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AËTIUS OF AMIDA

Libri Medicinales, Book 1

A Translation with Commentary

by

ERIC GOWLING

MB, ChB (Glas); D(Obst)RCOG; DCH; MRCP (UK); MA (Hons) (Glas)

Submitted in fulfilment of the requirements for the Degree of PhD

School of Humanities
College of Arts
University of Glasgow

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Abstract

This work is the first translation into a modern language of book 1 of the *Libri Medicinales* of Aëtius of Amida, a Byzantine physician who wrote in the middle of the 6th century AD. It comprises a lengthy preface, describing the analysis of pharmacological materials in terms of the science of the time, followed by 418 chapters, listing such materials obtained from plants. Commentary is to be found in the Introduction, as well as a running commentary after each part of the preface and each chapter. As Aëtius' book 1 is a synopsis of the plants section of Galen's *On the Mixtures and Capacities of Simple Drugs*, particular attention is paid to comparison between Aëtius' work and that of Galen. Evaluation of the efficacy and safety of the ancient drugs in the light of modern scientific knowledge, a relatively neglected area of research, has also been given serious consideration.

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Abbreviations

- Alim.Fac.* Galen, *De Alimentis Facultatibus* [On the Properties of foodstuffs]
- Anat.* Rufus, *De partibus corporis humani* [On the Parts of the Human Body].
- Ant.* Galen, *De Antidotis* [On Antidotes].
- André* André, J., *Lexique de Termes de Botanique en Latin*, (1956). Paris, Librairie C. Klincksieck.
- BNF* British National Formulary, (2007) (British Medical Association, Royal Pharmaceutical Society). bnf.org.
- BP* Cancik, H. & Schneider, H. (eds.); Salazar, C.F. (Eng. ed.), *Brill's New Pauly. Encyclopedia of the Ancient World*, (2002). Leiden & Boston, Brill.
- Carnoy* Carnoy, A., *Dictionnaire Étymologique des Noms Grecs de Plantes*, (1959). Louvain, Publications Universitaires.
- CD* Aretaeus, *χρονίων νούσων θεραπευτικόν* [On the Treatment of Chronic Diseases].
- Char.* Theophrastus, *Characters*.
- CMG* *Corpus Medicorum Graecorum*, (1821 –), Leipzig & Berlin, Knobloch, Teubner.
- Coll. med.* Oribasius, *Collectiones medicae* [Medical Collections].
- Comp. med. gen.* Galen, *De Compositione Medicamentorum per Genera* [On the Composition of Drugs according to Kind].
- Comp. med. loc.* Galen, *De Compositione Medicamentorum secundum Locos* [On the Composition of Drugs according to Places].
- De mundo* Aristotle, [On the Universe].
- Ecl. med.* Oribasius, *Eclogae medicamentorum* [Medical Passages].
- Epid.* Hippocratic Corpus, *Epidemics*.
- Fab.* Plutarch, *Fabius Maximus*.
- Fract.* Hippocratic Corpus, *De fracturis* [On Fractures].
- Gyn.* Soranus, *Gynaecology*.
- H.A.* Aristotle, *Historia animalium* [Investigation into Animals].
- H.P.* Theophrastus, *Historia plantarum* [Investigation into Plants].
- Hdt.* Herodotus, *Historiae* [The Histories].

- Il.* Homer, *Iliad*.
- Lib. Eun.* Oribasius, *Libri ad Eunapium [Books for Eunapius]*.
- LSJ* Liddell & Scott, rev. Jones, H.S. & McKenzie, R. (eds.), *A Greek-English Lexicon*, 9th edn with rev. supplement, (1996). Oxford, Clarendon Press.
- Med.* Celsus, *De medicina [On Medicine]*.
- Morb. sacr.* Hippocratic Corpus, *De morbo sacro [On the Sacred Disease]*.
- Mul.* Hippocratic corpus, *De mulierum affectis [On Women's Conditions]*.
- Nat. Fac.* Galen, *De Naturalibus Facultatibus [On the Natural Faculties]*.
- Nat.Hom.* Hippocratic Corpus, *De natura hominis [On the nature of man]*.
- N.H.* Pliny the Elder, *Historia naturalis [Natural History]*.
- OCD* Hornblower, S. & Spawforth, W.B. (eds.), *The Oxford Classical Dictionary*, 3rd edn. rev., (2003). Oxford, Oxford University Press.
- OCMD* Martin, E.A. (ed.), *Oxford Concise Medical Dictionary*, (2007). Oxford, Oxford University Press.
- Od.* Horace, *Odes*.
- OLD* Glare, P.G.W. (ed.), *Oxford Latin Dictionary*, (1982). Oxford, Clarendon Press.
- Onom.* Rufus, *De corporis humani appellationibus [On the Naming of the Human Body]*.
- Prob.* Aristotle, *Problemata [Problems]*.
- RHS* Brickell, C. (ed.), *The Royal Horticultural Society Gardeners' encyclopaedia of Plants & Flowers*, (1993). London, DK.
- S.* Horace, *Satires*.
- SMT* Galen, *De Simplicium Medicamentorum [Temperamentis Ac] Facultatibus [On the Powers [and Mixtures] of Simple Drugs]*.
- Syn.* Oribasius, *Synopsis ad Eustathium filium [Synopsis for his Son, Eustathius]*.
- Temp.* Galen, *De Temperamentis [On Mixtures]*.
- Timaeus* Plato, *Timaeus*.
- Thuc.* Thucydides, *Historiae [Histories]*.
- TLG* Stephanus.tlg.uci.edu, *Thesaurus Linguae Graecae*.
- V.M.* Hippocratic Corpus, *De vetere medicina [On Ancient Medicine]*.

Wach. fr. Fragments of Alcmaeon, ed. Wachtler, J.

Wr. fr. Fragments of Empedocles, ed. Wright, M.R.

Medical and scientific journals are abbreviated according to *Pubmed* website.

References for Aëtius are given by book, chapter and line, except for the prooemium of book 1, for which page references are given. Throughout the translation of the prooemium and list of simples, page references to the Olivieri text (*CMG* vol. 8.1) are shown in square brackets [].

References for Galen are shown according to the Kühn editions (K), as volume, page and line.

Page references are omitted where entries are arranged alphabetically, as in lexica and encyclopaedias.

Abbreviations Associated with Plant Names

(Where appropriate, the letters LSJ indicate that a dictionary translation of a plant name cannot be found in the International Plant Names Index.)

Aiton	Aiton, W.
A.Rich	Richard, A.
Asch.	Ascherson, P.F.A.
Baill.	Baillon, H.E.
Baker	Baker, J.G.
Batsch	Batsch, A.J.G.K.
Benth.	Bentham, G.
Berg	Berg, O.K.
B.Heyne	Heyne, B.
Birdw.	Birdwood, G.C.M.
Biv.	Bivona-Bernardi, A. de
Boiss.	Boissier, P.E.

Borkh.	Borkhausen, M.B.
Buch.-Ham.	Buchanan-Hamilton, F.
C.DC.	Candolle, A.C.P. de
C.Presl	Presl, C.B.
Cass.	Cassini, A.H.G. de
Crantz	Crantz, H.J.N. von
Curtis	Curtis, W.
DC.	Candolle, A.P. de
Decne.	Decaisne, J.
Delile	Delile, A.R.
Desr.	Desrousseaux, L.A.J.
Desv.	Desvaux, N.A.
Dunal	Dunal, M.F.
Endl.	Endlicher, S.F.L.
Engl.	Engler, H.G.A.
Forssk.	Forsskål, P.
Gaertn.	Gaertner, J.
Gilib.	Gilibert, J.-E.
Gmel.	Gmelin, C.C.
Griseb.	Grisebach, A.H.R.
Hoffm.	Hoffmann, G.F.
Hook.	Hooker, J.D.
Host	Host, N.T.
Huds.	Hudson, W.
Jacq.	Jacquin, N.J. von
Ker Gawl.	Ker Gawler, J.B.

Koenig	Koenig, J.
L.	Linnaeus, C.
Lag.	Lagasca y Segura, M.
Lam.	Lamarck, J.-B. P.A. de M. de
Lindl.	Lindley, J.
Link	Link, H.F.
Loisel.	Loiseleur-Deslongchamps, J.L.A.
Maton	Maton, W.G.
Mill.	Miller, P.
Moench	Moench, C.
Murray	J.A.
Nees	Nees von Esenbeck, C.G.D.
P.Beauv.	Palisot de Beauvais, A.M.F.J.
Pall.	Pallas, P.S. von
Pers.	Persoon, C.H.
R.B.	Brown, R.
Retz.	Retzius, A.J.
Roscoe	Roscoe, W.
Roxb.	Roxburgh, W.
Sch.Bip.	Schuly, C.H. 'Bipontinus'
Schott	Schott, H.W.
Schrad.	Schrader, H.A.
Schreb.	Schreber, J.C.D. von
Schübl.	Schübler, G.
Scop.	Scopoli, J.A.
Siebold	Siebold, P.F. von

Sm.	Smith, J.E.
Spach	Spach, E.
Spreng.	Sprengel, C.P.J.
Stokes	Stokes, J.H.
Talbot	Talbot, W.A.
Targ.-Tozz.	Targioni-Tozzetti, G.
Thunb.	Thunberg, C.P.
Wall.	Wallich, N.
Wight	Wight, R.
Willd.	Willdenow, C.L.
Vahl	Vahl, M.
Vill.	Villars, D.

Introduction

Like many ancient medical works, book 1 of the *Libri Medicinales* of Aëtius of Amida has not been translated into a modern language, until now (BP 1.276, Nutton). It is, however, not an insignificant work, providing for practising physicians a list of supposed therapeutic agents in the form of plant simples, together with an explanation of the theory behind their selection and use. (Of animal, vegetable or mineral origin, simples are individual items of supposed therapeutic effect, which may be used either singly or in combination.) It is largely a synopsis of Galen's *SMT* books 1 – 8, and gives Aëtius' readers access to his famous predecessor's ideas without the need to pick their way through Galen's much longer text. Aëtius' treatment of Galen's work is discussed in my Introduction. The existence of a Greek text published by Aldus Manutius in Venice in 1534, together with a Latin translation published by Cornarius in Basel in 1546, suggests that Aëtius' work was in use at least until the late Renaissance.

I have undertaken a translation and commentary for a variety of reasons. Of primary importance is my belief that this work by Aëtius should be available to be read in a modern translation not just as a shortcut to Galen's views on simples but because of its own merit. Certainly, it is an important step in the transmission of medical knowledge, albeit pharmacotherapy in particular, for, to maintain practicality, the discussion of other aspects of medicine are reduced to a minimum (van der Eijk, 2010: 534), and digressions into non-medical topics are extremely rare. In addition, however, to the writer's expertise as a collector and compiler, his own ideas are included, and so the work may be considered to represent a progression of practical medical knowledge, rather than be seen as a stagnant repository (van der Eijk, 2010: 521). Aëtius, and Oribasius before him and Paul of Aegina later, "were by no means mere cutters and pasters" (van der Eijk, 2010: 553).

