of Galen's work on Antidotes. Those compositions which cure affections not when they are applied externally, but when taken internally, are named antidotes by the ancients. There are three different kinds of them. The first are those which are administered for deleterious substances; the second, for those animals called venomous; and the third are the remedies for affections occasioned by bad articles of food. Some antidotes profess to fulfil all these three purposes, such as the one called theriac.

The preparation of the hedychrom, which forms an ingredient of the theriac. Of the bark of the root of aspalathus, of calamus aromaticus, of costus, of asarabacca, of xylobalсам, of valerian, of amaracus, of mastich, of each, dr. vj; of carpobalsam, dr. ij; of marum, dr. xvj; of the flower of the rush, dr. ij; of cinnamon, dr. xxiv; of amomum, of cassia, of rheum, of each, dr. viij; of Indian nard, of the cassia leaf (malabathrum), dr. xij; of myrrh, dr. xxiv; of saffron, dr. xij; mix with fine wine, and form into trochisks, having smeared the finger with opobalsam.

The preparation of trochisks of squills. Having covered over

the squills with clay or dough, roast it moderately, and taking of the inner parts of it, p. ij; and of the flour of tares, p. j; and having triturated in like manner, form trochisks.

The preparation of the theriac trochisks. Having chosen four or five vipers of a tawny colour, and recently taken, cut off their heads, and four fingers' breadth of the part next the tail, and having removed the skins and entrails, boil the rest in a new pot, with dill and a moderate quantity of salts, until the spines be separated from the flesh. Then removing and cleaning away properly the flesh from the spines, and having mixed with them an equal quantity of clean bread, and triturated them in like manner, form into small balls, having your fingers smeared with opobalsam, and cool in the shade.

The preparation of the theriac antidote. Of the trochisks of squills, dr. lxxij; of the theriac trochisks, dr. xxiv; of hedychrom, dr. xxiv; of cinnamon, dr. xxiv; of common pepper, dr. xxiv; of the juice of poppies, dr. xxiv; of dried roses, dr. xv; of water-germander, of rape-seed, of Illyrian iris, of agaric, of liquorice, of opobalsam, of each, dr. xij; of myrrh, of saffron, of ginger, of rhaponticum, of the root of cinquefoil, of calamint, of horehound, of stone-parsley, of cassidony, of costus, of white and long pepper, of dittany, of the flower of sweet rush, of male frankincense, of turpentine, of mastich, of black cassia, of spikenard, of each, dr. vj; of the flower of poley, of storax, of parsley-seed, of seseli, of shepherd's pouch, of bishop's weed, of germander, of ground pine, of the juice of hypocistis, of Indian leaf (malabathrum), of Celtic nard, of spignel, of gentian, of anise, of fennel-seed, of Lemnian earth, of roasted chalcitis, of amomum, of sweet-flag, of balsamum, of Pontic valerian, of St. John's wort, of acacia, of gum, of cardamom, of each, dr. iv; of carrot-seed, of galbanum, of sagapen, of bitumen, of opoponax, of castor, of centaury, of the species of birthwort called clematis, of each, dr. ij; of Attic honey, lb. x; of Falernian wine, oz. ij. Put into a mortar the opium, hypocistis, myrrh, sagapen, liquorice, storax, acacia, and opoponax, and having poured in some honey pound and dissolve: then pouring in wine so as to cover them, macerate for three days; then having pounded the others, unite them, and scum the honey. It is to be laid up in vessels of silver or glass, not quite full, and the covers taken off every day. In case of need

it may be used for persons bitten by venomous animals, and those who have taken anything poisonous, after seven years, a quantity of it, to the size of a filbert, being drunk twice a day, in three cyathi of wine. In like manner, to those who are in a dangerous state from some obscure cause, when the disorder in the body imitates the quality of a mortal poison, as is the case particularly in pestilential diseases, it is to be given once a day. But in all other affections, it is to be used from the tenth to the twentieth year. For coughs, pains of the chest or side, it is to be given at night, if free from fever, with wine and honey; but if feverish, with hydromel, to the extent of an Egyptian bean. In all cases of hæmoptysis, it is to be given morning and evening, to the size of an Egyptian bean; if recent, in oxycrate; or, if chronic, in the decoction of comfrey. In cases of flatulence, tormina, or cæliac affections, it is to be taken in the morning, to the size of an Egyptian bean, in hot water. It excites an intense appetite, and removes rigors, coldness, and vomiting of bile when drunk before the attack. It promotes menstruation, and expels the fœtus when dead, if drunk to the size of an Egyptian nut with honeyed water, or sweet wine, in which rue or dittany has been boiled. In the case of loss of voice, it is drunk alone, and with double the quantity of tragacanth in wine and honey, or sweet wine, being retained under the tongue and allowed to melt. For diseases of the spleen or liver, it is given with oxycrate; but if they are in a scirrhus state, with a cyathus and a half of oxymel, or vinegar of squills. For nephritic complaints, it is given with oxymel to the size of an Egyptian bean. In dysenteric cases it is given to the same amount, with the decoction of sumach, morning and evening. For dimness of vision it answers excellently thus: Mix oz. ij of the antidote, and of opobalsam, with one cyathus of honey, and after a little anoint with it. It is also used as a dentifrice. Many, for the sake of prophylaxis, take it at new moon to the size of a Grecian bean, after digestion, with a cochleare of honey and two cyathi of water. In like manner they use it when upon a journey they suspect that the air or water is bad.

Theriac salts. Take four female vipers recently caught; and then putting into a mortar one Italian modius of ammoniac or common salt, pound into thick pieces, along with it, of gen-

tian, lb. iss; of round birthwort, lb. iss; of the hair of the small centaury, lb. ij; of cardamom, of horehound, of each, oz. vj; of water germander, of parsley, of Cretan germander, of each, lb. j; of the seed of garden rue, sext. ij: unite these with a sufficient quantity of Attic honey, and throwing the half of them into a new pot, and then the four vipers alive, add to them fresh tender squills, cut into small pieces, and then join to them the remaining half of the mixture formerly mentioned. Then having covered up the pot carefully, make three or four perforations in its lid to allow the vapour to escape, that it may indicate to you the progress of the operation of roasting. At first much smoke will be seen issuing, fuliginous and very turbid, indicating that the fire is acting upon the animals. You must then take care lest you inhale any of this smoke, which is infected with the exhalation from the vipers. When this vapour has ceased, you may see a fine flame issuing through the holes, by which you may know that they are properly roasted. Then having removed the pot from the fire, and allowed it to cool for a whole day and night, take out the ashes, pound them carefully, and sift them along with these mixtures: of the seed of wild rue, of Cretan hyssop, of each, oz. ix; of the seed of fennel, of Celtic nard, of Scythian base horehound, of each, oz. vj; of Macedonian stone-parsley, of Indian leaf, of each, oz. iv; of amomum, of grapes, of the seed of horminum toasted, of each, oz. iij; of the shoots of marjoram, of the shoots of thyme, of each, oz. ij; of juniper berries, of white and of long pepper, of each, lb. j; of the root of laserwort, oz. x; of coriander seed, of ginger not perforated, of the seed or root of satyrium, of pennyroyal, of the seseli of Marseilles, of mint, of each, oz. vj; of cassia fistula, oz. ij; of cinnamon, oz. j. I, however, have made the preparation, so that I did not burn the animals, but mixed the trochisks from them, as related under the theriac, with those things which are burnt along with the vipers, that the bitterness which they have in them may be laid aside during the burning. I added just such a proportion of the trochisks as I conjectured to agree with the contents of the four vipers. And truly in this way they turned out excellent.

The Mithridatic antidote from scinks. Of troglodytic myrrh, of ginger, of cinnamon, of each, dr. x; of spikenard, of

frankincense, of shepherd's pouch, of opobalsam, of schœnanth, of costus, of cassidony, of seseli, of galbanum, of turpentine, of long pepper, of castor, of hypocistis juice, of storax, of the leaves of malabathrum, of each, dr. iv; of black cassia, of poley, of white pepper, of water germander, of carrot-seed, of carpobalsam, of cyphi, of bdellium, of Celtic nard, of gum, of stone-parsley, of opium, of cardamom, of the seeds of fennel, of gentian, of rose-leaves, of each, dr. viij; of dittany, of anise, of sweet flag, of valerian, of each, dr. iij; of Athamantic spignel, of acacia, of the belly of a scink, of the seed of St. John's wort, of each, dr. iss; of wine and honey, q. s. Prepare it in like manner as the theriac. Galen says, that it applies to the same cases as the theriac, with the exception of those who have been bitten by the viper, for there the theriac is more efficacious.

The antidote from different kinds of blood being a remedy against all venomous animals and deadly poisons. Of white and long pepper, of costus, of sweet flag, of valerian, of anise, of Cretan dittany, of each, dr. ij; of amomum, of opobalsam, of the seed of wild rue, of the seed of fennel, of Ethiopian cumin, of dill, of the dried blood of a male duck, of the blood of a kid, of the blood of a goose, of the blood of a female duck, of the seed of the wild rape, of each, dr. iij; of gentian root, of trefoil, of the schœnanth, of frankincense, of dried roses, of each, dr. iv; of cinnamon, dr. ij; of water germander, dr. viij; of stone-parsley, of poley, of myrrh, of nard, of each, dr. vj; of cassia, dr. iij; of Cyrenaic juice, dr. iij; of cassidony, dr. v; of asarabacca, dr. ij; of ammoniac perfume, dr. iij; of Athamantic spignel, dr. ij; of agaric, dr. ij; of carpobalsam, gr. xx; of boiled honey, q. s.

Simple oxymel. Of the most acrid white vinegar, sextar. j; of water, sextar. ij; of honey, sextar. j; boil to the consistence of the most liquid honey, despumating the honey.

The vinegar of squills. Of white squills cut into pieces, dried in the shade for forty days, and again cleaned, one mina; of good vinegar, sextar. xij. Put them into a vessel, cover it up, and allow to remain in the sun for sixty days; after which the squill is to be expressed and thrown away, and the strained vinegar laid up in a vessel. Some add one mina of squills to sextar. vj; others add the same quantity of green

squills to the vinegar, and allow them to remain in the vessel six months; and it becomes more penetrative. It is applicable for defluxions of the mouth, as a gargle, and when drunk, for many internal affections, excepting when there is ulceration, and for many other purposes.

The oxymel of squills. Of the internal tender parts of squills, lb. ij; of strong white vinegar, sext. xv; of pepper, of Macedonian stone-parsley, of each, dr. ij; of Cretan carrot, of bishop's weed, of anise, of Celtic nard, of lovage, of asarabacca, of cardamom, of spikenard, of amomum, of rha Ponticum, of each, oz. ss; of the seed of fennel, of cumin, of laserwort, of ginger, of pellitory, of Cretan hyssop, of costus, of pennyroyal, of each, oz. j; of green mint, one fasciculus; of green rue, five branches; of Attic honey, one sextarius; of rob, sext. ij; of green parsley, one fasciculus. Put the white inner parts of the squills bruised into the vinegar, and allow it to macerate seven days during the heat of the dog-days: then taking out the squills, which, if dried, are to be pounded, but if green, not pounded, add to the vinegar, and again, after seven days, having strained all, add the honey and rob to the vinegar, and having boiled to a proper consistence, lay them up in a glass vessel. This remedy is to be taken as a potion before food, or along with food for a sauce. It is much used.

Galen's medicine from squills, answering particularly with epileptics. Having broken down squills with your hands into small pieces, put into a vessel used for containing honey, and having covered it up properly, put it in a place exposed to the midday during the heat of the dog-star; forty days after the rising of the dog-star loose it, and you will find that the body of the squill is melted down. Taking, then, its juice, sweeten it with some very fine honey, and give every day a spoonful of it, if to children, a small one, but if to adults, a large one. But triturate the body of the squill itself with honey and give a spoonful of it. It is inferior in power to the juice.

The antidote of Philo. Of white pepper, dr. xx; of hyoscyamus, dr. xx; of the juice of poppies, dr. x; of saffron, dr. v; of pellitory, of euphorbium, of spikenard, of each dr. j; of Attic or any other fine, well-boiled honey, q. s. Give to adults the size of a filbert, to smaller persons, that of a bean,

and to children, the size of a chick-pea. It is an excellent anodyne and soporific medicine.

The Athanasian anodyne and pleuritic antidote, from Orbasius. Of cassia, dr. viij; of spikenard, of amomum, of saffron, of opium, of storax, of myrrh, of costus, of each, dr. iv; of despumated honey, q. s. The dose the same as that of the antidote of Philo.

The antidote from two peppers of similar powers. Of cardamom, of castor, of opium, of each, dr. iij; of myrrh, of costus, of white and of long pepper, of galbanum, of each, dr. iij; of saffron, dr. iij. Mix with well-boiled honey, and give to the size of a bean.

The antidote from poppy-heads and rob. Having macerated, in a sextarius of rob, eight or ten green, but not watery heads of poppy the day after they are gathered, and an ounce of liquorice for one day, boil until they are dissolved; and after they have acquired a moderate consistence, take from the fire, and put into a vessel, and use in the case of watchfulness, accompanied with fever, and when there is a thin defluxion from the head upon the chest.

The antidote from poppy-heads and honey. Boil the poppy-heads, as mentioned above, and the ounce of liquorice in oz. j of rain-water or spring-water until dissolved; and having squeezed it out, add to the decoction half a sextarius of honey and boil until it acquire consistence. Give it in those cases which, along with a mitigation of pain and the production of sleep, require purgative and detergent medicines, for the parts within the thorax, or about the lungs and kidneys.

The compound antidote from poppy-heads. Take of the water in which poppy-heads have been boiled, according to the above-mentioned proportion, sext. j; of sweet wine, two heminæ; of honey, lb. j; of saffron, of the juice of hypocistis, of each, dr. iv; boil to a proper consistence. That which is prepared from honey, poppy-heads, and quinces is more grateful to the stomach. It becomes more efficacious if along with the poppy-heads some melilot and liquorice be also boiled in the water.

A simple linctus or lohock from horehound, principally for consumptions. Boil a pound of the hair of horehound in six heminæ of water until but a third remain; then throw away

the herb, and adding to the water an equal quantity of honey, boil to the consistence of honey, and give one cochleare (spoonful).

A compound lohock from horehound. Of the hairy parts of horehound, of Illyrian iris, of hyssop, of pennyroyal, of liquorice, of parsley, of each, oz. ij; of fatty dried figs, oz. iij; of the kernels of the pine containing rosin, oz. iij; bruise the dry things into large pieces, and macerate with the figs in sextar. iij of water, and boil to a third part. Then having strained the water, add of honey, lb. ij, and boil to the consistence of honey.

The lohock from tares. Of bitter almonds, oz. ij; of the flour of tares, oz. iv; of hyssop, oz. iv; of iris, oz. ss; of toasted pine-nuts, oz. ij; of honey, sextar. j, or q. s.

The lohock called Dodecatheon. Of Illyrian iris, oz. iv; of tares, oz. iv; of hyssop, oz. ij; of nettle-seed, oz. ij; of liquorice, oz. ij; of fenugreek, oz. ij; of the bulbi, oz. iv; of toasted linseed, oz. iv; of gith, scr. xvij; of pennyroyal, scr. viij; of toasted pine-nuts, oz. ij; of pepper, scr. vj; of honey, q. s.

The antidote Sotira. Of spikenard, scr. xxxix; of myrrh, scr. xxvij; of saffron, scr. xxxvij; of castor, scr. xxxix; of opium, scr. xxxvj; of stone-parsley, scr. xlv; of anise, scr. ix; of parsley, scr. vij; of the schœnanth, scr. xxxvj; of cassia, scr. xij; of long pepper, scr. xij; of the seed of sinon, scr. vj; of storax, scr. xvij; of amomum, scr. xij; of seseli, scr. xij; of hedy-chroum, scr. xvij; of costus, scr. xvij; of asarabacca, scr. xvij; of honey, q. s.

The cough medicine from storax. Of amomum, of cassia, of each, oz. ij; of storax, of spikenard, of each, oz. iss; of saffron, of white pepper, of each oz. j; of honey, sext. j; give a spoonful.

The medicine of Philoxenus for empyema and chronic defluxions. Of turpentine, dr. xxvij; of nard, dr. xvj; of the oil of myrrh, dr. vj; of cardamom, of the bulbi, dr. vj; of saffron, dr. xij; of galbanum, dr. xvj; bitter almonds, lxxx; of honey, a hemina. It is given in water to drink to the size of an Egyptian bean.

The much-used antidote of Esdra; it is very desiccative. Of amomum, scr. vj; of saffron, scr. xvij; of the seed of carrot,

scr. iss ; of the seed of fennel, scr. iij ; of cassia, scr. iss ; of schœnanth, scr. iiiss ; of cinnamon, scr. iij ; of the juice of hypocistis, scr. ivss ; of sulphur, scr. v ; of poppy-seeds, scr. v ; of pellitory, scr. iij ; of stone-parsley, scr. iss ; of Illyrian iris, scr. vijss ; of the seeds of henbane, gr. xiiijss ; of spikenard, scr. vijss ; of the seeds of rue, scr. iss ; of dill, scr. iij ; of cardamom, scr. iij ; of dried roses, scr. ivss ; of the flower of nerium (it is, as it were, the flower-cup from which the rose of the *rose-bay* emerges), and of the rose of it, of each, scr. iij ; of Pontic rhubarb, scr. vj ; of gentian, scr. vj ; of hedychrom, scr. iss ; of tragacanth, scr. xv ; of buckthorn, scr. vj ; of the leaves of citron, scr. vj ; of the seed of basil, scr. iss ; of anise, scr. iij ; of euphorbium, scr. iij ; of Indian leaf, scr. ij ; of Celtic nard, scr. vj ; of spignel, scr. iij ; of costus, of myrrh, of each, scr. vj ; of bdellium, scr. xvj ; of the juice of southernwood, scr. xiiij ; of Syriac sumach, scr. xxvss ; of asarabacca, of the belly of a cormorant, of the jasper-stone, of each, scr. iij ; of pepper, scr. xv ; of castor, scr. iss ; of Cimolian earth, scr. vj ; of sison (bishop's weed?), scr. ix ; of storax, scr. ix ; of opobalsam, scr. xij ; of the herb seseli, scr. iss ; of honey, oz. xxviiij ; of wine, q. s.

The medicine from the flesh of quinces. Three pounds of clean quinces are boiled in three sextarii of old wine, then pounded, and there is added to them, of pepper, of anise, of lovage, of each, when triturated, oz. j. Some also add, of ginger, oz. ss ; and others, instead of the wine, use vinegar.

The medicine from the juice of quinces of approved efficacy for anorexia and dyspepsia. Of the juice of ripe quinces, sext. ij ; of fine honey, sext. ij ; of vinegar, sext. j ; of ginger, oz. iij ; of white pepper, oz. ij : boil to a proper consistence. Galen prepares it for those affected with cold. But, he says, when bile prevails, prepare it without the pepper and ginger.

The preparation of a tablet from quinces. Six pounds of clean quinces are boiled in wine until they become soft. Then being strained and triturated, some add, of honey, lb. viij, and boil at a slow fire, stirring with a piece of reed until the whole will not stain the hand ; and then they add the following things bruised : of pepper, oz. iij ; of anise, oz. iij ; of stone-parsley, oz. j. Some also add of ginger, oz. j, and of mastich, oz. j. When mixed, they are formed into

cakes of half an ounce each, and are composed along with bay-leaves.

Another medicine from quinces, having the pieces bruised, but entire. Of clean quinces cut into pieces, lb. viij are boiled in sext. viij of wine moderately, so that they may not be dissolved. Then there are mixed with them of despumated honey, lb. viij; of pepper, oz. viij; of stone parsley, of anise, of each, oz. iij; of ginger, oz. v; of spikenard, oz. iss; of cloves, oz. j. When all these things are pounded and moderately boiled to the consistence of broth, take them off, and having cooled it, add the pieces of quinces to the broth.

The antidote from three peppers. Of common, of white, and of long pepper, of each, dr. vij; of ginger, of anise, of thyme-tops, dr. ij; of honey, q. s.

Another, of Oribasius. Of white pepper, oz. ij; of black and of long pepper, of spikenard, of cinnamon, of bishop's weed, of walnut, of hyssop, of seseli, of carrot, of stone-parsley, of each, oz. j; of ginger, dr. iv; of honey, lb. iij.

Another. Of common pepper, oz. iij; of white pepper, oz. j; of long, oz. j; of stone-parsley, of cinnamon (or double the quantity of cassia), of ginger, of each, oz. j; of honey, oz. xxj, or q. s.; and have also mixed of the corymbi of thyme, oz. j.

The diospolites. Of cumin, which has been macerated in water and toasted, oz. j; of pepper, of ginger, of each, oz. ij; of green rue, oz. iss; of natron, dr. iiss. Mix with honey.

The medicine from calamint. Of stone-parsley, of penny-royal, of seseli, of calamint, of each, oz. iij; of parsley-seed, oz. j; of the corymbi of thyme, oz. j; of lovage, oz. iv; of pepper, dr. xij; of honey, q. s.

The medicine from citron, for those of slow digestion. Of vinegar, heminae iij; of the flesh of citron, lb. j; of hyssop, of rue, of origany, of each, a fasciculus; having been allowed to macerate for a night and a day in the vinegar, they are to be boiled to a third, and being expressed, are to be thrown away. But with the vinegar is mixed of honey, sext. j; and then it is to be boiled to the consistence of honey. When it acquires consistence, there is to be added to it, of asarabacca, of spignel, of white pepper, of each, oz. ij. The dose is a spoonful in the morning and at bedtime.

The picra of Galen. Of aloes, dr. c; of xylobalsam, of mastich, of saffron, of spikenard, of asarabacca, of cinnamon, of each, dr. vj: some add also, of schœnanth and of cassia, of each, dr. vj. Give dr. j in hydromel.

The picra from oxymel for stomach complaints, colics, affections of the uterus, and dropsy. Of aloes, oz. iv; of Indian leaf, oz. ij; of costus, of cassia, of amomum, of iris, of each, dr. j; of the bark of the root of fennel, lb. j; of mastich, of Celtic nard, of ginger, of each, dr. j; of pepper, dr. j; of spignel, dr. j; of vinegar, sext. iss; of honey, sext. iss. The fennel being first boiled in the vinegar is thrown away, then the honey is added, and after boiling to the consistence of honey, the other things are sprinkled in powder.

An excellent composition from the liver of a wolf. Of gentian, of ground-pine, of stone-parsley, of horehound, of the gall of a bear, of mustard, of ceterach, of the root of panax, of rubrica, of madder, of cabbage-seed, of long birthwort, of white pepper, of spikenard, of costus, of the seed of rocket, of the seed of eryngo, of poley, of viper's bugloss, of hemp-agrimony, of juniper-berries, of the liver of a wolf, of elecampane, equal parts. Mix with well-boiled honey. The dose is the size of a filbert, with boiled wine and honey.

The antidote Theodoretus with anacardia. Of anacardia, oz. iss; of saffron, of cassia, of Indian leaf, of spikenard, of cloves, of spignel, of agaric, of schœnanth, of Pontic rhubarb, of dodder of thyme, of each, dr. iv; of sweet-flag, of pepper, of each, oz. iss; of aloes, oz. iij; of saxifrage, of mastich, of Illyrian iris, of each, oz. iss; of nutben, oz. j; of honey, lb. vj, or q. s.

The Theodoretus without anacardia. Of aloes, dr. lx; of agaric, dr. xxiv; of saffron, of cassia, of Pontic rhubarb, of sweet-flag, of cinnamon, of mastich, of each, dr. x; of costus, of the seed of rue, of white pepper, of each, dr. viij; of spikenard, dr. iij; of xylobalsam, of asarabacca, of germander, of spiguel, of each, dr. iv; of honey, q. s. Some here add two anacardia. The dose is dr. ij, with honeyed water.

The cyphoides for hepatic affections and complaints in the chest. Of the flesh of dried grape, dr. xxv; of saffron, dr. j; of calamus, dr. ij; of bdellium, dr. iiss; of cassia, dr. iss; of cinnamon, three oboli; of nard, three oboli; of sweet rush,

dr. ij ; of myrrh, dr. iv ; of turpentine, dr. iv ; of the scrapings of aspalathus, twelve oboli ; of honey, dr. xvj ; of wine, q. s.

Another cyphoides, of Alexander. Of saffron, of cinnamon, of bdellium, of each, dr. iv ; of myrrh, of calamus, of each, dr. ij ; of bitumen, of schœnanth, of each, dr. iij ; of cassia, of nard, of each, dr. j ; of turpentine, dr. xvj ; of the flesh of dried grapes, dr. clx ; of honey, hemin. iss ; of Chian wine, q. s.

An hepatic medicine from cakanus. Of cakanus, oz. j ; of costus, oz. j ; of Indian leaf, scr. viij ; of white pepper, scr. vj ; of spikenard, scr. vj ; of honey, q. s. Give a spoonful with hippocras.

The Zopyrius. Of myrrh, dr. v ; of saffron, of cassia, of each, dr. iv ; of cinnamon, dr. iij ; of spikenard, dr. ij ; of schœnanth, dr. ij ; of white pepper, dr. iss ; of frankincense, dr. j ; of costus, dr. j ; of honey, q. s.

The Pæonian antidote. Of the styrax calamite, dr. vj ; of frankincense, of amomum, of saffron, of each, oz. iss ; of spikenard, dr. vj ; of Indian leaf, dr. ij ; of white pepper, dr. vj ; and of common, dr. viij ; of myrrh, oz. j ; of costus, oz. j ; of honey, q. s.

The hepatic pills, of Dositheus. Of aloes, oz. j ; of spikenard, of Indian leaf, of costus, scr. ij ; of agaric, scr. viij ; of mastich, scr. xij ; of dodder of thyme, dr. iv ; of Pontic rhubarb, scr. j.

The splenic oxymel. Of the bark of the root of capers, of scolopendrium, of spikenard, of asarabacca, of iris, of schœnanth, of the flower of cyperus, of anise, of cumin, of fennel, of sweet-flag, of the fruit of heath, of each, oz. j ; of the leaves of tamarisk, of the leaves of willow, of the root of parsley, of the frankincense tree, of squills, of each, oz. ij ; of vinegar, sextar. iij ; of honey, sext. iij ; of ammoniac perfume, oz. iij. Prepare like that from squills. Give two spoonfuls.

An oxymel for calculous complaints. Of saxifrage, of betony, of couch-grass, of maiden-hair, of spikenard, of carpesium, of asarabacca, of eryngo, of each, oz. j ; of Macedonian stone-parsley, of the seed of rue, of each, oz. ss ; of green fennel, of iris, of baked squills, of knee-holly (chamædaphne), of each, oz. ij ; of the bark of the root of capers, oz. iij ; of water-parsnip, oz. ij ; of water, of vinegar, of honey, of each, sext. ij.

The lithontriptic posca. Of pennyroyal, of mastich, of parsley-seed, of dried mint, of each, oz. j ; of common salt toasted, lb. j ; of coriander-seed, of spikenard, of anise, of

bishop's weed, of each, scr. vj ; of Indian leaf, scr. iv ; of white pepper, oz. ss, (or of common oz. j) ; of the seed of gromwell, oz. vj ; of bettony, oz. vj ; of fine vinegar, sext. v. When all are pounded, sifted, and triturated very fine, let them be mixed with vinegar for three days, and exposed in the sun for forty days. At the time of using, having made a decoction of black chick-peas, and of the root of asparagus, and of maiden-hair, and of parsley, add, for the sake of temperament, of vinegar hemin. ij, and let the patient drink it in the hot bath. Some give scr. xij of the afore-mentioned things, in powder with oxycrate mixed with the decoction of the afore-mentioned herbs; and the medicine is no less efficacious.

A lithontriptic hippocras. Of white pepper, of saxifrage, of spikenard, of gromwell, of bettony, of each, oz. j ; of stone-parsley, of Indian leaf, of each, oz. iss ; of the seed of wild rue, oz. ss ; of honey, sext. j ; of Ascolonic wine, sext. xvj.

The medicine from the blood of the buck-goat. When the grape begins to ripen, take the blood of a full-grown buck-goat, and having dried it in the sun, give to persons affected with calculi two spoonfuls of it with Cretan must. Some also mix, of amomum, of Indian leaf, of each, oz. iij ; and others of myrrh, scr. iv.

The nephritic composition from cicadæ. Of gromwell, of the garfish burned, of seseli, of each, oz. j ; of bishop's weed, of the seed of the garden cucumber, of common saxifrage, of grapes without their stones, of the seed of marsh-mallows, of the white fasil, of lycurium, of each, oz. ss ; of spikenard, of valerian, of spignel, of the stones from sponges, of each, dr. j ; of maiden-hair, of the seed within the Christ's thorn, of water-parsnip, of the root of brambles, of couch-grass, of polypody, of each, dr. iij ; of goat's blood dried, as described, scr. vj ; of dried cicadæ, without the head, wings, and feet, oz. iv ; of white pepper, dr. vj ; of boiled honey, q. s. The dose is the size of a filbert in hippocras, or the decoction of caltrops, or of saxifrage, or of sinon, or of the root of asparagus, or of couch-grass, or of cinquefoil, or of the root of fullers-herb.

The antidote from gromwell. Of gromwell, of betony, of saxifrage, of stone-parsley, of white pepper, equal parts. Mix with honey.

The antidote from the seed of leeks. Of white and of black

pepper, of Cretan carrot, of the seed of the garden cucumber, of the seed of fennel, of the seed of leeks, of Macedonian stone-parsley, of pellitory, of ginger, of the Indian leaf, of each, oz. j; of honey, q. s.

The antidote from tecolithos, or lapis Judaicus. Of spike-nard, of hyssop, of lapis Judaicus, of each, scr. viij; of pepper, scr. xij; of ginger, of stone-parsley, of costus, of saxifrage, of each, scr. vj; of cassia, of parsley-seed, of each, scr. iij; of cyperus, scr. vj; of the scrapings of ivory, scr. iv; of the wood of cardamom, scr. vj; of gromwell, scr. iv; of honey, q. s.

The antidote from the seed of the wild mallow. Of the seed of the garden cucumber, dr. xij; of the seed of henbane, dr. vj; of the seed of hemlock, dr. iij (but some use vj); of opium, of fennel, of the seed of the wild mallow, of saffron, of each, dr. iij; of parsley-seed, dr. vj; of cassia, dr. iv; almonds, x; walnuts, x; filberts, x; of asarabacca, dr. iv; mix with Cretan must, and give three oboli, if the patient be free from fever, with rob. But some mix it with honey.

A nephritic medicine from dessert-fruits, for ulceration of the bladder and kidneys. Of the white grape, deprived of its stones, of fresh pine-nuts, of each, oz. ij; of the seed of cucumber, stripped of its bark; of myrtles deprived of their bones; of bitter almonds, of fatty dates, of parsley-seed, of poppy-seed, of saffron, of each, dr. j; of myrrh, oz. ij. Give a drachm of it in must to the patient, fasting.

The satyriac antidote. Of ginger, of the superior satyrion (herb dogs-tooth?), of each, dr. viij, of the tail of a scink, of spignel, of asarabacca, of stone-parsley, of cardamom, of seseli, of each, dr. iv; of the seed of rocket, of cinnamon, of each, dr. iij; of all-good (horminum), of white pepper, of the seed of bastard saffron, of each, dr. ij; of the schœnanth, of spikenard, of each, dr. j, of goat's blood, a mystrum (spoonful). A drachm is given with wine, but to those who are weaker, with milk.

Pills from xylomacer for dysenteries. Of xylomacer, of opium, of Pontic rhubarb, of each, scr. vj; of gall, of myrrh, of each, oz. j; mix with palm wine.

Remedies for the gout. The antidote from corallium. O rheum barbarum, of pæony, of troglodytic myrrh, of spikenard, of each, oz. ij; of Indian leaf, oz. j; of cloves, gr. xv, of the pimpnel having the purple flower which they call corallium,

oz. ss ; of long birthwort, oz. iv, and of round, oz. vj. One scruple is to be given as a dose every day to the patient, when digestion is accomplished. We must begin at the autumnal equinox, which is about the 24th of the month of September ; and it is to be taken regularly for fifty days, and then interrupted for fifteen days ; and this is to be done until the whole 365 days be completed. It is to be given up during the whole of the dog-days, that is, from the 24th of June to the end of August. The patient must abstain from venery, from flesh, particularly that of swine, and from pickle, sauce, beet, carrot, mint, and from boiled lettuces and pompions ; from fishes, as the mullet, gomphi (gobii?), mollusca, and the testacea ; from all the legumes, and in short from all things which furnish a thick chyme, and from black wine, and from much wine of any kind. He is to bathe every day, and take exercise either on foot or on horseback, or in a vehicle. Those who are of a drier habit have not been injured by a less restricted diet.

The podagric antidote of Agapetus. Of Indian leaf, of rheum barbarum, of saffron, of spikenard, of troglodytic myrrh, of costus, of germander, of each, oz. ij ; of hepatic aloes, oz. v ; of St. John's wort, of pæony, of each, oz. iij ; of long birthwort, of valerian, of spignel, of vervain mallow, of pimpernel, of each, oz. iv. The mode of using it is the same as that of corallium.

The podagric remedy, called atactos. Of Indian leaf, of spignel, of vervain mallow, of the pimpernel having the blue flower, of madder, of mastich, of saffron, of cassia, of hepatic aloes, of gentian, of germander, of each, oz. j ; of cloves, of white and of black pepper, of each, oz. ss ; of spikenard, of myrrh, of rheum barbarum, of the root of pæony, of the long birthwort, and of the round, of each, oz. ij. To be used in like manner.

The podagric antidote of Proclus, answering also with ischiatic disease. Of germander, oz. ix ; of centaury, oz. viij ; of birthwort, oz. vij ; of gentian, oz. vj ; of St. John's wort, oz. v ; of Macedonian stone-parsley, oz. iv ; of spignel, oz. iij ; of agaric, oz. ij ; of valerian, oz. j ; of Attic honey, two heminae.

The composition from seven ingredients for the same purposes. Of St. John's wort, of long birthwort, of each, oz. j ; of centaury, of ground pine, of agaric, of each, oz. iij ; of germander, oz. vj ; of gentian, oz. v. Some add likewise, of stone-parsley, oz. j ; of honey, dr. v. The dose is dr. j.

COMMENTARY. Celsus thus defines the nature of antidotes : COMM.
 “Antidota raro, sed præcipue interdum necessaria sunt, quia
 gravisimis casibus opitulantur. Ea recte quidem dantur collis
 corporibus vel per ictus, vel ubi ex alto deciderunt, vel in vis-
 cerum, laterum, faucium, interiorumque partium doloribus ;
 maxime autem desideranda sunt adversus venena, vel per morsus,
 vel per cibos, aut potiones nostris corporibus inserta.” He
 gives prescriptions for three antidotes. They consist principally
 of stimulant and aromatic medicines, mixed with honey and
 wine. (v, 23.)

Most of the antidotes treated of in this chapter are copied from Galen's work ‘De Antidotis,’ but our author, in many instances, has used the liberty to introduce various alterations, either with the view of simplifying or improving upon the formulæ of Galen. Mesue also treats fully of antidotes in his work, ‘De Electariis,’ wherein he substitutes a considerable number of Arabic articles for those used by the Greeks. Serapion describes these compositions with extreme prolixity. (Tract. vii.) But what shall we say of Myrepsus, who gives prescriptions for 511 antidotes? Of these, and such like multifarious compositions, it would be idle to attempt any general analysis, and therefore we shall pass by all the articles treated of in this chapter unnoticed, with the exception of the *Theriac*, which was so celebrated in the records of ancient medicine, that we think ourselves called upon to give some further account of it. Galen devotes two distinct treatises to the consideration of the celebrated theriac from vipers, besides giving a general description of it in his work on antidotes. Our author's account of it is merely an abridgment of his. Galen mentions that Mithridates, king of Pontus, had, by repeated experiments upon condemned malefactors, acquired a most thorough knowledge of the proper antidotes for almost every venomous reptile and poisonous substance, and hence he constructed the composition bearing his name, which was long esteemed as a general antidote to deleterious substances. From it Andromachus, the chief physician to the emperor Nero, formed his famous theriac, having added the flesh of vipers, and otherwise altered some of the ingredients in the theriac of Mithridates. The prescription for it was translated into verse by Damocrates, and the poem, consisting of 174 lines, is preserved in Galen's work, ‘De Antidotis.’ As stated

COMM. by Galen, it was composed of inspissated juices, liquid juices, barks, roots, flowers, seeds, and fleshes. Of the vegetable substances which entered into the composition of it, it is difficult to remark any one general character, although one can have no difficulty in perceiving that by far the greater number of them are hot, volatile stimulants, which, agreeably to the ancient views of practice, as explained by us in the Fifth Book, were supposed to counteract the frigidity of poisons. It was, no doubt, with the same intention that Andromachus added the flesh of vipers, from which, as a modern author, Moses Charras, remarks, a volatile salt and oil are procured. In preparing the vipers, Galen directs us to cut off the head and tail to the extent of four fingers' breadth, and then to take out their entrails and fat, and boil them until the backbone be separated from the flesh, when the latter is to be taken out and formed into trochisks, with crumb of bread. We need not occupy time with detailing all the other steps in the formation of this multifarious composition, as our author's account is sufficiently ample and accurate. Galen expresses great confidence in it, especially as an antidote to poisons, and a remedy for inveterate diseases of the skin, such as leprosy and elephantiasis. It derives its name, he says, either from its being used as a remedy for the stings of venomous animals (*θήρια*), or because the flesh of such a reptile, namely, the viper, entered into the composition of it.

The Greek authorities subsequent to Galen repeat his directions for forming this celebrated medicine, and any alterations which they make in it are not very important. The *Rheum barbarum* instead of the *Rha Ponticum* appears in the prescription given by Myrepsus. Like his predecessors, he praises the theriac not only as an antidote to poisons, but as a preservative from pestilential diseases. Actuarius, who describes it very accurately, pronounces it to be the best of all the antidotes.

Averrhoes's treatise on the theriac is interesting and worth consulting, although his views are upon the whole much in accordance with those of Galen. He seems to have referred its action as a medicine to its power in rousing the vital heat of the system; and hence he very properly forbids it to be administered in all cases of an inflammatory and bilious nature. He therefore condemns the use of it in pleurisy un-

less when the pain is dull and chronic. He says, it ought not to be given in cases of difficult parturition, unless when it is wished to rouse the expulsive faculty, or when the fœtus is dead. According to his account, the composition has not arrived at perfection, when it is four years old, and it retains its powers until after forty years. COMM.

Haly Abbas sums up the medicinal properties of the theriac with stating that it dries the natural humidity, strengthens the viscera, cleanses the organs of food and respiration, and expels superfluities from the brain. Hence he pronounces it to be a remedy for all the diseases which attack the human body. (Pract. x 4.)

Serapion describes the following methods of trying whether the theriac be good: 1st. Give of it to the amount of a drachm to a person who has taken a powerful emetic or cathartic, such as white hellebore or scammony, and if it counteract the effect of the medicine that has been taken, we know that it is genuine. 2d. As Galen directs, having got a wild cock, allow it to be stung by a venomous reptile, and then give it a proper dose of the theriac. If the fowl escape unhurt we are sure that the medicine is good; but if he die we know that it is not to be depended upon. 3d. Give a poisonous substance, such as opium, to a cock or a dog, and then administer the theriac, the powers of which may be judged of from the result.

Moses Charras, who published 'The Royal Pharmacopœia' about the end of the seventeenth century, thus enumerates the medicinal uses of the theriac of Andromachus: "Treacle being composed of a great quantity of hot medicaments, ought to be very much esteemed for the cure of cold diseases, and of all those where the natural heat is feeble and languishing, especially, among the rest, of palsies, epilepsies, convulsions, and all cold diseases of the head. It is proper against all weaknesses and want of retention in the stomach and intestines; against the diarrhœa, dysentery, lientery, morbus cholera, and all sort of colics; against agues, and particularly the quartan; against the worms; against all sorts of poison, the pestilence, smallpox, the measles, and all epidemic diseases; against the biting of mad dogs and all sorts of venomous animals; against want of sleep, and griping pains in children; against hysteric passions, the jaundice, and an infinite sort of other diseases. (P. i, c. 20.)

COMM. This famous medicine was expelled from the 'British Pharmacopœia' about the middle of the last century. When its rejection was proposed by Dr. Heberden, the College divided upon the question, and there were found to be 13 votes for retaining, and 14 for rejecting it. Its medicinal virtues had been previously questioned by Capivaccius, Trincavallius, and Julius Alexandrinus. It is still retained, however, in the 'Codex Medicamentarius' of Paris; and, we understand, is much used by the Greek physicians in Constantinople. A formula for a theriac is contained in the Greek Pharmacopœia of the present day. Although it still retains the name of "Theriaca Andromachi," it consists of but a very small number of ingredients in comparison with the original preparation. Dr. Mead says of it, "The physicians in Italy and France very commonly prescribe the broth and jelly of viper's flesh to invigorate and purify the mass of blood exhausted with diseases or tainted with some vicious and obstinate ferment." (On Poisons.) Upon the virtues of viper's flesh, Duemerbroeck expresses himself in the following terms: "Carnes viperinas ac serpentinâs adversus multa venena eximiam antidotalem vim obtinere adeo notum est ut absolutè negari non possit, idque non tantum liquet ex Galeni testimoniis verum etiam ex quotidianâ experientiâ. Sic Hartmannus scribit se propriis oculis vidisse, a quodam experto medico tribus diebus continuis intra corpus gravissima quædam venena assumpta eademque paulo post sine ullâ noxâ, ab exhibitio pulvere cum astantium admiratione iterum expulsa fuisse." (De Peste, iii, 5.)

SECT. XII. ON TROCHISKS, OR TROCHES.

Trochisks are so named from their form. There are three kinds of them. For some of them are to be swallowed, some injected, and some rubbed in. Of those which are swallowed, some are for restraining the belly, or a flow of blood, or any other discharge, by their cooling, astringent, obstructing, or desiccative qualities, such as that from Egyptian thorn, that from seeds, and the like. Some are anodyne, either by deadening the sensibility, such as the saffron, or by dispelling, like those from aromatic substances. Some act as deobstruents on the

spleen, kidneys, and liver, such as that from bitter almonds. Of those which are injected, some are for blunting acrimony, as in dysentery, such as those from pompholyx, starch, and Samian earth, injected with the juice of ptisan, or the like. Some act as astringents upon the alvine discharges, or a flow of blood, as those from alum, acacia, and omphacium, such as that of Philip; or that consisting of Egyptian thorn, injected with the juice of roses or of plantain. Those that are caustic agree with spreading dysenteries, being composed of sandarach, arsenic, quicklime, and burnt pepper; but they are to be injected with the juice of lentils or of rice, the intestine being first washed out with salt water, and the patients having eaten and drunk beforehand, so that none of the powers of the medicine may be carried up to the stomach. Those trochisks which are injected prove serviceable principally in affections below the navel, for their power does not reach higher up. Those which are rubbed in are possessed of similar powers to those which are injected. But the astringent ones are applicable in herpes, exanthemata, intertrigo, hemorrhage, and ulcers attended with discharges, such as that of Andron and that of Polyides. Those possessed of blunting powers agree with carbuncle, and ill-conditioned ulcers, such as the white trochisks, and that from lotaria. Those which burn as those mentioned above, like the Faustian, are applicable in spreading ulcers in the pudenda and anus, and for pterygia and sarcomata.

The trochisk aster. Of saffron, of castor, of spikenard, of cassia, of myrrh, of Lemnian earth, of the bark of mandragora, of each, oz. iv; of carrot, of parsley, of anise, of seseli, of the seed of henbane, of storax, of each, dr. viij. Triturate with wine.

The trochisk trigonus. Of the seed of parsley, of the seed of henbane, of each, dr. ij; of anise, dr. viij; of opium, dr. iij. Triturate with water.

The trochisk from seeds. Of anise, of bishop's weed, of the seed of fennel, of each, dr. iv; of the seed of parsley, of opium, of the seed of henbane, of each, dr. ij. Triturate with water.

The trochisk croceus, or saffron trochisk. Of anise, of the seed of Cretan carrot, of each, dr. iv; of myrrh, of castor, of each, dr. ij; of saffron, of opium, of each, dr. iij; of the seed

of parsley, of storax, of each, dr. iv ; of the seed of henbane, dr. vj. Triturate with water.

The trochisk from roses. Of acacia, of gum, of the flower of roses, of pomegranate flowers, of the juice of hypocistis, of galls, of each, dr. iij ; of the juice of green roses, of the seed of plantain, of each, dr. j ; of Indian buckthorn, dr. j.

The trochisk from corallium. Of the seed of henbane, of frankincense, of each, dr. viij ; of Samian earth, of corallium, of Sinopic vermilion, of opium, of each, dr. iv ; of starch, of the flowers of the wild pomegranate, of each, dr. ij. Mix with the juice of knotgrass.

The trochisk from amber. Of fleawort, oz. v ; of mastich, oz. iv ; of the scrapings of amber, of iris, of saffron, of each, oz. iv ; of opium, oz. ij.

The trochisk from Egyptian thorn. Of Egyptian thorn, of sumach, of frankincense, of acacia, of stone-alum, of the juice of hypocistis, of galls, of Lemnian earth, of corallium, of comfrey, of Samian aster, of aloes, of Cretan cistus, equal parts. Mix with wine.

The trochisk which Galen entitles the aphrodisiasticum clidion. Of the flowers of the cultivated pomegranate, of Egyptian thorn, of the flowers of the wild pomegranate, of the juice of hypocistis, of acacia, of each, dr. vj ; of buckthorn, of Pontic rhubarb, of opium, of each, dr. iv ; of myrrh, dr. ij. Mix with myrtle wine, or the decoction of roses or of myrtles.

The clidion of Oribasius, for dysentery and cæliac affection. Of the immature gall, dr. viij ; of opium, dr. iv. Form into pills with water, and give three or four.

The trochisk from hartshorn for dysentery and hæmoptysis. Of snails, dr. xij ; of burnt hartshorn, of roasted galls, of roasted acacia, of each, dr. v ; obol. xij ; of black myrtles, dr. xv ; of dried opium, of the juice of hypocistis, of each, dr. v ; of the œnanthe, dr. v ; of the juice of the root of mandragora, of terra aster, of each, dr. xij ; of the sumach used for condiments, dr. xiv ; of roasted pomegranate rind, dr. vij ; of frankincense, dr. viij ; of the roasted bark of pine, dr. xiv ; of the seed of henbane roasted, dr. x ; of the rhus coriaria, sext. ii ; of dark-coloured wine, what will be sufficient to boil the sumach until the wine become thick. When it is strained, add the other things, and form the trochisks.

The trochisk of the Amazons. Of the seed of parsley, of anise, of each, dr. vj; of the hair of wormwood, dr. iv; of myrrh, of pepper, of opium, of castor, of each, dr. ij; of cinnamon, dr. vj. Mix with water.

The trochisk from bitter almonds. Of anise, of the seed of parsley, of asarabacca, of bitter almonds, of the hair of wormwood, equal parts; form, with water, trochisks of dr. j each. Give to those who are free from fever in wine and honey, and to those who have fever in water and honey.

The splenic trochisk from heath. Of the fruit of heath, dr. iv; of white pepper, of Syriac nard, of ammoniac perfume, of each, dr. ij. The ammoniac is dissolved in water, and added to the powders, and trochisks are formed containing a drachm each. The dose is one trochisk, with one cyathus of oxymel.

The trochisk from alkakengi. Of the seed of the cultivated cucumber, stripped of its bark, oz. iv; of the seed of henbane, of hemlock, of each, oz. ij; of fennel, of the seed of dock, of saffron, of pine nuts, of bitter almonds, of opium, of each, oz. j; of alkakengi, sext. iij; of wine, q. s.

The trochisk of Philip, for dysentery. Of the flowers of the wild pomegranate, of acacia, of the juice of hypocistis, of opium, of sumach, of frankincense, of myrrh, of saffron, of gall, of aloes, of Pontic rhubarb, of the rind of pomegranate, of myrtles, of each, dr. iv. Mix with austere wine, and form into trochisks of three oboli each. Give to those who are free from fever with wine, and to those in fever with hydromel.

The trochisk of Musa. Of alum, of aloes, of myrrh, of copperas (blue vitriol?) of each, oz. iss; of pomegranate rind, of saffron, of crocomagma, of each, dr. vj, in wine.

The preparation of the crocomagma. Of saffron, oz. ij; of roses, of starch, of myrrh, of aloes, of frankincense, of gum, of each, oz. j; of costus, of spikenard, of each, dr. j, in wine. In the prescription for oil of saffron another mode of preparing crocomagma is described.

The trochisk Nerè, from the works of Hera. Of myrrh, of aloes, of saffron, of each, dr. viij; of fissile alum, dr. c. Mix with water.

The sigillum of Polyides. Of fissile alum, dr. iij; of frankincense, dr. iv; of myrrh, dr. viij; of copperas (chalcantum?),

dr. ij; of the flowers of the cultivated pomegranate, dr. xij; of the gall of bulls, dr. vj (others use dr. xvj); of aloes, oz. j. Mix with austere wine.

The trochisk of Pasion. Of squama æris, dr. xij; of burnt copper, of sal ammoniac, of round alum, of scraped verdigris, of frankincense, of each, dr. viij; of wine, q. s.

The trochisk Andronius. Of the flowers of the cultivated pomegranate, dr. x; of myrrh, dr. iv; of galls, dr. viij; of round birthwort, dr. iv; of copperas, of saffron, of fissile alum, of crocomagma, of misy, of frankincense, of each, dr. ij. Triturate with astringent wine or vinegar.

The trochisk of Faustinus. Of arsenic, dr. xij; of sandarach, dr. vj; of quicklime, dr. viij; of burnt paper, dr. j. Mix with the juice or decoction of myrtles; make into trochisks, and inject along with the decoction of myrtles, of lentils, and of the roots of bramble.

The trochisk from paper. Of burnt paper, lb. ij; of quicklime, of arsenic, of sandarach, of each, oz. j. Mix with the juice of plantain.

The trochisk called Thronus Marcellius. Of burnt paper, dr. x; of sandarach, of arsenic, of squama æris, of fissile alum, of each, dr. iv; of the flowers of the wild pomegranate, dr. iij; of opium, dr. ij; of quicklime, dr. iij; of omphacium, dr. j; of the juice of hypocistis, dr. iij. Mix with myrtle wine, and form troches of four drachms each. When you have boiled the pomegranate rind, myrtles, and roses to a third part, give one trochisk, or simply dr. iv to six cyathi of wine.

The trochisk from cork. Of burnt galls, of burnt paper, of burnt cork, of burnt bread, of each, dr. xv. In another prescription there is added of burnt hartshorn, dr. xv; of arsenic, dr. ij; of sandarach, of quicklime, of each, dr. xv; of acacia, of ceruse, of each, dr. v; of litharge, dr. iij. Triturate in wine.

The trochisk Bithynus. Of pomegranate rind, dr. x; of calamine, oz. iij; of birthwort, of galls, of the root of all-heal, of iris, of copperas, of fissile alum, of chalcitis, of misy, of squama æris, of manna (and some also of costus), of each, oz. iss. Mix with vinegar.

The trochisk from castor, for ulcers, spreading sores, and defluxions. Of saffron, of aloes, of frankincense, of each, oz. j; of the flowers of the cultivated pomegranate, of fissile alum, of

castor, of manna, of scraped verdigris, of each, oz. j ; of sinopic vermilion, lb. j. Mix with old wine.

The trochisk from castor, for colics. Of myrrh, of castor, of each, scr. vj ; of saffron, of opium, of each, scr. ix ; of anise, of parsley seed, of carrot seed, of each, oz. ss ; of the seed of henbane, scr. xvij.

The trochisk from wine and oil, for the fundament and pudendum. Of ceruse, oz. x ; of litharge, oz. v ; of frankincense, of the dross of lead, of fissile alum, of each, oz. ij. Triturate with wine that does not contain salt water. At the time of using it, mix with wine and rose oil, or wine and myrtle oil.

The trochisk from Phrygian stone, for the pudenda. Take three Phrygian stones burnt and extinguished, and mix the first with butter or rose oil ; the second with wine ; and the third with honey, to the extent of oz. ij ; add, of the flower of roses, oz. iv ; of pomegranate rind, oz. j.

The trochisk from lotaria to the fundament and pudendum. Of ceruse, of starch, of glaucium, of saffron, of alum, equal parts. Triturate with the juice of lotaria or wine.

The white trochisk. Of terra aster, oz. iv ; of pompholyx, of ceruse, of starch, of each, oz. ij ; of opium, scr. iv. Mix with water.

The trochisk from halicacabus, or winter cherry. Of litharge, dr. xxiv ; of ceruse, dr. xij or xxj ; of winter cherry, dr. viij ; of copperas (chalcanthum), dr. iv ; of fissile alum, dr. iv ; of vermilion enough to give it colour. Mix with water.

The trochisk from the two hellebores, and also from the two acacias. Of the black and of the yellow acacia, of artificer's glue (in another prescription of fish-glue), of each, oz. iv ; of ammoniac perfume, of glaucium, of aloes, of each, oz. ij ; of male frankincense, of black and of white hellebore, of each, oz. j. Mix with vinegar of squills, and at the time of using it dissolve either in the same or in common vinegar, and anoint before and after the bath.

The trochisk Criogenes. Of myrrh, of burnt copper, of round birthwort, of scraped verdigris, of the squama stomomatis, of the straight vervain, of round alum, of each, oz. j ; of vinegar, q. s. The vervain is to be gathered when the sun is in Aries. It may be made into a plaster thus : take of the trochisk, of wax, of Colophonian rosin, of oil, equal parts ; of

vinegar what will be sufficient for the trituration of the trochisk.

The trochisk melanchlorus, or black-coloured. Of myrrh, of aloes, of burnt squama æris, of arsenic, of fissile alum, and of round alum, of iris, of chalcitis, of misy, of fossil salt, of copperas, of ceruse, of natron, of litharge, of the root of all-heal, of calamine, of pomegranate rind, of galls, of round birthwort, of the squama stomomatis, of scraped verdigris, of each, oz. j; of vinegar, q. s. It is formed into a plaster thus: of the trochisk, oz. ij; of Colophonian rosin, of wax, of oil, of each, oz. vj; of vinegar, what will be sufficient for the trituration of the trochisk.

The trochisk pantolmius, for chironian and malignant ulcers, and for discharges. Of cassia, of burnt copper, of ceruse, of litharge, of scraped verdigris, of fissile alum, and of round, and of liquid, and of the plinthitic alum, of the root of all-heal, of the long and of the round birthwort, of pomegranate rind, of copperas, of purslain, of the iris called astragalitis, of chalcitis, of misy, of ammoniac perfume, of sal ammoniac, of verdigris, of iron, of squama æris, of aloes, of diphyrges, of frankincense, of galls, of sarcocolla, of burnt lead, of olive leaves, of sori, of myrrh, of liquid melantheria, of the flowers of the wild pomegranate, of the Egyptian thorn, of sulphur which has not been touched with the fire, of natron, of red sumach, of Syriac sumach, of chrysocolla, of elm-leaved sumach (rus coriaria), of acacia, of the spuma salis, of omphacium, of arsenic, equal parts. Triturate during the heat of the dog-days with vinegar for thirty days.

The trochisk of Nymphodotus. Of aphronitrum, oz. j; of Alexandrian natron, of Gallic soap, of each, oz. j; of Cappadocian salt, of mastich, of galls, of each, dr. iv; of rose leaves, of amomum, of starch, of each, oz. j; of Indian leaf, dr. j; of fissile alum, of costus, of each, dr. ij; of myrtle wine, q. s.

The trochisk from thapsia, for hemicrania. Of the juice of thapsia (deadly carrot), dr. xvj; of myrrh, dr. viij; of opopanax, of euphorbium, of each, dr. vj; of natron, of the Parthic juice, of each, dr. iv; of pepper, of sagapen, of each, dr. ij; of vinegar, q. s. In using it, rub it in with vinegar, and after six hours wash it off. If you wish to use in a reduced state, mix with equal parts of cerate, and spread it, allowing it to remain for a day and a night.

The trochisk called *subditious*, for dysentery and pains of the anus. Of terra aster, of starch, of each, oz. iij; of saffron, oz. ij; of acacia, of tragacanth, of each, oz. j; of castor, of frankincense, of buckthorn, of each, oz. ss; and in hotter temperaments, also, of opium, oz. ss; mix with the juice of fleawort, and form into oblong trochisks.

COMMENTARY. Celsus informs us that they are the same COMM. as the *pastilli* of the Latins. He thus describes their general properties: "Pastilli hæc ratio est: arida medicamenta contrita humore non pingui, ut vino vel aceto, coguntur, et rursus coacta inarescunt, atque, ubi utendum est, ejusdem generis humore diluuntur." He gives prescriptions for six trochisks. (v. 20.)

Galen remarks that trochisks derive their name from their spherical shape. He treats of them at great length in the fifth book of his work 'De Comp. Med. sec. gen.' Many of our author's receipts are copied from him.

For an account of the Arabian trochisks, see in particular Serapion (vii, 18); Haly Abbas (Pract. x, 14); and Mesue (i, 8.) The following is Mesue's formula for the trochisks of camphor: "The trochisks of camphor, for ardent fevers, heat of the blood and bile, warm intemperament of the liver, insatiable thirst, jaundice, consumption, and hectic.—R. Of rose leaves dr. iv; of spodium, of liquorice āā, dr. ij; of yellow saunders, dr. iiss; of the seeds of citrons, melons, cucumbers, and gourds, of saffron, of tragacanth, of gum, of spikenard, āā dr. j; of lignum aloes, of cardomum, of starch, of camphor, āā dr. j; of white sugar, of manna, āā dr. iij. Mix with the mucilage of fleawort and water of roses." Myrepsus's formula for the same is little different. He describes the composition of 136 pastils.

Moses Charras gives the following account of trochisks: "They are also called pastils, rolls, cakes, and lozenges. Trochisks were invented as well to preserve a long time the virtue of certain medicaments as to unite together the virtue of several. To which purpose having finely powdered the ingredients, which are to be powdered, they are to be incorporated with some juice, syrup, or other viscous liquor, to make therewith a solid paste, out of which are formed little trochisks, flat,

COMM. round, triangular, square, long, or otherwise, which being spread upon paper, and dried out of the sun, and at a distance from the fire, to the end they may be dried in all parts alike, may be put up in boxes or pots for use." (Royal Phar. ii, 21.)

Troches are pharmaceutical preparations still frequently used. According to the directions in the 'Edinburgh Dispensatory,' "they are composed of powders made up with glutinous substances into small cakes, and afterwards dried." There is this difference, however, between the troches of the moderns and the trochisci of the ancients, that all the former are given internally, whereas many of the ancient trochisci were used as external applications. Of this description are five out of the six pastilli described by Celsus. Le Clerc says of them: "Ils differoient des emplâtres, et des collyres, en ce qu'il n'entroit aucune matière huileuse dans les trochisques et qu'ils servoient pour le dedans aussi bien que pour le dehors." (Hist. de la Méd.)

SECT. XIII.—DRY APPLICATIONS AND ABSTERGENTS
(SMEGMATA.)

Of dry applications or powders, some suit with ulcers, and some are applied to the skin. Of those which suit with ulcers, some act as incarnants of hollow ulcers, and some restrain fungous flesh, and some are cicatrizing, some caustic and septic, and some styptic. The incarnative applications act either by cleansing foul ulcers, such as those from tares, birthwort, iris, all-heal, myrrh, frankincense, and aloes; or by drying the superabundant discharge, as those from copper, diphryges, squama æris, burnt paper, the bark of pine and thorn. But these promote cicatrization, either by blunting acrimony and pungency, such as those from pompholyx, starch, ceruse, sphecla (impure potass), the lapis specularis, burnt oysters, terra Samia, and the like, and the compositions from them possess similar powers. Of repressing medicines, some are mild, such as those from squama æris, those from misy and chalcitis, when burnt, and galls; but those from copperas, verdigris, misy, and chalcitis, not burnt, are stronger. The caustics and septics are prepared from quicklime, arsenic, sandarach, and

sphæcla, which is the burnt lees of wine. All these things when reduced to a fine powder and sprinkled upon ulcers, are less pungent. The coarser the powder to which they are reduced, the more pungent are they. Styptics restrain bleeding, either by astringing or cooling, or proving desiccative or obstruent by burning and forming an eschar; and the materials of them have been mentioned in the section on Trochisks. Of those which are applied to the skin, some cleanse and absterge, such as those from Cimolian earth, pumice, bean-meal, barley-leaven, the flesh of pompions, and the flower of salt; some are attenuant and discutient, such as those from hellebore, alcyonium, sulphur, stavesacre, mustard, pellitory, the seed of the rosemary, lemnitis, or adarce, and the shell of the cuttle-fish. But those having quicklime and arsenic added to them, with some liquid, become depilatory and abstergent. Some are applied to the head in order to dry up the discharge from it, such as those from natron, salts, galls, the rind of pomegranate, and the like. All the smegmata or abstergents should be applied to the skin when it is not anointed.

The dry cephalic application. Of tares, oz. v; of iris, oz. iss; of manna, oz. iss; of birthwort, of squama æris, of each, oz. iss.

Another. Of the bark of pine, dr. vj; of frankincense, dr. iv; of pumice-stone, dr. iv; of iris, dr. ij; of dry rosin, dr. vj; of birthwort, dr. ij.

From aloes. Of aloes, dr. vj; of tares, dr. viij; of manna, dr. iv; of galls, dr. iij; of fissile alum, dr. ij.

The dry application of Manetho from the burnt lees of wine. Of calamine, burnt and washed, oz. j; of terra aster, oz. j; of burnt lees of wine, oz. iv; of lapis specularis, oz. iv; of frankincense, oz. iv; some add, also, of starch, oz. iv.

The melitera of Oribasius. Of chalcitis, of squama æris, of galls, of the flowers of the wild pomegranate, of long birthwort, of each, oz. j; of pomegranate rind, of fissile alum, of each, oz. ss.

From oysters. Of calamine, of frankincense, of each, oz. j; of oysters burnt, oz. iij.

The powder from frankincense. Of litharge, of frankincense, of calamine, of ceruse, equal parts.

The powder called aphroditarium. Of frankincense, of squama æris, of rhœdarium (a preparation from sumach), of starch, of ceruse, equal parts.

The Rhodian styptic for spreading ulcers and fungous flesh. Of unripe galls, dr. vj; of galls burnt, and extinguished in wine and dried, dr. xij; of the black squama æris, or, if not, of the red, dr. viij; of copperas, dr. xxiv; of fissile alum, dr. xxvij; triturate for a sufficient number of days.

The powder called flavus. Of burnt chalcitis, dr. xl; of burnt copperas, dr. viij; of burnt misy, dr. x; of burnt copper, dr. v.

The powder called psarus. Of misy, oz. v; of galls, oz. iv; of chalcitis, oz. ij; of squama æris, oz. ij; of copperas, oz. j; of scraped verdigris, oz. ij.

The caustic powder called heliocaes. Of arsenic, lb. j; of calx viva, lb. ij. Triturate with water during the dog-days, then dry and use.

The florid powder. Of cyperus, dr. viij; of myrrh, dr. xij; of sandarach, dr. iij; of the flowers of roses, dr. ij; of saffron, dr. ij; of crocomagma, of fissile alum, of Illyrian iris, of each, dr. ij.

The powder from paper, principally for spreading ulcers of the mouth and those of the pudendum. Of squama æris, of burnt paper, of each, dr. viij; of arsenic, of sulphur vivum, of each, dr. xij; of burnt lead, dr. vj. For the more humid mortifications use it dry, but for such as are dry mix it with rose-oil, and sometimes with honey along with rose-oil.

The powder from butcher's broom (oxymyrsine), for the same purposes. Of elm-leaved sumach, oz. ij; of the leaves of butcher's broom, of sandarach, of each, dr. viij; of the dried leaves of willow, of pomegranate rind, of each, dr. vj; of fissile alum, of chrysocolla, of aloes, of crude chalcitis, of squama æris, of arsenic, of common salts, of each, dr. iv.

The powder of Massaliotes. Of roasted natron, of chrysocolla, of Asian stone, of sandarach, of misy, of chalcitis, of fissile alum, of diphryges, equal parts. Use dry.

The dry abstergent application (smegma) called the Æsculapian. Of bay berries, of Alexandrian natron, of roasted salt, of Cappadocian salt, of ammoniac perfume, of aphronitrum, of pumice-stone, of each, lb. j; of black hellebore, of fuller's herb, of pellitory, of the burnt lees of wine, of stavesacre, of mustard, of cyperus, of fissile alum, of the schœnanth, of iris, of galls, of each, oz. vj; of sampsuchum (a species of marjoram), lb. j;

of the seed of the chaste tree, of pennyroyal, of the flour of beans and of lupines, of each, oz. vj; of the black chamæleon, of sulphur, of gum, of frankincense, of pepper, of the root of the wild cucumber, of horehound, of Cimolian earth, of pæony, of the shell of the cuttle-fish, of the leaf of fenugreek, of costus, of cumin, of euphorbium, of spikenard, of each, oz. iij. But Alexander adds the following things: of bitter salts, of salts from nitrous fountains, of Tragesæan salt ("see Plin. xxxi, 61"), of each, lb. j; of adarce, oz. j; of liquid alum, of Celtic, of cnicus, of granum Cnidium, of dried grass, of dried bryony, of each, oz. iij.

The abstergent application from pompions (smegma peponaton). Of frankincense, of mastich, of ammoniac perfume, of each, oz. j; of tragacanth, oz. iss; of the juice of wild grape, oz. ix; of the fresh seed of pompion, oz. iij; of similago, sext. v; the whites of xxi eggs, of iris, oz. iv. Some also use of black hellebore, oz. ij.

Otherwise, that of Crito. Of bean meal, one modius; of similago, sext. iv; of trefoil, of nutben, of Illyrian iris, of each, lb. iv; of ammoniac perfume, lb. j; of costus, lb. j; the whites of seven eggs, of the flesh of pompions, sext. ij; of the juice of unripe grape, sext. ij. Mix, and having formed trochisks, dry, then having pounded and strained, use.

Otherwise. Of tragacanth, of frankincense, of mastich, of ammoniac perfume, of each, dr. x; of the juice of unripe grape, dr. v; of similago, sext. v; of the white of an egg, oz. j; of the flesh of pompions, oz. j. Prepare as above described.

A desiccative smegma for defluxions of the head. Of the tawny-coloured Alexandrian natron, oz. v; of common salts, roasted, oz. iss; of Cappadocian salts, oz. j. Having mixed these with the strongest vinegar, put into a linen bag, and burn in a furnace until it be reduced to cinders. Then having cooled it, rub with it triturated, adding a little wine in the bath.

The soap of Constantine. Of dried roses, of aloes, of galls, of pomegranate rind, of Indian leaf, of sarcocolla, of each, oz. iij; of the flowers of the wild pomegranate, of myrrh, of sandarach, of spikenard, of each, oz. ij; of costus, oz. j; of Gallic soap, lb. j. Mix with the decoction of lupines.