Although there is no expectation that any forgotten drugs or cures new to us may be found, it is of interest to discover what therapies were prescribed, and to try to understand the rationale behind their use. Understanding the actions and rationale of the ancient practitioners may

even provide some enlightenment into the thinking both of practitioners and patients in our modern age, when, despite the availability of scientifically endorsed therapies and the information regarding the evidence substantiating them, large numbers of people willingly seek treatment from practitioners of alternative treatments.

Furthermore, the information included about the conditions which these simples were used to treat can provide us with an insight, admittedly liable to distortion, of the health concerns of Aëtius' and Galen's fellow-citizens, and create a picture at least suggestive of their state of well-being or morbidity, not normally found in other forms of literature. The variety and widespread provenance of their materials remind us of the extent of the influence and sophistication of the civilisations in which the ancient physicians flourished.

As a former practising physician myself, I believe that an area of research which has received relatively little attention but which deserves further exploration is the assessment, in the light of modern scientific evidence, of the efficacy of the individual ancient therapies listed in this book. I propose, therefore, to add such an assessment to the commentary on each chapter. Three steps are essential to this: the identification of the plant being used; the identification of the condition being treated, including anatomical and pathological details; and scrutiny of modern scientific literature. The first two of these steps are not without problems, which I shall discuss in the appropriate sections of this Introduction.

Finally, I hope this translation and assorted comments will be of assistance and interest to anyone engaged in the fascinating study of ancient medicine.

Aëtius' Life

Little is known with much certainty about Aëtius. Weigel's biography is based mainly on the evidence of Aëtius' own writings, the *Tetrabiblon*, i.e. his sixteen *Libri Medicinales* arranged in four groups of four, and on the comments of Photius, a 9th century AD Byzantine scholar (Weigel, 1791). From this, and from a little additional information in BP

(1.276, Nutton) and *OCD* (1.30-1, Scarborough), the following facts or probabilities emerge.

He was born in Amida, a city near the Tigris, studied at Alexandria and practised for some time in Egypt. He was active in Constantinople during the reign of Justinian (AD527-565), and became court physician, attaining the rank of *comes obsequii*. He possibly wrote between 540 and 550 (Weigel, 1791: 8), or perhaps some ten years earlier (Nutton, 2013: 302). Scarborough points out that the title *comes obsequii* is inappropriate, and has been attributed erroneously by later writers (Scarborough, 2013: 745-6). In consideration of the therapies offered for gynaecological problems in Aëtius' Book 16, and the Empress Theodora's reputation as an ex-prostitute, he speculates that Aëtius "possibly served in some capacity at the court of Justinian and Theodora, likely perhaps even as a court gynaecologist and obstetrician in special service to Theodora" (Scarborough, 2013: 760). He posits that the Empress may even have been the Aspasia cited in Book 16, and Aëtius may have been called upon to perform clitoridectomies on the young ladies of the court to increase their marriageability (Scarborough, 2013: 751-2, 755). The verifiable facts are that Theodora had a louche reputation and that Aëtius wrote extensively on gynaecological therapies in Book 16, as well as including many simples with supposed gynaecological effects such as emmenagogues, abortifacients and contraceptives in Book 1.

His medical ideas were strongly influenced by Galen, but although his belief in the Theory of Elements and Humours, in which physiological, pathological and pharmacological processes depended on the influence of the elemental qualities hot, cold, moist and dry (cf. Introduction xii-xviii), was certain, he may also have inclined towards Methodism (cf. Intro. xxi) (Weigel, 1791: 17-19). His extensive knowledge of ophthalmology is evidenced in his book 7.

The political and cultural environment in which Aëtius lived was considerably different from that of Galen, although this does not appear to be reflected in any way in Aëtius' Book 1. The Western Empire was fragmented, Constantinople had become the centre of power, Christian orthodoxy had become a dictat of imperial policy, and the destruction of

pagan medical shrines had been started during the 4th century (Nutton, 2013: 309, 311). Under the influence of Christianity, hospitals of various sorts now provided an alternative source of help for the sick, especially within the Byzantine Empire (Nutton, 2013: 314-5). The works of Galen, however, were generally not unacceptable in the post-pagan world, perhaps especially as they contained a belief in a demiurge; indeed, they came to assume an importance which largely led to the exclusion of other medical systems, and acquired an almost dogmatic status in medical education (Nutton, 2013: 303, 310, 317).

It has been suggested that the ordered structure of an ancient empire was particularly conducive to the collection, organisation, promulgation and enhancement of knowledge, that there was even a “mutually parasitic relationship between ancient empire and knowledge” (König & Whitmarsh, 2007: 5). Although, unlike Oribasius’ dedication to the Emperor Julian (van der Eijk, 2010: 525), no dedicatory passage, nor explanation for his writing, appears in Aëtius’ work, it is possible that he may have enjoyed the patronage of Justinian and Theodora for his medical scholarship as well as his medical care, in a tradition previously recognised in Imperial Rome (König & Whitmarsh, 2007: 20, 36-7).

A notable feature of Aëtius’ book 1 is his insertion, in addition to Galen’s information, of detailed, and sometimes quite elaborate, methods of preparation of recipes. This would suggest that Aëtius was personally involved in their preparation, and would have had the necessary equipment, premises, and possibly servants or staff.

Elements and Humours

It is clear even from his first sentence in the Prooemium that Aëtius accords great importance to the system of elements and humours as offered by Galen and many illustrious predecessors as an explanation for the composition of living materials, both animal and vegetable, for minerals, for the well-being and diseases in humans, and for the rationale behind therapy. In 307 of Aëtius’ 418 chapters about plant simples some reference is made to this system; the simples are frequently said to be heating or cooling, moistening or drying, or used to treat hot, cold, moist or dry conditions,

which are usually hypothetical concepts rather than actual physical processes. These four elemental qualities – hot, cold, moist and dry – are related, as Galen says, to the four elements (τὰ στοιχεῖα), fire, earth, water and air (*Temp.* K1.510.3-15), and to the four humours (οἱ χυμοί) – blood, yellow bile, phlegm and black bile – fluids supposed to accumulate and move within the human body with potentially pathological results (cf. *Temp.* K1.603.8-604.3). Blood is hot and wet, yellow bile is hot and dry, phlegm is cold and wet, black bile is cold and dry, as stated by Galen (*De nat. fac.* K2.129.5-130.3; 130.16-131.6).

The effective elemental capacity of a substance is modified by whether it is λεπτομερής or παχυμερής (fine-grained or coarse-grained, or, as in the LSJ translation, composed of small particles or consisting of thick or coarse parts, respectively), and therefore penetrative or otherwise (cf. Debru, 1997: 85-101). In addition, Galen has attempted, in an admittedly subjective manner, to quantify the simples' capacity to heat, cool, moisten or dry in terms of four degrees or levels (τάξεις or ἀποστάσεις) (cf. pr. 17.10-18.3).

In view of its influence on Aëtius' work, I believe that further discussion of the origins and development of this theory of elements and humours is merited. I have been trying to discover the source of humoral theory, and why it became so dominant. It has been suggested that it originated in Ancient Egypt; Ebbell, the 1937 translator of the *Ebers papyrus* (c.1550BC), wrote in his introduction: "And indeed, even the ancient doctrine of the disease-producing humours as the cause of different diseases seems to come from Egypt. For the word *stt* is used in various places in a way showing that it must have been an analogue of the Greek φλέγμα..." (Ebbell, 1937: 25-6). As evidence for this he has produced only one word *stt*, which he translates as "phlegm" or "something which flows", but which Faulkner later translates in his dictionary as "shooting pains" (Faulkner, 2002: 253). I have read, in translation, the *Ebers papyrus* and also the *Edwin Smith Surgical Papyrus* (c.1700BC) (Breasted, 1930), possibly the two most important Ancient Egyptian medical documents, and I have consulted Dr Jackie Campbell of Manchester and Alexandria universities, one of the foremost experts on Ancient Egyptian pharmacology

(personal conversation, 2011), and I am satisfied that there is nothing akin to humoral theory in Ancient Egyptian medicine.

In Greek literature the idea first appears in the writing of Alcmaeon of Croton, whose work survives only in fragments. He may have practised medicine and apparently reached manhood when Pythagoras was an old man (Wach. fr. 21), which, if true, dates him at least as far back as early in the fifth century BC. He attributes good health to an equal balance of the powers or capacities (τῶν δυνάμεων), which he lists as moist, dry, cold, hot, bitter, sweet and the rest, and he blames disease and destruction on the predominance of a single one or other of them (Wach. fr. 22).

Next, later in the fifth century, it appears in the poetry of Empedocles (c.492-432). He talks (in Wr. fr. 12) of the mixture and separation of the elements, which he identifies (Wr. fr. 25) as ἠλέκτωρ τε χθών τε καὶ οὐρανὸς ἠδὲ θάλασσα – beaming sun and earth and sky or sea. He gives the composition of bone as two parts earth, two parts water and four parts fire (Wr. fr. 48). There is, I believe, an important clue as to a possible origin of this concept when, in Wr. fragment 62, Empedocles says that Aphrodite created life by moistening earth (χθών) in (rain)water (ὄμβρος) and giving it to fire (πῦρ), which seems analogous to what a potter does. When stressing the importance of using one’s perceptive powers, Galen quotes Empedocles (*SMT* K 11.461.7).

At any rate, the theory seems to be becoming firmly established and generally accepted when mentioned by some of the Hippocratic writers towards the end of the fifth century. At the very beginning of *On Ancient Medicine*, the writer warns the physician to be careful not to oversimplify cause of death by attributing it to one or two of the four – hot, cold, moist and dry, or anything else they may choose (*V.M.* 1.1-12). Later in the same work, the strength of the humours – and again the author adds “or anything else”, determines potential harm (*V.M.* 14.16-22). He also talks about a sweet humour or flavour, which can change or revert to bitter, salty, astringent or, most likely, sour (*V.M.* 14.5-8) – a belief echoed by Aëtius (e.g. pr. 23.7-10; 26.9-10). In *The Nature of Man*, which was written some time after 440BC, the four elements air, fire, water, earth, are listed (*Nat.Hom.* 1.4-5) and there is an attempt to relate them to the body fluids

blood, phlegm, bile and black bile, under the influence of the seasons and weather (*Nat.Hom.* 7.1-23).

That humoral theory was still to some extent in a process of development in the fifth century is shown elsewhere in the Hippocratic Corpus. In *Places in Man*, according to Prof. Craik, “Humoral theory is...at its most inchoate” (Craik, 1998: 14), and in this work there is evidence of “a proto-humoral phlegm-moisture-swelling conjunction” (Craik, 1998: 15).

Later on, Plato was to state quite clearly (in *Timaeus*, 82A) that there were four types of element from which the (human) body was composed, namely earth, fire, water and air; he then goes into great detail about their relation to bodily fluids and disease. Aristotle imagined the world to be composed of the elements arranged in concentric spheres, with earth at the centre, then water, air, fire, and the whole surrounded by a fifth element, αἰθήρ, whatever that is (*de Mundo* 393a).