The depilatory powder for the gout. Of mastich, of male

frankincense, of stavesacre, of white hellebore, of litharge, of each, oz. iij; of Indian leaf, of starch, of black hellebore, of the flower of Asian stone, of each, oz. j; of alcyonium, of roasted pumice-stone, of Cimolian earth, of sampsuch (marjoram), of each, oz. iij; of spikenard, oz. j; some also add of aloes, oz. j. Having pounded them, keep the powder in a vessel; and when going to use it, put the juice of rice and of ptisan in a pot, and after it boils add of the powder, oz. iss; of Gallic soap, oz. iss; of arsenic, of fissile alum, of each, oz. iss; of sandarach, oz. iss; of recent quicklime, lb. j. Use this unguent thrice a month, on the 9th day of the moon, the 19th, and the 29th, for a whole year, and afterwards once a month on the 29th day of the moon.

COMM. COMMENTARY. The terms are thus explained by Blancard: *Diapasma*. Plinio, medicamentum aridum ex siccis pulveribus conflatum inspersile, quod aut vestibus ad gratiam odoris, aut ulceri vulnerique variâ ratione, aut potui etiam ad luxum inspergitur, *διάπασμα, κατάπασμα, κατάπαστον φάρμακον*. Oribasius non malè discrimen inter has voces ex Antyllo ponere mihi videtur ut *ἐμπάσματα* sint, quæ sudoribus cohibendis, et commovendo pruritu adhibentur: quæ *Sympasmata et aspergines* Aurelianus nominat: *καταπάσματα* sunt quæ ulceribus superponuntur, *ξήρια* etiam dicta: *διαπάσματα* vero conciliandæ in vento fragrantia. (Lexicon Medicum.) The different forms of medicines are thus characterized by Dr. Blomfield: "Quatuor sunt *φαρμάκων* genera, quorum principè mentio fit apud auctores Græcos: *φάρμακα χριστά, παστά, πλαστά*, et *πιστά* vel *πότιμα*, quibus interdum additur quintum genus, *τὰ βρώσιμα*, et sextum *ἐπωδαί*, prout eis ad *unguendum, inspergendum, emplastro obtegendum, bibendum, edendum, vel incantandum* utebantur." (Glossarium ad Æschyli Prometh. l. 488.) Theocritus uses the word *ἐπίπαστον* in its medical sense. (Idyll. xi, 2.) He says, no medicine, either in the form of ointment or powder, is a remedy for love. Le Clerc thus explains the medicines of which we are treating: "Les *poudres* s'appelloient en Grec *ξήρια* ὃν *ξηρά* c'est à dire, *médicamens secs*. On les appelloit *Diapasmata, Catapasmata, Catapasta, Sympasmata*." He says of the Smegma: "On s'en servoit particulièrement pour nettoyer le peau, pour ôter le démangeaison, &c." He adds:

“Lorsque il s’agissoit de faire tomber le poil on prenoit des matières encore plus fortes et plus acres que celles qu’on a indiquées, comme de l’orpiment, de la sandaraque, de la chaux vive, et l’on les détrempoit avec les sucs. En ces cas on donnoit à cette composition le nom particulière de *psilothrum* ou *dépilatoire*.” (Hist. de la Méd.) On the meaning of the terms see, further, Eustathius (ap. Iliad. iv); Scholiast. Aristoph. (Plaat); and Gataker’s Antoninus (v, 9.)

Celsus gives the following general description of these medicines: “Quædam autem mixturæ medicamentorum sunt quibus aridis neque coactis utimur, sic ut inspergamus, aut cum aliquo liquido mixta illinamus.” The powder of gollas, if prepared according to his directions, would consist of potass, sulphur, quicklime, and orpiment. His ninth preparation of this class is a sternutatory, and the tenth is one for making a gargle. (v, 22.)

Most of our author’s formulæ are borrowed, with a few alterations, from Galen. (De Med. sec. gen. v.)

For a description of the Arabian *Pulveres*, see, in particular, Haly Abbas (Pract. x, 16,) and Mesue, (i, ix.) Many of Mesue’s compositions are internal medicines, consisting principally of aromatics. Thus, his first preparation, which is intended to dry humidity of the stomach, dispel flatulence, and assist digestion, consists of lignum aloes, oz. ss; of galls, dr. iss; and of white sugar, oz. iss.

Nicolaus Myrepsus, in his copious ‘Dispensatory,’ describes the composition of 50 smegmata and 143 pulveres. The far greater number of the former are intended as applications to the skin in diseases thereof, such as impetigo, leprosy, itch, and the like. The pulveres consist of applications to the skin, sternutatories, gargles, and injections. None of them, we believe, are to be taken inwardly.

SECT. XIV.—ON LINIMENTS TO THE MOUTH AND THROAT.

As much as the coat which lines the mouth is finer and softer than the skin, such a difference must there be with regard to the applications made to the mouth. At the commencement, therefore, of inflammation, medicines for repelling the defluxion

are required, such as the dry applications, namely, omphacium, the gall omphacitis, the juice of sumach and of hypocistis, and alum, the bark of pine and of the frankincense-tree, and the flowers of the wild pomegranate tree; and, in a word, all the astringents, with the exception of those which are unsavoury and deleterious; and the liquid applications, such as the juice of the blackberries, both of the brambles and those called mulberries: also the juice of the bark of green walnuts and of pomegranates, more especially such as are acid, and of quinces and Aminean must. Honey is mixed at the commencement solely for the preservation of the medicines. But when the humour lodges in the part, digestive and moderately-repellent articles are to be mixed, such as saffron, myrrh, and the juice of liquorice. And during the whole time that intervenes between the acme and decline, a compound of both kinds is to be used, I mean, the repellent and discutient; and at first the repellent are to be the prevailing ingredients, but afterwards the discutient. In the decline we must use discutients, which have no astringency, such as natron, aphronitrum, origany, hyssop, thyme, calamint, iris, besasa and the like. The liquid application then should be rob, that from boiled must, that from dried figs and palm-nuts, and the sweet must itself with honey. When but a little of the inflammation remains, we are to mix also some sulphur vivum. We must first boil the juice with honey, to the consistence of the more liquid honey, and then sprinkle the powders finely levigated, and afterwards boil moderately until the whole are properly united, and then it is to be laid up in vessels of glass.

The simple liniment to the mouth from mulberries. Of the juice of mulberries, sext. iij; boil until a third part be consumed, add of honey, sext. j, and boil to the consistence of honey.

The compound one from mulberries. Of the juice of mulberries, hemin. vj; boil to the consistence of the sordes in baths, then mix, well triturated, of saffron, dr. j; of myrrh, dr. ij; of the juice of unripe grape, dr. j; of fissile alum, three oboli; of honey, one hemina; and boil to a proper thickness.

Of the bramble-berries. The composition from bramble-berries is prepared in like manner, being more astringent.

The simple one from walnuts. Of the juice of the pounded

bark of green walnuts, hemin. v; of honey, hemin. j; it is boiled like that from mulberries.

The compound one from walnuts. In the commencement, and at the acme of inflammations in the mouth, mix of saffron and of alum, of each, oz. j; of myrrh, dr. ij; and in the decline add, as a discutient, of natron, dr. j; of sulphur, dr. j, to the aforementioned proportions of the juice and of honey.

The preparation from the juice of pomegranates. Of the juice of sweet pomegranates, without their kernels, sext. iv; of the juice of acid pomegranates, sext. ij; of honey, sext. j; of the Minnæan myrrh, dr. viij; of crocomagma, of galls, of each, dr. viij; of fissile alum, dr. iv; of Illyrian iris and of omphacium, of each, dr. viij. Prepare like that from mulberries.

The same otherwise. Of the juice of sweet pomegranate bruised with their kernels, sext. vj; of fine honey, sext. j; of fissile alum, oz. j; of myrrh, oz. ss.

The preparation from must. Of must, sext. vj; of galls, of fissile alum, of each dr. ij; of saffron, of myrrh, of each, dr. j. If you mean it for a demulcent, let the must be sweet, but if as a repellent, austere. The middle state has intermediate properties.

The Egyptian stomachic. Of honey, lb. j; of oil, oz. viij; of turpentine, oz. ij; of saffron, dr. iv. They are melted in a double vessel.

The stomachic medicine, from besasa. Of anise seed, of parsley seed, of the schœnanth, of the seed of bishop's weed, of fissile alum, of Illyrian iris, of besasa (which some call harmala, it is the wild rue), of cinnamon, of troglodytic myrrh, of saffron, of gall, of each, oz. j; of long birthwort, of cassia, of crocomagma, of dried roses, of each, oz. j; of costus, of the fresh ashes of pigeons, oz. iij; of Indian nard, of amomum, of each, oz. ss; of honey, q. s.

COMMENTARY. Celsus thus sums up the general properties COMM.
of these preparations: "Gargarizationes autem aut lævandi
causa fiunt, aut reprimendi, aut evocandi. Lævant, lac, cremor
vel ptisanæ, vel furfurum: reprimunt aqua, in qua vel lenticula,
vel rosa, vel rubus, vel cotoneum malum, vel palmulæ decoctæ
sunt: evocant, sinapi, piper." (v, 22.)

Galen treats of these compositions very systematically, and

COMM. at great length, in the sixth book of his work, 'De Comp. Med. sec. loc.' The far greater number of our author's prescriptions are copied from it. Myrepsus likewise gives a long list of such like compositions (§ ix.) See also Aëtius (viii.)

SECT. XV.—ON DELICIOUS AND OFFICINAL POTIONS.

Of delicious officinal potions, some are composed of wine, having certain articles added to it, such as pepper, wormwood, sowbread, and many other things, from which they sometimes receive their appellation, sometimes having honey mixed with them and sometimes not; and some are composed from water in which have been boiled apples or roses, with certain juices, such as those of unripe grapes, pomegranates, and myrtles.

On this account the finest scummed honey is mixed with them for the sake of preservation, sweetness, and sometimes of utility. The austere and vinous hydromel brought from Cebyra in small vessels is an exception; for I have known it formed without honey, as the apomel is made from honey alone and water, without any other substance. But those things which are prepared from wine, which are called propotions (or "whets"?) receive sext. j of scummed honey to four of wine and are made without being boiled. Those which are prepared from water and juices, if boiled, receive one part of honey to three of the liquor, about two parts of which are consumed in the boiling; but if they are not boiled they receive one part of honey to two of the liquor. Those things which are not boiled are to be isolated for a sufficient time, and particularly the omphacomel. Those from water require to be boiled, because from their weakness they are readily changed. They are all to be laid up in small pitched earthen vessels, which are to be carefully covered up and deposited in situations above ground until they are concocted. They are to be used as attenuants, and well mixed with water. But the omphacomel after being boiled like must, and settling, is to be covered up. Those composed from wine we use principally in cases which are free from fever, or for the relish only (with the exception of those which are prepared from scammony, the granum Cnidium, or the like purgatives); or in such affections

as when we would use the medicines which are the ingredients of them by the mouth. Those prepared from water, or the juices we use in febrile cases, or as sweeteners, when the disease does not admit the use of wines, and sometimes as agreeing with the affections, as apomel for a sialogogue, diuretic, laxative of the bowels, or attenuant of humours; and hydromelon and hydrosaton in cases of thirst, ardent fevers, resolutions, and derangements of the stomach; and omphacomel, myrteton, rhodostacton, and rhoita, in cæliac and dysenteric cases, and for vomitings and other defluxions. They are frequently used as washes in affections of the mouth.

The hydromelum from the juice of apples. Of the juice of clean quinces bruised, sext. ij; of honey, sext. iij; of water, sext. vj. Boil, scumming it until it be reduced to a third part. *Another.*—Of clean quinces cut into pieces, lb. v. Boil in sext. j of well-water until they become soft. Then removing them from the fire, after they become cold, strain, and having filtrated the apples throw them away. Having measured the water, mix with it half the quantity of honey, and boil again, scumming it until the eighth part be consumed. Some compose the hydromelum in like manner from sweet apples.

The composition of the hydrosatum. Of roses deprived of their nails (the white parts of the leaves), lb. iv; of water, sext. v; of honey, sext. ij.

The preparation of the Rhodomelum. Of the juice of quinces, sext. j; of roses, lb. iij; of honey, sext. iij; of water, sext. v. But since the apples are not found at the same season with the roses, these are to be added to honey at the proper season, and when the apples appear, the composition is to be completed.

The preparation of the omphacomel. Of the juice of unripe grapes, sext. iij; of honey, sext. j. Having mixed, expose it to the sun for forty days, or boil.

The preparation of Myrteta. Of the juice of myrtles, sext. iij; of honey, sext. j. Boil till the third is consumed.

Apomel from the works of Phalagrius. Of white honey-combs filled with honey, lb. j; of spring water, lb. iijss; having broken down the comb and united them, boil the water with the honey until the scum of it and the waxy part

swim on the top and is separated, then cool and cover it up carefully.

The composition of rhodostactum. Of the juice of roses without their nails, sext. ij; of honey, sext. j. Boil, scumming it, until the fourth part be consumed.

The preparation of rhætes. Of the juice of pomegranate, sext. iij; of honey, sext. j. Boil to a third part.

COMM. COMMENTARY. We shall in the first place give some account of the Propoma. It was a draught generally containing wine, which was taken at the commencement of the supper, or principal meal of the ancients. Horace alludes to it in the following lines :

“Anfidius forti miscebat mella Falerno,
Mendose: quoniam vacuis committere venis
Nil nisi lene decet: leni præcordia mulso
Prolueris melius.”

(Lib. ii, Sat. 4.)

Catius here condemns the practice of using strong wine for the composition of the Propoma. Old Falernian wine was thought the best. Thus Macrobius says of it: “Mulsum quo probe temperes, miscendum esse novo Hymetto et Falerno vetulo.” (Saturn. vii, 12.) “To the Propoma,” says Athenæus, “were added pepper, Indian leaf, myrrh, cyperus, and Egyptian ointment.” (Deip. ii, 25.) A long list of receipts for Propomata is given by Myrepsus (§ 38.) Most of them contain wine, honey, and aromatics. See a learned Dissertation on the Propoma by Casaubon (in Athen. Deipnos. ii, 17); also Lister (in Apicii Op. i, 1.)

It will be proper here to give some account of the medicated wines, or, as we would now call them, the *Vinous Tinctures*, of the ancients. Dioscorides details the composition of them very fully in the fifth book of his ‘Materia Medica.’ The following is his prescription for the *wine of squills*: Take a mina of squills, and having pounded it, sift, and bind it in a thin piece of linen; then put it into 20 sextarii of good fresh must, and allow it to macerate for three months; afterwards strain the wine into another vessel, and cover it up carefully. The *wine of quinces* is to be prepared by putting 12 minæ of quinces, deprived of their seeds, into a cadus of must, and

allowing it to remain for thirty days. Wines from other kinds of apples, such as medlars, services, and pears, may be prepared in like manner. He afterwards gives similar directions for preparing the following medicated wines :

Wine of wild vine.

pomegranate.
roses.
myrtles.
lentisk.
turpentine.
palms.
figs.
sycamores.
resin.
cone of the pine.
cedar or juniper.
cedar-rosin.
pitch.
wormwood.
hyssop.
germander.
cassidony.
betony.
tragogianum.
bunium.
dittany.
horehound.
thyme.
savoury.

Wine of marjoram.

calamint.
fleabane.
aromatics.
myrrh, pepper, and iris.
elicampane.
spikenard.
asarabacca.
wild nard or valerian.
carrot.
sage.
panacea.
sweet-flag.
parsley.
fennel and dill.
hellebore, wild cucumber, or
scammony, for procuring
abortions.
spurge-flax.
mezerion.
ground-pine.
mandrake.
hellebore.
scammony.

The preparation of these factitious wines is also described by Pliny. (H. N. xiv, 19.) To this class we may refer the *Vina condita* of Apicius. (Cap. i.) See also in particular Aëtius (iii); Myrepsus (§ 27); Haly Abbas (Pract. x, 21); Serapion (vii, 35); Actuarius (Meth. Med. v, 7.) Actuarius gives the following prescription for preparing a *vinous tincture of poppies*, which he recommends for coughs, cholera, and such like complaints : Of poppy-heads, c ; of liquorice-root, lb. j ; of sodden must, lb. c.

SECT. XVI.—ON COLLYRIA AND AGGLUTINATIVE APPLICATIONS.

The materials from which ophthalmic medicines are composed are various. For inspissated and liquid, seeds, fruits, the parts of herbs, and metals are ingredients in them. Of these, some sooth acrimonies, and are, as it were, obstruents, such as pompholyx, spodium, starch, lead, Samian aster, calamine, all washed substances, and the white of an egg. These are to be used after evacuation of the head, for if there should be plethora of it, there will be danger of the coats of the eyes being ruptured by distension. The opposite class of collyria being of an acrid nature, are deobstruents and evacuants of the humours permanently lodged there; such as the Cyrenaic and Median juices, sagapen, euphorbium, and the like. Some are detergents of foul ulcers, such as the squama æris, copper, chalcitis, misy, sori, the flowers of copper, and antimony burnt. Allied to these are those called abstergents, such as arsenic, sandarach, the flower of Asian stone. Some are astringent, and of these such as are moderately astringent are of extensive use for ophthalmies, ulcers, and defluxions, as the leaves, fruit, and flowers of roses, spikenard, Indian leaf, saffron, glaucium, and hypocistis. Those possessed of a stronger astringency are mixed with those remedies which are used for sharpening the sight, such as omphacium, acacia, the flowers of the wild and of the cultivated pomegranate, and galls. Some are concoctive and discutient, such as myrrh, saffron, castor, rosemary, and the juice of fenugreek. Of compound ophthalmic medicines, some are simply called *plasta*, some *xerocollyria*, and some *hygrocollyria*. The first class admit of all the materials formerly mentioned, and agree with all states. They are to be prepared most commonly in spring, for in summer their strength is apt to evaporate, and in winter the articles being constricted do not mix properly. They are to be rubbed with the addition of a fluid, but not in great quantity that the metallic parts may not subside, nor the aromatic float on the surface, but in small quantities, so that it may be rubbed until it is like the *sordes* of baths. Rain-water should be used, because it is finer and moderately astringent. But if not, those things are to be levigated and triturated with wine or some juice; the metallic

substances for a longer time, and the juicy substances for a shorter. At last, after sufficient trituration, we must add the gum, and having formed them, lay them up in copper vessels especially, or in glass. Those prepared from juices are to be used immediately, but the metallic improve by keeping. Of the xerocollyria, some melt down, and absterge callus, sycosis, pterygium, and scabious affections, being composed of chalcitis, verdigris, and misy. Some occasion a discharge of tears, agreeing with obstructions and dimness of sight, and are composed of these things, pepper and spikenard. Some are prophylactics for preventing influxes, such as those from Phrygian stone, sarcocolla, glaucium, aloes, calamine, antimony, and saffron. All these medicines are to be applied to the eyes in a state of the finest powder. But the hygrocollyria are prepared from Attic honey, opobalsam, oil of the most subtile kind from age, the juice of fennel, the galls of different animals, the Cyrenaic juice, and many other things. Those things which are attenuant, calefacient, and purgative are useful for dimness of sight, and incipient suffusions. These and all acrid things are to be used when the head is free from plethora, and when the atmosphere is serene and pure, and the wind is northerly, and not very hot nor very cold. Those preparations called agglutinants are made from such things as are obstruent, agglutinative, constringent, refrigerant, styptic, or desiccative, such as pollen, manna, Samian earth, myrrh, shells, acacia, opium, with the white of an egg. They are glued to the forehead when the humour is not under the scalp, but external to it.

The collyrium monemerum for incipient and old ophthalmies. Of acacia, dr. xxxvj; of gum, dr. xxxij; of calamine, dr. xxiv; of burnt and washed copper, dr. viij; of opium, dr. j. Triturate in austere wine. It is discutient and desiccative.

The collyrium chiacum. Of sinopic vermilion, of the immature gall, of saffron, of the flower of fresh roses deprived of their nails (which we call the pouch), of gum, of each, oz. iv; of opium, oz. j. Triturate with Aminæan, Falernian, or Chian austere wine. But the wine must not contain salt water.

The collyrian cygnarium. Of calamine, burnt and washed, oz. vj; of washed ceruse, oz. iv; of pompholyx, oz. iv; of starch, oz. ij; of tragacanth, of roasted opium, of gum, of each, oz. ij. Triturate with rain-water.

The pale-coloured cygnus. Of calamine, burnt and washed, oz. ij; of terra aster, oz. ij; of ceruse, oz. iv; of pompholyx, oz. viij; of starch, oz. ij; of opium, oz. ij; of acacia, of tragacanth, of each, oz. j; of gum, oz. iv. Triturate with rain-water.

The white cygnus. Of calamine, oz. xv; of ceruse, oz. xvij; of opium, dr. viij; of frankincense, dr. vij; of starch, oz. vij; of gum, oz. xij. Triturate with rain-water.

The collyrium pelarion for ulcers. Of calamine, of ceruse, of each, dr. xxiv; of acacia, of opium, of each, dr. xvij; of gum, of tragacanth, of starch, of each, dr. ix; of myrrh, dr. iij; of copper, of saffron, of each, dr. iss. Triturate with water.

The brown collyrium, for hypopium and great affections. Of tender calamine, dr. xxiv; of ceruse, dr. xvj; of scraped verdigris, dr. xij; of antimony, dr. viij; of fissile alum, dr. iij; of burnt chalcitis, dr. iij; of Indian nard, dr. iv; of the oil of unripe olives, dr. ij; of copper, dr. ij; of squama æris, dr. viij; of the fruit of heath, dr. xij; of the juice of poppy, dr. xxiv; of saffron, dr. iv; of castor, dr. iij; of myrrh, dr. vj; of Indian buckthorn, of acacia, of gum, of each, dr. iv; of fresh roses, dr. iiss. Triturate with Falernian, Surentine, Aminæan, or Chian austere wine. It is rubbed in three times a day, in a watery state, being diluted with the juice of fenugreek, then the white of an egg or milk, and at last, with water, thicker.

The collyrium severianum. Of calamine, oz. vj; of ceruse, oz. xij; of tragacanth, oz. iij. Triturate with the juice of fenugreek. Having burnt the calamine, dissolve it in milk and then wash.

The collyrium from decoctions. Of calamine, oz. xvj; of ceruse, oz. viij; of starch, of opium, of tragacanth, of acacia, of each, oz. ij; of gum, oz. vj. Triturate with the decoction of dried roses, of melilots, of poppy, of poppy-heads, of liquorice, in equal parts.

The repellent collyrium, from hydria or water vessels. Of the sand found in copper vessels used for heating water, lb. iij; of calamine burnt and washed, lb. j; of washed ceruse, of washed pompholyx, of washed terra aster, of each, oz. vj; of frankincense, oz. j; of myrrh, oz. j; of the juice of linseed, of fleawort, of ptisan, of fenugreek, of each, lb. j; of tragacanth, oz. vj; of gum, lb. j.

The collyrium of Nilamon. Of calamine, oz. viij; of pompholyx, oz. iv: of ceruse, lb. j; of tragacanth, of gum, of opium, of each, oz. iv. Rain-water.

The collyrium spodiakon, for inflammations, defluxions, and chemoses. Of frankincense, of antimony, of each, dr. c; of calamine, of ceruse, of each, dr. xxiv; of Samian earth, of the juice of poppy, of each, dr. iij; of gum, dr. xv. Triturate with the juice of fresh olive leaves. Prepare the juice thus: having pounded in a mortar the more tender leaves of olive, washed, add a moderate quantity of water, and filtrate through a piece of linen rag.

The tender collyrium from olive leaves. Of frankincense, dr. iv; of antimony, dr. xv; of calamine, dr. xxvij; of ceruse, dr. xlix; of Samian earth, dr. xvij; of opium, dr. vj; of gum, dr. j; of lead, burnt and washed, dr. viij. Mix with the juice of green olive leaves.

The yellow collyrium from green olive leaves. Of burnt copper, dr. xij; of sandyx, oz. xxiv; of olive leaves, oz. ij; of opium, oz. ij; of gum, oz. x. Mix with palm wine, or Aminæan.

The Claudiac collyrium from myrrh. Of glaucium, of sarco-colla, of each, dr. xlviij; of saffron, dr. xxiv; of opium, of myrrh, of bloodstone, of each, dr. vi; of tragacanth, dr. xlviij; of gum, dr. xvj. Mix with Italian wine. To be used with an egg.

Another collyrium from myrrh, for fistula lachrymalis. Of calamine washed, of bloodstone washed, of each, dr. xxvij; of myrrh, of Cyprian spodium, of each, dr. xxiv; of opium, dr. viij; of saffron, dr. iv (but some use dr. viij); of white pepper, grs. xxx; of gum, dr. xvj. Mix with Italian wine. To be used with an egg, and in recent cases diluted with water.

The stacticon of Prosechius. Of calamine, of gum, of each, dr. xx; of antimony, of copperas, of each, dr. viij; of opium, dr. xiv; of scraped verdigris, dr. x; of white pepper, dr. vj; of saffron, dr. viij; of raw misy, dr. viij; of opobalsam, dr. iv. Water.

The hygidium of Ammonius. Of calamine, of copper, of each, dr. xvj; of ceruse, of castor, of aloes, of saffron, of each, dr. iv; of squama (æris?), dr. v; of the flower of roses, of burnt lead, of each, dr. viij; of buckthorn, dr. iij; of the stone

schistos, dr. iv ; of opium, dr. x ; of acacia, dr. xj ; of gum, dr. xlvij. Water.

The collyrium Olympus, or Olympiacum. Of acacia, of spikenard, of frankincence, of each, dr. viij ; of copper, burnt and washed, of antimony, burnt and washed, of ceruse, burnt and washed, of calamine, of each, dr. xij ; of myrrh, of roasted opium, of each, dr. iv ; of saffron, dr. v ; of scraped verdigris, dr. iij ; of the stone schistos, of the red squama, of Indian buckthorn, of the oil of unripe grapes, of each, dr. j ; of castor, of the flower of roses, of each, dr. ij ; of palm-nuts, dr. iv ; in like manner the bones of burnt palms, to the number of v ; of gum, oz. v. Rain-water. Let there be soaked in water for three nights and days, of the aromatic reed, of the seed of henbane, of dried roses, of each, dr. iv ; of Indian leaf, dr. j.

The collyrium of nard. Of calamine, of saffron, of gum, of each, dr. xxxvj ; of burnt copper, dr. xvij ; of antimony, of acacia, of each, dr. xxx ; of Syriac nard, dr. xij ; of opium, of myrrh, of each, dr. xvj. With water.

The small Theodotian collyrium. Of antimony, of acacia, of each, dr. xx ; of burnt copper, dr. viij ; of ceruse, dr. iv ; of myrrh, dr. iv ; of verdigris, dr. ij ; of aloes, of meconium, of buckthorn, of each, dr. j. Rain-water.

The collyrium rhinarion. Of bloodstone, of the stone schistos, of each, dr. xvj ; of burnt copper, of calamine, of verdigris, of each, dr. viij ; of opium, dr. v ; of chalcitis, dr. ij ; of gum, dr. viij. In wine.

The collyrium xyster. Of burnt pumice-stone, of burnt misy, of burnt shells, of each, oz. vj ; of calamine, of opium, of burnt chalcitis, of saffron, of hepatic aloes, of castor, of Indian leaf, of each, dr. ij ; of antimony, of acacia, of each, oz. j ; of burnt copper, oz. iv ; of troglodytic myrrh, dr. iv ; of spikenard, dr. j ; of ceruse, dr. viij ; of gum, dr. iv. Rain-water. Some also mix wine.

The hecatomb collyrium for thick cicatrices. Of calamine, burnt and washed, of copper, burnt and washed, of each, dr. viij ; of antimony burnt, of the yellow acacia, of gum, of each, dr. xv ; of aloes, of galls, of ærugo vermiculata, of castor, of buckthorn, of spikenard, of saffron, of opium, of myrrh, of ceruse, of the shavings of ebony, of chalcitis, of each, dr. j ; of roses, dr. lx. Rain-water.

The collyrium from horn, of Galen. Of burnt lead, of burnt hartshorn, of each, oz. ij; of ceruse, of squama æris, of starch, of frankincense, of cuttle-fish, of burnt shell, of verdigris, of myrrh, of gum, of each, oz. j. Rain-water.

The collyrium from frankincense. Of frankincense, oz. vj; of calamine, of pompholyx, of terra aster, of starch, of gum, of each, oz. iij; of ceruse, oz. vj; of squama æris, oz. iv; of tragacanth, oz. iij; of opium, oz. vj. Rain-water.

The Libanian collyrium. Of washed calamine, of starch, of each, dr. xij; of ceruse, dr. xij; of spodium, of pompholyx, of terra aster, of lead, burnt and washed, of tragacanth, of each, dr. viij; of opium, dr. xij; of gum, dr. iv. Rain-water and the whites of twenty eggs. Some add also of myrrh, dr. iv.

The collyrium called the aster of Magnus. Of pompholyx, of calamine, of ceruse, of each, dr. xvj; of lead, dr. viij; of starch, dr. xvij; of frankincense, dr. x; of terra aster, dr. xij; of myrrh, dr. ij; of tragacanth, of gum, of each, dr. viij. Water.

The collyrium Uranium. Of terra aster, washed, oz. iij; of spodium, washed, oz. j; of gum, oz. iv; of antimony, burnt and washed, oz. ij; of squama æris, washed, oz. j; of opium, dr. vj; of calamine, burnt and washed, dr. ij. Rain-water. It is an incarnant and repellent.

The collyrium from the juice of fenugreek. Of calamine, of tragacanth, of each, oz. viij; of ceruse, oz. xxx; of starch, oz. xxx; of opium, oz. j. Triturate with the juice of fenugreek.

The collyrium of Cleon. Of pompholyx, of lead, of each, oz. v; of saffron, oz. iss; of the squama stomomatis, oz. j; of gum, oz. ij. Rain-water. Inject diluted.

The collyrium containing lxxii ounces of roses. Of green roses, oz. lxxii, of calamine, burnt and washed, dr. xxiv; of scraped verdigris, dr. ij; of spikenard, dr. j; of squama æris, washed, dr. ij; of antimony, burnt and washed, of opium, of myrrh, of each, dr. iij; of saffron, dr. viij; of starch, dr. ij; of gum, dr. xxiv. Rain-water.

The white collyrium from roses. Of calamine, burnt and washed, of ceruse, washed, of each, lb. j; of starch, of opium, of tragacanth, of each, oz. iij; of aloes, oz. iss; of gum, oz. iij; of saffron, oz. iss; of roses without their nails, oz. vj. Water.

The collyrium from aloes. Of calamine, of ceruse, of aloes,

of each, oz. x; of green roses, oz. vj; of starch, oz. iij; of opium, oz. j; of tragacanth, oz. ij; of gum, oz. iij. Rain-water.

The saffron collyrium from roses. Of spikenard, of dried roses, of aloes, of each, dr. ij; of the white henbane, dr. iss; of saffron, dr. ivss; of glaucium, oz. vj; of sarcocolla, oz. vj; of opium, dr. ij; of tragacanth, oz. j. Rain-water.

The collyrium from roses, of Nilus. Of tender roses, dr. iv; of saffron, dr. ij; of poppy, obol. j; of gum, dr. iv. Rain-water.

The collyrium lynceus for sharpening the sight. Of calamine, of burnt copper, of ammoniac perfume, of each, dr. xij; of myrrh, of bloodstone, of Thebaic opium, of each, dr. vj; of hepatic aloes, of the gall of bulls, of galbanum, of sagapen, of each, dr. iv; of scraped verdigris, of opoponax, of sal ammoniac, of each, dr. j; of gum, dr. vj. Rain-water.

The collyrium Proteus, for the same purposes, and it also attenuates cicatrices. Of calamine, of ceruse, of crude chalcitis, of each, dr. xl; of pepper, dr. iss; of Cyrenaic juice, dr. viij; of saffron, dr. xij; of Thebaic opium, dr. x; of sagapen, dr. xij; of Ethiopian olive, dr. xij; of arsenic, of fissile alum, of each, dr. viij; of myrrh, dr. xij; of ammoniac perfume, dr. xx; of opoponax, dr. xvj; of opobalsam, dr. x; of gum, dr. xx. In rain-water.

The collyrium from the juice of fennel. Of calamine, dr. xvij; of Indian ink, dr. xvj; of long pepper, dr. xiiij, and of white, dr. xij; of Cyrenaic juice, dr. viij; of opobalsam, dr. vj; of spikenard, dr. vj; of sagapen, of opoponax, of each, dr. v; of opium, dr. iv; of euphorbium, dr. j; of gum, dr. j. Triturate with the juice of fennel.

The collyrium from opobalsam. Of calamine, of ceruse, of each, dr. viij; of the oil of unripe olives, dr. iv; of white pepper, dr. xvj; of opium, dr. iv; of opobalsam, of gum, of each, dr. xvj. Rain-water.

The collyrium called thalasseros. Of calamine, oz. viij; of verdigris, oz. ij; of Indian ink, oz. viij; of white pepper, oz. iv; of Median juice (assafœtida?) oz. j; of opobalsam, oz. ij; of gum, oz. vj. Water.

The collyrium harmation. Of ammoniac perfume, of burnt copper, of the bark of frankincense, of each, dr. iv; of verdigris, dr. j; of gum, dr. iv. Rain-water.

The collyrium malabathrinum, called also isotheon. Of calamine, dr. xvj; of copper, burnt and washed, dr. xiv; of opium, of Indian buckthorn, of Indian leaf, of Indian nard, of saffron, of aloes, of each, dr. ij; of ceruse, dr. viij; of castor, dr. ij; of myrrh, dr. iv; of acacia, of antimony, of each, dr. xl. With water. To be used with an egg.

The thicker collyrium from wine. Of calamine, of the lapis hæmatitis, and schistos, of each, dr. xl; of burnt copper, dr. xxx; of chalcitis, dr. xxxij; of the seed of poppy, dr. xiiij. Having boiled the poppies in water, and strained the juice, add and triturate with palm wine or Aminæan.

Another from wine. Of burnt copper, of the calamine called placitis, of each oz. ix; of bloodstone, washed, oz. vj; of saffron, of myrrh, of aloes, of ammoniac perfume, of each, oz. iiij; of Indian buckthorn, of spikenard, of each, oz. j; of white pepper, gr. cl; of the yellow acacia, oz. ix; of gum, oz. iiij. Triturate with Falernian or Aminæan wine.

The collyrium from two stones for asperities. Of lapis hæmatitis and schistos, of cassia, of each, dr. xviiij; of copper, of calamine, of opium, of scraped verdigris, of each, dr. ix; of gum, dr. ix; of burnt chalcitis, dr. vj. Water.

Xerocollyria. The prophylactic of Galen. Of Asian stone cut into small pieces and burnt in a pot, until it become red-hot and extinguished in butter not old, and then again burnt and extinguished in Falernian wine; and a third time burnt and extinguished in honey, and dried, lb. j; of burnt copper, of white pepper, of Indian leaf, of each, oz. j; of antimony, oz. iss: and when all the things are levigated, and you wish to lay up the medicine, add of the juice of balsam, not thick (for this prevents the preparation from getting dry) but of the most transparent, oz. j. Apply it to the eyelids only, not allowing the pencil to touch the coats, but so that it may only reach the eyelids when opened. They are to be anointed, not once, but often before food and after it, and more especially if a sense of ophthalmy be present. It preserves in a wonderful manner, before every other medicine.

The dry collyrium from saffron. Of sarcocolla, dr. viij; of saffron, dr. iv; of glaucium, dr. iv. Anoint often in the day. Some also add aloes.

Another dry collyrium for xerophthalmy, sycosis, mortifi-

cations, and hypersarcoma. Of calamine, dr. x; of chalcitis, dr. xx; of pepper, gr. xv; of Celtic nard, dr. j; triturate the calamine and chalcitis with wine, and when dried add the other things and reduce to a fine powder.

The liquid collyrium from wild carrot. Of the juice of wild carrot, of germander, of cresses, and sometimes of othonna, equal parts. The othonna is the great celandine.

Another, for syçosis, encanthis, and sarcoma. Of roasted misy, dr. vj; of copperas, dr. iv; of Attic honey, sext. j.

The liquid collyrium panchrestus of Erasistratus, having wonderful efficacy, in complaints of the eyes, tonsils, pudenda, and suppurated ears. Of copper, dr. vj; of roasted misy, of myrrh, of each, dr. iij; of saffron, dr. iss; of pepper, dr. j; of Chian wine, and of Cretan must, of each, hemin. iss. Having triturated all the things in the wine until dry, pour in the must and boil to the consistence of honey.

Agglutinants for defluxions of the eyes. Of Samian earth, of manna, of frankincense, of myrrh, equal parts. Adding to it the white of an egg, apply to the forehead spread upon linen.

Another.—Of the seed of henbane, dr. j; of opium, dr. j; of myrrh, dr. ij; of saffron, dr. j; of pollen, dr. iv; the yolks of two roasted eggs. Mix with the white of an egg.

COMM.

COMMENTARY. Gorræus derives the word collyrium from *κολοβή ούρα*, i. e. *cauda trunca*, being expressive of their conical shape. (Defin. Med.) Blancard prefers the derivation from *κωλύω* and *ρόυς*. (Lexicon Medicum.)

Oribasius states that collyria were applied—to the eye, to the uterus, and to fistulous ulcers. (Med. Coll. x, 23.) It is obvious, therefore, that the ancients used the word in a more general signification than the moderns do. Le Clerc gives the following description of the ancient collyria: “Les uns, qui étoient composés de matières seches, eurent le nom de *ξηροκολλούρια*, *collyres secs*. Les autres, où il n’entroit que des matières liquides, s’appellèrent *ύγροκολλούρια*, *collyres humides* ou *liquides*. Les ingrédiens des premières, qui étoient les mêmes que ceux des collyres entières, étoient des poudres métalliques, de *ceruse*, de *pompholyx*, d’*antimoine brûlé*, de *vert-de-gris*, de *chalcitis*, de *cadmia*, et autres semblables. Il y entroit aussi des poudres tirées des plantes, quelques suc

d'herbes, et quelques gommés, commé du *saffran*, des *roses*, COMM. du suc de *chelidoine*, et de *fenouil*, de *l'aloés*, de la *myrrh*, de *Popium*. On méloit tous ces ingrédients et on en formoit des masses que l'on faisoit sécher, et dont on faisoit de la poudre lorsqu'on vouloit s'en servir. Les collyres liquides étoient seulement composés de matières liquides. On prenoit, par exemple, du *miel d'Attique*, qui étoit estimé le meilleur, de *Popobalsamum*, avec du *fiel de vipre*, de *perdreix*, ou de quelque autre animal, et du *suc de fenouil*. On faisoit de cela un mélange, dont on laissoit tomber quelques gouttes dans les yeux de ceux qui avoient la vue foible, ou quelque suffusion commençant." (Hist. de la Méd. iii, ii, 1.)

The Ophthalmic Collyria are treated of with extraordinary accuracy and minuteness of detail in books iv and v of Galen's work 'De comp. med. sec. locos.' Notwithstanding the success with which the surgery of the eye has been cultivated of late, we are confident that the oculists of the present day might derive still further improvement from an attentive study of these books. It is to be remarked that several of his collyria, as well as those of Celsus, contain opium, so that the use of the *vinum opii* in modern practice is not an original invention. Many of them contain very powerful escharotics, such as copper and arsenic, which indicates a great degree of boldness in ancient practice. Why is arsenic never used now for the cure of complaints of the eye? Our author's account of them, which is mostly taken from Galen, is very accurate and deserving of consideration.

All the collyria of Celsus are ocular remedies. As he states, they consist principally of soothing and refreshing medicines variously mixed.

Scribonius Largus describes fully the composition of collyria, which he divides into the soothing and the acrid. The former consist of saffron, gum, tragacanth, calamine, antimony, opium and the like. The latter contain such ingredients as these, burnt copper, verdigris, chalcitis, misy, alum, ammoniac, and galls.

Myrepsus gives prescriptions for 87 ocular collyria, of every possible variety of character.

For the Arabian collyria, see particularly Serapion. (De Antidot. vii, 34.) Camphor is an ingredient in many of them.

SECT. XVII.—ON PLASTERS, AND THOSE THINGS WHICH ARE ADDED TO THE BOILING OF THEM, FROM THE WORKS OF ANTYLUS, AND,

On the proportion of wax to oil. Of those medicines which are the ingredients of plasters, some are terrene, as the metals, and some are kinds of stones and earth, as lees, ashes, and shells; some are oily, some tears, some soluble, some inspissated juices, some liquid juices; also a few admit seeds, herbs, and roots. Of plasters themselves, some are vulnerary, and are called bloody, agglutinative, and plasters for fractures, which must be composed of desiccants, not in the extreme, but in the second order complete, and the commencement of the third. Such are willow, oak, cypress, the barks of pine and pitch-tree, myrrh, rosemary, bitumen, aloes, birthwort, the ashes of the wood of vine, ceruse, litharge, and the most of the metals. They are boiled until they do not stain. The cicatrizing plasters are also composed of desiccants, but more so than the agglutinants. Such are, burnt copper, the squama æris and ferri, verdigris, chalcitis, the flower of burnt copper, alum, gall, molybdæna, calamine, pumice-stone, and the shells. The discutient are formed from the calefacient and moderately desiccative, such as birthwort, thapsia, old oil, and the oil of radishes, honey, opobalsam, pitch, turpentine, galbanum, burnt salts, and the flower of salt. The emollient are formed from litharge, fats, marrow, old oil, bee-glue, ammoniac, storax, galbanum, bdellium, mastich, turpentine, the root of marsh-mallows, and of the wild cucumber. The desiccative are made of sulphur, natron, salts, ashes, bitumen. The epispastic are formed from salts, natron, bee-glue, verdigris, leaven, dung, sulphur, turpentine. The digestive are composed of wax, ladanum, dried grape, amomum, saffron, frankincense, pitch, Egyptian mastich, storax, myrrh, galbanum, butter, œsypum, fats, verdigris. The suppurative are formed from water and oil, pollen, wheaten bread, chondrus, butter, the fat of swine and of calves, frankincense, pitch, rosin. The paregoric are made of litharge, ceruse, oil, dill, camomile, starch, white wax. The bloody-plasters (as they are called) are to be applied when the wounds

and fractures are recent, and to co-operate with them, sponges soaked in oxycrate are to be bound on, above the pledgets, and are to be loosened on the third day, and the same pledgets and not others, again applied. The emollient, epispassic, discutient, and suppurative are applied after the use of cataplasms and cerates. But the suppurative agree best at the commencement and in cases of extreme pain. Of the boiling of them we will speak afterwards.

The plaster tetrapharmacum, basilicum. Of wax, of Colophonian rosin, of pitch, of bull's suet, equal parts.

The plaster from the juice of linseed for discussing and breaking. Of old oil, lb. ij; of wax, oz. xx; of Colophonian rosin, of axunge, of each, lb. iss; of litharge, lb. j; of ceruse, oz. vj; of the juice of linseed, oz. vj; of pollen, oz. j; of frankincense, oz. iv.

The plaster from honey. Of litharge, of wax, of oil, of each, lb. iv; of turpentine, lb. ij; of honey, of axunge, of each, lb. j. *Another.* Of litharge, lb. vj; of oil, lb. vss; of Colophonian rosin, lb. viiss; of wax, lb. iiiss; of honey, lb. iij.

The diachylon, or plaster from juices. Of litharge, lb. vj; of oil, in summer, lb. vij, but in winter, lb. ix; of fenugreek, sext. ss; of linseed, sext. ss; of marsh-mallows, lb. iij. Boil the marsh-mallows and seeds in sext. xx of water, until but a little be left, and of it, mix lb. iv to the oil, and boil until the bubbles cease; then sprinkle with the litharge finely levigated, and boil at a gentle fire until it no longer stain.

The plaster from pollen. Of fine flour, of ammoniac perfume, of each, lb. j; of pine-rosin, of wax, of axunge, of each, lb. iij; of the juice of linseed, q. s.

The botanicon, or plaster from herbs. Of dock, of sordid oil, of the anchusa called the Chærospelethos (it is the Onoclean), of the plantain which has seven fibres (*Plantago major?*), of each, oz. iij; of oil, lb. vj; of axunge, lb. vj. The herbs, being boiled in the oil, are thrown away, but the other things are melted in the oil.

The plaster from king's-spears. Of the juice of the root of asphodel, lb. j; of oil of roses, of oil of camomile, of the fat of geese, of each, oz. ij; of axunge, oz. iij; of wax, oz. iv.

The leaven-plaster for breaking abscesses. Of leaven, of axunge, of each, oz. vj; of salts, oz. iv; of pine-rosin, oz. iij;

of wax, oz. iv; of aphonitrum, oz. j; of ammoniac perfume, oz. ij; of honey, oz. vj; of soap, oz. ij.

The dothiene, or plaster for furunculus. Of ammoniac perfume, lb. j; of Alexandrian natron, oz. vj; of aphonitrum, oz. vj; of swine's seam, lb. ij; of wax, lb. ij; of turpentine, lb. j; of old oil, oz. j; of vinegar, q. s.

The plaster from soapwort for discussing strumous swellings. Of litharge, of soapwort, of birthwort, of each, oz. iv; of galbanum, of squama æris, of aloes, of each, oz. j; of manna, oz. ij; of ammoniac perfume, oz. vj; of pine-rosin, oz. xvj; of vinegar of squills, sext. iv; for the trituration of the powders.

The plaster smilium for abscesses. Of old oil, lb. iss; of litharge, of red natron, of sal ammoniac, of the lye of figs called protostacton, of rosin, of each, lb. j; of galbanum, of ammoniac perfume, of each, oz. ij; of copperas, oz. iv; of wax, oz. vj; of verdigris, of opoponax, of each, oz. j; of vinegar, q. s. Boil the litharge and the verdigris in the oil until it cease to stain, and then add the other things.

The plaster from garlic for breaking abscesses. Of wax, oz. vj; of Colophonian rosin, oz. iv; of pine-rosin, oz. iij; of bull's suet, oz. iv; of yellow natron, oz. iss; the heads of garlic cleansed, xx; of oil, sext. ss. Having boiled the garlic in the oil, throw it away, and mix the other things.

The discutient plaster from apyranon. Of the fat of geese and of pheasants, of each, oz. iij; of old oil, oz. xxvj; of fleawort, oz. iij; of nettle-seed, of the green root of apyranum, of each, lb. j; of white wax, oz. x; of diachylon plaster, oz. ij; of turpentine, oz. j. Having divided the root into small pieces, macerate in the oil with the fleawort and nettle-seed a night and a day; and then having boiled, throw them away, and mixing the soluble substances with the oil, dissolve.

The wheat-plaster for hardness and scirrhus swellings. Of marsh-mallows, of palm-nuts, or of Nicolan dates, of each, lb. ij; of fenugreek, of linseed, of each, sext. ss; of camomile, of melilot, of the bark of palms, of each, oz. vj; of Aminæan wine, sext. vj; of litharge, lb. j; of ceruse, of Colophonian rosin, of each, lb. ij; of wax, of turpentine, of each, lb. j; of old oil, lb. v; of water, lb. ij; of dried bread broken down and sifted, lb. v. The juice of the herbs is extracted by

boiling in wine, and the bread is soaked in it; on the day following, the litharge and ceruse are triturated in the water, and afterwards the oil is added and boiled until it ceases to stain; and then the other things are added. Being removed from the fire, the bread is added and stirred strongly. To these are then added, of scraped verdigris, of the flower of salt, of each, oz. vj; of iris, of birthwort, of each, oz. vj; of turpentine, lb. j.

The plaster Pelarion, from the dross of silver, for excoriations and the like. Of wax, of the fat of bulls, of each, oz. v; of the dross of silver, oz. vj; of Colophonian rosin, oz. iv; of pitch, of oil, of each, oz. ij; the dry dross is triturated in wine or the juice of fenugreek. When the dross is not at hand we may use molybdæna.

The plaster from marshmallows, in gouty cases and other indurations. Of the juices of fenugreek, linseed, and marshmallows, of each, lb. iij; of oil, lb. ij; having boiled it until the juice be consumed, add of Colophonian rosin, lb. j; of turpentine, lb. j; of the tear of ivy, oz. iij. When dissolved, having taken it from the fire, add of wax, lb. j, of galbanum, oz. iv, both pounded together, and having dissolved, stir with a spatula.

The plaster kissinon, or ivy plaster, for wounded nerves and punctures, especially chronic. Of red squama, oz. ivss; of frankincense, oz. j; of misy, oz. iss; of chalcitis, dr. iv; of vinegar, vj. Triturate in the summer sun until consumed, when having dissolved, of wax, oz. viij; of oil, oz. xvij ("deest aliquid"); mix. But if a nerve be divided and laid bare, instead of the galbanum, add of turpentine, oz. ij.

The melanchlorus, for the same purposes, and for bleeding wounds. Of pomegranate rind, of burnt copper, of galls, of round birthwort, of sal ammoniac, of squama æris, of fissile and liquid alum (but some instead of the liquid use the round), of iris, of misy, of copperas, of chalcitis, of scraped verdigris, of calamine, of aloes, of myrrh, of frankincense, of the root of all-heal, of litharge, of ceruse, equal parts. All of which are triturated in the sun during the season of summer, with vinegar for a sufficient number of days, and formed into trochisks. It is made into a plaster thus: of the medicine, oz. ij; of wax, oz. vj; of oil, oz. viij; when for wounded nerves the oil is to be old, but otherwise the common.

The plaster from groundsel. Of the juice of groundsel, lb. ij; of old oil, lb. iss; of oil of privet, oz. iv; of old axunge, lb. j; of turpentine, oz. j; of galbanum, oz. ss; of pine rosin, oz. vj; of verdigris, of frankincense, of the medicine œsypum, of each, oz. j; of squama æris, scr. viij; of wax, oz. x; of the old pitch of ships, oz. xiv. Boil the oil with the juice to the consistence of the sordes of the oil in baths, with swine's seam, and triturate the powders with oil of privet; beat the galbanum with the wax, and put it into a pot. And if the pitch of the ships be dry, having triturated and strained it, weigh and sprinkle it. If it cannot be triturated let it be strained, with part of the oil dissolved, and then let all the things be mixed.

The discutient plaster of Mnasæus. Of wax, of axunge, of each, lb. j; of Colophonian rosin, oz. vj; of litharge, lb. ij; of fine wax, lb. iv.

The Ariobarzanian plaster, for the same affections. Of litharge, oz. iss; of ceruse, lb. j, oz. v; of sea-water, oz. xxv; of old oil, lb. iss; of buccina burnt, oz. viiss; of yellow wax, oz. ix; of turpentine, oz. vj; of frankincense, oz. iij, scr. iiiss.

The plaster from dracunculus, or dragon-herb. Of wax, of Colophonian rosin, of dried pitch, of axunge, of rosin, of each, lb. iv; of ammoniac perfume, lb. ij; of the root of dracunculus, lb. v. The root being dried and triturated is sprinkled, with the other things dissolved.

The plaster called Psittacion. Of wax, of Colophonian rosin, of swine's seam, of the tender leaves of henbane, or the juice of them, equal parts. But in Alexandria, of wax, lb. iiss; of henbane, lb. ij; of axunge, lb. iiss; of Colophonian rosin, lb. x. This is more discutient.

The myrtle plaster, or emplastrum myrsinatum. Of litharge, of ceruse, of sandyx, of lead, burnt and washed, of each, oz. j; of wax, oz. vj; of myrtle oil, lb. j; of wine, q. s.

The plaster from ceruse, or from eggs. Of white wax, oz. vj; of rose oil, lb. iss; of litharge, oz. ij; of ceruse, oz. ij; of starch, oz. iij; the whites of v eggs.

The plaster Parygron, of Oribasius. Of litharge, oz. iss; of ceruse, oz. iss; of wax, oz. iv; of swine's seam, oz. vij; of Colophonian rosin, oz. ix; of the juice of linseed, of oil, of each, oz. x. It answers admirably for fissures of the heels.

But, says he, it must be kept from ulcers, for it becomes fetid.

The epulotic plaster from calamine. Of burnt chalcitis, oz. ij; of calamine, of manna, of each, oz. j; of wax, of colophony, of myrtle oil, of each, lb. j; of wine, q. s.

The palm plaster, or emplastrum palmulatum. Of old axunge, lb. ij; of old oil, lb. iij; of litharge, lb. iij; of crude chalcitis, oz. vj. First the chalcitis is to be levigated in a proper vessel, or in the sun. After it has become of the consistence of the lees of the oil in baths, add the litharge, previously triturated, and afterwards the suet. After they are properly triturated, boil with a gentle fire until it cease to stain, stirring with palm branches.

The plaster from alkanet, for burns. Of white wax, oz. ix; of rose oil, oz. xvij; let these be melted, and sprinkle upon them of the dried root of the purple alkanet, finely levigated, oz. iv. *Another.* Of the green root of alkanet, of the hair of horehound, of each, oz. iij. Boil in oz. ix of oil, and throw away. Add to the oil v oz. of white wax and dissolve.

The plaster called pompholygeron. Of pompholyx, oz. ij; of litharge, oz. iij; to be triturated with the juice of linseed, and then to be added when dissolved and cooled; of wax, oz. vj; of the grease of geese or domestic fowls, oz. ij; of chamomile, oz. vj.

The anodyne plaster phycotyche, for the fundament. Of frankincense, oz. xvij; of myrrh, oz. vij; of opium, dr. iv; of fissile alum, dr. ij; of butter, dr. iv; the yolks of iv eggs roasted; of calamine, burnt and washed, dr. iv; of pompholyx, dr. vj; of Tuscan wax, oz. viij; of the grease of geese, dr. xvj; of stag's marrow, dr. xj; of lead, burnt and washed, dr. viij; of bloodstone, dr. j; of liquid cœsypum, dr. iv. Triturate the powders with Italian wine, and mix the soluble substances.

The plaster of Amythaon, for distorted and torn joints. It is also epispastic. Of ammoniac, of wax, of bdellium, of each, dr. viij; of turpentine, of Illyrian iris, of galbanum, of each, dr. xx.

The Aristophanian emollient plaster. Of pitch, lb. iv; of the pitch of ships, lb. ij; of wax, lb. j; of opoponax, oz. j; of vinegar, hemin. j.

The plaster from molybdæna, for hot affections. Of molybdæna, oz. iv; of litharge, oz. ij; of ceruse, oz. ij; of wax, oz. viij; of myrtle oil, lb. ij. Triturate the dry things with wine.

The plaster coracon from oxymel, for the pudendum and spreading sores. Of galls, oz. ij; of squama æris, oz. iss; of chalcitis, of frankincense, of each, oz. j. Triturate with vinegar for a sufficient number of days; then mix of honey, oz. v. But having made separately a cerate from oz. ij of myrtle or rose oil, and of the seam of bulls, oz. viij; of wax, oz. iv; of turpentine, oz. j; having mixed, triturate together, and use like that from paper, both by means of an instrument for extracting pus and by a pledget.

The plaster from vinegar and oil. Of litharge, p. j; of oil, of vinegar, of each, p. ij, some make it iij.

The plaster from agate, being discutient and emollient. Of agate stone, half burnt, oz. iss; of wax, oz. v; of roasted rosin, oz. iij; of oil, oz. j.

The plaster Isis, for bloody wounds, being agglutinative, incarnative, and cathartic. Of squama æris, of burnt copper, of round birthwort, of each, dr. viij; of fissile alum, dr. vj; of ammoniac salts, dr. viij; of frankincense, dr. viij; of ammoniac perfume, dr. viij; of myrrh, dr. xij; of aloes, dr. xij; of galbanum, dr. xij; of the juice of the root of dracunculus, dr. viij; of wax, lb. j; of Colophonian rosin, lb. ij; of old oil, oz. iij; of vinegar, q. s.

The plaster Athena, for foul ulcers, infarctions, and wounded nerves. Of pomegranate rind, of burnt copper, of galls, of round and long birthwort, of sal ammoniac, of ammoniac perfume; of squama æris, of fissile alum and of round, of iris, of misy, of copperas, of chalcitis, of scraped verdigris, of calamine, of aloes, of myrrh, of frankincense, of bee glue, of galbanum, of each, oz. j; of wax, dr. cc; of pitch, dr. cc; of Colophonian rosin, dr. c; of oil, oz. vj; of vinegar, q. s.

The agglutinative plaster from dittany, for the bites of dogs and all sorts of ulcers. Of litharge, lb. ij; of squama æris, oz. iss; of old oil, sext. ij; of diphryges, oz. iij; of gentian, oz. iss; of birthwort, of scraped verdigris, of each, oz. iss; of dittany, of burnt copper, oz. iss; of Colophonian rosin, lb. j; of manna, of galbanum, of aloes, oz. iij; of ammoniac perfume, oz. vj; of bee glue, oz. ij; of common wax, oz. viss. The oil must first be boiled with the litharge, until it cease to stain. Then taking it off the fire, we are to add the verdigris and squama, and again boil until it cease to stain; and again taking it off the fire, add

the rosin, the ammoniac sifted, and stir until it cease boiling; and place it at the fire, and when it boils but a little add the copper and diphryges and boil again until it thicken; then add the common wax, and boiling until it cease to stain, put in the bee glue, and after a little the aloes, manna, dittany, birthwort, and gentian, are to be sprinkled finely levigated when but a little cooled.

The Barbaric plaster, for bloody sores, and for promoting the formation of callus in fractures. Of Judæan asphaltos, of dried pitch, of wax, of rosin, of each, lb. j; of turpentine, oz. ij; of litharge, oz. j; of ceruse, oz. iss; of manna, oz. ij; of opoponax, oz. ij; of myrrh, oz. ij; of oil, oz. iij; of vinegar, q. s.

The agglutinative plaster from willows, for hæmoptysis and empyema when applied to the chest. Of misy, of chalcitis, of verdigris, of ceruse, of galls, of fissile alum and of round, of melantheria, of each, oz. vj; of wax, lb. ij; of pine-rosin, lb. ij; of pitch, lb. ij; of pomegranate rind, oz. vj; of asphaltos, lb. ij; of willow-leaves, lb. ij; of the oil of roses, oz. iv; of copperas, oz. vj; of vinegar, q. s. Some add also of turpentine, oz. ix.

The plaster of Nicolaus, for bloody wounds and an agglutinant of sinuses. Of squama æris, oz. iv; of scraped verdigris, oz. iss; of litharge, oz. iss; of long and of round birthwort, of each, oz. j; of fissile and of round alum, of copperas, of each, oz. j; of sulphur vivum, oz. j; of the gall omphacitis, oz. iv; of ammoniac salts, oz. j; of misy, oz. j; of marjoram, oz. j; of chamæleon, oz. j; of the calamine called racemosa, oz. j; of white hellebore, oz. j; of hog's-fennel, oz. iij; of parsley-seed, oz. ij; of the root of comfrey, oz. iss; of ceruse, oz. iss; of the juice of mandragora, oz. ss; of chalcitis, oz. iss; of Samian aster, oz. j; of male frankincense, oz. j; of aloes, oz. j; of bdellium, oz. ij; of Thebaic opium, oz. ij; of troglodytic myrrh, oz. ss; of ammoniac perfume, oz. j; of fenu-greek, oz. vj; of the juice of perdicias, oz. vj; of yellow wax, lb. iij; of Colophonian rosin, lb. ij; of pine-rosin, lb. j; of bitumen, lb. j; of mastich, oz. vj; of black pitch, lb. ij; of old oil, lb. j; of storax, oz. j; of opoponax, oz. iss; of vinegar, q. s.

The Icesian plaster, for strumæ, abscesses, the spleen, joints, and ischiatic disease. Of litharge, dr. cxx; of old oil, sext. ij;

of vinegar, sext. j; of verdigris, dr. iss; of the bark of the pine, dr. viij; of chamæleon, with the root, dr. xvj; of euphorbium, dr. xvj; of the juice of hypocistis, dr. xvj; of bee-glue, dr. xvj; of myrrh, dr. xvj; of elicampane, dr. xvj; of pellitory, dr. xvj; of wax, lb. iij.

The plaster of Nero, for blows and all pains of fleshy parts. Of old oil, lb. iss: of litharge, lb. j; of ammoniac perfume, oz. j; of ceruse, oz. iv; of galbanum, of manna, of myrrh, of frankincense, of each, oz. j.

The much-used emplastrum oxyrum. Of dried pitch, dr. ij; of wax, lb. j; of ammoniac perfume, oz. j; of turpentine, lb. ss; of galbanum, oz. ij; of manna, oz. ij; of vinegar, sext. iss.

The agglutinative plaster without wax, or emplastrum aceratium of Galen. It is digestive and promotes the suppuration of ulcers, with oleum ricini and old oil, when spread upon a pledget. Of litharge, lb. iij; of oil of ricinus, or old oil, lb. iv, of the most acrid vinegar, lb. ij; of the black squama æris, of chalcitis, of verdigris, of each, oz. ij. Boil the litharge with the oil to the consistence of the lees in baths; then add the metallic substances, triturated for many days with vinegar.

The plaster from metals. Of chalcitis, oz. j; of misy, oz. ij; of squama æris, oz. iij; of frankincense, oz. iij; of Colophonian rosin, oz. ij; of galbanum, oz. iss; of wax, lb. j; of oil, oz. xv; of vinegar, q. s.

The plaster harmonia, for fractures. Of chalcitis, oz. iv; of squama æris, oz. iiss; of burnt copper, oz. j; of frankincense, oz. ij; of oil, lb. j; of vinegar, lb. j. Boil the metals in the oil until it cease to stain, then add the frankincense.

The emplastrum melinum of Serapion. Of litharge, lb. j; of wax, oz. vij; of ammoniac perfume, oz. iiiss; of galbanum, of verdigris, of each, dr. ix; of Colophonian rosin, oz. vij; of myrrh, dr. j: of oil, hemin. iss. Boil the litharge with the oil until it cease to stain, then add the other things.

The emplastrum anicetum, being agglutinative, discutient, removing scales, and answering with distortions. Of bay-berries, of dried iris, of frankincense, of each, dr. lx; of burnt copper, dr. xx; of natron, of sal ammoniac, dr. xx; of pellitory, of stavesacre, of the seed of rosemary, of the granum Cnidium, of mustard, of pigeon's dung, of birthwort, of cumin, of verdigris, of cyperus, of the seed of rocket, of each, dr. viij; of vinegar,

hemin. xii. Triturate during the heat of the dog-days until the vinegar is consumed, then add, of the thickest decoction of dried figs, oz. ix; and having mixed, form trochisks and dry. In using it, triturate of the trochisks, oz. ij, with vinegar, and mix, of rosin, oz. iij; of Tuscan wax, oz. ij; of oil, oz. ij.

The plaster from darnel. Of pitch, lb. ij; of pine-rosin, oz. ix; of Tuscan wax, oz. v; of oil, oz. iij; of strained bitumen, oz. ij; of the flour of darnel, sext. j; of vinegar, q. s.

The plaster from the juice of mulberry-tree. Of litharge, of dried pitch, of bull's-seam, of each, oz. viij; of turpentine, oz. iij; of wax, oz. v; of scraped verdigris, of opoponax, of galbanum, of each, oz. j; of the oleum ricinum, oleum susinum, or very old oil, hemin. j; of liquid pitch, hemin. j; of the juice of the mulberry, the fruit of which is called sycomorora, hemin. j.

The double-coloured plaster, or dichromos. Of burnt copper, of fissile alum, of ammoniac perfume, of each, oz. j; of wax, lb. j; of Colophonian rosin, lb. j; of swine's scam, lb. j; of vinegar, q. s.

The Indian agglutinative plaster, for spreading ulcers and hæmoptysis. Of wax, of roasted rosin, of dried pitch, of the liquid Zacynthian bitumen, of each, lb. j; of ceruse, of chalcitis, of misy, of melantheria, of fissile and of round alum, of the gall omphacitis, of the rind of the pomegranate, of each, oz. vj; of vinegar, q. s.

The plaster from the ashes of asps, for discussing strumæ and gout. Of turpentine, of Asian stone, of Judæan bitumen, of each, dr. ccclx; of wax, of bay-berries, of ammoniac perfume, of aphronitrum, of the fat of calves, of each, dr. cccxl; of the lapis pyrites, of quicklime, of each, dr. cxl; of the ashes of asps, dr. cxl; of old oil, hemin. ij. Sprinkle the ashes upon the medicine when cooled. It is prepared also without the ashes, because some have an aversion to them, and it is no less efficacious.

The desiccative and discutient plaster, called læna or lioness. Of ammoniac perfume, of plumbago, of each, dr. c; of mustard, dr. viij; of the root of chamæleon, dr. xvj; of Colophonian rosin, dr. c; of squama æris, of the root of soapwort, of euphorbium, of verdigris, of each, dr. viij; of birthwort, dr. xvj; of pellitory, dr. viij; of old oil, hemin. j; and of the oil of

radishes, q. s.—*Another*. The læna for altering and evacuating humours. Of copperas, oz. ij; of arsenic, oz. j; of black hellebore, of cantharides' breasts, of each, dr. iss; of sandarach, oz. iij; of wax, lb. iss; of roasted rosin, lb. j; of oil, hemin. ij.

The Macedonian plaster. Of wax, of Colophonian rosin, of pitch, of the suet of bulls, of rosemary, equal parts. Having melted and removed them from the fire, sprinkle the frankincense.

The plaster sphæron, for febrile complaints. Of ceruse, of litharge, of quicklime, of each, oz. iij; of wax, oz. iss; of Berenicarian natron, of rose oil, of each, oz. j. Pour the melted things upon the dry and form small balls. In using, melt, of oil, oz. vj, with oz. ij of wax, and add, of the medicine, oz. j, and stir with a spatula. When cooled, bruize with oz. ix of water; add also of rose-oil, oz. iij.

The anti-inflammatory plaster from ochre, both for those cases of inflammation which occur spontaneously, and those occasioned by judicial torture. Of Attic ochre, lb. ij; of chalk, lb. j; of litharge, oz. viij. Triturate with wine, of wax, of Colophonian rosin, of pitch, of pine rosin, of each, lb. j; of turpentine, oz. viij; of oil, lb. ij. It is dissolved thus: of wax, lb. j; of old oil, lb. iij; of the medicine, lb. j. Bruise with wine.

The plaster from cedria, being agglutinative, discutient, and detergent. Of wax, of dried pitch, of each, lb. j; of Colophonian rosin, oz. viij; of cedar rosin (gum juniper?), oz. vj. Having melted them together, boil until they cease to stain.

Another emollient plaster. Of wax, of pitch, of each, oz. viij; of Colophonian rosin, dr. xxv; of bee-glue, dr. xvij; of cedar rosin, dr. xx.

The cicatrizing plaster from pumice-stone. Of myrtle oil, lb. ij; of wax, lb. j; of pumice burnt and extinguished in wine, dr. vj; of the squama stomomatis, dr. vj; of burnt copper, of Cimolian earth, of each, dr. v. It is put upon a pledget, and a sponge out of water is applied above.