Although over the centuries various other systems of medical theory came to prominence under the influence of rival proponents and supporters, that of elements and humours persisted, and ultimately assumed the greatest importance. A more complex version of humoral theory appears in the fragments of Praxagoras around 300BC (Steckerl, 1958: 2, 16, 24-7, 72-4), and also of his followers Phylotimus (Steckerl, 1958: 108-121), and Pleistonicus (Steckerl, 1958: 124-6). It does not appear to have been important to Pliny or Celsus, but features prominently in Dioscorides’ great pharmacopoeia, *De materia medica*, a work written around AD65, and relied upon at least into the Renaissance; the importance of this work is reflected by the fact that there are 21 sixteenth century texts of 16 different editions in the Glasgow University library. Plants are frequently described in terms of elemental qualities; poppies, for example, are said to have a δύναμις ψυπτική [cooling capacity] (4.64.2.1 [K 25.1.554.11]). Rufus of Ephesus, who probably wrote in the 1st century AD, and whose work found favour with Galen, adopted the theory of the four humours into his approach to medicine, which was generally that of a pragmatist (Nutton, 2013: 214-5).

Galen embraced and vigorously defended elemental and humoral theory, and in *On Mixtures* he clarified and gave an expansive explanation of his perception of it: the elements were four in number, the opposing pair

hot and cold, and the opposing pair moist and dry (e.g. *Temp.* K 1.514.4-5); nowhere, however, does he foreshadow the modern concept, that heat and cold, rather than being separate entities, are different quantities of heat energy, and moistness and dryness are different concentrations of liquid. The mixture of these was responsible for an individual human's constitution, and disease was caused by imbalance or excess. Perhaps as a result of the outstanding extent of Galen's knowledge, research and writings, but also perhaps in consequence of his self-promoted "aura of infallibility" (Nutton, 2013: 245), his ideas came to dominate medical education in subsequent centuries, and to acquire a dogmatic status amongst generations of physicians, as reflected in the encyclopaedic works of Oribasius, Aëtius of Amida and Paul of Aegina; "Galen was becoming Galenism" (Nutton, 2013: 303). Galen and humoral theory became arguably the most important influence on the medical profession in Europe, and possibly the Middle East, at least until the end of the Renaissance. Chaucer, for one, includes knowledge of it as an attribute of his pilgrim doctor, though not without some degree of scepticism, as evinced by his delicate irony:

...ther was a Doctour of Phisyk,
In al this world ne was ther noon him lyk
...To speke of phisik and of surgerye;
For he was grounded in astronomye.
He kepte his pacient a ful gret del
Of houres, by his magik naturel...
He knew the cause of everych maladye,
Were it of hoot or cold, or moiste, or drye,
And where engendred, and of what humour;
He was a verrey parfit practisour.

(*Canterbury Tales, Prologue*)

In retrospect, it may be argued that had there not been, for several centuries, this firmly established all-embracing theory, then into the gap there might more readily have appeared ideas leading sooner to our present, evidence-based medicine. Even to the present time, echoes of beliefs associated with elements and humours may be found. In my own working life, I have been asked by a ward sister if a pneumonia patient, recovering

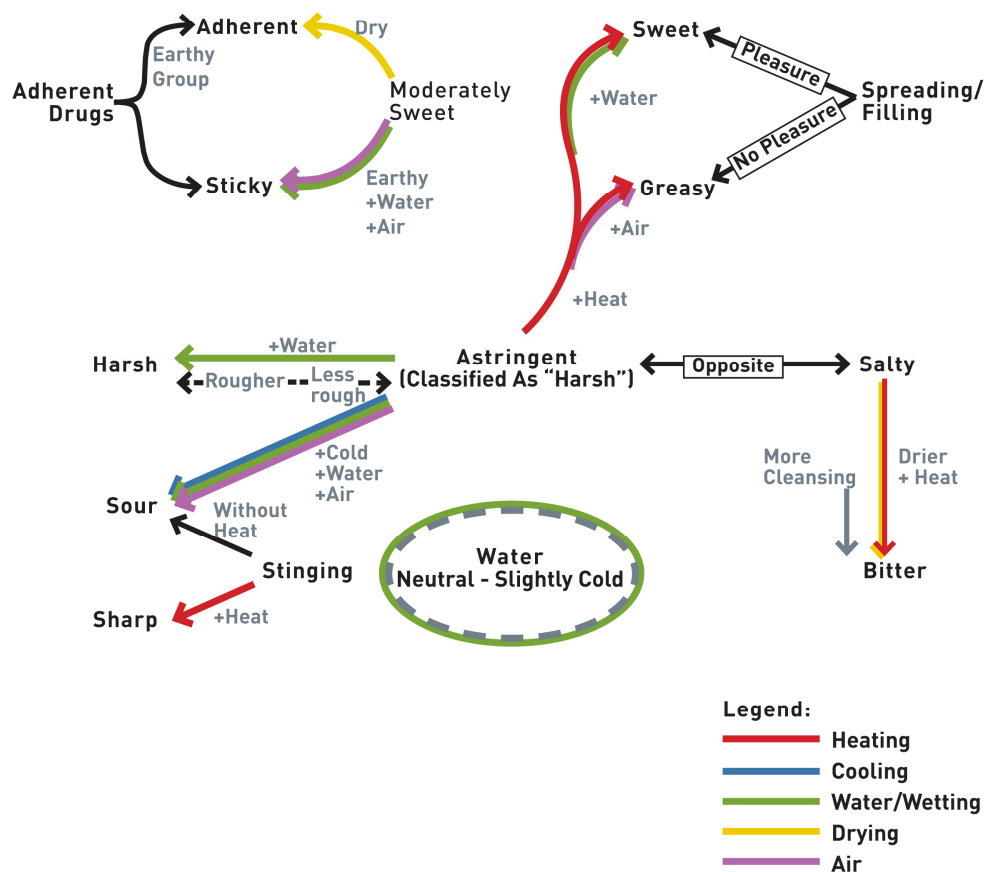
on antibiotics, might not also benefit from “Auntie Flo” – i.e. antiphlogiston, a Greek-derived term for the application of heat by means of a poultice.

Accordingly, much of Aëtius’ book on plant simples is occupied by discussion of their elemental capacities. In *SMT*, from which Aëtius has made his synopsis, Galen expends disproportionately more effort in asserting and re-asserting the importance of the elements, and their involvement in pharmacology (v. infra, Intro. xxviii, xxx, and running commentary). Extension of this elemental or humoral theory is that diseases can be treated by correction of the elemental imbalance causing them, either by physical means such as heating or wetting the sufferer or even by the removal of blood, or by identifying the elemental potential of drugs or diet to heat, cool, wet or dry their recipients.

The analysis of plant material in terms of elemental capacity is to be achieved almost entirely by tasting, and this is discussed at length in Aëtius’ Prooemium. Ten tastes, or sensations discernible by the tongue, are mentioned: adherent (ἐμπλαστικός), astringent (στρυφνός, στύφον), bitter (πικρός), greasy (λιπαρός), harsh (αὐστηρός), pungent (δάκνος, δακνώδης, δάκνων), salty (άλυκός), sour (ὀξύς), sticky (γλίσχρος), sweet (γλυκύς). The complexity of this system would, I suspect, have caused problems for the practising physician, trying to relate the taste of a simple to its elemental composition and hence to its therapeutic potential. I have summarised in graphic form (diagram 1) the interrelationships between elements and flavours, as stated in the Prooemium, in an attempt to identify a cohesive pattern in Aëtius’ and Galen’s perception of pharmacognosy as derived from the taste of plant materials. For example, according to the text, material which stings the tongue but does not heat it is sour (pr. 18.26-19.1), and such material can be produced by cooling and adding water and air to astringent material (pr. 22.2-3), and sour material will therefore have cooling and moistening qualities. The qualities of materials may therefore be approached by different routes. Unfortunately, no clear pattern has emerged.

Diagram 1:

Aëtius' Prooemium: Relationships of Flavours and Elements



(Graphic design by Pauline McKay)

Other Ancient Physicians

The names of various other ancient physicians are included in Aëtius' text, and in the accompanying Introduction and Commentary. In order to clarify their relevance and relative positions in ancient medicine, I have listed the following brief biographical summaries, drawn mainly from *OCD* and *BP*, except where otherwise stated.

Physicians Cited by Aëtius (appearing in book 1, or in his other books referred to in the commentary). The citation of other physicians is relatively infrequent in book 1 (22 instances involving 16 doctors), although

elsewhere in his *Libri Medicinales* he often quotes, and acknowledges, other sources.

Agrippa (1.139.4). Julius Agrippa, believed to have lived between 10BC and AD90, formulated medicaments (Keyser & Irby-Massie 450, Keyser).

Andreas the Courtier (1.124.1). Court physician of Ptolemy IV Philopator, and follower of Herophilus; he wrote about medicaments and died in 217BC (*OCD* 88, Spawforth) or 215BC (BP 1.681, Nutton).

Archigenes (1.318.2). Originally from Apamea, he was a physician in Rome during the reign of Trajan (AD98-117), and was a proponent of the elemental theory of illness, while also influenced by the Pneumatists (BP 1.981, Nutton).

Crito (1.128.8; 8.16.7). Titus Statilius Crito, from Carian Heraclea-Salbace, was archiatros to Trajan (AD98-117) (BP 13.797, Touwaide).

Demosthenes (7.53.1). Demosthenes Philalethes wrote on ophthalmology in the first half of 1st century AD and was a follower of the ideas of Herophilus (BP 4.298, Nutton).

Dioscorides (1.147.12, 217.4). Pedanius Dioscorides, from Anazarbus in Cilicia, studied in Tarsus and was probably a military doctor in the 1st century AD. His extensive, detailed pharmacopoeia has survived.

Galen (title, book 1). (cf. Hankinson, 2008.) Born in Pergamum in AD129, Claudius Galen practised in Rome and became one of Marcus Aurelius' personal physicians. An avowed follower of Hippocrates, he was a prolific writer, an experimental physiologist, and a polemical proponent of the theory of elements and humours. He died possibly in 216, and remained hugely influential in medicine until at least the late Renaissance.

Herodotus (9.37.1). A Greek physician, possibly from Tarsus, he was a Pneumatist who practised in Rome in the Flavian Period (AD70-96) (BP 6.271, Touwaide).

Hippocrates (1.314.2; 1.346.8). Considered as the father of modern medicine, he lived in Cos, probably in the late 5th century BC; there is dispute as to which works in the Hippocratic Corpus were written by his followers or by himself (cf. Nutton, 2013: 53-103).

John the Unguent-maker (1.131.55; 1.132.17). No information is apparent regarding this person, and he does not appear in *SMT*.

Leonidas (15.5.1; 16.44.1) A Greek physician in Alexandria in the late 1st century AD, Leonidas (or Leonides) described his ideas as “episynthetic”, and had a particular interest in ophthalmology (BP 7.402, Nutton).