The plaster called Paula or Rest, for strumæ and buboes. Of wax, of Colophonian rosin, of natron, of each, lb. j.

The plaster from natron, for carbuncles. Of roasted natron, oz. iij; of wax, of oil, of Colophonian rosin, of each, dr. iss; of Cyrenaic or Median juice, dr. x. It is applied, diluted, upon a pledget.

The plaster from anemone. Of anemone stripped of its nails ("the white parts of its flowers"), oz. ij; of wax, oz. v; of oil, oz. iv; of rosin, oz. vss; of Colophonian rosin, lb. iiss.

The green plaster of Machæron for ischiatic diseases, infarctions of the joints, and abscesses. Of opoponax, of galbanum, of verdigris, of myrrh, of iris, of ammoniac perfume, of birthwort, of each, oz. j; of turpentine, of wax, of the oil of unripe olives, of each, oz. vij.

Another simple green plaster. Of rosin, lb. iij; of wax, lb. j; of scraped verdigris, lb. ss; of frankincense, dr. xxv; of vinegar, q. s.

Another green plaster for humid and fungous ulcers. Of Colophonian rosin, oz. vj; of scraped verdigris, oz. iss; of wax, oz. ij; of Cappadocian salts, oz. j; of rose oil, oz. ij; of vinegar, q. s.

The plaster from rue, for pleuritic cases. Of green rue, lb. j; of butter, lb. iss; of turpentine, oz. xv; of the medicine œsypum, oz. xv; of opoponax, oz. iij; of galbanum, oz. iij; of oil of dill, lb. j.

The plaster from lye, for ischiatic, arthritic, and œdematous complaints. Of wax, of old oil, of protostacton ("a mixture of lime with some other sort of lixivial ashes"), of each, lb. j; of roasted rosin, of Alexandrian natron, of white natron, of turpentine, of each, oz. vj. Triturate the natron with the ashes.

The plaster from natron, for abscesses and scirrhus swellings.

Of old oil, of wax, of aphonitrum, of soap, of ashes, of each, lb. j; of turpentine, oz. vj; of galbanum, of bee-glue, of ammoniac perfume, of each, oz. j. Prepare like the former.

The plaster from salts. Of wax, oz. iv; of oil, lb. j; of common salts, oz. iv; of aphonitrum, oz. iv; of ceruse, oz. viij; of vinegar, oz. ij, for the trituration.—*Otherwise.* Of common salts, of natron, of each, oz. iv; of wax, of old oil, of each, oz. vj; of sea-water, q. s.

The plaster from bacon, for dissolving topi. Of the fat of old swine's bacon, of ammoniac perfume, of the old cheese of cow's or goat's milk, of bull's fat, of the pitch of ships, of each, lb. j; of the marrow of stags, oz. viij; of the cerate of œsypum, oz. iij; of the oil of privet, oz. vj; of Egyptian wine, q. s.

The plaster from dragon's blood (cinnabaris), for topi and all

other scirrhus swellings. It is called pampathes. Of litharge, lb. j; of old oil, sext. j; of squama æris, oz. j; of burnt copper, oz. j; of sanguis draconis, scr. xvij; of a living magnet, oz. j; of Phrygian stone, dr. vj; of the stone pyrites, of calamine, of scraped verdigris, of frankincense, of each, oz. j; of diphryges, oz. ij; of aloes, oz. iss; of galbanum, oz. iss; of the Scythian stone onites, scr. xvij; of the blood-stone, oz. j; of bee-glue, lb. j, scr. xxvij; of wax, oz. xvij; of the stone perdicites (another edition has perdicaton), oz. j; of betony, oz. j, scr. viij; of gentian, oz. j; of long and of round birthwort, dr. iv; of the black chamæleon, oz. j; of dittany, scr. xij; of dried rosin, lb. j; of the fat of the ostrich, lb. j. Triturate the stones with the litharge, adding of the flower of salt, lb. ij, gradually until the whole be consumed.

The plaster from filberts, of tried efficacy, for topi of the joints. Of protostacton ("a mixture of lime with some lixivial ashes"), oz. vj; of the inner part of filberts, oz. ij; of aphonitrum, oz. vj; of old oil, lb. j; of gallic soap, oz. iv; of honey, oz. viij; the whites of six eggs; of wax, oz. x; of turpentine, oz. ij. Triturate with the protostacton.

An admirable anodyne cerate from the torpedo, for gout. On the fifth day of the month of March, put into a pot under ground of common oil, sext. ij, boil with the wood of vine, and when it boils, add of the sea-fish torpedo, lb. j; and of the blood of the mole, which some call madaniuda, oz. iv, and boil until the flesh of the fish be dissolved or toasted; then, having strained, add of oil and of wax what will be sufficient to give it consistence, so that the cerate may be very tender, which, having spread upon a linen rag, apply.

The plaster from the urine of a mule, for gout. Of the urine of a male mule, sext. iv; of litharge, lb. ij; of old oil, one mina. Having triturated all the things for a long time until they become of the consistence of the lees of baths, boil till it cease to stain.

The plaster from the flower of Asian stone, of Philagrius, for scirrhus. Of the root of hog's fennel, of the flower of Asian stone, or, if it is not at hand, of salts, of ammoniac perfume, of unscoured wool burnt, of each, oz. j; of round birthwort, of pumice-stone, of dog's dung, of scraped verdigris, of squama

æris, of misy, of each, scr. xvij; of castor, scr. xvij; of myrrh, oz. iij; of the most acrid vinegar, oz. iij; of wax, oz. xiiss; of pine rosin, of Brutian pitch, oz. xviiiss, scr. vj; of old oil, and of the most acrid vinegar, q. s.

The same, of Galen. Of wax, of turpentine, of each, lb. j; of Asian stone, of manna, of each, oz. iij; of oil of privet, oz. ij; of the bonnet-maker's water, q. s.

The arthritic plaster from the flower of salt, in the decline of the complaint. Of turpentine, of roasted rosin, of pine rosin, of wax, of each, lb. j; of dried pitch, of fissile alum, of the flower of salt, of each, lb. ss. Boil in a double vessel.

An incarnative plaster for ulcers. Of rose-oil, of turpentine, of honey, of each, oz. ij; of ceruse, of butter, of each, oz. j. Some add also of frankincense, oz. j.

The Italian plaster for cleansing and incarnating foul ulcers. Having boiled the tender bark of the wild fig in oil, throw it away, and having melted in the oil a sufficient quantity of dark yellow wax, use on a pledget.

The erective plaster. Of satyrion, of the testicle of a stag, of the tail of a skink, of each, dr. ij; of the seed of rocket, of pellitory, of the seed of rosemary, of wax, of each, dr. iv; of turpentine, oz. j; three eggs of troglodytic sparrows, ("wrens?") three swifts, of oil of bay, or of iris, q. s. The swifts are soaked alive in vinegar for forty days, the vessel being buried in dung.

The golden plaster for bloody wounds. Of frankincense, of fissile alum, of each, oz. ij; of Colophonian rosin, of common rosin, of each, lb. j; of oil, oz. iij; of arsenic, oz. ij. Triturate the arsenic in the vinegar.

The plaster for fractures, of Oribasius. Of Brutian pitch, lb. j, oz. iv; of litharge, lb. j, oz. iv; of frankincense, oz. viij; of turpentine, oz. v; of bull's suet, lb. j, oz. iv; of galbanum, of opoponax, of each, oz. j; of wax, oz. iv; of old oil, lb. j; of vinegar, oz. v.

A plaster for fractures with a wound and without a wound. From Heraclitus. Of dried pitch, mina j; of litharge, mina j; of manna, mina ss; of calves' suet, mina j; of Tuscan wax, oz. xxvj; of opoponax, dr. viij; of scraped verdigris, of Cyprian copper, of each, the fifth and tenth part of a mina; of turpentine, min. iss; of copper, oz. j; of oleum ricini (castor oil), or old oil, hem. j; of vinegar, hemin. ss.

The preparation of the medicine called the liquid œsypum. Of melilot, oz. iv; of cardamom, oz. ij; of unscoured wool, oz. vj: having macerated in sext. ij of wine for three days, boil until little is left; and having filtrated mix with the wine, oz. iij of oil, and boil until little of the wine remain, and then add of Colophonian rosin, oz. x; of turpentine, oz. x. Some add likewise of wax, oz. x, and of the herb hyssop, oz. j, and boil with the others. Others clean the wool in wine, and having dried the wine with the sordes, which they call *pinon*, at the time of using, add of it, oz. iij, and the other things as mentioned.

On the mixture of wax to oil. If you wish to prepare ointments like those called *Acopa*, add four parts of the oil to the wax; but if, as in fractures, you wish to make a soft cerate, make it double. When we wish to give the medicine the form of a plaster, then we mix equal parts of oil with wax, if the atmosphere be of a moderate temperature. But if the wax be old or dry, and the atmosphere cold, then there must be a little more of the oil than of the wax; when the wax is soft and the atmosphere warm, the wax should be a little less than the oil. This *little* should be the twelfth part on each side of the middle, for in this case you will mix xj or xiij oz. of oil to the pound of wax.

From the works of Antyllus, on the boiling of those medicines which are the ingredients of plasters.—Litharge. In the boiling of the medicines, the litharge will be boiled with the oil; but the litharge having been previously triturated, is to be triturated again with the oil, so as to become viscid, and then it is to be boiled at a gentle fire, stirring incessantly. At first, then, it swells and bubbles; but when nearly boiled sufficiently, it becomes of a more feculent colour. It has attained its measure of boiling when the swelling subsides, and it no longer stains. The molybdæna is to be boiled in a similar manner to litharge; but the measure of the boiling of it is not only when it ceases to stain, but when it changes from a fiery colour to a yellow and strongly florid. Burnt copper in boiling is not to be put in at the commencement, but when the plaster is half boiled: the measure of the boiling, unless a small quantity only is put in, is when its colour predominates and renders the plaster yellow; sori and diphryges are put in during the boiling. The measure of the boiling of the diphryges, like the

squama, is to be when its colour predominates. With regard to the sori, there is no particular measure, except the common one, to make the plaster of such a consistence that it does not stain. The chalcitis is boiled like copper, and the measure of it is the degree to which it renders the plaster of a deeper yellow and more ruddy colour. The flower of copper is like copper, and is regulated by the common measure of boiling. Copperas (blue vitriol?) is added in the middle of the boiling, and when boiled it gives a stronger shade to the colour of the plaster; and if not prevented by other circumstances, it renders the plaster black; misy is added in the end, but there is no particular measure with regard to it; arsenic and sandarach are added at the end of the boiling; burnt lead is put in at the middle of the boiling; ceruse is put into white plasters at the end, for thus it preserves their colour and whitens them still more, but it is added to the black at the commencement, for by being more boiled it becomes blacker; verdigris is added to the green plasters after the boiling; and, in some cases, it is not put into the pot at all, but being triturated with vinegar, and remaining in the mortar, the other things are mixed with it: to those of an apple colour (pale red?) it is added when the preparation is half boiled; for when it undergoes moderate boiling, it puts on the apple colour; but in those which are to have a double appearance, and double colour, we must boil the verdigris immediately after the commencement; when the boiling is persevered in, it first puts on the apple colour, then the double appearance, and at last its colour becomes yellow; alum is added for the most part after the boiling, but there is no measure of its boiling; vermilion is added at the end; calamine and pompholyx are added at the commencement; salts and natron are added at the middle of the boiling; sulphur at the end, the boiling of it blackens the plasters. All earths and stones are added at the end for the most part: pumice-stone, too, at the end. Burnt shells are added at the end. Oil, if added at the commencement to rosin and liquid pitch, prevents the plaster from acquiring consistence. The oil, therefore, is to be added after it has acquired consistence. Other fatty substances which do not contain salt, are to be added at the middle of the boiling. Of ointments, the Irinum bears boiling, the Cyprinum and Rosaccum less; the others, none at all. The ingredients are,

therefore, to be added at the end of the boiling. Wax is not boiled alone by itself, for it burns, neither with liquid rosin nor liquid pitch, for it remains disunited. But it is added to pure oil or oily matters boiled with the metals, or to rosin and pitch, previously boiled and thickened with other things which are to be added. Dried rosin is added with wax. The liquid, before all other things, is boiled by itself, unless a very small quantity is used. Pitch is added before all other things. The measure of the boiling of the liquid is its acquiring consistence; but of the dry especially, if boiled with vinegar, when it ceases to bubble and swell. The pitch of ships, when triturated and separated by a sieve from its recrements, is sprinkled upon a plaster when boiled; but if soft, it is dissolved with the oil. The former method is the more correct, because in the second the weight is not preserved. Bitumen (asphaltos) is boiled by being added at the commencement. But it is not to be levigated, because it contains asperities like grains of figs. It is, therefore, to be broken into large pieces and boiled in vinegar, not stirring it lest it bubble. I, says Timocrates, have succeeded by boiling it in oil. Bee-glue (propolis) is to be softened and boiled. For, by the boiling, it is not entirely incorporated. But if the plaster receives, as an ingredient, common wax, the bee-glue, like the galbanum, is to be pounded with the wax and added. Ammoniac is added about the middle of the boiling. But if it can be levigated, it should be sprinkled in the state of a powder, but if not, it may be triturated with some liquid; but if it be a plaster for fresh wounds, it is to be triturated with vinegar or wine; but if for fistulæ or strumæ, by all means with vinegar. If it be a soft plaster (such as those for the fundament), it is to be triturated with water; then, being levigated, it is to be added to the other things when cooled that they may not boil. Opoponax is added much later than ammoniac: it requires but very little boiling; but it must be frequently triturated with wine or vinegar. Galbanum does not bear boiling. But when the plaster has attained such a consistence that it does not stain, it is to be taken off the fire, and it is to be softened and added. Sagapenum is pounded in a mortar, and when it becomes tender it is softened with the plaster after being removed from the fire. Aloe is sprinkled after the boiling. Poppy-juice is macerated for one

day in a little water, and is then levigated in a mortar, and in this state the plaster is poured upon it. Thapsia is sprinkled last, or triturated with some fluid. Bdellium being levigated, is sprinkled after the plaster is taken from the fire; but if it is of a fatty nature, and cannot be levigated, it is to be pounded like sagapen, and made into the form of a plaster, and softened with the plaster after the boiling. Frankincense and manna are sprinkled at the end of the boiling, becoming glutinous, with a little honey, vinegar, water, or wine, if the plaster admit a liquid. Myrrh is added when the boiling is over. None of the seeds, roots, and herbs can endure boiling; but when levigated, and while they remain in the mortar, the other things are poured upon them in a state of solution.

COMMENTARY. The following are the general directions COMM. given by Celsus for the formation of plasters: "Emplastrum hoc modo fit: arida medicamenta per se teruntur; deinde mixtis his instillatur aut acetum, aut si quis alius non pinguis humor accessurus est, et ea rursus ex eo teruntur; ea vero quæ liquari possunt, ad ignem simul liquantur, et si quid olei misceri debet, tum infunditur: interdum etiam aridum ali quod ex oleo prius coquitur." He describes the composition of 28 plasters. (v, 19.)

The composition of plasters is treated of by Galen at so great length that it is quite out of the question to attempt even an abstract of his account of them. His accuracy of detail and attention to minutæ are almost inconceivable. See the first four books of his work (De Med. sec. genera.) Our author, as usual, is much indebted to him.

For further information regarding the emplastra of the ancients, see also Haly Abbas (Pract. x, 18); Mesue (De Unguentis); and Myrepsus (§ x.) Myrepsus, as usual, is most copious: he gives formulæ for 199 plasters.

The *diachylon plaster* is described by Galen and Mesue, but as the ingredients of theirs are nearly the same as in that of our author, we need not give their formulæ.

The *Ægyptiacum*, which is still celebrated as a remedy in certain cases is thus described by Mesue: "Take of verdigris, dr. v; of honey, dr. xiv; of very acrid vinegar, dr. vij: boil

COMM. to a proper consistence. Some also add dr. iiss of triturated frankincense."

The following is an *itch ointment* by Mesue: "Take of ceruse, of litharge, of aloes, of saffron, of calamine, of mercury extinguished, equal parts; make into an ointment, with oil of oleander and vinegar, q. s."

An *itch ointment* of Myrepsus consists of the fresh leaves of the bay-tree boiled with oil, and having wax and sulphur added to it. We can say, from ample experience, that such an ointment is a most effectual remedy for scabies.

The preparation of the *basilicon*, as directed by Avicenna, is a nearer approach to the modern ointment of that name than our author's: "Of rosin, of pitch, and of wax, equal parts, prepare with olive oil."

SECT. XVIII.—ON EMOLLIENT PLASTERS AND EPITHEMES.

Of those applications called emollient plasters, or malagmata, some are applied to the middle parts of the body when in a state of chronic inflammation, or indurated, or in a hot or cold state, or affected with defluxions; and some to the extremities when infarcted, or to the nerves when affected with cold; or they are serviceable to the other parts when scirrhus. These have been treated of in the section on Plasters, and will be treated of in that on Acopa. Of those which agree with the middle parts of the body (which are properly called epithemes), those applied for the stomach and liver, of whatever kind they are, must require a strengthening power from astringents; for without these there will be danger to the life, the functional operations of these parts being extensive; and, therefore, they are principally composed of aromatics. When the stomach then is affected with dyspepsia, atony, or inflation, those from seeds, and from melilots, aloes, and wormwood, from sampsuchum (marjoram), nard, and mastich are to be applied. To the liver, those from nutben, ammoniac, fats, and chamomile ointment; and to the spleen, those from quicklime, arsenic, capers, willows, cardamom, verdigris, ammoniac, and vinegar are to be applied. For defluxions about the belly, those from wild vine, alum, apple ointment, and other astringents are to be used. And these by

a misnomer are called by the general name of malagmata or emollient plasters, although their power be the reverse of softening. When the viscera are in a hot state, as in ardent fevers, those from saffron, oil of roses, the juice of linseed, endive, knot-grass, hog's lard, or litharge are to be applied; but when in a cold state those from opobalsam, Indian leaf, sowbread (cassamum), and pepper. In expectorations of blood, astringent and desiccative applications, composed from alum, willow, and bitumen, are to be applied to the breast; and in consumptions, those from bay berries, horehound, cardamom, and lye.

The malagma from melilots. Of saffron, of Celtic nard, of cyperus, of cardamom, of iris, of myrrh, of each, oz. ij; of melilots, lb. j; of ammoniac perfume, lb. j; of wax, lb. iij; of turpentine, lb. j; of oil of privet, lb. iij; of glaucinum, lb. ij; of bdellium, oz. vj. Some add also of cyphi, oz. ij; of wine, q. s.

The malagma Polyarchium, from Galen's work, 'according to the parts.' Of wax, of turpentine, of bdellium, of ammoniac perfume, of cardamom, of cyperus, of each, one mina; of melilot, of amomum, of Indian nard, of saffron, of myrrh, of frankincense, of the wood of cinnamon, of each, dr. xxv; of oil of privet, hemina j; of Italian wine, q. s. Prepare and use sometimes unmixed and sometimes diluted with the cerate of privet.

The Polyarchium, otherwise. Of xylobalsam, of costus, of iris, of cyperus, of myrrh, of the schœnanth, of cardamom, of frankincense, of spikenard, of mastich, of storax, of bdellium, of amomum, of Indian leaf, of saffron, of cassia, of pellitory, of long birthwort, of each, oz. j; of ammoniac perfume, oz. iss; of roasted rosin, oz. iij; of turpentine, lb. j; of stag's marrow, oz. ij; of wax, lb. ij; of opobalsam, oz. vj; of wine, oz. viij.

The malagma Philagrianum. Of saffron, oz. iss; of aloes, of ammoniac perfume, of bdellium, of storax, of each, oz. j; of the fat of geese, oz. ij; of the medicine œsypum, oz. iv; of palm-nuts, oz. ij; of wax, lb. j; of nard, oz. vj; of the ointment of apples, oz. vj; of wine, what will be sufficient for triturating the dry things.

The fragrant malagma. Of saffron, of aloes, of mastich, of wormwood, of storax, of wild vine, of sowbread, of cloves, of

each, oz. ij; of nard, lb. j; of wax, lb. j; of oil of apples, oz. vj; palm-nuts, xij; of wine, q. s.

The malagma Baion. Of cardamom, of cassia, of Celtic wild vine, of the flowers of the wild pomegranate, of virgin wax, of each, scr. viij; of savin, of sowbread, of amomum, of each, scr. vj; of the schœnanth, scr. xvij; of iris, scr. iv; of cloves, scr. iss; of the lily perfume, oz. ij; of frankincense, of myrrh, of each, oz. j; of ladanum, oz. vj; of bdellium, of mastich, of aloes, of nard, of the oil of lentisk, of each, oz. ss; of maple rosin, of pine rosin, of turpentine, of each, oz. ij; of opobalsam, oz. j; of ammoniac perfume, scr. vj; of wax, oz. vj. The bruised juicy and dried things are to be pounded with oil of wild vine. In another prescription, some add, of pepper, scr. xvij, and of musk, scr. j.

The Galenian malagma. Of saffron, oz. ss; of aloes, oz. j; of mastich, oz. ij; of the fruit of wormwood, scr. viij; of wild vine, scr. viij; three large dates; of wax, oz. ij; of oil of apples, oz. vj.

The malagma Brythrion. Of storax, oz. v; of quinces, oz. xx; of masucha or masuaphium, of saffron, of each, dr. x; of crumbs of bread, of cyphi, of each, dr. v; of wild vine, oz. iiss; of sowbread, of wormwood, of each, dr. x; of cloves, scr. xv; of ammoniac perfume, scr. x; of opobalsam, scr. viiss; of nard, oz. v; of Colophonian rosin, of gleucinum, of oil of apples, of each, oz. x; of oil of roses, dr. x; of bee-glue, oz. v; of turpentine, oz. x; of honey, coch. x; of Indian leaf, dr. x; of spikenard, dr. x; of wax, oz. viiss. Triturate with Falernian and Aminæan wine.

The splenic malagma of Nilus, for all other cases of induration. Of wax, lb. j; of ammoniac perfume, lb. j; of oil of privet, lb. j; of saffron, oz. ss (some make it, oz. j); of vinegar, q. s.

The malagma citrinum. Of wax, of Colophonian rosin, of each, lb. j; of ammoniac perfume, of arsenic, of lime, of alum, of vinegar, of each, cyath. viij. Triturate the dry things with the vinegar.

The barber's malagma. Of dried pitch, lb. j; of wax, of pine rosin, of ammoniac perfume, of natron, of dry bay-berries, of the fat of bulls, of each, lb. ij; of the flour of fenugreek, sext. j; of pollen, sext. j; of the dried root of the black chamæleon, lb. j.

The malagma, from goat's dung, of Oribasius, for splenic affections, dropsies, and scirrhus liver. Of oil of privet or very old oil, lb. iij; of wax, lb. iiss; of the dung of goats, of bay-berries stripped of their bark, of Illyrian iris, of each, sext. j; of turpentine, lb. j; of mustard, of natron, of cyperus, of the seed of radish, of the bark of the root of capers, oz. iij; of the medullary part of colocynth, oz. ij; of fenugreek, oz. j. Sometimes the dry things are added to the soluble and sometimes they are mixed with vinegar. But if there is a flux of the bowels, the colocynth must not be added.

The malagma spongiola, from goat's dung, for dropsies. Of Brutian pitch, lb. iiss; of natron, lb. j; of the medullary part of colocynth, of pellitory, of opoponax, of granum cnidium, of each, oz. iij; of bark of the root of capers, of frankincense, of iris, of the fat of bulls, of elaterium, of squama æris, of parsley-seed, of the seeds of spurge (lathyrides), of each, oz. vj; of bay-berries, sext. ss; of the flour of fenugreek, oz. ss; of bull's gall, oz. ij; of oil of privet, sext. ss; of wax, lb. j; of roasted rosin, lb. iij; of mountain goat's dung, of the seed of rosemary, of cyperus, of cardamom, of each, oz. vj.

The malagma from bay-berries. Of wax, of rosin, of pitch, of bay-berries, of bull's fat, of each, lb. j; of natron, of ammoniac perfume, of each, oz. vj; of vinegar, q. s.

The malagma from seeds. Of cardamom, of cyperus, of savin, of natron, of bay-berries, of cassia, of melilot, of fenugreek, of Celtic nard, of parsley-seed, of sampsuchum, of anise, of the root of panacea, of frankincense, of ammoniac perfume, of turpentine, of each, oz. iij; of honey, of wax, of nard, of each, lb. j; of the fat of bulls, lb. j.

The fetid malagma for pleurisy. Of pine rosin, lb. j; of wax, of green rue, of oil of privet, of each, oz. vj; of sulphur vivum, of opoponax, of sagapen, of each, dr. iv. Some add also of galbanum, dr. iv.

The malagma from sampsuchum. Of wax, lb. j; of turpentine, lb. ij; of sampsuchum (marjoram?), of bay-berries, of fenugreek, of each, sext. j; of nard, q. s.

The malagma of Apollonophanes for hepatic diseases. Of wax, dr. lxxx; of turpentine, of manna, of each, dr. xl. Pound with the lees of iris-oil and anoint the mortar.

The malagma copton, for hardness of the stomach and liver.

Of bee-glue, oz. vj; of storax, oz. ij; of mastich, oz. j; of turpentine, oz. ss; of the lees of nard, q. s.

The malagma from wild vine. Of wild vine, of aloes, of saffron, of acacia, of fissile alum, of dried roses, of the juice of wormwood, of galls, of the oil of unripe olives, of Syrian sumach, of manna, of each, dr. j; of myrtle-oil, of wax, of each, lb. j; five large palm-nuts; of Aminæan wine, q. s.

The Antyllian malagma. Of fissile alum, oz. ss; of aloes, oz. j; of mastich, scr. vj; of wild wine, scr. viij; of the oil of unripe olives, scr. viij; of dried roses, scr. viij; of Syriac sumach, scr. x; of the Egyptian thorn, scr. x; of the flowers of the wild pomegranate, scr. xx; of galls, scr. xv; of wax, oz. v; of oil of apples, q. s.

The malagma from grape stones. Of saffron, of sandyx, of wild vine, of each, oz. j; of dried alum, oz. iv; of the flowers of the wild pomegranate, of oil of unripe olives, of the flower of roses, of dried myrtles, of each, oz. ij; of white wax, lb. j; of oil of apples, lb. ij; of quinces, oz. iv; ten Nicolan palm nuts; of Aminæan wine, q. s.; of dried grape stones, oz. viij. In using, take of the medicine, oz. iij: of wax, oz. j.

The malagma from dill. Of green dill, oz. vj: of melilot, oz. ij; of chamomile, oz. ij; ten green heads of poppy. Having boiled, mix of the decoction, lb. iij; and as much of oil; and when the decoction is consumed, add of fresh hog's lard, lb. ij; and separately triturate of the inner part of baked squill, oz. ij; and of stag's marrow, oz. ij. Mix all together.

The malagma ambrosia, for stopping fevers. Of litharge, lb. j; of fresh hog's lard, oz. vj; of the juice of linseed, oz. vj; of white wax, oz. ix; of oil of roses, lb. j; of honey, oz. iij; of saffron, oz. j. Some add also the raw yolks of ten eggs.

COMM.

COMMENTARY. Le Clerc thus describes these preparations: "Ce qu'on appelloit malagma ne différoit fort de l'emplâtre. Galien déclare (Pharmac. gén. vii, 5) qu'il est indifférent qu'on se serve du terme de malagme, ou de celui d'emplâtre." He adds, "Ce qu'on appelloit epithème étoit aussi à peu près le même chose." (Hist. de la Méd.) According to Galen, the malagmata derived their name from being used as emollient applications to parts in an indurated state, and were all moderately calefacient, being in general neither desiccative nor

humectative. He describes the composition of these preparations with his usual accuracy and minuteness. COMM.

Celsus gives a full account of the malagmata. He says plasters, malagmata, and pastils differ, inasmuch as malagmata consist principally of aromatics, whereas, the other two are rather formed from metallic substances. In general, he says, they are rather calefacient than refrigerant; some, however, are refrigerant, and are used as applications to the joints in gout. A few are not only calefacient but also epispastic. He gives prescriptions for 35 malagmata. He makes no mention of epithemes. (v, 17, 2.) Scribonius Largus, likewise, treats fully of the malagmata (§ cclv-cclxvii).

Oribasius states that there are three varieties of malagmata: the first consisting of dry things, namely, roots and herbs; the second kind, of metallic substances, or a certain proportion thereof; and the third, of juices, suet, and tears. (Med. Collect. x, 28.)

A full account of them is given by Actuarius (Meth. Med. vi, 9) and Myrepsus (§ xi, xxxiv.) The following epitheme is said to be powerfully purgative: "Of scammony, of elaterium, of spurge, of each, dr. viij; of white and of black hellebore, of bull's gall, of each, dr. iij; of the root of the wild cucumber, of the leaves of wormwood, of each dr. x; of Tuscan wax, dr. viij; of turpentine rosin, dr. iv; of Attic honey, oz. viij; of red nitre, oz. j." (Myrepsus, l. c.)

The following is a malagma for luxated joints and contusions: "Of galbanum, oz. j; of saffron, dr. ij; of ammoniac perfume, of pure wax, of each, oz. iss; of dried pitch, lb. iss; of very acrid vinegar, coch. iss." (Ibid.)

SECT. XIX.—ON RESTORATIVE OINTMENTS (ACOPA), LINIMENTS, CALEFACIENT PLASTERS (DROPACES), AND SINAPISMS.

The acopa are so named for having been first invented for the feeling of lassitude, as a tensive, ulcerative, and osseous lassitude; but they agree with many other complaints. Some, then, are calefacient, some emollient, and some stimulant. The calefacient are prepared from pepper, pellitory, the seed of rosemary, and the like. They agree with affections of the

nerves, and strong frigidity which cannot be readily restored to heat. The emollient agree with induration, scirrhus, and infarction of the joints; and the materials of which they are formed have been pointed out by us when treating of plasters. The stimulant being composed of lemnestis, the seed of rosemary, euphorbium, the granum cnidium, and the like, are to be used in chronic affections, and such as are difficult to dislodge, namely, in such cases as sinapisms are applicable. The consistence of all the acopa is to be intermediate between the cerates and plasters. The liniments resemble the acopa, but have a more liquid consistence. The dropax has a twofold composition, the one being like a plaster, and the other like a malagma. Some rub them into the part warm. Their materials are like those of the acopa and plasters. It serves the purpose of a cataplasm, agreeing with the same chronic affections in which sinapisms are applicable. A dropax ("calefacient plaster") is applied before a sinapism, in order to prepare the body for the mustard; and after the sinapism, in order to remove the residue of the complaint. The sinapism is not composed of many ingredients, but is a most powerful application, agreeing particularly with chronic affections after all other remedies have been tried in vain. It is more especially applicable in cephalæa, hemicrania, epilepsy, vertigo, and mania, when applied to the head; and in asthma, orthopnoea, and chronic cough when applied to the chest; and in chronic catarrh, a sinapism may be applied both to the head and chest; and to the stomach and belly in chronic affections of them. It is a suitable remedy in all ischiatic and podagric cases, to any part which has lost its tone, or is in a cold state, and cannot easily be warmed. The limits of the action of the medicine are, when violent pain has been produced, and the flesh becomes more livid and swelled up, and so that after the bath it may become blistered in a mild manner. But if the sensibility has been lost, care must be taken lest the burning proceed too far without being perceived, and therefore the part is to be often uncovered and examined. Of acute diseases, lethargy, cataphora, and catochus admit of sinapisms, which, if at the commencement, are to be applied to the legs, but if the matter has fixed in the part, to the head. Those which are in a cold state and cannot be warmed but with difficulty,

must have sinapisms applied to the legs and arms. Sinapisms are to be entirely proscribed when there is continued fever or an ulcer; also in affections of cartilaginous parts, and such as have no flesh. For the parts which are devoid of flesh are sometimes burnt black when sinapisms are applied to them.

The acopon called Bromion. Of wax, of Colophonian rosin, of common rosin, of each, lb. j; of hog's lard, oz. iv; of butter, oz. vj; of marshmallows, of fenugreek, of linseed, of each, lb. ij; of oil, lb. j; of galbanum, oz. iiss. Having boiled the juice with the oil until the most of the juice be consumed, add the other things with wax and galbanum.

The complex acopon. Of the juice of marshmallows, of fenugreek, of linseed, of rue, and of cumin, of each, lb. ij; of stag's marrow, lb. j; of old oil, lb. j; of the fat of geese, of opobalsam, or nard, of each, lb. j; of wax, of Colophonian rosin, of common rosin, of each, lb. iss; of euphorbium, of turpentine, of opoponax, of each, oz. vj; of castor, oz. iij; of the herbs from which the juice is formed, of each, lb. j, is to be taken and boiled like the former.

The acopon of Azanites. Of hog's lard, lb. ij; of the fat of bulls, of rosin, of Colophonian rosin, of the medicine œsypum, of wax; of each, lb. j; of galbanum, oz. iij.

The acopon of Basilius. Of marshmallows, of chamomile, of melilot, of linseed, of fenugreek, of each, oz. iss; of amomum, oz. iij. These things are macerated in sext. viij of the wine of Ascalon or the Cilician for three days, and boiled to a milky consistence. Then lb. v of the juice, with lb. ivss of old oil are boiled until a moderate quantity of the juice remain; and then there are added to it of butter, oz. vj; of turpentine, oz. iv; of the fat of geese, oz. xv; of stag's marrow, triturated with a little oil, oz. v; of white wax, lb. iij.

The acopon Lysiponium. Of pepper, of castor, of storax, of mastich, of aloes, of elecampane, of iris, of each, oz. iv; of euphorbium, of costus, of ammoniac perfume, of myrrh, of marjoram (sampsuchum), of frankincense, of cyperus, of cassia fistula, of the seed of rosemary, of each, oz. iij; of adarce, of amomum, of bdellium, of xylobalsam, of each, oz. ij; of Indian leaf, of spikenard, of pellitory, of saffron, of each, oz. j; of opobalsam, lb. j; of the ointment of nard, of the ointment of privet, of gleucinum, of each, lb. ij; of wax, lb. j.

A fetid acopon from Galen's work, secundum genera. Of wax, of turpentine, of each, dr. xxiv; of galbanum, of ammoniac perfume, of each, dr. vj; of old oil, hemin. ij; of stag's marrow, dr. viij. Use both undiluted and diluted.

Another fetid acopon. Of turpentine, dr. lvj; of wax, dr. xxviij; of œsypum, of honey, of each, dr. vj; of stag's marrow, dr. vj; of ammoniac perfume, of galbanum, of aphronitrum, of bay berries, of each, dr. vj; of old oil, sext. j; of wine, cyath. ij. Some add also of castor, dr. iij.

The barbaric acopon from euphorbium, for ischiatic diseases, and many other purposes. Of opoponax, oz. j; of Tuscan wax, lb. j; of turpentine, lb. iiss; of galbanum, oz. j; of ammoniac perfume, oz. ij; of euphorbium, of castor, of white pepper, of each, oz. ij; of stag's marrow, oz. iv; of œsypum, oz. iv; of lemnestis, (a saline concretion), it is the same as adarce, oz. ss; of the oils of storax, of bay, of iris, and of sweet marjoram, of each, oz. vj; of old oil, lb. ij; of hedy-chroum, oz. vj.

The acopon called Pyxis. Of Colophonian rosin, lb. iss; of turpentine, oz. viij; of ammoniac perfume, oz. iij; of frankincense, oz. ix; of old oil, lb. ij; of the juice of linseed, lb. j; of cow's milk, lb. j; of the fat of geese, oz. vj; of butter, oz. viij; the whites of xxiv eggs. Having prepared it, lay it up in a vessel of box wood.

The acopon from the fir, of Galen. Of the ripe seed of the fir tree, j Italian modius, i. e. sext. xvj; of oil, lb. xv; of wax, lb. iv; of rosin, of pine-nut, or of turpentine, of each, oz. iv. Having bruised the seed of the fir, add it to the oil, and allowing it to remain forty days, filtrate and throw away; and having mixed the other things, use for spontaneous lassitude, paralysis, and coldness of the joints. But if the necessity for using it be urgent, we must boil the seed of the fir with the oil, mixing with them, sext. iv of water, to prevent them from being burnt. They are used in podagric and arthritic affections.

The same otherwise. Of oil, hemin. xxv, i. e. sext. xiiss; of the fruit of the fir, mod. j, i. e. sext. xvj; of the rosin of ash, lb. iij; of the rosin of pine-nut or of turpentine, lb. iij; of wax, lb. j.

The acopon from the black poplar, for the same affections.

Instead of the fruit of the fir, adding an equal quantity of the fruit of the black poplar, prepare the other things in like manner.

The liniment of Zosimus, celebrated for tremblings. Of pine rosin, oz. xvj; of wax, oz. iv; of old oil, lb. j; of opoponax, oz. ij; of adarce, oz. j; of euphorbium, oz. j; of natron, oz. iv; of tender aphronitrum, oz. iv. Triturate the natron, euphorbium, and adarce with wine, then add the opoponax, and triturate together. Melt the soluble substances separately with alkanet, that they may acquire colour, and having cooled, mix.

The dropax, or calefacient plaster Gallus. Of Oribasius. Of the Colophonian rosin which is redolent of frankincense, of pine rosin, and of that which is called the woody, being found only in Italy, of the pitch of ships, of dried pitch, of each, lb. iv; of wax, lb. iv; of roasted rosin, oz. xv; of Brutian pitch, lb. ij; of natron, lb. j; of bitumen, of galbanum, of adarce, of pellitory, of each, oz. vj; of opoponax, of euphorbium, of white hellebore, of pepper, of each, oz. iv; of sulphur vivum, oz. iij; of castor, of ammoniac, of the wild grape dried, of each, oz. ij; of Sicyonian oil, lb. j; of opobalsam, oz. vj.

Otherwise, a simple dropax. Of wax, lb. j; of dried pitch, lb. iss; of Brutian pitch, lb. j; of pine pitch, lb. iss; of roasted rosin, lb. j, oz. iij. Having first prepared the part with natron, apply.

The preparation of a sinapism. On the preceding day, dried figs are to be macerated in tepid water, and next day they are to be properly filtrated and strongly pounded. Then some acrid mustard, such as the Syriac and Egyptian, is to be triturated separately, pouring on it a little of the infusion, and mixing and forming into a mass; if we wish to form a strong sinapism, joining two parts of mustard to one of dried figs, but if weak, in the inverse proportion; and if a moderate one, mixing equal parts. If the mustard before it is triturated, be allowed to macerate in vinegar, as some do, it becomes weaker. After the mustard has been cleared away, and the bath used, if the pain continue violent, or if redness and blisters supervene, we are to wet a cloth in the juice of mallows, or of fenugreek, with oil of roses, and apply. Then we may use the rose cerate with ceruse. But in cases of paralysis, when the sensibility is impaired, care must be taken, and the part frequently uncovered and examined, for often they are burnt immoderately

without being sensible of it. And goat's dung, applied with vinegar, is more efficacious than mustard, especially in diseases of the hip-joint.

The liniment from writing-ink acting as a rubefacient, especially in cases of hemicrania. From the works of Alexander. Of euphorbium, of writing-ink, of each, dr. iv; of troglodytic myrrh, of crocomagma, of white pepper, of each, oz. iij; of saffron, dr. ij; of vinegar, q. s., so that these things may be properly triturated, and become of the consistence of the sordes in baths; and then anoint with it, beginning from the middle of the eyebrow to the whole temple, especially if it be bare of hairs; and after it cools, anoint again, and when the remedy acts properly, let the man be put into a bath.

COMM. COMMENTARY. Le Clerc says of the Acopa: "On les appelloit *acopa* comme qui diroit, *Unguens qui ôtent les douleurs, ou la lassitude, parcequ'on s'en servoit principalement pour le délasser, ou pour apaiser les douleurs qu'on sent après le travail et la fatigue.*" (Hist. de la Méd.) Galen explains that although this class of ointments derived their name from their being originally used as soothing applications to parts which were pained from severe exertion, they came afterwards to be applied for various other purposes, as for removing all deep-seated pains, indurations, contractions, and the like. Their consistence, he says, is nearly the same as that of the liquid cerates or the ointments made from wax and oil. According to their qualities, he adds, they have the epithets of emollient, calefacient, anodyne, relaxant, or alterative, applied to them. He describes, in prose and verse, the composition of an almost countless variety of these preparations. (De med. sec. gen. vii.) Celsus says of the *acopa*: "*Acopa quoque utilia nervis sunt.*" He gives formulæ only for two *acopa*, which consist of aromatic and stimulant medicines mixed with oil or some fragrant ointment. (v, 25.) Oribasius divides them into three kinds, the emollient, the calefacient, and the scarificient; the last being a near approach to sinapisms. On the *acopa* see further Scribonius and Actuarius.

The *liniments* of the ancients seem to have been very much the same as those of the moderns. Celsus says of them: "*Ἐγχεῖσται* autem Græci vocant liquida qui illinuntur."

(v, 243.) In consistence and qualities they nearly resembled COMM.
 the acopa, being composed of a large proportion of oil with a
 small quantity of wax or honey. Myrepsus gives prescriptions
 for a considerable number of them.

The *dropax* is thus described by Le Clerc: "On étendoit une certaine quantité de cette emplâtre sur la toile, ou la peau; on appliquoit cela sur quelque partie du corps, on le levoit, ou on l'arrachoit, et on l'appliquoit derechef, reitérant souvent la même chose, pour faire rougir la partie, dans le dessein d'attirer en dehors les humeurs, ou les sucs qui servent à la nourriture des parties, ou dans la vue d'ouvrir les pores. Pour rendre cette emplâtre plus efficace on y ajoutoit quelquefois des poudres acres, comme du pyrèthre, du poivre, du sel, du soufre. On emploie aussi le dropax pour faire tomber, ou pour arracher le poil de quelque partie." (Hist. de la Méd.) Heyschius appears to have confounded the *dropax* with the *pilothron* or *depilatory*. The former was merely a sort of calefacient plaster, and was applied to parts not covered with hairs. Oribasius says of it that it is prepared like the malagma. When it is desired to make it calefacient, he directs us to add to it pellitory, the seed of rosemary, and bitumen; when desiccative, the sulphur vivum, salts, and the ashes of vegetables; and when it is wished to make it of such a nature as to scarify the parts, he directs us to add to it limnesium (adarse) and spurge. The part to which it is to be applied, he says, if weak, should be shaven, but in the more robust, and when a stronger application is required, it need not be shaven, unless it is to be applied to the head, chin, or pubes. Myrepsus commends the following dropax: "Take of bitumen, oz. ij; of wax, oz. j, sext. j; of dried pitch, dr. j; of pine-rosin, of natron, of each, oz. j; of sulphur vivum, of pellitory, of white hellebore, of adarse, of each, sext. j; of stavesacre, of spurge, of each, dr. $\frac{1}{2}$; of oil, q. s." Certain forms of the dropax seem to have been allied to the *blistering plasters* of the moderns. On this subject we cannot do better than copy the remarks of Dr. Clinch, in his Preface to Ruffus Ephesius: "Quantum usus cantharidum, ex quibus hodierna vesicantia ubique fere componuntur, veteribus innotuit, vir Doctissimus Johannes Freind luculenter satis explicuit. Nequeo autem hic

COMM. silentio transire, quam graviter erratum sit a Georgio Baglivi, qui Oribasii meminit, utpote primi ex Arabibus, qui de usu vesicantium scripsit, quum eundem et Græcum fuisse, et Græcorum idiomate scripsisse, nemo non noverit. Is profecto aliquid suggerit de eo vesicantium genere, quæ dropaces et sinapismi dicuntur, qui ex sinapi, pipere, pyrethro et ejusmodi acribus medicamentis conficiebantur, et semel quidem cantharidum mentionem facit, neutiquam vero, quod scio, de his loquitur tanquam de medicina, quâ ad vesicas in cute excitandas utebantur. Aëtius quidem dropacis formam exhibuit, quæ tres cantharidum drachmas recipit, unde dropax exulcerans vulgo audit.”

Oribasius gives, from Antyllus, a most interesting and judicious account of the *sinapism*. He says that it does not suit with acute diseases, or, at least, only when the patient is of an inert constitution, and the sensibility is obtuse. It is applicable, however, he says, in almost all chronic diseases when other remedies have failed, except in the case of an ulcer in the lungs or liver, or when the disease is seated in a cartilaginous part. He recommends it in all cases of diminished sensibility. The only acute diseases in which he represents it as applicable are lethargy, catochus, carus, or fevers attended with loss of heat and diminished sensibility. Like our author, he directs us to prepare the sinapism with dried figs and mustard. Aëtius, upon the authority of Archigenes, details its medicinal properties in nearly the same terms. Both Aëtius and Oribasius represent goat's dung, pounded with vinegar, as being equally efficacious as the sinapism, and applying particularly to ischiatic diseases. Myrepsus's account agrees exactly with that of our author. He mentions that some macerate the figs in vinegar instead of water, but says that it renders the preparation weaker. The Arabians prepared the sinapism exactly as the Greeks, and applied it in similar cases. See Mesue (De Unguentis, i.)

SECT. XX.—DIFFERENT PREPARATIONS OF OILS AND
OINTMENTS.

Of unguents and ointments, or of oils in the form of ointments, some are simple, having only one article added to the oil, and some are prepared and compounded from more substances. Of the simple some are formed from flowers put into the oil, such as the oil of roses, that of chamomile, and the susinum, or oil of lilies; some are formed from fruits and seeds, and some from certain shoots, as of rue, which are boiled along with the oil, none of the flowers admitting boiling, and therefore they are rather exposed to the sun. But if their fragrance be strong and permanent, if exposed for a number of days to the sun, they become finer and more useful, such as the oils of roses and chamomile. But such flowers as are weaker and more volatile bear less insolation, being easily dissipated, such as the lily and violet. Of those formed from fruits and seeds, some are formed from them added whole to the oil, such as the melinum or oil of apples; and some have them pounded or altered, and the oily part of them removed, either by being squeezed out in a press and thus separated, such as the oils of walnuts, of sesame, of almonds, of lentisk, of bay, of Palma Christi, of radish, and the like. The compound ones are principally composed of aromatic herbs, which are boiled in the oil with wine, must, or water, and filtrated, some juices, and sometimes fats and marrows, being mixed with the oil. Of these, some being of a strictly oily consistence, are called, simply, ointments or unguents, as the gleucinum, nardinum, sicyonium, and cyprinum: but some having the consistence of acopa, and receiving wax, rosin, or the like, into their composition, are called myracopa, such as the decamyron, amaracinum, and those resembling them. And some are boiled only once, namely, such as do not consist of complex materials, as the metopium, mastichinum, and sicyonium; and some at two, three, or four successive additions, the articles which are most difficult to boil being first put in, such as rosewood, spathe, frankincense-tree, and bay; then the aromatics, Indian-leaf, spikenard, amomum, savin; and, last of all, the juices, fats, marrow, and perhaps

wax and rosins being added. The juice of balsam, or opobalsam, is not boiled at all, but is added after the boiling is over, and the ointment moderately cooled; and of the ointments some do not admit of boiling at all, but the ingredients are only mixed, as the mendesium; but some, when wishing to prepare the green ointment, after taking it from the fire, an oz. iss of well-triturated verdigris having been put into lb. v of oil, as in the cyprinum and amaracinum, dip the ointment in this mixture. The simple ointments are possessed of the powers of the articles added to them, or which are pounded in them, the oil being but the groundwork (as it were) or vehicle of them. The nature of all the complex ointments inclines to heating; but some are powerfully calefacient and emollient, so as to agree with cases of ancylosis and infarction, as the metopium, mendesium, marciatum. The pentamyron is more moderate, as the decamyron is stronger, so as to abrade the surface; but those which are moderately hot are subtile, pargoric, and digestive, such as the susinum, amaracinum, irinum, crocinum, foliatum. Some, in addition to their heating qualities, are sufficiently desiccative and cutting, such as the cyprinum and sicyonium: some are powerfully heating, and rather tonic, and hence they agree with the stomach and viscera in particular when relaxed, such as the mastichinum, nardinum, gleucinum; but the most tonic are those prepared from wild olives; but some ointments are used only by women for their fragrant smell, as the foliatum, spicatum, commagenum, and those called moschelæa or compositions of musk and oil.

The rosaceum, or oil of roses. Of red roses deprived of their nails (or the white extremities of their flowers), and dried for a night and a day, oz. iij; of the oil of unripe olives, one Italian sextarius. Having bound up the vessel carefully, so that it may not evaporate, expose to the sun in open air for forty days, and then deposit the vessel, not on the pavement, but upon a table: some instead of the insolation put the vessel into a well, in order that its fragrance may be preserved by the cold, but others bury it underground.

The chamæmelinum, or oil of chamomile. Of the flower of chamomile, without the white petals, which has been dried for a night and a day, oz. ij; of oil, one Italian sextarius. Cover over the vessel with a plain piece of cloth, so as to allow it to

transpire for forty days, after which it is to be carefully covered over and laid up.

The anethinum, or oil of dill. Of the hair of the green dill, dried, oz. j; of sweet oil, an Italian sextarius: expose to the sun in like manner. The oil of dill may likewise be prepared at once, without exposure to the sun; for the hair of dried dill may be boiled in a double vessel, and used; and the oil of chamomile may be prepared in like manner; but they are weaker than those from green dill, and especially if made by exposure to the sun.

The liliaceum, or oil of lilies, called also susinum, perhaps from having been invented in Susa. Of the petals of white lilies, dried in like manner, oz. ij are to be added to an Italian sextarius of oil, and carefully covered over so as to prevent it from evaporating, and exposed to the sun for three days, after which, the first being filtered and thrown away, other two ounces are to be added for other three days, and thus laid up.

The compound susinum, or oil of lilies. Of oil, sext. iij; of aromatic cane, oz. v; of myrrh, oz. v; of cardamom, oz. iij; of the petals of lily, deprived of their nails and dried, lb. j; of cinnamon, oz. iij; of Cilician saffron, oz. v. The whole process is to be divided into three successive additions. First, we are to macerate the myrrh and the calamus in wine for five days, stirring it three times a day, and then we are to boil it with the oil for a very short time. Secondly, we are to macerate the cardamom in water for three days, stirring it in like manner, and then we are to boil it with the oil for one hour. Having filtrated, we add to the pure oil the third part of the lilies, and after three days, again having filtrated, we put in the other third of the lilies; and again, after three days having filtrated and thrown away the first, we are to add the remainder with triturated saffron. But after other three days, the oil being filtrated, we add to it the cinnamon pounded, or, instead of it, arnabo, or double the quantity of cassia or carpesium, and lay it up.

The iaton, violaceum, or oil of violets. They prepare the oil of violets, some from the purple, some from saffron-like, and some from white violets, adding oz. iij of the leaves deprived of their nails to an Italian sextarius of the oil of unripe olives; and covering it up carefully to prevent it from evaporating;

they insolate it for ten days, changing them three times after every three days like the lilies. And in laying them up, they add a few completely dried.

The melinum, or oil of apples. This is prepared from Cydonian apples or quinces, which are to be rubbed externally with a piece of cloth and cut into pieces with their bark; and then lb. iij of them are to be added to x Italian sext. of oil of unripe olives, and insolated for forty days.

The sesaminum, or oil of oily-grain. The oil of sesame is prepared from oily grains bruised, softened, and squeezed in strainers with screws, or from the oily part separated in hot water and laid up in vessels of glass.

The raphaninum, or oil of radishes. And this is prepared after the same manner in Egypt from the seed of the radishes with small roots, pounded, and the oil separated.

The ricinum, oil of Palma Christi, or castor-oil. This also is prepared after the same manner in Egypt from the seed of the ricinus, which is called croton, similarly pounded or levigated.

The ægirinum, or oil of the black poplar. It is found in the season of spring when there is much rosin in the seed. For breaking down the grains of black poplar, they add oz. iv of them to sext. j of sweet oil and insolate for forty days, or boil in a double vessel for three hours, and thus filtrate and lay up.

The amygdalinum, or oil of almonds. This is prepared like the aforementioned, pure bitter almonds being bruised, a little water poured in, and the oil separated as described above. Some add oz. ij of pounded almonds to an Italian sextarius of sweet oil, and boil in a double vessel.

The oil of almonds, which is called metopium. The Egyptians, who invented this oil, called it metopium, because it contains galbanum, and the shrub from which the galbanum is got is called metopium. It admits the following things: of the oil of unripe olives, sext. xx; of bitter almonds, lb. ij; of cardamom, lb. j; of the schœnanth, of calamus aromaticus, of carpobalsam, of each, lb. j; of myrrh, of galbanum, of each, oz. vj; of turpentine, lb. ij; of fragrant wine to soak the dry articles, sext. iv; of Attic honey, lb. iij. The rosin and galbanum being triturated and dissolved in part of the oil, we put them into the other things boiled, and then add the honey.

When all the things are properly mixed, and while it is still tepid, we remove it from the fire and strain it, for it becomes thick when it cools.

The balaninum, or oil of acorns. The oil of acorns is prepared like the oil of almonds, from the acorns of oaks.

The caryinum, or oil of walnuts. This is prepared like the aforesaid, from old walnuts.

Laurinum, or oil of bay. The plain oil is formed in the same manner from the fruit of bay, but the mixed is prepared thus: of ripe olives, sext. j is added to sext. ij of bay-berries, and all pounded and expressed. Some mix equal parts of each.

The lentiscinum, or oil of lentisk. And this is prepared in the same manner as the oil of bay, from the fruit of lentisk, in two ways, by itself and with olives, not ripe but sour.

The mastichinum, or oil of mastich. The most simple kind is formed of Chian mastich, oz. j, being added to an Italian sextarius of oil of unripe olives, and boiled in a double vessel. Some add also, of wormwood and of storax, of each, oz. j.

A more complex oil of mastich. Of oil, sext. l; of elecampane, lb. v; of xylobalsam, lb. x; of the schœnanth, lb. v; of cardamom, lb. vij; of mastich, lb. v; of the wood of mastich, lb. viij; of turpentine, lb. iij; of the hair of wormwood, lb. j; of fragrant wine, sext. v; of water, sext. j. The dry things being previously macerated in wine for three days, are mixed with the oil and the water, and boiled for six hours, and then the mastich and turpentine are added, and being properly mixed are filtrated, and when cooled are put into a vessel.

The simple sicyonian, or oil of cucumbers. This is prepared by adding oz. ij of the dried root of the wild cucumber to an Italian sextarius of oil, and boiling in a double vessel.

The compound oil of cucumbers. Of oil, sext. x; of the scraped root of the wild cucumber, lb. j; of wild thyme, of melilot, of each, oz. v; of fatty dead pines, of marsh-mallows, of each, oz. v; of asplenium, oz. vj; of fenugreek, sext. ij. The fenugreek is first soaked in the water for one day and then filtrated, and is added to the things mentioned with oil and sext. ij of wine; and when all are boiled, there are added of stag's marrow, triturated with a little oil, oz. iv; of the

grease of fowls, oz. iv; and when the oil is again filtrated, it is to be deposited in a vessel. Some also expose it to the sun after boiling forty days.

Another oil of cucumbers, more efficacious. Of the juice of elaterium, sext. iij; of round and of long birthwort, of storax, of elecampane, of hyssop, of iris, of colocynth, of pennyroyal, of origany, of cyperus, of frankincense-tree, of centaury, of bay-leaves, of each, oz. ij; of oil, sext. v. Having mixed, boil until but little of the juice remain.

The cyprinum, or oil of privet, from the works of Posidonius. Of oil, sext. j; of cyperus, of elecampane, of iris, of each, lb. j; of sampsuchum, of hyssop, of the seed of chaste-tree, of sage, of each, oz. iij; of the flower of privet, lb. j. All the other things having been previously macerated in wine for one day, are to be boiled with the oil for six hours. To the pure filtrated oil the privet is added, if the green be at hand, with its tender branches not bruised, but otherwise the dried are to be pounded with a little water, and boiled for an hour and a half. But if you wish to give it colour after taking it from the fire, add of pure verdigris, lb. iss. Posidonius, wishing to avoid the acrimony of the verdigris, directs, after the boiling, to leave the oil for three days in a vessel not tinned, and it will acquire the colour, with its powers unimpaired.

Another formula for the oil of privet. Of citron-leaves, of bay-leaves, of iris, of cyperus, of sage, of each, oz. iij; of frankincense-tree, of the long birthwort, of the seed of chaste-tree, of each, oz. iv; of elecampane, of rosewood, of each, oz. vj; of rue, oz. ij; of cypress, oz. ij; of oil, sext. j. Having first macerated these things in wine, boil with oil; and having filtrated, add again of xylobalsam, of xylocassia, of each, oz. iv; of sampsuch, of cumin, of myrtle, of storax, of mastich, of each, oz. iij; of opoponax, oz. ij; of the flower of privet, oz. vj; of verdigris, oz. j.

The amaracinum, or oil of marjoram. Of elecampane, lb. x; of xylobalsam, lb. xx; of cyperus, lb. viij; of the schœnanth, of rosewood, of savin, of each, lb. viij; of opoponax, of seed of amaracus, of each, lb. ij; of primary oil, sext. lxxx; of fragrant oil, sext. v. All the other things, being first macerated in wine, are to receive the first addition, but the second addition is to be the savin; and the former articles are to be boiled

six hours, but this only three. Some dip it and add of verdigris, oz. iij.

The irinum, or oil of iris. Of iris, of rosewood, of cyperus, of each, lb. v; of opoponax, oz. iij; of alkanet, oz. ij; of oil, sext. xxx; of water, sext. xv. Some add also, of the schœnanth, oz. vj; of cassia, oz. iij; of xylobalsam, oz. vj; of Celtic nard, oz. vj. All these things, being bruised, are to be first macerated in water and oil for five days, and then boiled in a double vessel for six days, and laid up.

The crocinum, or oil of saffron, in which is contained the composition of another crocomagma. Of the fragrant oil of unripe olives, lb. j; of calamus aromaticus, oz. v; of troglodytic myrrh, oz. v; of cardamom, oz. vij; of Cilician saffron, oz. vj. The first addition is to be of the calamus and myrrh, which, being triturated with wine, are to be macerated for three days, and three times a day stirred with a spatula of palm: then they are to be boiled with the oil. The second addition is to consist of the cardamom which has been macerated in the water for one day before; and the third, of the saffron in wine. Some add other five ounces of the myrrh with the saffron. Having filtrated, the pure oil is laid up. The whole deposit of the articles is formed into trochisks, which, being dried, constitute what is called the crocomagma.

The Mendesium. It is so called because it was invented in Egypt where Mendes is worshipped. It receives of the oil of acorns, lb. x (in another formula, sext. x); of myrrh, of cassia fistula, of each, oz. iij; of turpentine, lb. x (in another formula, sext. x); of cinnamon, oz. iij. This is not boiled, but the dry things being put in, are stirred for sixty days: then the turpentine being melted, is added to part of the oil, and afterwards stirred for sixty days, in which state it is laid up.

The marciatum. Of mastich, of wax, of storax, of each, oz. iij; of the medicine cœsypum, oz. ss; of opobalsam, oz. iss; of oil of nard, of glucinum, of oil of unripe grapes, of each, oz. iij; of stag's marrow, oz. iss; of turpentine, oz. j.

The oil of unripe olives. The first addition.—Of rosewood, of the branches of palms, of melilots, of iris, of the schœnanth, of xylobalsam, of dried roses, of sweet-cane, of each, oz. iij; of oil of unripe olives, lb. x; of the juice of unripe olives, sext. x.

The second addition.—Of Indian leaf, of amomum, of spike-

nard, of costus, of cloves, of cassia, of cassamum, of each, oz. iij (in another formula also, of arnabo, oz. iij) ; of wine, q. s.

The third addition.—Of frankincense, of ammoniac perfume, of storax, of bdellium, of myrrh, of mastich, of each, oz. iij ; of wine, q. s. ; of white wax, oz. v ; of opobalsam, oz. vj (some make it oz. viij). The articles of the first addition are to be first macerated for one day in the juice of unripe olives and the oil ; but those of the second in another vessel, in Aminæan or some other old and fragrant wine, stirring every day with a spatula of palm three times for three days ; after which boil in a vessel lined with tin ; first, the articles of the first addition until little remain of the unripe olive juice : then, immediately add those of the second with the wine. But it is better, having first filtrated, to add these things to the pure oil ; and when boiled until little of the wine be left, in order that the oil may not be burnt, take it off the fire and filtrate, and add again to the pure oil the succulent articles of the third addition, which have been previously triturated in a mortar with wine such as I mentioned, all except the storax, for it, if added with the other things, is straightway dissolved. And they are to be boiled upon coals until the preparation appears to be in a proper state, when it is to be taken off the fire and allowed to cool. Next day, having filtrated the oil carefully, and warmed it sufficiently upon the fire, add the wax, and when it is taken off, stir with a spatula. After it is cooled add the opobalsam, and lay it up in vessels of glass.

The gleucinum, or oil of must. The first addition.—Of oil, sext. x ; of Aminæan must, sext. vj ; of rose-wood, oz. iv ; of palm-branch, oz. vj ; of the schœnanth, oz. vj ; of melilots, oz. iv ; of roses, oz. j ; of myrrh, oz. iij ; of bay-leaves, oz. ij ; of frankincense-tree, oz. vj ; of xylobalsam, oz. vj ; of elecampane, oz. vj ; of long birthwort, oz. iij ; of iris, oz. iij. Macerate these things in the must.

The second addition.—Of Celtic nard, oz. iv ; of cassamum (or sow-bread), oz. ij ; of cyperus, of cassia, of spikenard, of asarabacca, of amomum, of costus, of sampsuch, of each, oz. iij ; of calamus aromaticus, of cloves, of Indian leaf, of each, oz. j ; of cardamom, oz. iv. Macerate in fragrant wine.

The third addition.—Of mastich, oz. iv ; of troglodytic myrrh, of bdellium, of each, oz. ij ; of ladanum, oz. iij ; of liquid

storax, of male frankincense, of each, oz. iv ; of opobalsam, oz. vj (some add also of saffron, oz. ij). Prepare like the ointment from unripe olives, except the wax. But here the articles of the two additions are to be macerated for seven days.

The nardinum Cyzicenum, or nard oil of Cyzicus. The first addition.—Of primary oil, sext. x ; of rose-wood, of cyperus, of elecampane, of iris, of xylobalsam, of birthwort, of cardamom, of the schoenanth, of each, oz. vj ; of sampsuch, oz. iv ; of savin, oz. ij. Some add also of calamus aromaticus, oz. ij. These things are to be macerated in sext. iv of fragrant wine.

The second addition.—Of cassia, of cassamum, of arnabo, of each, oz. ij ; of spikenard, oz. iij ; of cloves, oz. j ; of costus, of amomum, of each, oz. ij (some add also of Celtic nard, oz. ij). These things are to be macerated in wine.

The third addition.—Of troglodytic myrrh, of aloes, of frankincense, of each, oz. ij ; of storax, oz. iij ; of mastich, oz. iv ; of opobalsam, oz. vj (some add also oz. j of saffron, triturated in wine). Prepare this also as said above.

The decamyron, or oil containing ten ingredients. Of spikenard, of Indian leaf, of euphorbium, of pepper, of costus, of adarce, of each, oz. j ; of mastich, oz. iss ; of opobalsam, oz. vj ; of oil of nard, lb. j ; of wax, oz. vj.

The pentamyron. Of storax, oz. j ; of mastich, oz. ij ; of white wax, oz. iij ; of opoanax, oz. iv ; of nard, oz. v.

The foliatum, or ointment of Indian leaf. Of Indian leaf, oz. iij ; of amomum, oz. j ; of cassia, oz. vj ; of ladanum, oz. j ; of white pepper grains, xl ; of troglodytic myrrh, dr. j. These things being bruised and sifted are to be again triturated in a mortar, with the addition of one pound of oil of nard. To render the medicine darker, triturate the burnt barks of walnuts in a mortar, and add ; then mix of opobalsam, cochl. iij, and use.

COMMENTARY. The preparation of oils and ointments is fully treated of by Dioscorides in the first book of his *Materia Medica* ; and in like manner by Pliny (H. N. xv, 7, and xiii, 2.) See also Avicenna (v, 1, 10, 11) ; Serapion (vii, 25) ; Haly Abbas (Pract. x, 19) ; and Mesue (De Unguentis et De Oleis.) COMM.

Notwithstanding the importance of these articles for medicinal and pharmaceutical purposes, we think it unnecessary to

COMM. treat of them more at large, as our author's account is sufficiently ample and accurate, and few articles of any great consequence are omitted by him. It will be remarked that most of the unguents and ointments here described are of a fragrant nature.

SECT. XXI.—ON CENANTHARIA.

It is not because they contain the wild vine (*cœnanthe*) that they are called *cœnantharia*, for some of them have no wild vine at all; but it is from the wine and flower of the lilies that they have obtained this appellation. The *cœnantharia* are used by some solely for their fragrance, and for luxury alone; these persons having them poured over their bodies after coming out of the bath, and having their tables wiped with sponges dipped in them. But to those who use them properly, they prove remedies in cases of paralysis and syncope, if mixed with the tonic cataplasms, for the stomach; and to convalescents more especially from febrile diseases. They are to be poured upon the bodies of such persons, and applied to their noses if they can still inhale. For they are drawn in deeply, and strengthen the mental and vital spirits. They are useful, likewise, as preservatives from pestilential diseases, when the state of the atmosphere appears to be of this nature. The following is the *cœnantharium* of Posidonius, which he calls *Mesopotamenum*.

The preparation of the cœnantharium. Of cassia, of myrrh, of frankincense, of Indian leaf, of amomum, of mastich, of costus, of carpobalsam, of opobalsam, of each, oz. iij; of fatty storax, oz. iv; of fragrant Aminæan wine, x Italian sext. Having pounded and filtrated all the things, divide the storax into small pieces, put into a vessel with a broad mouth along with the leaves of lilies, dried the preceding day and stripped of their nails, placing them alternately; let the lilies be *ccc* in number; then put in the wine and the opobalsam, which have been mixed and stirred together before their addition, and having covered up the mouth of the vessel, expose to the sun for forty days. Use after the bath, as a restorative from disease, sprinkling the house and vessels with it, or dipping sponges in it and applying to the face.

Another, of our own invention. Of costus, oz. iij; of spike-

nard, of arnabo, of cloves, of each, oz. j; of amomum, oz. iij; of cassia, of wild vine, of calamus, of each, oz. ix; of storax, of opobalsam, of each, oz. iv; lilies, *ccc*; of Falernian wine, sext. x. Prepare after the same manner.

COMMENTARY. See also Aëtius (xii, 116) and Myrepsus COMM.
 (§ 37.) The *Enantharia* were fragrant preparations, made with wine and aromatics. The prescriptions given by Aëtius and Myrepsus are so similar to our author's that we need not repeat them. We are not aware of the Arabian authors having treated of them anywhere; at all events, they have not done so by this name.

SECT. XXII.—ON PERFUMES AND CYPHI.