Nechepso (1.38.9). Possibly an Egyptian astrologer who wrote a book on iatromathematics between 150-120BC (BP 9.590, Hübner), his name does not appear in Galen.

Oribasius (8.16.111). Born in Pergamum c.AD320 (died c.AD400), he studied in Alexandria and became personal physician to Julian. His encyclopaedic writing is said to have been influenced by his paganism (*OCD* 1074-5, Browning, Nutton). He was appointed quaestor in Constantinople, accompanied Julian to the Battle of Ctesiphon, and went into exile amongst the Goths after the emperor’s death. Supposedly because he was such a good doctor, he was able to return to Constantinople under the reign of Valens or Theodosius. (BP 10.203-5, Touwaide).

Orpheus (1.139.10; 1.175.24). There is a mention in Galen, regarding the treatment of white lead poisoning, of an Orpheus, called Theologos (*Ant.* K14.144.14); otherwise, no information is apparent about any physician of this name.

Poseidonius (6.2.1). In late 4th century BC, he wrote especially about mental illness, which he attributed to humoral imbalance (BP 11.682, Nutton).

Rufus (1.321.8). Born in Ephesus, he studied in Alexandria, visited Cos and Caria, practised in the second half of the 1st century AD and was influenced by Hippocratic ideas. His writings on anatomical nomenclature are remarkable for their clarity and brevity (cf. *De corporis humani appellationibus, De partibus corporis humani*) (BP 12.756-7, Nutton).

Other Physicians (not cited here by Aëtius, but mentioned in commentary):

Aretaeus (Intro. lviii) From Cappadocia, living in the mid or late 2nd century AD, he was possibly a contemporary of Galen, or perhaps he lived a century earlier (Nutton, 2013, 210); he was influenced by the Pneumatists (BP 1.1051, Nutton).

Asclepiades (Intro. xlv) Born in Cius in Bythia, lived from late 2nd to early 1st century BC, he practised in Rome, where he was credited with the introduction of Greek medicine. His ideas on corpuscles and pores were later to influence the Methodists (BP, 2.99, Nutton).

Methodists were physicians who believed that all diseases had commonalities, which were evident on initial clinical examination, and the pathological process depended on the state of the particles and pores of which the patient (and the whole world) was formed, as opposed to the elements. This system, about which very little literature survives, came to a predominant position for some three centuries (Nutton, 2013; 192-5). Although rubbished by Galen, Methodism was a flourishing alternative to Galenism at least into late antiquity (van der Eijk, 2010: 520).

Celsus (Intro. lxviii, lxx). Aulus Cornelius Celsus lived during the reign of Tiberius (AD14-37), and wrote extensively. Only his eight books on medicine survive, but, based on his use of the first person, he may actually have been a doctor (BP 3.74, Sallmann).

Diocles (Intro. xxix). Born in Carystus in Euboea, he may have been a contemporary of Aristotle, in the 4th century BC. He believed in the effects of elements and pneuma, and was regarded very highly by the Athenians (BP 4.424, Nutton).

Heliodorus (Intro. xliii, lix). Possibly a surgeon from Egypt, living in the time of Juvenal (c. AD60-140), influenced by the Pneumatists (BP 6.71-2, Touwaide).

Herophilus (Intro. xxi). Born in Chalcedon c.330BC (d. 260), he practised in Alexandria, and, as the first to perform human dissection, he made notable contributions to anatomy and physiology. He accepted humoral imbalance as a hypothetical cause of disease (BP 6.274-6, Touwaide).

Praxagoras (Intro. xv, lxix). Practising in second half of 4th century BC, he believed in the effects of humours (up to ten of them) and pneuma, and his teaching influenced various physicians, including Herophilus (BP 11.782-3, Nutton).

Soranus (Intro. xl, lxiii). Born in Ephesus, he studied at Alexandria and practised in Rome during the reigns of Trajan and Hadrian (AD98-138). He

was influenced by the Methodists, and was noted for his knowledge of gynaecology (BP 13.653, contributor unstated).

Comparison of Aëtius' Synopsis with Galen's Text

Aëtius' reasons for producing a synopsis of Galen's *On the Mixtures and Capacities of Simple Drugs (SMT)* can be inferred with a degree of confidence. Firstly, he clearly valued the work of his predecessor highly enough to reproduce it in a form which would be accessible to his contemporaries and to subsequent generations of physicians. To create a practical handbook, it would have been desirable to reduce the length of the original, while retaining the most important information regarding therapeutics, and presenting this information in a clear, simple form. Aëtius might also use the opportunity to change or omit parts of Galen's work which he considered erroneous, and to add whatever he thought was a significant improvement or innovation, prompted by his own experience and by knowledge of any discoveries in the three and a half centuries which had elapsed since Galen's time. He may even have considered that a work dealing with such a prestigious physician as Galen would have been widely read, and therefore would be a suitable vehicle in which to include for publication his own ideas. I shall now examine what methods Aëtius used to achieve these supposed objectives, and with what results.

It is clear that Aëtius has, as he himself says, created a synopsis rather than an epitome. The former term may be defined as a summary or general view, whereas the latter indicates a simple abridgment (cf. van der Eijk, 2010: 526). Aëtius has certainly reduced the length of *SMT* substantially, but has set his own stamp on it. In the prooemium he has selected various introductory passages from *SMT*, rearranged them and pieced them together to form a convincing whole. In the alphabetical list of simples he has added and omitted some plants and information about the use of others, and he has added a list of oils; on several occasions he has quoted from a different work by Galen, namely *On the Properties of Foodstuffs*. Such manipulation, the details of which are shown below and in the running commentary, shows Aëtius' intention and ability to provide his readers,

most likely practising doctors, with a practical handbook. The creation of such a handbook, or at least a more manageable work, would have been facilitated by technological change, namely from papyrus roll to parchment codex (Horster & Reitz, 2010: 5).

Any comparative analysis of the works in question must take into account three areas of uncertainty. We do not know the precise content of the copy of Galen's text which Aëtius was using. We do not have an accurate, original text of what Aëtius wrote, but must rely on the best efforts of those who have edited the manuscripts of later copies; for this I rely upon the work of, and am greatly indebted to, Irene Calà (Calà, 2012). "For each of the three families of Aëtius' manuscript tradition (related to book 1), [she] has recollated the most ancient codices: *Messanensis gr.* 84 for the first family; *Leidenensis Voss. gr. fol.* 58 (not taken into account by Oliveri) for the second family; *Parisinus gr.* 2191 (only the earliest part; when the manuscript hands down most recent integrations, the *Vaticanus gr.* 298 has been employed) for the third family." (Personal communication, van der Eijk, 2012). For Galen's text, we depend on the editing of later copies, particularly the 1826 work by Kühn, of whom Nutton says: "His text of Galen, so all are agreed, is filled with errors of all kinds." (Nutton, 2002: 2), or, as Petit puts it, "truffée de fautes" (Petit, 2010: 144).

A remarkable abridgment has been achieved. The 139,244 words of the *SMT* have been reduced by Aëtius to some 54,900 words (34,200 words in Aëtius book 1 plus 20,700 in the mineral and animal sections of book 2, as estimated from page counts); Aëtius' synopsis is therefore 40% of the length of the original. The degree of reduction is least in the lists of simples. For example, Aëtius' plants list, including his own additional material, is 77% of the length of Galen's (30,100 words as opposed to 39,000). Galen's long preambulatory discussion, however, has been cut drastically. Aëtius has created his preface by discarding 94% of the Galenic text which does not contain lists of simples (4,100 words as opposed to 68,700), and by rearranging the remainder, largely with very little alteration of the original words, into a concise but fluent narrative.

SMT consists of 11 books. The first five, roughly of equal length and together constituting some 45% of the total work, serve to explain and

justify Galen's perspective on pharmacological theory; frequent reference to the elemental qualities is made, and various authors are cited. The remainder contains lists of plant simples (books 6-9), animal materials (books 10-11) and a short list of minerals (book 11, last 13 entries); each of books 6-11 starts with a fairly short proemium. There appears to have been serious contamination between the work of Dioscorides and this section dealing with lists of simples (Petit, 2010: 150). It is interesting that Aëtius has, in his abridgment, treated Galen's simples list (books 6-11) differently from the first five books, for *SMT* has been identified by Petit as having a "tradition bipartite", with these two parts being quasi-autonomous, with separate transmissions and possibly separate readerships (Petit, 2010: 147).

Preface

The extraordinary nature of this rearrangement is demonstrated by examination of the sequence of the 64 excerpts joined end-to-end with minimal interpolation of additional text to form Aëtius' preface. [v. table 1.]

Table 1: Sequence of excerpts from Galen’s *SMT* used by Aëtius to form his preface. (Apart from first excerpt, taken from vol. 12, all the references are to Kühn vol. 11.)

	Aëtius’ Preface: <i>CMG</i> vol. 8a page.line	Galen <i>SMT</i>			Aëtius’ Preface: <i>CMG</i> vol. 8a page.line	Galen <i>SMT</i>	
		book.chap	Kühn’s ref.			book. chap.	Kühn’s ref
1	17.1-18.4	7.pr.22-43	12.2.15-4.2	33	24.5-11	1.32	437.5-12
2	18.4-15	3.13	571.15-572.9	34	24.11-17	1.32	437.16-438.5
3	18.15-17	4.4	632.5-9	35	24.17-22	4.12	659.13-660.1
4	18.17-20	1.39	453.1-4	36	24.22-25	4.12	660.4-7
5	18.20-19.5	1.39	453.8-454.2	37	24.25-26	4.12	660.15-16
6	19.5-22	4.4	632.9-633.10	38	24.26-25.10	1.39	452.5-453.1
7	19.22-20.4	4.5-6	633.15-634.16	39	25.11-12	4.7	645.4-6
8	20.4-6	4.6	634.18-635.3	40	25.12-20	4.9	649.14-650.5
9	20.6-7	4.6	635.3-7	41	25.20-26.1	4.10	652.15-653.9
10	20.8-9	4.6	635.8-10	42	26.1-7	4.16	674.4-11
11	20.9-12	4.6	635.12-15	43	26.7-9	4.19	686.6-8
12	20.12	4.7	636.7-8	44	26.9-13	4.19	686.11-15
13	20.13-15	4.7	636.9-12	45	26.13-22	4.20	689.11-690.3
14	20.15-19	4.7	638.5-11	46	26.22-24	4.15	671.11-13
15	20.19-27	4.7	638.18-639.11	47	26.24-27.3	4.21	695.8-15
16	20.28	4.7	640.15	48	27.3-9	4.20	693.2-10
17	20.28-21.3	4.7	640.5-8	49	27.10-15	4.20	693.13-19
18	21.3-5	4.7	640.8-15	50	27.16-18	4.20	693.19-694.4
19	21.5-13	4.7	640.14-641.5	51	27.18-28.2	4.19	684.4-685.1
20	21.14-17	4.19	688.10-14	52	28.2-7	4.19	685.7-13
21	21.18-24	4.7	641.5-14	53	28.7-8	4.22	696.17-18
22	21.24-22.6	4.8	647.6-648.1	54	28.9-21	4.22	697.2-16
23	22.6-9	4.7	636.16-637.1	55	28.21-23	4.22	699.8-11
24	22.9-17	4.7	637.3-12	56	28.23-25	4.22	699.13-15
25	22.17-20	4.7	637.15-18	57	28.26-29.4	4.22-23	699.17-700.11
26	22.20-23.7	4.8	648.1-649.3	58	29.5-6	4.23	700.15-702.11
27	23.7-13	4.12	656.7-14	59	29.6-8	4.23	702.11-13
28	23.13-21	4.12	657.2-10	60	29.8-11	4.23	701.14-18
29	23.21-24	4.12	657.12-14;15-17	61	29.11-15	4.23	702.13-19
30	23.24-24.1	4.12	658.4-13	62	29.15-28	4.23	703.1-16
31	24.1-3	4.12	658.14-17	63	29.30-30.3	6.pr.	791.15-792.1
32	24.3-5	1.31	435.13-14	64	30.4-6	6.pr.	792.1-4

Showing an impressive familiarity with Galen’s work, he begins his synopsis by selecting part of a sentence from the prooemium of book 7, i.e. in the middle of Galen’s list of plant simples, reversing part of the word order, and then quoting it virtually verbatim as his first two sentences. The appropriate passages are as follows:

Galen SMT 7 pr. 19-27 (K 12.2.12-3.3)

ἐν μὲν οὖν τῷ πρὸ τοῦδε μέχρι τοῦ ι προήλθομεν·
ἐνταυθοῖ δὲ τὴν ἀρχὴν ἀπὸ τοῦ κ ποιησόμεθα τοσοῦτον
ἔτι προαναμνήσαντες, ὡς εἰς τὰς προαποδεδειγμένας ἀρχὰς
ἀνάξομεν ἅπαντα· τῷ γὰρ ἐπὶ τοσόνδε θερμὸν ἢ ψυχρὸν,
ἢ ὑγρὸν ἢ ξηρὸν, ἢ λεπτομερὲς ἢ παχυμερὲς ὑπάρχειν ἕκα-
στον τῶν φαρμάκων αἱ διαφοραὶ τῶν κατὰ μέρος ἐνερ-

(3.) γειῶν αὐτῶν γίνονται, τὸ δ' ἐπὶ τοσόνδε προήκειν ἐν ἐκά-
στω τῶν προειρημένων ἄρρητόν ἐστι πρὸς γε τὴν ἀκριβεστά-
την ἀλήθειαν.

(Words used by Aëtius, but with change of order, shown in bold.)

[And so, in the [book] preceding this one, we reached iota; but at this point we shall make a start from kappa, still bearing in mind first and foremost that we deal with everything in the light of the previously proven first principles: for, according to how great an extent each of the drugs is hot, cold, moist, dry, fine-grained or coarse-grained, the differences in their relative effects come about, but the extent cannot be defined in each of the aforementioned aspects with any very exact degree of accuracy.]

Aëtius 1 pr. 1-5 (8.1.17.1-5)

Αἱ διαφοραὶ τῶν κατὰ μέρος ἐνεργειῶν ἐν ἐκάστω τῶν φαρμά-
κων γίνονται τῷ ἐπὶ τοσόνδε θερμὸν ἢ ψυχρὸν ἢ ξηρὸν ἢ ὑγρὸν ἢ
λεπτομερὲς ἢ παχυμερὲς ὑπάρχειν ἕκαστον αὐτῶν. τὸ δὲ ἐπὶ τοσόνδε
προήκειν ἐν ἐκάστω τῶν εἰρημένων ἄρρητόν ἐστιν πρὸς γε τὴν ἀκρι-
βεστάτην ἀλήθειαν.

[The differences in the relative effects in each of the drugs come about according to how great an extent each of them is hot, cold, dry, moist, fine-grained or coarse-grained. But the extent cannot be defined in each of the aforementioned aspects with any very exact degree of accuracy.]

Presumably Aëtius wanted to begin by emphasising the importance of elemental theory in his view of pharmacology, and had found the most suitable piece of Galen to use for this purpose.

In the same Galenic passage, the division into four levels of capacity in each of the abilities to warm, cool, dry or moisten is made, but Aëtius chooses to illustrate this (18.4-15) by inserting a partially modified section of *SMT* book 3. The importance of taste in the analysis of simples is asserted by a paraphrase of part of *SMT* 4.4, and then, with no apparent break in the sentence, he uses material from *SMT* 1.39 to expand on the tongue's perceptive abilities (18.15-19.5).

What follows is taken mainly from *SMT* 4. Selected excerpts, arranged largely in the order in which they appear in Galen, form a continuum in which no obvious interruption betrays the omissions of Galenic text, and into which passages from elsewhere in *SMT* are inserted as considered necessary by Aëtius to supplement or illustrate his arguments. This section begins with a definition of flavours (18.5-19.5). The supposed relationship between flavours and pharmaceutical materials is presented, together with examples of substances from which identification of these flavours can be learnt, and the supposed elemental basis for this relationship is explained with specific instances involving a wide variety of materials. This discussion of the interaction of elemental qualities, flavours and therapeutic effects, illustrated by examples, is expanded so that it occupies the largest part of the preface (19.5-28.7).

The value of smells in indicating the pharmacological properties of simples is the subject of the next, much shorter, section (28.7-29.13), which is followed by even briefer comments about the assessment of the capacities of simples according to their colours (29.13-25). The preface then ends with Aëtius setting out the scope and structure of the rest of the work by quoting a short passage from the prooemium of *SMT* 6.

In addition to the introductory and concluding passages, as mentioned above, there are several places where Aëtius' progression through *SMT* 4 as a source of his preface is affected by insertions or a change in sequence. A comment about the burning effect of certain materials within the gut (21.14-17) is added by inserting a passage from

4.19 into a passage from 4.7; a discussion about the properties of vinegar (24.3-17) is expanded using passages from *SMT* 1.31-32 inserted into 4.12; comments about how the tongue is stimulated (24.26-25.10) come from 1.39, and seem a natural conclusion to a section about sour and astringent materials from 4.12, before the next topic concerning sweetness and nutrition (25.11-26.1) is introduced by reaching back and quoting from 4.7, followed by 4.9 and 4.10. A passage mainly concerning bitter materials in comparison with sweet ones (26.1-24) is drawn from 4.16, 19 and 20, but ends with a sentence from 4.15. The introduction to saltiness (26.4-27.3) comes from 4.21, and illustration, referring to the Dead Sea, is then provided from 4.20. Aëtius returns to 4.19 for material about sharp flavours, and then chooses passages in the order that they appear in 4.22-23 to deal with smell (28.7-29.11) and colours (29.11-28).

The omissions of text from *SMT* 4 vary in length and content. A constant feature is the absence in Aëtius of Galen's frequent references to authorities such as Theophrastus, Aristotle and Plato, and of internal references to different parts of *SMT*. Otherwise, Aëtius seems to have excised passages whose exclusion renders his narrative more concise without apparent loss of continuity: for example, Galen's discourse about the distinction between drugs and foods, and the acquisition of warmth and sweetness in 4.9 (11.649.10-651.6); or his lengthy discussions of, among other topics, flavours and elements in 4.11 (11.653.10-656.2), and wine, fruit and nutrition in 4.13-15 (11.661.11-673.3).

Of the other books which serve in *SMT* as a lengthy introduction before the appearance of the beginning of the list of simples, after a lengthy preface, in book 6, *SMT* 2 and 5 are omitted entirely, as are virtually all of 3 and most of 1. Galen has used these books to reinforce his ideas about elemental theory and its relevance to taste and pharmacology. The four elemental qualities are listed in the first chapters of books 1, 2, 4 and 5, and in the second chapter of 3, and are frequently referred to throughout the work, and in many places Galen attempts to provide practical illustrations of his ideas by referring to diseases or simples, individually or in groups. Among his many references to other authors, he includes quotations, sometimes of substantial length: e.g., by Plato in 1.37 (11.446.4-448.3), or

by Diocles in 2.5 (11.472.5-474.6). Presumably intending to give a sense of order, he says that in the first book he had considered the capacities of vinegar and water, and that the second book was mostly about oil with a small addition about rosewater (3.1 (11.542.2-4)). Because many of his colleagues wanted, he says, to refute the fallacious arguments of more modern (νεωτέρων) doctors, he has been expansive in the first two books, as well as in his daily tutorials, so that, purified in mind, the reader can follow his true arguments in the third book (1.40 (11.457.12-19)).

It is very hard, however, to see that his introduction has been constructed in a systematic manner. Overall, Galen's style is didactic, or even polemical. On occasions he uses this work as a vehicle to contradict those with whom he disagrees, such as, in book 5.24-25 (11.780.3-784.2), the Methodist physicians. In view of its rather rambling structure, it would have been difficult for Galen's students to use the introductory part of the work for reference, or to extract specific information from it. Had Aëtius included more of this material in his preface, it would, I believe, have been detrimental to the creation of a practical handbook.

Aëtius' additions of his own material into the preface are infrequent and brief. He extends a list of astringent and pungent minerals (21.9-10), and he expands on the interaction of flavours (21.31-22.1). When Galen refers to ἡ ἀσφαλτῖτις λίμνη [the bituminous lake] (11.693.3-4), Aëtius adds by way of clarification that it is called ἡ νεκρὰ θάλαττα [the Dead Sea]; Galen has used the latter name elsewhere (e.g., 11.692.8-9). Aëtius also adds the reason for its name (27.15-16). In discussion of the effects of materials with sharp flavours, he adds illustrative examples: involving beetles (27.26-27); minerals (27.28-29); and plant seeds (27.29-30). Near the end of the preface he inserts a sentence summarising what he proposes to do next (29.28-30).

Simples List

Aëtius reduces Galen's text both by omitting entries in their entirety and by omitting or paraphrasing parts of individual entries. The 121 plants present in Galen's list but completely absent in Aëtius appear to share no common feature, neither in length of entry, provenance, elemental

composition, therapeutic effects nor harmful effects; their omission is puzzling. The absence of seven consecutive plants (12.88.7-90.2) may suggest a gap in the manuscript(s) Aëtius was working from, but elsewhere the plants are missing individually or in pairs or threes. (I have included details in the commentary accompanying the translation.) The only suggestion of a pattern is in the increasing frequency of omission towards the end of the work: 23% of the first hundred of Galen's entries are absent, 21% of the second hundred, 17% of the third, 29% of the fourth, and 37% of the final 83.