In materials the cyphi are intermediate between the trochisks which are drunk and the antidotes. We use them sometimes in fumigations on account of their fragrance, and so also the perfumes; sometimes we smell to them, in order to concoct catarrhs and defluxions, and as deobstruents, and to clear the parts about the brain, and as preservatives from pestilential disorders; they are also taken by the mouth for these purposes, and to concoct matters lodged in the chest, and for cold affections in the liver: hence the ancients invented the antidotes called cyphoid. They are mixed also with compound medicines, and more especially with epithemes and antidotes.

Suffimentum rosatum, rose perfume. Of costus, of amomum, of myrrh, of cassia, of each, oz. j; of Chian storax, of bdellium, of onyx, of moss, of ladanum, of each, dr. ij; of pure roses, oz. xxix; of opobalsam, of wine, q. s.

Suffimentum liliaceum, the perfume from lilies. Of lilies deprived of their nails (i. e. the white parts of their flowers), lb. j; of primary storax, oz. ix; of spikenard, oz. iij; of costus, of cloves, of amomum, of mastich, of burnt onyches, of honey, of each, oz. iss; of opobalsam, oz. v; of wine, q. s. Triturate and form trochisks.

The cyphi magnum called the solar, consisting of thirty-six ingredients. Of storax, of myrrh, of bdellium, of ladanum, of rosewood, of elecampane, of each, oz. vj; of Celtic nard, of Indian

leaf, of cypress-seed, of ammoniac perfume, of pine-nuts, of the moss of trees (splanchnon), or, instead of it, of two large onyches, of carpobalsam, of each, oz. iij; of cassia, of iris, of seseli, of sphagnon (muscus arboreus?), of cyperus, of cardamom, of sweet-cane, of each, oz. v; of dried roses, of saffron, of spikenard, of savin, of the root of kingspear (but some use the juice), of each, oz. iv; of lacaphthus (it is the bark of a pine or of some other tree), oz. ix; of costus, of the flower of schœnanth, of each, oz. ij; forty large juniper-berries and fifty small; of amomum, of turpentine, of pure palm-nuts, of each, lb. j; of dried figs without their stones, of dried grapes without their stones, of each, lb. ij; of scummed honey, lb. v. Posidonius adds, likewise, of fragrant wine, sext. iij.

Another cyphi, called the lunar, consisting of twenty-eight ingredients. Of bdellium, of elecampane, of each, oz. vij; of schœnanth, oz. ij; of the moss of trees, oz. v; fifty small juniper-berries; of cardamom, oz. v; of rose-wood, oz. vij; of cassia fistula, oz. v; of spikenard, oz. ij; of cyperus, oz. v; of the root of kingspear, of savin, of each, oz. iv; of cypress-seed, of Celtic nard, of malabathrum with the leaves, of dried roses, of each, oz. iij; of costus, of saffron, of each, oz. ij; of ladanum, of myrrh, of each, oz. vij; of fatty dried figs, of grapes deprived of their stones, of each, lb. ij; of pine-nuts, oz. viij; of turpentine, lb. j; of storax, oz. vij; of fatty palm-nuts, lb. j; of honey, lb. v; of fragrant wine, q. s.

COMM. COMMENTARY. See Aëtius (xiii, 37); Oribasius (Synopsis, iii); Myrepsus (i, 299); Actuarius (Meth. Med. v, 6.) These are sweet-smelling compositions which were used as restoratives, or in order to sooth. The following *suffitus* of Oribasius is soporific: Of storax, of amomum, of costus, of ammoniac perfume, of Scythian bdellium, of the root of mandrake, of the juice of poppy. The cyphoid antidotes of Myrepsus are very multifarious compositions, consisting of a great variety of aromatics, mixed up with honey and fragrant wines.

Similar preparations are described by the Arabians among the confections and antidotes. See Avicenna, Serapion, and Haly Abbas.

SECT. XXIII.—THE PREPARATION OF MASUCHA, WHICH SOME
CALL MASUAPHIUM.

Of melilots, oz. x; of the wood of balsamum, of rose-wood, of savin, of myrrh, of amomum, of the schœnanth, of bay-leaves, of the fat of myrrh (*stacte*), of storax, of calamus aromaticus, of sampsuchum, of each, oz. ij; of iris, oz. v; of Indian leaf, of saffron, of each, oz. j; of opobalsam, oz. ss; of gum, lb. j; of dried roses, oz. vj; of wine, q. s.

COMMENTARY. See Aëtius (xiii, 118); Myrepsus (§ xxi, 14); ^{Comm.} Actuarius (Meth. Med. v. 8.) The following is Myrepsus's formula for the suffimentum called *Masucha*: Of yellow aloes, of bay-leaves, of costus, of amomum, of cardamom, of cassia, of carpobalsam, of ladanum, of each, lb. iss; of myrrh, of iris, of melilot, of Indian leaf, of roses, of the leaves of olive, of Celtic nard, of each, lb. ss oz. iij; of saffron, oz. iij; of galbanum, oz. ss; of gum, lb. iss; of fragrant wine, q. s.

SECT. XXIV.—ON PESSARIES, FROM THE WORKS OF ANTYLLUS.

Pessaries are applied to the womb. There are three different kinds of them; for some are emollient, some astringent, and some are anastomative, i. e. they open the mouths of vessels. We use the emollient in inflammations of the womb, in ulceration and coldness of it, in ascension upwards, eversion and inflation thereof. They are prepared from Tuscan wax, the oil of privet and of lilies, the fat of geese and of fowls, unsalted butter, burnt rosin, stag's marrow, fenugreek, and the like. The anastomative, or those which open the mouths of vessels, are used when we wish to recall the menstrual purgation that has been stopped, or to correct the state of the womb when it is shut up or contracted. These are prepared from honey, mugwort, dittany, the juice of cabbage, liquorice, the juice of horehound, rue, scammony, or the like. The astringent are used in cases the reverse of those for which the anastomative are applied; for they restrain the female discharge, contract the womb when it is open, and impel it

upwards when prolapsed. The materials of the astringent have been already pointed out in the chapter on Collyria and Trochisks. The pessary is to be made of the thickness of of bath sordes, and a little thicker; and then some wool, like a narrow tent, is to be doubled and dipped in the medicine, and applied to the mouth of the womb, having a long thread attached to it to draw down the pessary readily when it is thought proper.—The Saffron Pessary, for inflammations, eversions, hardness, and inflation of the womb: Of white wax, of calf's marrow, of each, dr. xvj; of stag's marrow, dr. xj; of the grease of geese, dr. viij; of the grease of fowls, dr. viij; of mastich, dr. iv; of the medicine *œsypum*, dr. iij; of honey, dr. ij; of saffron, dr. viij; of rose oil, q. s. Triturate the saffron with the milk of a woman.—The Golden Pessary, an excellent emollient: Of saffron, dr. j; of unwashed wool (*œsypum*), dr. j; of stag's marrow, dr. ij; of turpentine, of wax, of the grease of geese, of each, dr. iij; the yolks of sixteen eggs roasted; of oil, of iris, of roses, q. s.—The Libanian Pessary, being emmenagogue, and agreeing excellently with affections of the womb: Of nard ointment, oz. vj; of Tuscan wax, oz. v; of the ointment of lilies, oz. iv; of fresh hog's lard, oz. iij; of the grease of geese and of domestic fowls, of stag's marrow, and of the ointment of amaracus, of each, oz. ij; of bull's tallow, of turpentine, of *œsypum*, of each, oz. j. It is dissolved in a double vessel, as are all the other pessaries.—The Pessary *Enneapharmacus*: Of the ointment of roses, of that of ricinus, of turpentine, of wax, of honey, of the grease of geese and of oxen, of stag's marrow, and of butter, equal parts.—The Titian emollient Pessary: Of wax, oz. vj; of Colophonian rosin, oz. ivss; of bull's tallow, oz. iv; of ammoniac perfume, oz. iv. Triturate the ammoniac with water.—The Egyptian Pessary: Of honey, of turpentine, of butter, of oil of roses or of lilies, of saffron, of each, p. j; and when there is no inflammation and the parts are foul, of verdigris, p. ss.—The Pessary called *Genitura*, for conception: Of butter, oz. vj; of the medicine *œsypum*, of stag's marrow, of the grease of geese and of domestic fowls, of turpentine, of aloes, of each, oz. iij; of Tuscan wax, oz. vj; of oil of roses, lb. ij; of myrrh, of cassia, of each, oz. ij; of spikenard, oz. j; of honey, q. s.

COMMENTARY. The pessaries of the ancients bore no resemblance to the instruments of box-wood and other solid materials now used to prevent prolapsus of the uterus. Those of the ancients were medicated ointments or liniments, which were generally applied to the natural parts upon wool, most commonly for the purpose of correcting the menstrual discharge. A modern authority describes them in the following terms: "Pessaries are made like a finger, of medicines for the womb, taken into a long linen bag, well-waxed, or incorporated with honey, ladanum, galbanum, wax and juices. They are in shape like a suppository, but longer and thicker." Schroder (*Chym. Dispensat.* p. 134). They were also frequently resorted to for the wicked purpose of producing abortion. Hippocrates, in his Oath, obligates the medical apprentice not to give such a pessary to a woman. Pessaries of this description consisted of strong stimulants, such as cantharides, elaterium, colocynth, &c. The emmenagogue pessaries were formed of such-like ingredients, weakened by mixture with others of less activity.

Celsus gives a very distinct account of pessaries. He says of them: "Sed alia quoque utilia sunt; ut ea, quæ fœminis subjiciuntur; πῆσσοις Græci vocant. Eorum hæc proprietas est: medicamenta composita molli lana excipiuntur, eaque lana naturalibus conditur." (v, 21.) He gives formulæ for seven pessaries. One, for expelling the dead fœtus, consists of pomegranate rind pounded with water. (v, 21.)

Pessaries are treated of at great length by Oribasius, Aëtius, and Actuarius, and preparations are described for every imaginable condition of the uterus. Aëtius gives formulæ for pessaries to procure sterility, the ingredients of which, for the most part, are powerful astringents and bitters. But Myrepsus is the most copious writer on this subject, for he describes the preparation of forty-five pessaries (§ 38). Their ingredients, of course, are various, according to the purpose for which they are to be applied. The Emmenagogue consist of cumin, ginger, birthwort, the pulp of colocynth, castor, musk, rue, &c., mixed up with wax, suet, or honey.

As there is nothing original in the views of the Arabians, we need only say with regard to them that they prepared and applied pessaries on the principles laid down by their Grecian masters. See, in particular, Rhases (*Cont.* xxii); Avicenna (iii, 21, 2); Serapion (*de Ægritudinibus Matricis.*)

SECT. XXV.—ON MEDICINES WHICH MAY BE SUBSTITUTED FOR ONE ANOTHER, FROM THE WORKS OF GALEN.

In Alexandria, he says, wishing to obtain the campion (lychnis) for a certain woman who was in danger, and not having got it, if I had not found and used the seed of acanthium, the woman would have been soon lost. Hence, having been requested by my companions, I made out a list of the medicines which may be substituted for one another, in order, beginning with this same article :

- Instead of the seed of acanthium, campion (lychnis).
 southern-wood (abrotouum), origany.
 agallochus, sweet-cane (calamus aromaticus).
 agaric, euphorbium.
 Indian aloes, glancium, lycium, or centaurium.
 winter-cherry (halicacabus), the seed of strychnos.
 asphaltum, the Bruttian liquid pitch.
 aconite or wolfsbane, the root of the wild iris.
 wormwood, southernwood.
 opobalsam, myrtle-juice.
 quicklime (calx-viva), adarce.
 alkanet, hyacinth.
 sal ammoniac, Cappadocian salts.
 arsenic, sandarach.
 starch, dried flour.
 ammoniac perfume, bee-glue.
 rose-wood (aspalathus), the fruit of heath, or the seed of the chaste-tree.
 aracus (a species of pulse), Indian corn.
 bitter almonds, wormwood.
 Armenian stoue, Indian ink.
 the elder, thorn.
 prickly-poppy (argemone), seriphium.
 kingspear, the juice of beet.
 wall-pepper, the juice or leaves of lettuce.
 maiden-hair, aphroselinum.
 Ethiopian olive, two parts of the tears of acacia.
 Asian stone, gagate stone, or sal ammoniac burnt.
 fox's grease, that of a bear.
 shoots of the black poplar, sampsuchum.
 buprestis, bugs (blattæ).
 butter, cow's milk coagulated.
 the juice of balsam, the juice of myrrh.

Instead of bdellium, the aromatic moss of trees (sphagnus).
 gentian root, aromatic parsley.
 Samian earth, the Egyptian leucographis.
 Eretrian earth, Thebaic lime.
 turnip, the sun-flower.
 liquorice juice, the juice of mulberry.
 vulture's dung, pigeon's dung.
 soft earth, plumbago.
 dorycnium, the seed of henbane.
 dittany, sage.
 bay-berries, dried wild thyme.
 carrot, the seed of water-parsnip.
 diphryges, Phrygian stone.
 dracunculus, wake-robin.
 sage, calamint.
 the tear of olive, the juice of hypocistis.
 wild thyme, potamogeton.
 the seed of rocket, the seed of hedge-mustard.
 the juice of elaterium, the juice of the leek.
 the seed of hedge-mustard, soapwort.
 the fruit of heath, the gall omphacitis.
 ebony, the wood of the lotus.
 the leaves of wild fig, the dung of ibis (?).
 the root of butcher's broom, the leaves of the mulberry (?).
 black hellebore, the root of papyrus (?).
 enneaphyllon, the potamogeton.
 old oil, boil a double quantity of oil with old hog's lard.
 ginger, pellitory.
 deadly carrot (thapsia), the juice of the black chamæleon.
 thapsia, the seed of cresses or rocket.
 sulphur vivum, red arsenic (sandarach).
 the rust of iron (rubigo ferri), the squama ferri.
 the mistletoe of the oak, that of black chamæleon.
 Illyrian iris, the aromatic elecampane.
 cinnamon, double the quantity of cassia.
 cyperus, the large juniper.
 cardamom, cyperus.
 costus, juniper-berries.
 juniper-berries, ladanum.
 calamus aromaticus, the moss of trees.
 saffron, crocomagma.
 crocomagma, Indian aloes.
 castor, laserwort (assafœtida).
 calamine, the Egyptian leucographis.
 the tallow of the crocodile, that of the sea-dog.
 hemlock (conium), the seed of coriander.
 cantharides, phalangia.

- Instead of the seed of hastard saffron, the seed of chaste-tree.
 the juice of ivy, that of peach.
 the palma Christi, the sordes from the palestra.
 the root of capers, the root of heath or tamarisk.
 the dung of the turtle, pigeon's dung.
 ceraunium, leucographis.
 coral, moly.
 cat's dung, that of the ichneumon.
 dragon's blood (cinnabaris), the rhodoides.
 cnmin, the seed of cabbage.
 field hasil (clinopodium), the sun-flower.
 calamint, the wild mint.
 colocynth, the seed of the palma Christi called croton.
 navelwort (cotyledon), the onocardium.
 Colophonian rosin, the pitch of ships.
 cynosbatos, the seed of the winter cherry.
 linseed, the juice of beans.
 pumice stone, Cretan earth.
 cyphi, burnt dried fig.
 buccina, oysters.
 cardamom, xylocarpasum.
 wax, bruised beans boiled and pounded with bee-glue.
 frankincense, the terra ampelitis.
 lathyrides (a species of spurge), the granum Cnidium.
 dittander (lepidium), madder.
 the magnet, the Phrygian stone.
 the Phrygian stone, the agerat.
 the seed of lovage, the seed of carrot.
 the stone pyrites, the stone pyrobolus.
 the flower of the stock gilly-flower, soapwort.
 the seed of the lotus, the seed of beet.
 the root of dittander, the leaves of capers.
 the sea-hare, the sea-shell (?).
 the root of dock, the root of pellitory.
 Indian leaf (malabathrum), cassia or Indian nard.
 mandrake (mandragora), dorycnium.
 myrtle oil, the juice of mulberry.
 mastich, the juice of lentisk (?).
 myrohalan, rue.
 mallows, fenugreek.
 honey, roh.
 manna (of frankincense ?), the hark of frankincense.
 mice dung, an equal quantity of flies.
 stag's marrow, stag's grease or the marrow of a calf.
 quinces, melilots.
 Cyprian misy, Cyprian ochre.
 spignel, myrohalan.

Instead of the juice of mulberries, the leaves of hrambles.
 roasted misy, diphyrges.
 Syriac nard, the aromatic rush.
 navew, turnip-seed (?).
 xylobalsam, the root of stock gilly-flower.
 poppy-juice, the juice of mandragora.
 opoponax, the milk of mulberry.
 Cyrenaic juice, Syriac juice.
 juice of carpasum, the juice of myrtle.
 juice of the fig, the juice of mulberry.
 juice of the willow, the juice of the black ivy.
 juice of the rose hay, the mistletoe of the oak.
 juice of the œnanthe, that of the cultivated vine-tree.
 all-good (horminum), linseed.
 rice, barley-flour.
 Italian wine, Mendesian wine.
 Rhodian wine, austere wine.
 the star of Bethlehem (ornithogallum), anthyllis.
 the unripe olive, the gall omphacitis.
 onocardium, the herb psyche.
 juice of hog's fennel, liquorice-juice.
 bee-glue, ladanum.
 canker-worm of the pine, the wasps on the unripe rosin.
 pepper, ginger.
 fern, the seed of cneoros.
 polypody, the root of mezereon, or of the chamæleon.
 vervain, ground poplar.
 polytrichon, wormwood.
 rosin of the fir-tree, turpentine rosin.
 dried roses, the dried leaves of the peach-tree.
 oil of radishes, the oil of ricinus (castor oil).
 rhodoides, Sinopic ochre.
 Colophonian rosin, the pitch of ships.
 aromatic rush, cardamom.
 Cyprian spodium, the ashes of olive-leaves.
 troglodytic myrrh, the calamus aromaticus.
 stag's grease, the grease of geese.
 grease of the hyena, the grease of foxes.
 grease of the fox, the grease of the bear.
 root of soapwort, the root of the black hellebore.
 satyrium, the seed of rocket.
 salamander, the green lizard.
 aromatic moss of trees, the sweet-rush.
 syricum (psoricum ?), litharge.
 dross of lead, the scoria argenti.
 marjoram (sampsuchum), the dried culinary sumach.
 mustard, cresses.

Instead of sagapen, dried pine rosin.
 scammony, the internal parts of the seed of palma Christi.
 pine-nuts, the seed of cucumber.
 alum, fossile salt.
 the skink, satyrium.
 antimony, the squama æris.
 sweet rush, the root of knot-grass.
 dross of copper, the Egyptian melanteria.
 water-cress, basil.
 cultivated grape, the flesh of the Syrian palm.
 Saunder's herb, southernwood.
 the shell of the cuttle-fish, pnmice-stone.
 orchis (serapias), the root of peony.
 squill, bolbus.
 sesamoides, what remains after the filtration of amaranth.
 Indian grain, linseed.
 the seed of hembane, the seed of sweet briar.
 juice of hypocistis, the juice of acacia.
 liquid pitch, opoponax.
 unscoured wool (œsypum), the marrow of a calf.
 hyacinth, the flower of woad.
 St. John's wort, the seed of dill.
 burnt lees of wine, sandarach.
 sea-weed, alkanet.
 valerian, the moss of trees.
 the gall of the hyæna, the gall of partridge.
 the gall of the viper, that of the ichneumon.
 gall of the shrew-mouse, that of the camel.
 gall of the camel, that of the swift.
 galbanum, sagapen.
 germander, the root of the wild dock.
 chamomile, anthemis.
 ceruse, the dross of lead (scoria plumbi).
 fleawort, the marsh lentil (lens palustris).
 basil (ocimum), water-cress (sisymbrium).
 ocimoides, the wild mint.

COMM. COMMENTARY. This is taken from a work ascribed to Galen,
 the authenticity of which, however, is very doubtful. Cornarius
 has attempted many corrections of the text, and we have found
 ourselves compelled to make other alterations.

SECT. XXVI.—ON WEIGHTS AND MEASURES.

The weight is determined by the degree of heaviness; the measure by the capacity of the vessel: but the vessel is the measure either of a dry or of a liquid quantity. So then there are three differences of a measured quantity: first, that of weight; second, that of a dry substance, and, as it were, of such things as can be heaped; and third, that of a liquid. There being many and almost infinite varieties of weights and measures according to the practice of places, and of those who use them, we shall treat only of those which are familiar to all.

On the characters used by the Greeks for indicating weights and measures. But since some do not indicate these by whole letters, but by characters, it will be better for us, in imitation of the ancients, to explain these characters in the first place.

First, then, the letter χ having alpha placed above it, signifies *chalcus* (i. e. *æreus*), thus χ^{α} ; but if the χ has o, *chus* (i. e. *congius*), thus χ° ; but if o, *chænix*, thus $\chi^{o\alpha}$; but if η , *cheme*, thus χ^{η} ; K if it has ϵ placed above it, and a straight line obliquely intersecting the lower curvature of it indicates *ceration* (i. e. *siliqua*), thus K^{ϵ} ; but if the K has v, *cyathus*, thus K^v , and if o *cotyle* (i. e. *hemina*), thus K° . The circumflex line not surrounded by anything, and placed altogether obliquely, indicates *obolus*, thus \frown ; but if there are two lines not surrounded, they signify two oboli, thus $\frown\text{---}\frown$, which make a *gramma* (i. e. *scrupulum*), which is indicated by γ having ρ near it, intersected by a straight line, thus γ^{ρ} . Two lines united at one extremity so as to make an angle, like the two wings which join the straight line of the letter K, indicate *drachma* (or *drachm*), which is synonymous with *holca*, thus $<$. But the *holca* is properly indicated by λ with o in its middle, thus λ° . But if the λ has ι , it indicates *libra* (a pound), thus λ^{ι} . Some, however, indicate a pound, by another line intersecting the line of the λ obliquely, thus λ^{ι} . But Γ having the letter o within its angle, signifies *uncia* (an *ounce*), thus Γ° . The letter μ having v in its middle, indicates *mina*, or *mina*, thus μ^v ; but if the μ has v, it indicates *mystrum*, thus μ^v ; but if

ϵ , *medimnus*, thus μ^ϵ ; and if o , *modius*, thus μ^o . The letter τ followed by a ρ with a ν about it, indicates *tryblium*, thus $\tau\rho\nu$. The letter ξ , if it has ϵ placed above it, indicates *sestes* (i. e. *sextarius*), thus ξ^ϵ . But if it has o written above, it signifies *oxybaphum* (i. e. *acetabulum*), thus ξ^o . Some indicate a sextarius by a ξ , with a straight line intersecting it, thus ξ . The letter η , having μ placed above it, indicated *hemina*, thus η^μ . The letter κ prefixed to ρ , and having μ placed above it, indicates *ceramium*, thus $\kappa\rho^\mu$.

On Weights.

The Attic and Egyptian <i>mina</i> (i. e. <i>mina</i>)	contains oz. xvj.
The Roman <i>mina</i>	„ oz. xx.
The <i>libra</i> (i. e. <i>pound</i>)	„ oz. xij.
The <i>uncia</i> (i. e. <i>ounce</i>)	„ dr. viij.
The <i>drachma</i> (i. e. <i>drachm</i>)	„ scr. ij.
The <i>scrupulus</i> (i. e. <i>scruple</i>)	„ oboli ij.
The <i>obolus</i>	contains ceratia or siliquæ ij.
The <i>siliqua</i>	contains chalci (i. e. <i>ærei</i> or <i>æreoli</i>) ij. and ð.

So that an obolus contains viij æreoli.

On the Measures of Liquids.

- The Italic *ceramium* contains choes (or *congi*) viij.
 The *chus* or *congius* contains sextarii vj.
 The *sextarius* contains cotylæ ij, which are also called tryblia.
 The *cotyla*, or *tryblium*, contains great mystra ij, but acetabula iv.
 The *great mystrum* contains acetabulum j, and a third.
 The *acetabulum* contains cyathus j, and a half.
 The *cyathus* contains small chemæ, or small mystra ij.

But if you would wish to know the measure of the weights of liquids (for there are many differences of liquid substances according to weight), we shall illustrate this by the example of oil, wine, and honey. Honey, then, is heavier than wine by a fourth part, and a tenth part more, which makes altogether almost a third part. For the same measure of honey as of wine contains the weight of the wine and a third part more. Honey is heavier than oil by one half; for it contains the whole weight of the oil, and a half part of the weight besides. Wine exceeds oil by a ninth part, for it contains the whole

weight of the oil and a ninth part more. In order to make this appear more manifest, we shall subjoin, as in a diagram, the proportion of the particular measures, it being obvious that the words *oil*, *wine*, and *honey*, are to be understood as expressed in every line of the series.

The Italian	<i>Of oil.</i>	<i>Of wine.</i>	<i>Of honey.</i>
Ceramium contains	lib. lxxij .	lib. lxxx	lib. cvij.
Chus, or congius . .	lib. ix	lib. x	lib. xiiss.
Sextarius	oz. xvij	oz. xx	oz. xxvij.
Cotyle or hemina . .	oz. ix	oz. x	oz. xiiss.
Great mystrum . . .	oz. iij	oz. iij, scr. viij . .	oz. ivss.
Acetabulum	dr. xvij	oz. ij, scr. xij . . .	oz. iij, scr. ix.
Cyathus	dr. xij	oz. iss, scr. iv . . .	oz. ij, dr. ij.
Small mystrum . . .	dr. vj	scr. xx	dr. ix.

Oribasius says, on the authority of Adamantius, that the Italian sextarius of wine contains oz. xxiv by measure, but lb. j oz. viij by weight; and that a sextarius of honey contains lb. iiss by weight.

On the Measures of Dry Substances.

The Egyptian *artaba* contains modii iij.

The Egyptian and Italian *modius* contains chœnices viij.

The *chœnix* contains sextarii ij.

The *sextarius* contains two semisextarii, which are called heminæ.

The *hemina* contains cyathi viij.

The Attic *medimnus* contains hemiecta xij.

The *hemiection* contains chœnices iv. Hence the *medimnus* contains modii vj, chœnices xlvij, and sextarii xcviij.

But of these it is not easy to give the weight, because of dry things the difference, according to the inclination of the balance, is immense.

The end of the Seventh and Last Book of PAULUS ÆGINETA.

COMMENTARY. See, further, Galenus (De Pond. et Mens.); COMM. Cleopatra (De P. et M.); Celsus (v, 17); Pliny (H. N. xxi, 34); Rhemnus Fannius (De Pond. et Metr.); Marcellus Empiricus; Pollux (Onomast.); Hesychius et Suidas (pluries); Serapion (de Antid. vii, 37); Avicenna (v, 2, 8.) The best modern writers on the weights and measures of the ancients are,

COMM. Arbuthnot (On Ancient Coins, Weights, and Measures); Milligan (Præfatio et Notæ in Celsum); Pougton (Métrologie); Raper (Philosoph. Transact. London, 1770, 1771); J. F. Wurm (De Pond. &c.); Conger (Weights, Measures, &c. of the Greeks and Romans.)

Since a proper knowledge of this subject is indispensably necessary, in order to attain a practical acquaintance with ancient pharmacy, we shall not scruple to avail ourselves freely of the information contained in the works of the modern authorities referred to above. It will be seen, that in the following sketch, we have followed Arbuthnot very closely; indeed, it is proper to mention, that when we originally wrote this, our concluding Commentary, we were not acquainted with the labours of Wurm and Conger. We now remark that, although the later authorities agree with Arbuthnot on general principles, they differ from him on a few points, as will be perceived upon a comparison of his tables with those of Conger. The discrepance between them, we find, arises from two causes, only one of which, it will be observed, is of any practical importance. First: Arbuthnot mixes the fractional with the decimal mode of computation, whilst Conger uses the decimal method alone. Second: They give different estimates of the length of the Pes. For example, Arbuthnot states the contents of the *ligula* to be $\frac{1}{48}$ pint, and the decimals $\cdot 117\frac{17}{18}$ solid inch; whereas Conger rates it at the decimals $\cdot 62$ pint, or the decimals $\cdot 69$ solid inch. Now the 48th part of a pint equals the decimal $\cdot 6$, which, when added to the former decimals $\cdot 117$ solid inch, amounts to $\cdot 717$: the difference between this number and $\cdot 69$ is $\cdot 027$, which being multiplied successively by the tabular values of the *ligula*, *cyathus*, *acetabulum*, &c., and the product divided by the number of solid inches in a pint, gives 12 pints, or 1 gal. 2 qts. as the difference between Arbuthnot's and Conger's contents of the amphora. By Arbuthnot's table the contents of the amphora is 7 gal. 1 pint, 10·66 solid inches; by Conger's, it is 5 gal. 2 qts. 1 pint, and the decimal $\cdot 64$ of a pint. For example,

	<i>gal.</i>	<i>qts.</i>	<i>pts.</i>	<i>sol. inch.</i>
Arbuthnot's amphora =	7	0	1	10·66
Conger's " =	5	2	1	
Difference	1	2	0	10·66

The Pes is the standard from which the contents of the amphora, and of the other names of weights and measures in the table are deduced; and, as our authorities assign slightly different estimates to the length of the pes, the other measures in the table are consequently affected by this difference in the assumed standard. Arbuthnot assumes the pes to be 11.604 inches, whereas Conger, with the later authorities, makes it to be .97075 ft. or 11.649 inches. Now the amphora, being the cube of the pes, equals, according to Arbuthnot, 1562.5112 solid inches, whereas the cube of Conger's pes makes the amphora to contain 1580.75 solid inches.

Having thus pointed out the source of the discrepancy between the tables of Arbuthnot and the later authorities, we shall now proceed with our extracts, beginning with Dr. Milligan, who, although he can have no pretensions to be reckoned an original authority on the subject, has been particularly fortunate in giving from Targa and Arbuthnot, a very lucid exposition of the weights, measures, and characters, which occur in the works of Celsus.

Extracts from Dr. Milligan's edition of Celsus.

Characterum in Celso obvenerunt Tabula.

P	=	Pondo: cum aliis notis junctum quasi pondere;
		Anglice, <i>by weight</i> , significat.
P., per se	=	1 Libra.
⌘	=	1 Denarius.
≡ non per se	=	1 sextantem denominationis antecedentis signat.
≡ per se	=	fere unius drachmæ sextantem.
==	=	2 sextantis.
⌘̄	=	1 sextantem.
—	=	$\frac{1}{2}$ sextantis.
Z	=	1 sextantem.
8	=	1 sextantem.

Porro P. =, P $\bar{\tau}$, PZ, P8, characteres compositi sunt, qui omnino secundum tabulam superiorem, libræ sextantem singuli significant. Pari quoque ratione, P. ⌘. =, P. ⌘. $\bar{\tau}$, P. ⌘. Z, P. ⌘. 8, denarii sextantem, vel uncie quadragesimam secundam partem designat.

Notæ Celsi lectoribus negotii nonnihilo facessere solent. Cum ipso igitur, id anticipandum nobis erit; ut ponderum divisio

COMM. quam decimo septimo libri quinti capite descripsit, hic quasi prærogetur.

Libra .	}	valet	{	Uncias duodecim.
Uncia .				Denarios septem.
Denarius .				Sextantes sex.
Sextans .				Obolum unum.
Obolus .				Scrupulum dimidium.

Denarius autem (Greaves, Diss. on the Denarius) grana 62 (*English Troy weight*) habebat; unde uncia essent 434, sextanti ejus $10\frac{1}{3}$ grana; fere scrupulum dimidium, ut Celsus, loco citato, docet.

His præpositas scire licet,

á. *Notam P.*, per se libram significare.

β'. *Notam =*, sextatem indifferenter significare, sed non drachmæ magis quam libræ, vel cujuslibet denominationis præcedentis, sextantem. Sic *Notam P. =*, uncias duas æquare.

γ'. *Notam = =*, duos sextantes indicare.

δ'. *Notam —*, sextantis dimidium representare.

é. *Notam x*, Denarium indicare = $\frac{1}{7}$ uncia. Quam vero notam, propter similitudinem, librarii sæpe cum X, *decem* indicante confundunt. Nam x, perinde ac X decem olim significabat.

Videmus ergo *Notam P*, libram esse; cum aliis autem notis *pondo* significat, quasi *pondere* (Anglice *by weight*) adeo ut ista textus *P. x =*, Denarii sextantem *pondere*, vel grana $10\frac{1}{3}$ indicet. Pari ratione *P. x*, denarius *pondere*, vel absolute denarius, qui grana 62, est.

Porro *P. =*, *PZ*, *P8*, *Pτ*, libræ sextantem *pondere*: *P. x =*, *P. xZ*, *P. x8*, *P. xτ*, denarii sextantem, vel uncia quadragesimam secundam partem, designant.

Constat 1. Denarium Romanum grana Trojana Britannica $62\frac{1}{3}$ pependisse.

2. Pedem Romanum pollicum Britannicorum 11·604 valuisse.

Ab his sequitur, pedem Romanum, ad pendulum latitudinis Londinii per spatium inane, ad 62 Farenheiti thermometri calefactum, oscillans, rationem habere quam 11·604 ad 39·1393. Porro congium Romanum ad congium (*gallon*) Britannicum Imperialem, ut 189·64 ad 274, esse.

Tabula Ponderum et Mensurarum Pliniana.

COMM.

		= 1 obolus	= 10 chalci.
1 denarius argenteus	= 1 drachma Attica	= 6 oboli	= 60 chalci.
1 cyathus	= 10 drachmæ	= 60 oboli	= 600 chalci.
1 acetabulum	= 15 drachmæ	= 90 oboli	= 900 chalci.
1 hemina	= 60 drachmæ	= 360 oboli	= 3600 chalci.
1 mna	= 100 drachmæ	= 600 oboli	= 6000 chalci.