The text cut by Aëtius from individual chapters varies in amount and subject matter. Only 6 entries (chh. 25, 67, 163, 223, 224, 272) appear exactly as they do in Galen; in many more only minor changes are seen, such as altered word order, or differences in conjunctions or prepositions. In a large number, however, significant parts of the text have been rejected. (More detailed information is included in the commentaries accompanying each chapter.) Certain patterns may be found in the rejected material. Discussion of taste and therapeutic capacity in relation to elemental theory is the commonest subject in the parts rejected by Aëtius. This happens in no less than 54 chapters, sometimes with substantial loss of Galen's text (e.g., chh. 1, 3, 4, 31, 46, 61, 341). In 35 chapters Aëtius has omitted from the original one or more therapeutic indications or uses; in 16 chapters comparison with other plants has been omitted, in 14 discussion of the plant's name, and in 5 discussion of its provenance. A warning by Galen of adverse effects has been omitted in 3 chapters. In ch. 22 there is evidence, I believe, that Aëtius has deliberately and prudently edited Galen, by omitting his incredible assertion (11.823.3-4) that madwort often completely cures someone already showing signs of hydrophobia, a condition incurable to this day. (The ancient diagnosis of hydrophobia appears to match the modern one – cf. Celsus 5.27.2.) It is a different matter when Aëtius (22.3-4) and Galen (11.823.1-3) claim that the plant benefits those bitten by mad dogs, for there is a chance that a victim may not develop the disease, through good luck rather than any supposed prophylactic effect attributable to the plant.

21 of the the entries in Aëtius' list of plant simples do not appear in Galen's *SMT*. In 11 instances (chh. 44, 93, 199, 200, 226, 227, 242, 315, 379, 382, 404), however, it is clear that, without any acknowledgement of the fact, Aëtius has used material, usually quoted verbatim, taken from Galen's *On the Properties of Foodstuffs* (*Alim.Fac.*); these instances are noted in the running commentary. In a further 20 chapters, he has supplemented what he has taken from *SMT* by adding quotations from *Alim.Fac.* In addition to these individual simples, Aëtius has included a section of 36 chapters on oils and ointments (chh. 101-136), apparently largely the product of his own invention. (For further discussion, see pp. 121-2.)

The material added by Aëtius to Galen's plant entries shows certain recurrent features. Obviously designed to be of practical assistance, information on preparation and administration of simples is included in 23 chapters; sometimes fairly elaborate details of a recipe are given, e.g. in chh. 35, 54, 139. Another common concern of Aëtius is the digestibility, or effect on the gastro-intestinal tract, of some simples, with comments being introduced to 11 chapters; sometimes this additional information is taken, as noted in the running commentary, from *Alim.Fac.* Therapeutic indications or uses not found in Galen have been added to 39 chapters. In 4 chapters (281, 318, 359, 380) the heading taken from Galen is followed by an entry which is substantially or totally different from the original. In a rare instance, Aëtius appears directly to contradict Galen (assuming no scribal error): he says that lentils "are not strongly astringent" – στύφουσι μὲν οὐκ ἰσχυρῶς (402.1), whereas the οὐκ is absent in Galen, with the result that he says they "are strongly astringent" – στύφουσι μὲν ἰσχυρῶς (12.149.5-6); in *Alim.Fac.* Galen says that only the lentil husk is astringent, whereas the juice has the opposite effect (K6.525.6-10). On one occasion, Aëtius makes a clear distinction between Galen's input and his own; in the chapter about Cretan thyme, he says: καὶ ταῦτα μὲν ὁ Γαληνός. τὰ δὲ διὰ πείρας ταῦτα... [Galen has provided the information so far. The following information, however, is provided by practical experience:...] (166.4-5).

Language

Much of the time Aëtius has accurately copied, word for word, the text of Galen, who had been writing, “in the interests of clarity”, a simpler form of Attic than his contemporaries in the Second Sophistic (Horrocks, 1997: 82). Galen, in fact, frequently disparaged those who sought to write in pure Attic, as he considered this to impair clarity (Wilkins, 2003: xiv-xv); for example, he starts an entry on mulberries in *On the Properties of Foodstuffs* with the following warning: Οὐ τοῖς ἀττικίζειν τῇ φωνῇ προηρημένοις γράφεται ταῦτα ... [These things are not written for those who Atticise in their speech ...] (*Alim.Fac.* 6.584.5). Although Aëtius generally relies on accurately quoted pieces of Galen’s text as his building blocks, in many instances his use of language differs from that of his predecessor, the following aspects being the most obvious. (More details are included in the running commentary.)

Lack of elision occurs constantly when δὲ or τε appear before a vowel in Aëtius, replacing δ’ or τ’ found in Galen. Loss of Attic forms is common but variable. The σσ found in other dialects and in the later Common Greek (Κοινή) replaces ττ in some instances, for example τέσσαρας in Aëtius (pr.17.10) instead of τέτταρας in the Galen from which it is taken (12.3.9); similarly, ἀρμόζουσιν in Aëtius (185.6, 223.3) twice replaces ἀρμόττουσιν (12.14.3, 12.44.1). Both authors, however, (or perhaps their copyists) seem rather lax about their use of these forms, both of which can appear in quick succession; for example, Aëtius has γλώσση (pr.18.17) followed by γλώττης (pr.18.21), and Galen has θάλαττα followed in the next line by θάλασσα (11.548.7,8), and again θάλαττα (11.690.6) and four lines later θάλασσαν (11.690.10). Occasionally a later form (according to LSJ) is found in Aëtius: e.g., διδόμεν (58.13) for δίδομεν (11.845.14); the use of αὐτό as a demonstrative (pr.17.6) instead of τοῦτο (12.3.3) also reflects a change in language in the period between the writers (Horrocks, 1997:73). It is possible, however, that these minor differences may reflect the decisions of the copyists or editors, rather than represent evolution of the language, or may be due to unconscious effects related to perceived or imagined sound of the words (West, 1973: 20).

Differences often appear in the use of prepositions. For example, Aëtius has κατά (pr.27.23) instead of ἐπί (11.684.10), and μετ' (396.3) for ἐν (12.147.1), and uses the dative (219.8) instead of πρὸς and accusative (12.40.18-41.1), and again (255.7) for εἰς and accusative (12.61.17). Sometimes an adverbial prefix is changed: e.g. καταπλασσόμενον (368.5) for ἐπιπλασσόμενον (12.126.7).

A word which appears in Aëtius – ἔλλιγμα (147.3,4) – but not in LSJ can be understood by its derivation from ἔκλειγμα [linctus] in Galen (11.877.17, 878.1). Spelling changes are seen in some plant names, sometimes of a minor degree, e.g. ἐλαφόβοσκον (137.1) for ἐλαφόβοσκος (11.873.3), sometimes more substantial, e.g. τερέβινθος (368.1) for τέρμινθος (12.138.14).

Sometimes Aëtius replaces words with others of very similar meaning, for no apparent reason: e.g. ἰατρικὴν (pr.18.15) for θεραπευτικὴν (11.572.8) [pertaining to treatment], and τόπῳ (27.8) for χωρίῳ (11.693.8) [place]. His replacement of anatomical terms may reflect changes in accepted nomenclature among contemporary physicians: e.g., κίων (16.3) for σταφυλή (11.819.15) [uvula]; τιθοί (147.11) for μαστοί (11.878.4) [breasts]; ὄρχεις (147.11, 145.7) for δίδυμοι (11.877.4, 878.4) [testicles] (further discussion is to be found in the Anatomy Terms section of the Introduction). When, however, words are substituted for others of similar appearance but entirely different meaning, it is tempting to assume that scribal error has occurred: e.g., ῥυπτικῆς (263.1) [cleansing] for πεπτικῆς (12.65.6) [digesting]; πρώτην (289.1) [first] for τρίτην (12.84.12) [third]; γόνασι (326.3) [knees] for γενέσει (12.104.6) [origin].

On occasions, Aëtius copies Galen's use of the first person singular, and thus presents himself as the first-hand observer of a pharmaceutical effect, rather than the reporter of Galen's findings. This, however, is not inconsistent with the tradition of transmission of medical texts; Galen, for example, also "borrows the 'I' of his sources" (Totelin, 2012: 308). For example, in the chapter about capers, the words καὶ ἔγωγέ...οἶδα διαφορήσας... [I also know, having dispersed...] appear both in Galen (12.11.10-11) and Aëtius (180.21). Similarly, in the chapter about pears, Aëtius' words – ...ὥστε ἔγωγε καὶ κολλήσας αὐτοῖς οἶδα τραύματα. [...as I

know, since I have glued wounds with them.] (41.5-6) are almost identical to Galen's – ...ὡς ἔγωγε κολλήσας αὐτοῖς οἶδα τραῦμα, μηδενὸς ἄλλου φαρμάκου παρόντος. [...as I know, since I have glued a wound with them, when no other drug was available.] (11.834.15-17). Elsewhere, in the chapter on oaks, even when Aëtius condenses and paraphrases Galen's text, he retains the first person: ...ἔγωγ' οὖν οἶδα... [...so I know...] in Galen (11.866.8) becomes ...ὥσπερ ἐγὼ κατ'ἀγρὸν ἐπειράθην. [...as I have experienced for myself in the field.] in Aëtius (95.25-26). In view of his careful manipulation of Galen's text throughout the work, I believe that in these examples Aëtius is deliberately trying to convince us of his personal experience of the drugs.

Conclusions from Comparison

Aëtius' respect for Galen is undoubted, as evidenced by his initial decision to base his discussion of simples, which forms all of book 1 and part of book 2 of his *Libri Medicinales*, on *SMT*, and by his quotation of large parts of Galen's text, albeit influenced by the language of his time. In the case of his preface, Aëtius puts us in the elemental theory picture by presenting us with a collage drawn mostly from original pieces of his predecessor's work, rather than writing a summary in his own words, surely an easier option.

It is clear, however, that Aëtius was more than just a dutiful copyist. He has whittled down and streamlined Galen's text, which, in its digressions and repetitions, is at times reminiscent of a series of lectures to students, to produce a practical handbook for practising physicians. Centuries later it may well have been used in this way, as illustrated by marginalia in one of the Aldus Manutius 1534 editions in the library of the University of Glasgow: words inked in, such as *ad capitis dolores* [for headaches], *ad febres* [for fevers], appear beside appropriate simples, suggesting that a doctor had required a means of quick reference when treating his patients from this book.

It seems certain that Aëtius was drawing on his personal experience as a practising physician, and probably also as a concocter of his own recipes, when he inserted the additional material about prescriptions, and

comments about digestion, as well as the section on oils. His chapters about plants which are absent from Galen may also be attributable to extra information acquired by Aëtius in his studies. The omission of several of Galen's simples remains unexplained; as I have said, the missing simples share no common factor, neither in provenance nor availability, supposed therapeutic or adverse effect, nor are they grouped alphabetically in such a way as to suggest that their absence in Aëtius is due to loss of manuscript. (cf. also Scarborough, 1984: 224-5.)

Plant Names

In any attempt to translate ancient Greek plant names into English, it soon becomes apparent that there are problems in the information given by our most important Greek-English lexicon, the LSJ. Frequently a single term has several varied translations: e.g., φοῖνιξ may be the date palm (*Phoenix dactylifera* L.), the dwarf palm (*Chaemerops humilis* LSJ), the Mazri palm (*Nannorhops ritchieana* LSJ), a sea plant (*Callophyllis laciniata* LSJ), or rye grass (*Lolium perenne* L.). Occasionally terms are considered to be synonyms, despite evidence to the contrary: e.g., μύλη is said to be equal to μῶλυ (moly), although distinctly different plants are indicated in Galen's entries (K12.80.3-6; 12.82.13-18). In another instance, different plants are given the same common name but different botanical names: e.g., ἄλυσσον and μυσοσωτίς are translated as "madwort (*Farsetia clypeata* LSJ)" and "madwort (*Asperugo procumbens* L.)" respectively.

In consideration of Thistleton-Dyer's botanical contribution to LSJ, Raven says: "If you take my advice you will henceforth view every entry in Liddell and Scott (LSJ) under a Greek plant name with a measure of scepticism." (Raven, 2000: 6). Amigues goes further; talking of A. Hort's translation of Theophrastus *H.P.* (Loeb, 1916-26), she says: "...si la traduction anglaise a l'avantage de mettre L'*Historia plantarum* à la portée du grand public, l'*Index of plants* publié à la fin du tome II a fourni au *Greek-English Lexicon* de Liddell-Scott-Jones tout un contingent de déterminations imprudentes ou manifestement erronées, auxquelles

l'autorité de ce dictionnaire garantit une longévité regrettable.” (Amigues, 1988: L).

To improve the accuracy of translation, I have used the following sources to test, endorse or modify the information in LSJ. Firstly, in some instances the context provides useful guidance. (For example, in the case of φοῖνιξ, mentioned above, reference to “the tree” and “the fruit” (ch. 406.1,3) makes it clear that the date palm is being discussed.) Comparisons of the LSJ entries with those in the lexica of Carnoy (1959) and André (1956) have resulted in confirmation of the majority of translations, and more suitable alternatives in several others. Consideration has also been given to the information found in other ancient authors, including Galen, Dioscorides, Theophrastus and Pliny the Elder; of these, the work of Dioscorides (Περὶ ὕλης ἰατρικῆς) is a valuable source of synonyms and detailed botanical descriptions, together with therapeutic indications with which Aëtius' work can be matched. Regard has also been given to Beck's translation, influenced by André, of Dioscorides' plant names (Beck, 2011). Finally, occasional archaic terms used in LSJ have been replaced with names from a modern dictionary or encyclopaedia (Chambers, 2011; *RHS*, 1993).

When doubts and discrepancies about plant name translation occur, these are discussed in the running commentary; if no such comment is added, the translation has been examined by the above procedure, and is considered sound. Sometimes, however, it is impossible to remove a degree of uncertainty about which plant was being used. When there is a possibility of alternative translations, all the species in question have been included in the modern pharmacological assessment.

Some Problems with Anatomical Terms

Precision in anatomical nomenclature is essential in modern medicine, and has been facilitated by the use of internationally agreed conventions, such as the *Basle Nomina Anatomica* of 1895, the *Birmingham Revision* of 1933, and the *Nomina Anatomica* of 1961 (Romanes, 1964: 989). Ancient physicians also valued clarity, as is made clear in works such as Rufus' *De corporis humani appellationibus* and Galen's *De usu partium*,

where description of organs' appearance, location and function is often supplemented by additional information about synonyms and the derivation of their names. Unfortunately, whether due to changes in usage over the centuries, or simply some imprecision on Aëtius' or Galen's part when describing pharmacological effects, uncertainty about meaning arises in some instances. Particularly when dealing with the alimentary canal, Aëtius presents the translator with some dilemmas, which I shall now discuss.

The gullet, or oesophagus, is accurately described by Rufus, and referred to as ὁ στόμαχος (*Anat.* 20.2-21.1), which, he says elsewhere, is synonymous with ὁ οἰσοφάγος (*Onom.* 157-158). In *De usu partium*, Galen says he uses the term οἰσοφάγος, but it is generally called στόμαχος (K3.267.2-4); he also refers to it as τὸ στόμα τῆς κοιλίας [lit. "the mouth of the abdomen"], "which they call οἰσοφάγος" (K3.409.7-8). According to LSJ, στόμαχος is also used by Galen to mean "stomach", although the examples cited (K6.227, K15.460) do not provide anatomical confirmation. The word οἰσοφάγος does not appear in Aëtius. Instead, he uses τὸ στόμα τῆς κοιλίας four times (1.35.6, 52.10, 170.4, 406.9); in the first of these, he quotes Galen (11.830.18-831.1), in 170.4 he has modified Galen, who has τοῦ στόματος τῆς γαστρὸς (11.889.6-7), and in the other two instances, no such words appear in Galen's entries.

The meaning of στόμαχος as used by Aëtius is open to debate. It appears twenty-one times in book 1; for ten of these Galen has been quoted. Consideration of the context of each entry can be used to indicate the likely meaning. For example, assertions that a simple strengthens the στόμαχος (52.5, 99.6, 179.6), or nourishes it (100.21), or upsets it (390.6), or relaxes it (52.8), or can be used for it when it is chilled and flaccid (131.26), suggest that it be translated as "stomach" rather than "gullet"; only one of these instances (179.6) appears also in Galen. In one instance, Aëtius says that a simple stings the στόμαχος and is therefore κακοστομαχόν, a term which appears seven times in book 1, and is perhaps less clumsily and more accurately translated as "bad for the stomach", rather than "bad for the gullet". Similarly, εὐστομαχός is used six times, and is likely to mean "good for the stomach".

In contrast, descriptions of the στόμαχος as καυσόμενος (220.5) and ἐγκαιόμενος (327.3-4) by both Aëtius and Galen are consistent with heartburn, or reflux oesophagitis, with στόμαχος being translated as “gullet”. In ch. 346, Aëtius, not quoting Galen, treats “those being gnawed in the στόμαχος by troublesome humours” with a Hippocratic remedy for heartburn sufferers (καρδιαλοῦσιν); again, the translation is “gullet”. It seems, therefore, that Aëtius and, to a lesser extent, Galen have used στόμαχος to indicate the stomach as well as the gullet.

The next problem encountered as we descend the alimentary canal is ἡ γαστήρ. LSJ translates this as “belly, paunch”, or “womb”. Rufus, however, defines it as being in the upper abdomen, below the diaphragm, leading down to the pylorus and small intestine – i.e. the stomach (*Onom.*, 169). Galen concurs, describing it as an abdominal organ between oesophagus and intestine, situated between liver and spleen (K.3.277.11-279.13). Nevertheless, consideration of its use in context in Aëtius’ book 1 raises questions regarding its definition as stomach. On twelve occasions (4.7, 61.6, 62.8, 78.3, 84.7, 95.4-5, 142.3, 171.6, 171.10, 289.6, 295.2, 385.7), quoting Galen, Aëtius associates γαστήρ with fluxes or discharges (ῥεῦματα mostly, ῥοώδη twice); it may be that these fluxes are hypothetical or imagined humoral effects on the stomach, but if they are observable to the patient or physician they are most likely to have exited the body via the anus, suggesting the bowel as their origin, and “bowel” as the translation of γαστήρ. In five entries, the simple is said to affect both στόμαχος and γαστήρ; in three of those (chh. 4, 131, 342) the indication for treatment is the same (drying fluxes, chilling and flaccidity, and weakness, respectively), and in the others the γαστήρ is purged while the στόμαχος is relaxed (52), and the γαστήρ is emptied while the στόμαχος is strengthened (179). Aëtius refers also to the γαστήρ being subjected to the laxative effect of a simple, not quoting Galen, in six chapters (52, 109, 227, 233, 379, 380); in one instance (227), he describes, accurately by modern standards, how bran is not broken down in the γαστήρ and has a laxative effect. In ch. 298 a simple has a checking effect on it. Wind in the γαστήρ is mentioned three times (39, 380, 406), but it is not stated whether this is evidenced by eructation or flatulence.

From these data it may be concluded that *στόμαχος* and *γαστήρ* are not synonyms, and that the terms are probably not being used loosely, as the lay public does nowadays, when an “upset stomach” may mean vomiting and/or diarrhoea, and a “stomach pain” may emanate from gall bladder, appendix or any abdominal organ. If *στόμαχος* means stomach rather than gullet, as seems likely on those occasions when it is referred to as being relaxed, flaccid, weak or strengthened, then *γαστήρ* must mean something else; since it is the site of fluxes and target of laxatives, and can be subject to wind, “bowel” seems a reasonable translation in this context, but unfortunately contradicts the clear definitions of Rufus and Galen given above. Furthermore, other words are used for bowel, in particular *ἔντερον*. Although the ancient physicians had a precise knowledge of anatomy in some areas, their lack of physiological knowledge may have led to an overlap in what they saw as the functions of stomach and bowel, leading to discrepancies between anatomical and pharmacological vocabulary.

Either in the singular or the plural, *τὸ ἔντερον* is used eight times in book 1, and may be satisfactorily translated as “intestine” (synonymous in modern medicine with gut or bowel). Rufus describes how it continues below the stomach (*γαστήρ*), and how the small intestine (*τὸ λεπτὸν ἔντερον*) reaches the caecum and colon (*Onom.*, 169-171). Aëtius specifies the small intestine once (171.8), and in another instance (194.3) he says the *ἔντερον* is subject to a simple’s laxative effect. The problem is that while *ἔντερον* certainly means intestine/gut/bowel, doubt is cast on using the same translation for *γαστήρ*. On one occasion, Aëtius, quoting Galen, talks in the same sentence of healing the pangs of the *στόμαχος*, and drying fluxes affecting the *γαστήρ* and *ἔντερα*, which are therefore separate entities (289.5-7); here, perhaps, *στόμαχος* may mean “gullet”, *γαστήρ* “stomach”, and *ἔντερα* “intestines”.

The definitions of *ἡ κοιλία* given by LSJ include “thorax with abdomen, belly, abdomen, intestines, bowels, excrement, any cavity of the body, womb”. Rufus says that *ἄνω κοιλία* and *κάτω κοιλία* are synonyms for *γαστήρ* and *κόλον* respectively (*Onom.*, 169, 170), which would suggest “gastro-intestinal tract” as a translation for *κοιλία*. In book 1, Aëtius uses the word twenty times (not including references to *τὸ στόμα τῆς κοιλίας*

[gullet]), quoting Galen in half of these. On one occasion, not quoting Galen, he says an oil softens the exterior of the κοιλία, making the most likely translation “abdomen”. In other chapters, the context is less helpful, when the κοιλία is affected by fluids (7.4, 57.4), 188.5), or inflammation (57.7, 270.2, 384.4), or is simply upset (166.8); nevertheless, the translation as “abdomen” is still reasonable. In one instance (57.7-8), it is clear that the κοιλία is a separate entity from the thorax. In the remaining twelve instances, the κοιλία is either cleansed, purged or stimulated, constipated, checked or restrained, or destroys what has been swallowed, and translation as “gut” or “bowel” seems quite possible, but overlaps the meaning of ἔντερον and, in this context, γαστήρ.