Tabula Ponderum Celsiana.

		1 sextans	= 1 obolus.
		1 scrupulus	= 2 + sextantes = 2 + oboli.
	1 denarius	= 3 scrupuli	= 6 sextantes = 6 oboli.
1 uncia	= 7 denarii	= 21 scrupuli	= 42 sextantes = 42 oboli.

Sed ut ostendemus, 1 denarius = 62 grana (Troy weight), hinc 62 grana = 1 denarius = 6 sextantes = 6 oboli; dividendo, 10½ grana = 1 sextans = 1 obolus.

Tabula, pondera Trojana, tam mensurarum capacitatis, tam gravitatis, Romanorum sistens.

	Urna.	Libræ.	Unciæ.	Denariæ.	Scrupulæ.	Sextans.	Chalens.	Grana.
Amphora	= 2	= 80	= 960	= 6720	= 20160	= 40320	= 403200	= 420480
Urna	1	= 40	= 480	= 3360	= 10080	= 26160	= 210600	= 210240
Congius	¼	= 10	= 120	= 840	= 2540	= 5040	= 50400	= 52920
Sextarius		1⅓	= 20	= 140	= 420	= 840	= 8400	= 8760
Libra		1	= 12	= 84	= 252	= 504	= 5040	= 5256
Hemina			8½	= 60	= 180	= 360	= 3600	= 3759
Acetabulum			2½	= 15	= 45	= 90	= 900	= 939
Sesqui-cyathus			2½	= 15	= 45	= 90	= 900	= 939
Cyathus			1½	= 10	= 30	= 60	= 600	= 626
Sescuncia			1½	= 10½	= 31½	= 63	= 630	= 657
Uncia			1	= 7	= 21	= 42	= 420	= 438
Cochleare				2½	= 7½	= 15	= 150	= 156
Drachma				1	= 3	= 6	= 60	= 62½
Denarius*				1	= 3	= 6	= 60	= 62½
Scrupulus					1	= 2	= 20	= 20½
Scrupulus dimidiatus					½	= 1	= 10	= 10½
Obolus						1	= 10	= 10½
Sextans							1	= 10½
Chalcus								1½

* Denario infra hanc lineam 62 grana, compendii numerique rotundandi gratia tribuimus. Qui accuratiora volunt § illud Grævii in valorem per denariorum columnam ducant, et nostris superaddant.

Sed post tot annorum lapsum, quomodo ista pondera ad nostra Trojana referamus? Diligentia antiquariorum illud perfacile effecit. Inclutus enim *J. Grævius* Angliæ decus, pondus *Denarii*, per plurima exemplarium centena, in Italicis atque cimbriis conservata, ipsa statera trutinavit; et pondus omnium meliorum denariorum ad grana Trojana 62½ librare reperit. Sed cognito denarii, qui veteribus non tantum nummus fuit, sed ponderis rerum arbiter, ceterarum denominationum valorem calculo simplicissimo, in granis Trojanis habebis.

COMM.

Tabula Ponderum ac Mensurarum relationis quas passim Celsus usurpavit.

Unc.	Sextans.	Quadrans.	Triens.	Quincunx.	Semis.	Septunx.	Bes.	Dodrans.	Dextans.	Deunx.	Quovis unctar.	Characteres.
1 Uncia	1 = $\frac{1}{6}$	1 = $\frac{1}{4}$	1 = $\frac{1}{3}$	1 = $\frac{1}{2}$	1 = 1	1 = $\frac{7}{8}$	1 = $\frac{2}{3}$	1 = $\frac{3}{4}$	1 = $\frac{5}{6}$	1 = $\frac{1}{2}$	1 = $\frac{1}{12}$	┌
2 Sextans	1 = 1	1 = $\frac{1}{2}$	1 = $\frac{2}{3}$	1 = 1	1 = 1	1 = $\frac{1}{2}$	1 = $\frac{1}{3}$	1 = $\frac{1}{4}$	1 = $\frac{1}{6}$	1 = $\frac{1}{3}$	1 = $\frac{1}{6}$	=, Z,
3 Quadrans	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = $\frac{1}{3}$	1 = $\frac{1}{4}$	1 = $\frac{1}{6}$	1 = $\frac{1}{4}$	1 = $\frac{1}{2}$	1 = $\frac{1}{3}$	= -
4 Triens	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = $\frac{1}{4}$	1 = $\frac{1}{6}$	1 = $\frac{1}{8}$	1 = $\frac{1}{3}$	1 = $\frac{1}{2}$	1 = $\frac{1}{4}$	= =
5 Quincunx	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = $\frac{1}{6}$	1 = $\frac{1}{8}$	1 = $\frac{1}{12}$	1 = $\frac{1}{2}$	1 = $\frac{1}{3}$	1 = $\frac{1}{6}$	= - =
6 Semis	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	S. S."
7 Septunx	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	V.
8 Bes	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	- S. -
8 Octunx	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	- S -
9 Dodrans	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	S = -
10 Dextans	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	S = =
11 Deunx	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	1 = 1	S = - =

His cujusvis unitatis, libræ, uncia, denarii, congii, partes duodecimæ, hoc est uncia, distributæ erant.

Extracts from Dr. ARBUTHNOT'S Tables of Ancient Coins, Weights, and Measures.

1. Roman Measures of Capacity for things Liquid.

Ligula	English Wine Measure.		
	Gall.	Pints.	Sol. Inc. Dec.
0	0 $\frac{1}{12}$	0	0-117 $\frac{1}{2}$
4 Cyathus	0	0 $\frac{1}{3}$	0-469 $\frac{1}{2}$
6 $\frac{1}{2}$ Acetabulum	0	0 $\frac{1}{2}$	0-704 $\frac{1}{2}$
12 3 2 Quartarius	0	0 $\frac{1}{4}$	1-409
24 6 4 2 Hemina	0	0 $\frac{1}{2}$	2-818
48 12 8 4 2 Sextarius	0	1	5-636
288 72 48 24 12 6 Congius	0	7	4-942
1152 288 192 96 48 24 4 Urna	3	4 $\frac{1}{2}$	5-33
2304 576 384 192 96 48 8 2 Amphora	7	1	10-66
46080 11520 7680 3840 1920 960 160 40 20 Culeus	143	3	11-095

2. Attic Measures of Capacity for things Liquid.

Κοχλιάριον	English Wine Measure.		
	Gall.	Pints.	Sol. Inc. Dec.
0	0	0	0-0356
2 Χήμη	0	0 $\frac{1}{80}$	0-0712
2 $\frac{1}{2}$ 1 $\frac{1}{2}$ Μέστρον	0	0 $\frac{1}{4}$	0-089
5 2 $\frac{1}{2}$ 2 Κόγχη	0	0 $\frac{1}{4}$	0-178
10 5 4 2 Κόθαδος	0	0 $\frac{1}{2}$	0-356
15 7 $\frac{1}{2}$ 6 3 1 $\frac{1}{2}$ 'Οξύβαρον	0	0 $\frac{1}{2}$	0-535
60 30 24 12 6 4 Κοτύλη	0	0 $\frac{1}{2}$	2-141
120 60 48 24 12 8 2 Ξίσσης	0	1	4-283
720 360 288 144 72 48 12 6 Χοῦς	0	6	25-698
8640 4320 3456 1728 864 576 144 72 12 Μετρητής	10	2	19-626

3. Attic Measures of Capacity for things Dry.

COMM.

										English Corn Measure.			
										Pecks.	Gals.	Pints.	Sol. Inch.
Κοχλίριον										0	0	0	0.276
10	Κύαθος									0	0	0	2.763
15	1½	Ἰξόβαρον								0	0	0	4.144
60	6	4	Κοτόλη							0	0	0	16.579
120	12	8	2	Ξίσθης						0	0	0	33.158
180	18	12	3	1½	Χοῖνιξ					0	0	1	15.705
8640	864	576	144	72	48	Μίδιμνος				4	0	6	3.501

N.B. Besides this *Medimnus*, which is the *Medicus*, there was a *Medimnus Georgius*, equal to 6 Roman Modii.

4. Less ancient Grecian and Roman Weights reduced to English Troy Weight.

										Lb.	Oz.	Dwts.	Gra.	
Lentes										0	0	0	0.85	
4	Siliquæ									0	0	0	3.1	
12	3	Obolus								0	0	0	9.2	
24	6	2	Scrupulum							0	0	0	18.4	
72	18	6	3	Drachma						0	0	2	6.2	
96	24	8	4	1½	Sextula					0	0	3	6.5	
144	36	12	6	2	1½	Sicilius				0	0	4	13.3	
192	48	16	8	2½	2	1½	Duella			0	0	6	1.5	
576	144	48	24	8	6	4	3	Uncia		0	0	18	5.4	
6912	1728	576	288	96	72	48	36	12	Libra		0	10	18	13.5

N.B. The Roman ounce is the English avoirdupois ounce which they divided into 7 denarii as well as 8 drachms; and since they reckoned their denarius equal to the Attic drachm, this will make the Attic weights $\frac{1}{7}$ heavier than the correspondent Roman weights.

The above Tables are thus given by CONGER.

I. Roman Measures of Capacity.

For Liquids (Unit: Amphora = $5\frac{1}{10}$ gallons).

										Cub. inch	Gal.	Qts.	Pints.
Ligula										0.69			0.02
4	Cyathus									2.74			0.08
6	1½	Acetabulum								4.12			0.12
12	3	2	Quartarius							8.23			0.24
24	6	4	2	Hemina						16.47			0.48
48	12	8	4	2	Sextarius					32.93			0.95
288	72	48	24	12	6	Congius				197.59		2	1.70
1152	288	192	96	48	24	4	Urna		799.38		2	3	0.82
2304	576	384	192	96	48	8	2	Amphora	1580.75		5	2	1.64
46080	11520	7680	3840	1920	960	160	40	20	Culeus	31615.01	114	0	0.80

COMM.

II. Grecian Measures of Capacity.

For Liquids (Unit. Μερητής = 8½ gallons).

										Cub. inch.	Gal.	Qts.	Pints.		
Κοχλιάριον										0·27			0·008		
2	Xήμη									0·55			0·016		
2½	1½ Μύστρον									0·69			0·02		
5	2½	2 Κόγχη								1·37			0·04		
10	5	4	2 Κάβαθος							2·74			0·08		
15	7½	6	3	1½ Όξέφαρον						4·12			0·12		
30	15	12	6	3	2 Τέταρον					8·23			0·24		
60	30	24	12	6	4	2 Κοτόλη				16·47			0·48		
120	60	48	24	12	8	4	2 Ξίστης				32·93			0·95	
720	360	288	144	72	48	24	2 6 Χοῦς				197·59		2	1·70	
4320	2160	1782	864	432	288	144	72	36	6	Διόση	Cub. ft.	1185·56	4	1	0·23
8640	4320	3456	1728	864	576	288	144	72	12	2 Μερητής	1	643·13	8	2	0·46
										10	13	1247·26	85	2	0·60
										100	137	375·60	855	2	1·97
										1000	1372	310·	8557	1	1·70

III. Grecian Measures of Capacity.

For things Dry (Unit. Μείμωνος = 1½ bushels).

										Cub. inch.	Bos.	Pks.	Qts.	Pints.		
Κοχλιάριον										0·22				0·08		
10	Κάβαθος									2·74				0·79		
15	1½ Όξέφαρον									4·12				·12		
60	6	4 Κοτόλη								16·47				·48		
120	12	8	2 Ξίστης							32·93				·95		
240	24	16	4	2 Χοῦνιξ						65·86				1·90		
960	96	64	16	8	4	1 Ημίκετον				263·46			3	1·61		
1920	192	128	32	16	8	2 Έκτος				526·92			7	1·21		
3840	384	256	64	32	16	4	2 Τριτὸς		Cub. ft.	1053·83			1	7	0·43	
11520	1152	768	192	96	48	12	6	3	1	Μείμωνος	1	143·35	1	1	5	1·28
										10	18	511·	14	1	0	0·8
										100	182	1654·	142	2	3	2·
										1000	1829	989·	1426	0	7	2·

IV. Roman Weights.

(Unit: Libra = 10 oz. 10 dwts. 9·5 grs. Troy weight.)

										Troy weight.			Avoirdupois weight.				
										Lb.	Oz.	Dwts.	Gr.	Lb.	Oz.	Dwts.	
Siliqua													2·9			0·11	
3	Obolus												8·8			0·32	
6	3 Scrupulum												17·5			0·64	
12	4	2 Semisextula											1	11·1		1·28	
24	8	4	2 Sextula										2	22·1		2·56	
36	12	6	3	1½ Siciliguus									4	9·2		3·85	
48	16	8	4	2 Duella									5	20·3		5·13	
72	24	12	6	3	1½ Semiuncia								8	18·4		7·03	
144	48	24	12	6	4	3 Uncia							17	12·8		15·30	
1728	876	288	144	72	48	36	24	12	1	Libra		10	10	9·5	11	8·67	
172800	87600	28800	14400	7200	4800	3600	2400	1200	100	Cent. pod.	87	7	19	17·1	72	2	2·65

The denarius was the chief silver coin among the Romans. COMM.
 As a weight it was the 7th part of a Roman ounce. It is from this standard that both the value of the Roman weights and coins are deduced.

The industrious, learned, and honest Mr. Greaves affirms that having in Italy and elsewhere perused many hundred *Denarii consulares*, he found, by frequent and exact trial, the best of them to amount to 62 grains English.

The Roman ounce is certainly our avoirdupois ounce; but I must own that I have differed in a small matter from Mr. Greaves in settling the quantity of Troy grains contained in an ounce avoirdupois. The denarius, according to my supposition, will come out $62\frac{23}{30}$ grains.

That the denarius was the 7th part of the Roman ounce is clear from multitudes of passages. Celsus (v, 17): Sed et antea sciri volo in uncia pondus denariorum esse septem.

Celsus divided the denarius into six parts, which he called, unciae; uncia being a general word for the division of any integer. This was done in imitation of the Greek physicians, who, after the manner of their country, divided their drachma into 6 oboli.

The common mark of the denarius was an X or \times , in imitation of which, among the Latin physicians, it grew to an *.

Of the Roman Pondo. The pondo argenti, amongst the Romans, is a sort of numeral expression of sums of money, and is different from the common libra which consisted only of 84 denarii, or 96 drachms, for *as*, *æs*, *pondo*, and *mina*, amongst ancient authors generally pass for the same.

Pondo is an indeclinable word, and when it is joined with numbers it signifies *libra*; but when it is joined to other weights, it stands for the same thing as *σταθμῆ*, or *ὄλκη* in the Greek, signifying the same with *pondus*, or weight in general.

Of Roman Weights. The Romans used the libra, which they divided into 12 unciae, or ounces, and the later Greeks, in imitation of them, had their *λίτρα*, which they divided after the same manner.

They divided their ounce into 3 *duellæ*, and likewise into 6 *sextulæ* (*sextula* among the Greeks was called *ἑξάγιον*, and corruptly, *στάγιον*). Another division of their ounce was into 4 *sicilici*. They likewise divided their ounce into 7 *denarii*.

COMM. Then they divided it into 8 *drachms*. The 12th part of an ounce they called *dimidia sextula*. It was likewise divided into 24 *scrupula*, or rather *scriptula*, called by the Greeks, *γράμματα*.

The denarius was divided into 2 *victoriati*, not only as a piece of money but as a weight. The denarius was also divided into 6 *sextantes*, in imitation of the 6 oboli of a drachm; according to which division a *sextans* would contain, in English Troy weight, about $6\frac{1}{3}$ grains. Celsus mentions the *quadrans denarii* and the *triens denarii*.

The value of the Roman pound is determined, as in the tables, from the value of the denarius, viz. 5245 $\frac{5}{7}$ Troy grains; according to the common reckoning it is 5256; this small difference proceeds from assuming the avoirdupois ounce to the Troy ounce precisely as 51 to 56.

Greek Weights. The *talent* was the greatest weight as well as the greatest sum of money among the Greeks. And this ponderal talent was divided, as the nummary talent, into 60 *minæ*, and every mina into 100 *drachmæ*.

A *drachma* was $\frac{1}{3}$ of the ounce and $\frac{1}{100}$ part of a mina. The Greeks used the expression *τρίτον ἡμιδράχμων* to signify $2\frac{1}{2}$ drachms. The old division of drachma was into 6 *oboli*.

An *obolus* contained 6 *χαλκοί*, or, as the Latins call them, *æreoli*.

An *ἡμιώβολον*, or *semiobolus*, contains 1 *siliqua* and a half, and 4 *æreoli*, according to Cleopatra, but 3 only according to Diodorus (Ap. Suidam.)

Χαλκός, or *æreolus* contained the 6th part of an obolus, and 7 *λεπτά*, according to Suidas.

The *λεπτόν* was the 7th part of an *æreolus*, and was called by the Latins *minuta*, and sometimes *minutia*, and is not divided into any lesser weight.

The Greeks used the *ὀνγγία*, and divided it as the Romans did. They used the *κερατιον*, in Latin, *siliqua*, which was the $\frac{1}{18}$ of a drachma.

The medical weights were the *mina*, of 16 Roman ounces, as appears from Dioscorides and Galen, and Cleopatra (in *Cosmeticis*) who tells you that mina, as a weight, contains 16 ounces, 128 drachms, 384 *scriptula*, 768 oboli, 1052 *lupini*, 2304 *siliquæ*, 6144 *æreoli*. But when Celsus and Scribonius Largus make use of a denarius of about $62\frac{22}{30}$ grains, the

drachma being supposed equal to that; 100 such drachmæ must have made a mina of $6222\frac{23}{40}$ grains, whereas, a mina of 16 ounces is about 7000 Troy grains, or our avoirdupois pound. } COMM.

The physicians likewise made use of the *litra* of 96 drachms. The *ὀνυγία*, or *uncia*, being divided as usually. The *κεράτιον*, or *siliqua*, as mentioned before, was likewise a common weight among the physicians; and the *σπράγιον*, or grain, $\frac{1}{4}$ of the *siliqua*.

The Romans dividing their ounce into 7 *denarii*, and likewise into 8 *drachms*; the Greeks of later ages dividing likewise their ounce into 8 drachms, and the Roman denarius being supposed equal to the Greek drachma, have occasioned great confusion in the expressions of authors about the weights of both nations. It is evident there was an Attic mina of 16 Roman ounces, namely, the more ancient one, and another of $12\frac{1}{2}$ ounces. By ounces is here meant Roman ounces, which is our avoirdupois ounce. So that the most ancient *mina Attica* was exactly our avoirdupois pound. Cleopatra speaks of the two different minæ, the first of 16 and the other of $12\frac{1}{2}$ ounces. Dioscorides mentions only that of 16 ounces; and though it is mentioned by the physicians, it is not what they prescribed by, but perhaps like our avoirdupois weight, what their gross drugs were at first bought and sold by.

Of Arabian Weights. The Arabian weights used by their physicians, Serapion, Rhases, and Avicenna, are a mixture of the Greek and Roman weights, and derived from them. Their *manes* is a corruption of the Hebrew *maneh*, or the Greek *mina*: there were two of them, one of 20 ounces, and another of 16.

The ancient Arabian weights reduced to Troy weights.

										Lib.	Oz.	Dwts.	Gr.
2	Kirat									0	0	0	$1\frac{33}{100}$
4	2	Danich								0	0	0	$3\frac{1}{10}$
6	3	$1\frac{1}{2}$	Onolossat							0	0	0	$9\frac{3}{10}$
12	6	3	2	Garme						0	0	0	$18\frac{3}{10}$
36	18	9	6	3	Darchimi					0	0	2	$06\frac{2}{10}$
$41\frac{1}{2}$	$20\frac{1}{2}$	$10\frac{1}{2}$	$6\frac{1}{2}$	$3\frac{1}{2}$	$1\frac{1}{2}$	Denarius				0	0	2	$14\frac{33}{100}$
144	72	36	24	12	4	$3\frac{1}{2}$	Sextarium			0	0	9	$2\frac{1}{2}$
288	144	72	48	24	8	7	2	Sacros		0	0	18	$5\frac{1}{2}$
3456	1728	864	576	288	96	84	24	12	Ratel	0	10	18	$13\frac{3}{4}$
4608	2304	1152	768	384	128	112	36	16	$1\frac{1}{2}$ Manes Alicatica	1	2	11	$10\frac{1}{2}$

Greek Measures of Capacity. In reducing the Greek solid measures to the English, I shall make use of the $\chi\acute{o}\nu\varsigma$, which

COMM. made in weight 720 drachms, according to all authors; suppose of rain-water, the ancients making no difference betwixt the weight of that and of wine. Taking the heaviest Attic drachm, which is the 100th part of the old Attic mina, or our avoirdupois pound, and neglecting the small difference in the tables, I shall state it at 70 grains Troy. According to this drachm, the weight of the Attic $\chi\acute{o}\nu\varsigma$ must be 50,400 grains. There are in a solid foot 1728 solid inches, weighing 76 pounds of rain water: by this experiment 760 grains make 3 solid inches; therefore, 50,400 make 198.94737 solid inches, the number of the solid inches in the $\chi\acute{o}\nu\varsigma$; which is 6 pints, 25,698 solid inches, somewhat less than the Roman congius, though the Greek $\chi\acute{o}\nu\varsigma$ and Roman congius are used indifferently as the same measure by ancient authors; as likewise are the 6th part of them, the $\xi\acute{\epsilon}\sigma\tau\eta\varsigma$ and sextarius, and the 12th the $\kappa\omicron\tau\acute{\upsilon}\lambda\eta$ and the hemina. There is great probability that the Greeks measured the capacity of their vessels by the weight of oil, the product of their country. For the physicians, speaking of these measures, always mention their weight in oil; and Galen, speaking of the cotyla, saith that Heras understood the cotyla to be of 60 drachms reducing the weight to oil. I find likewise that it is a general supposition among the ancients that the weight of oil was to that of wine, as 9 to 10; so 72 pounds of oil is made equal in bulk to 80 pounds of wine, 9 pounds of oil to 10 of wine, and so everywhere. According to our experiments, the weight of oil is to that of wine or fresh-water, as 476 to 527, which is very near, as 9 to 9.96. So small a difference may be accounted for by the oil weighing less in a warm country than in ours.

The largest Greek measure for things liquid was the Attic $\mu\epsilon\tau\rho\eta\tau\acute{\eta}\varsigma$, which contained 12 *choes*. It is also called $\acute{\alpha}\mu\phi\omicron\rho\epsilon\acute{\upsilon}\varsigma$, $\kappa\acute{\alpha}\delta\omicron\varsigma$, $\kappa\epsilon\rho\acute{\alpha}\mu\omicron\nu$.

The $\chi\acute{o}\nu\varsigma$, or $\chi\omicron\sigma\acute{\upsilon}\nu\varsigma$ contained 12 cotylæ. It is also called $\lambda\acute{\alpha}\gamma\nu\omicron\varsigma$, or $\lambda\acute{\alpha}\gamma\nu\omicron\nu$, $\lambda\acute{\alpha}\gamma\eta\nu\omicron\nu$, or lagena. The Greek physicians sometimes use $\chi\acute{o}\nu\varsigma$ for the Roman *congius*, the difference being but small. The Grecians in later times borrow the $\xi\acute{\epsilon}\sigma\tau\eta\varsigma$ from the Roman sextarius. It was the 6th part of the $\chi\acute{o}\nu\varsigma$.

The Attic $\kappa\omicron\tau\acute{\upsilon}\lambda\eta$ was one half of the $\xi\acute{\epsilon}\sigma\tau\eta\varsigma$. It is also called $\tau\rho\acute{\upsilon}\beta\lambda\iota\omicron\nu$.

The $\acute{\omicron}\xi\acute{\upsilon}\beta\alpha\phi\omicron\nu$ was a measure answering to the Roman *acetabulum*. Pliny saith it was the 4th part of the hemina.

(H. N. xv, c. ult.) Hesychius saith it was called *αῖς*, *ἄλις*, COMM.
βάφιον, and *γάβεινον*.

Κύαθος was the 12th part of the *ξέστης*.

Κόγχη was so called from a shell. There were a greater and a less. The greater was equal to the *oxybarphum*, and the lesser to one half of the *cyathus*.

Μύστρον, or *μύστρον*, so called from *μῦς*. Of this measure there were two kinds, the greater of which was the 16th part of the cotyla, and the lesser the 4th part of the cyathus. The mystrum is called *βάρβος* by Hesychius.

Χήμη was so named from a shell-fish. There was a greater or *rustic cheme*, the 20th part of the cotyla; but the lesser, which the physicians used, was the 30th part of the cotyla.

The *κοχλιάριον*, in Latin, cochlear, was the smallest measure for liquids: it is equal to one half of the cheme. See the Table.

Greek Measures of things Dry. *Μέδιμος*, or *μέδιμνον*, was a measure for dry things, such as wheat, barley, flour, &c., and contained 48 *chænicas*.

Χώνιξ is a dry measure containing 3 cotylæ, and so was $1\frac{1}{3}$ of the *ξέστης*: *κοτύλη*, *όξύβαφον*, *κύαθος*, and *κοχλιάριον* were also used as measures for things dry. Their capacity and proportion to one another is the same as when they are measures for liquids, which have been shown already.

The Roman Measures of Capacity. The *amphora*, which contained 8 congii, was the cube of a pes, or foot. The congius itself, the cube of $\frac{1}{2}$ foot. The pes being settled, as equal to 11.604 inches, its cube 1562.5112, gives the contents of the amphora in solid inches; and divided by 8, gives 195.3139 inches for that of the congius.

The greatest measure among the Romans of liquid things, was the *culeus*, or *culleus*, containing 20 amphoræ. A culeus also contains 40 urns, the urn being half the amphora.

The *amphora* is otherwise called quadrantal, ceramium, cadus, and *μετρητής Ιταλικός*. The *urna* is the 40th part of the culeus, and the half of the amphora.

The *congius* was the 8th part of the amphora, and the 4th of the urna: it contained 6 sextarii. The congius in English measure contains 207.0676 solid inches, that is, 7 pints 4.942 solid inches.

The *sextarius urbicus* was the 6th part of the congius. This

COMM. sextarius is divided into two *heminae*, or *cotylæ*. It is also divided into four quartarii which are the half of a hemina. A sextarius is also divided into 8 acetabula. The parts of the sextarius were like those of the as, uncia, sextans, quadrans, triens, quincunx, semis, septunx, bes, dodrans, dextans, deunx, by which words a certain number of cyathi is meant, a cyathus being the 12th part of the sextarius. The *sextarius castrensis* was double of the urbicus.

Hemina, the half of the sextarius, contains 2 quartarii, 4 acetabula, 6 cyathi, 24 ligulæ.

Quartarius, as we have said, was the fourth part of the sextarius.

The *acetabulum* was the half of the quartarius.

Cyathus was the 12th part of the sextarius.

The *ligula*, or *lingua*, contained one 48th of the sextarius.

Cochlear, *cochleare*, and *cochlearium*, often denote a spoon, and sometimes a measure equal to the ligula.

There was also among the Romans a *libra mensuralis*, which the Greeks called λίτρα μετρικῆ, and distinguished from the λίτρα σταθμικῆ, or *libra ponderalis*. This consisted of 12 ounces, and was divided as the *as*. It was made commonly of horn, and divided by 12 lines, marking the ounces. This *libra mensuralis* weighed 10 ounces of oil, and of wine, 11 oz. 2 scr., 1 obolus, and 1 siliqua, according to the ponderal libra. The ancients all along supposed the weight of oil to be, to that of wine, as 9 to 10. This proportion of the specific gravity of these two liquors holds in this computation; for 11 oz., 2 scr. 1 ob. 1 sil., make 1600 siliquæ; and 10 ounces make 1440 siliquæ; and dividing both by 160, makes it as 9 to 10. According to this weight of wine assigned by Galen, the *libra mensuralis* contained 19·085 solid inches, somewhat less than $\frac{3}{4}$ of our pint, wine measure. But the Roman measures varying, in all appearance this originally was designed to contain 12 ponderal ounces of water, according to which weight it would be equal to 20·612 solid inches, the difference between the two being only 1·527 solid inches.

Roman Measures of Capacity for things dry. The *modius* was the third part of the *amphora*, or *quadrantal*, which was one half of the *medimnus*. The *semimodius* contained 8 sextarii. *Sextarius* and *hemina* are also measures of dry things, as so also *quartarius*, *acetabulum*, *cyathus* and *concha*.

Table of the Roman Measures of capacity for things Dry.

COMM.

					English Corn Measure.			
					Pecks.	Gal.	Pints.	Sol. inch.
Ligula	.	.	.	.	0	0	$\frac{1}{16}$	0-01
4	Cyathus	.	.	.	0	0	$\frac{1}{2}$	0-04
6	$1\frac{1}{2}$	Acetabulum	.	.	0	0	$\frac{1}{2}$	0-06
24	6	4	Hemina	.	0	0	$\frac{1}{2}$	0-24
48	12	8	2	Sextarius	.	0	0	1
384	96	64	16	8	Semimodius	.	0	1
768	192	128	32	16	2	Modius	.	1
							0	0

Of the Arabian Measures. The knowledge of the Arabian measures is necessary for those who read the Arabian physicians, such as Avicenna, Rhases, Serapion, Mesue, and Haly Abbas.

Dorach, equal to the Roman amphora.

Aldorach, equal to 2 xestæ.

Johem, equal to the congius of the Romans.

Kist, equal to a Roman sextarius.

Korboni, equal to the hemina.

Kiliathi, equal to one half of the cotyla.

Kestuf, equal to the acetabulum.

Cuathum, equal to the cyathus.

Falgerin, equal to the cochleare parvum.

Briala, a measure of uncertain capacity.

Mustarum, the greater equal to $\frac{1}{3}$ hemina, the lesser equal to $\frac{1}{2}$ cyathus. A corruption of the Greek $\mu\acute{\upsilon}\sigma\tau\rho\nu$.

Decimal Tables.

Roman Measures for things Dry.

Hemina	.	.	.	.	.	0-5074 pint.
Sextarius	.	.	.	.	.	1-0148 pints.
Modius	.	.	.	.	.	1-0141 pecks.

Attic Measures for things Dry.

$\Xi\acute{\iota}\sigma\tau\eta\varsigma$	.	.	.	.	.	0-9903 pint.
$\text{Κοῖνὸν}\xi$	.	.	.	.	.	1-486 pints.
Μέδωμος}	.	.	.	.	.	1-0906 bushels.

Roman Measures for things Liquid.

Hemina	.	.	.	.	.	0-59759 pint.
Sextarius	.	.	.	.	.	1-19518 pints.
Congius	.	.	.	.	.	7-1712 pints.
Urna	.	.	.	.	.	3-5857 gallons.
Amphora	.	.	.	.	.	7-1712 gallons.
Culeus	.	.	.	.	.	2-27 hogheads.

Attic Measures for things Liquid.

Κοτύλη}	.	.	.	.	.	0-5742 pint.
$\Xi\acute{\iota}\sigma\tau\eta\varsigma$	.	.	.	.	.	1-1483 pints.
Χοῦς}	.	.	.	.	.	6-8900 pints.
Μετρητής}	.	.	.	.	.	10-335 gallons.

COMM. A Table of the more usual Characters of Weights and Measures used by the Greek and Roman Authors. From Paucton, 'Métralogie,' p. 95.

NOTES *pondérales des Romains.*

Granum	gr.
Teruncius	T. ∴
Libella	—
Simplium	χ. ∅ s.
Sestertius, Nummus	HS. IIS. HHS. N. .
Scriptulum, Scripulum, Gramma	℥. ℥. ℥. ℥. ℥. ∅.
Victoriatus, Quinarius	V. V. Q.
Hemisescla	X.
Denarius, drachma	X X X . L. z. ε.
Sextula, sescla, exagion, stagion .	∪. U. V.
Semisicilicus	2.
Sicilicus, sesquisextula	∅. ∅. ∅ 9. ∅.
Duella, binæ sextulæ	∏. UU. IO
Semuncia	Σ. EN. Γ. S. Γ. ∏ s. ε s.
Uncia, oungia, oungia	— ∪. ∅ Γ. ∅. 2. ∏
Sescuncia	— ∪. ∅ I.
Sextans	— . ∅ ∅ . z.
Quadrans	— . — . — I. ∅ ∅ ∅ .
Triens	— . — . — . ∅ ∅ ∅ ∅ .
Quincunx	— . — . — . — . — I.
Semissis, Semis, Selibra	S. SS.
Septunx	S — .
Bessis, Bes	S — . — S — .
Dodrans	S — . S — I. SZ
Decunx, Dextans	S — — .
Deunx	S — — — S — — — I
Libra, litra, pondo, as, monas	L ℥ P I A. A. A. ∅. ∏ ∅.
Dupondium	PP. H. LL.

COMM.

NOTES *mensurales des Grecs.*

Chemé	· χ^{π} .
Kochlearion, <i>Ligula</i>	· $K\chi$
Mystron	· $M. \mu$
Kyathos	· $K^{\circ}. K. \kappa \psi$.
Oxybaphon, Baphion	· $\xi^{\circ}. \xi^{\circ}. E^{\circ} \equiv 0$.
Kotyle, Tryblion	· $K^{\circ}. K^{\circ}. K^{\circ}. H. \psi. \chi$
Xestes	· $\xi. \xi^{\xi} \xi' \cdot E \cdot \equiv$.
Choînix, Choenix	· $X \cdot X$.
Chous	· X .
Medimnos	· $M^{\xi}. \mu. \mu \xi$.
Keramion, Metretes, Cados	· $K^{\mu}. K^{\circ} \mu$.

The end of the Commentary on PAULUS ÆGINETA.

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