In order to provide a reasonably consistent translation in this text, which is a pharmacological rather than an anatomical treatise, I shall translate these problematic terms as follows:

τὸ στόμα τῆς κοιλίας:	gullet
ὁ στόμαχος:	stomach (if necessitated by text, gullet)
εὐστόμαχος:	good for the stomach
κακοστόμαχος:	bad for the stomach
ἡ γαστήρ:	bowel (if necessitated by text, stomach)
τὸ ἔντερον:	intestine
ἡ κοιλία:	abdomen
κοιλιακός:	suffering from abdominal complaint.

The remainder of Aëtius’ anatomical terminology does not present such difficulties in translation. The following few occurrences are worthy of comment:

ἡ μήτρα and ἡ ὑστέρα appear to be used by Aëtius for uterus, without any distinction between them; μήτρα is used five times, ὑστέρα four times, in very similar contexts. Both even appear in the same sentence (383.7-8). Soranus, in his work on gynaecology, has μήτρα, ὑστέρα and δελφύς as synonyms, and offers derivations for them (*Gyn.*, 1.6).

οἱ μαστοί is used for breasts three times. οἱ τιτθοί appears twice; in ch. 147 this is in relation to indurations, the likely meaning being “breasts”,

and in ch. 348 reference to inflammation, fieriness, discharge and surrounding materials makes “nipples” possibly a better translation.

For testicles, Aëtius uses οἱ ὄρχεις three times and οἱ δίδυμοι once. As they are being treated for indurations in three instances, and having a poultice applied in the remaining one, the alternative LSJ translation of “ovaries” can be rejected. In his description of testicles, Rufus states clearly that ὄρχεις and δίδυμοι are synonyms (*Onom.*, 105).

For ἡ πόσθη, LSJ gives the alternative translations “*membrum virile*” and “foreskin”. Πόσθη on its own (37.8) can be translated as penis, but πόσθη αἰδοίου (2.4) may have the latter meaning, consistent with the descriptions by Rufus (*Onom.*, 102.2) and Galen (K3.898.5-7; 910.19).

For uvula, Aëtius uses ἡ κίων (16.3) and ὁ γαργαρέων (209.5); in the former instance he has changed Galen’s text, which has γαργαρέων, in the latter he has quoted him precisely. In book 8.43.1-6, Aëtius gives these terms as synonyms, and goes on to discuss diseases of the uvula.

Translation of Terms Indicating Pathology

It is difficult, and in some instances impossible, to understand exactly what the ancient writers meant by certain technical terms describing diseases, and to render those terms into modern English, in which precise definitions exist for each aspect of pathology. While an attempt is made to accommodate modern diagnosis, a further complicating factor is the possibility that, over the centuries, diseases may change in prevalence, severity and even clinical presentation. As I propose to demonstrate, the information to be found in lexica is sometimes limited or inadequate. On occasions, Greek words, adopted into English as modern disease names, have come to be applied to entirely different diseases. Rather than suspend the translator’s responsibility and leave untranslated, possibly transliterated, those terms, or at least a selection of the more problematic ones, I shall now list my choice of words to represent Aëtius’ words, and since the accuracy of this attempt is open to debate, I shall include a discussion of how I reached these translations. I shall also note the frequency with which they occur in the plant simples of book 1, and in which chapters.

Terms whose meanings are debatable are shown in bold; for other terms the LSJ translation is acceptable with minimal discussion.

αἰγίλωψ, ὁ: 2 instances (9, 185). LSJ definition: “ulcer in the eye, lachrymal fistula”. In book 7.87 Aëtius describes a small abscess close to the inner canthus, difficult to treat because of the proximity of bone, capable of spreading harm to the eye through the lacrimal canaliculus (διὰ τοῦ φυσικοῦ κατὰ τὸν κανθὸν μικροῦ τρηματίου 7.87.5); inflammation is a notable feature. If treatment with various topical preparations fails, surgery or cautery may be required (7.88). (For modern equivalent with illustration, cf. Chawla, 1993:130.)

Proposed translation: **dacryocystitis**.

αἵματος ἀναγωγή; αἷμα ἀνάγων – bringing up of blood; one bringing up blood: 12 instances (15, 61, 96, 146, 156, 159, 171, 203, 192, 262, 327, 381). Whether the meaning is haemoptysis or haematemesis is not stated. The former is specified in 5 instances [v. αἵματος πτύσις, αἰμοπττικός]; the latter would suggest upper gastrointestinal tract bleeding, usually a serious event often fatal within a short period (Longmore et al., 2001: 208).

αἵματος πτύσις; αἰμοπττικός – haemoptysis; one suffering from haemoptysis (spitting up blood): 8 instances (62, 95, 139, 246, 252, 291, 341, 383) (for causes, v. Longmore et al., 2001: 61).

αἰμορραγία, ἡ – haemorrhage, bleeding (site unspecified): 2 instances (262, 388).

αἰμορροίδες, αἰ – piles: 4 instances (128, 141, 232, 234). In each case, the piles are supposedly “opened up” by the simple.

ἄκροχορδών, ἡ (usually in plural): 2 instances (63, 391). LSJ: “wart with a thin neck” (related to χορδή, a sausage). They are mentioned frequently in Dioscorides and Galen, usually in association with μυρμηκία [q.v.], from which, as Galen says, they differ by sticking out from the skin (K.10.1011.6-9). Plutarch notes that Fabius Maximus was called “Warty” (ὁ Βερρούκωσος) because he had a small ἄκροχορδών growing over his lip (*Fabius Maximus*

1.4.3). According to Oribasius, citing Heliodorus, they can appear on any part of the body, most often the fingers, and they are smooth, fleshy projections with a narrow base (*Coll. med.* 45.14.1-2).

Proposed translation: **pedunculated wart**.

ἀλφός, ὁ (usually in plural): 11 instances (5, 22, 94, 101, 140, 148, 162, 232, 295, 315, 413). LSJ: “dull-white leprosy”. This diagnosis is too specific for an age when differential diagnosis was in its infancy (cf. Nutton, 2005: 29-30), and, in addition to leprosy, other diseases such as vitiligo and pityriasis versicolor can cause areas of hypopigmentation (Marks, 1983: 174; Longmore et al., 2001: 416). According to the Hippocratic corpus, it was a spring disease (*Aph.* 3.20); Theophrastus suggested it might be hereditary (*Char.* 19.2); Galen differentiates between ἀλφοί, white lesions (λευκοί), and dark lesions (μέλανες), and suggests that ἀλφοί consist of a coagulum of flakes on the surface of the skin (7.227.4-9). Aëtius refers once in book 1 to “white *alphi*” (ἀλφοὺς...λευκοὺς (73.4-5) [148.4-5]), which may be pleonastic, or indicate a different form of disease.

Proposed translation: **pale skin lesion**.

ἀλωπεκία, ἡ: 11 instances (2, 7, 9, 54, 63, 108, 141, 232, 234, 271, 295). LSJ: “bald patches” (derivation related to mange in foxes – cf. Aëtius 6.55.9-10). Aristotle says it is related to a change or damage to the surface of the flesh (*Prob.* 893b 37-40), and Aëtius stresses that it is a different disease from ῥεοῦσαι τρίχες [q.v.], and offers various humoral explanations for its cause (6.55). The modern term “alopecia areata” signifies bald patches of unknown aetiology, a fairly common disease affecting both sexes at any age; bald patches can also result from trauma, burns and certain infections, such as kerion (Sneddon & Church, 1964: 83, 164-6).

Proposed translation: **patchy hair loss**.

ἀμβλυωπία, ἡ – visual impairment: 3 instances (189, 254, 349).

ἀνὰ σάρκα – anasarca (generalised severe oedema): 1 instance (321).

ἀναγωγή, ἀνάγειν / ἀνάπτυσις, ἀναπτύεσθαι...ἐκ θώρακος καὶ πνεύμονος – bringing up/coughing up...from chest and lung: unspecified material, in 4 instances (166, 233, 241, 311); thick and sticky material/liquids/humours in 6 instances (7, 13, 31, 81, 138, 147). The adjectives “thick and sticky” (παχέα καὶ γλίσχρο) seem inseparable, and the anatomical provenance of such material is always referred to, rather pleonastically, as “chest and lung”, even though it can only come from the lungs, inevitably sited in the chest, and not directly from the chest. The diseases responsible are likely to have included acute or chronic bronchitis, and bronchopneumonia. There are 3 similar instances indicating lung disease: unblocking and purification of the lungs (323), relief of abscess formation (324), and purgation of pus (381).

ἄνθραξ, ὄ (usually in plural): 6 instances (71, 113, 185, 236, 238, 321). LSJ: “carbuncle, malignant pustule” or possibly “smallpox”. From Galen’s description (7.719.7-720.4), it appears to be a hot swelling of the skin with a central black, ash-like scab, surrounded by dark, gleaming inflammatory tissue, which ulcerates; this fits the description of a carbuncle (Grist et al., 1993: 70-1). Although it can have similar skin lesions, the disease known nowadays as anthrax is a serious systemic infection, usually fatal without antibiotic intervention.

Proposed translation: **carbuncle**.

ἀπόστημα, τό: 3 instances (7, 117, 156). LSJ: “abscess” (also, “distance, interval”). Aëtius says that its formation deep in the body can cause serious systemic upset (5.51), that ἀποστήματα can occur in the lung (8.63.15), in eyelids (7.81) (where “styes” would be a more appropriate translation), in the tongue (8.41), and as a consequence of tonsillitis (i.e. quinsy formation), when, if they do not burst spontaneously, incision is required to permit evacuation of pus (8.48.65-67). All this is consistent with the definition of an abscess as a walled-off collection of pus, and the LSJ translation is sound.

Proposed translation: **abscess**.

ἄργεμον, τό: 1 instance (165). LSJ: “a white speck on the eye”. Aëtius is more specific, and says it is a small sore on the iris, white in appearance, which can be complicated by choroidal prolapse and scab formation, if not treated properly (7.28). What this may have been in terms of modern pathology is unclear.

Proposed translation: **white lesion on iris**.

ἄρθριτικά, τά; ἄρθριτικός – joint diseases; suffering from arthritis: 2 instances (166, 321).

ἀρτηριακός – suffering from windpipe problem: 1 instance (94).

ἀσθματικός (usually in plural): 6 instances (43, 175, 181, 234, 322, 370).

LSJ: “suffering from dyspnoea or asthma; panting”. Aëtius discusses and defines the terms ὀρθοπνοικός, ἀσθματικός and δυσπνοικός, along with the principles of their treatment, in book 8.63.1-44. Ἀσθματικοί are those who, though afebrile, are suffering from rapidity of breathing, as if they had been running fast (“tachypnoea”, in modern terminology, typically caused by conditions such as heart failure, pulmonary emphysema or fibrosis); this is different from the modern term “asthmatic”, which implies reversible respiratory distress characterised by prolonged expiratory phase, wheeze and hyperinflation of the lungs (Longmore et al., 2001: 172). Largely quoting from Galen (13.105.19-106.12), he says that, in contrast, ὀρθοπνοικοί are obliged by fear of choking to maintain their chests in an upright position, and have to arrange their bedding to accommodate this, lest they choke while asleep (the modern term “orthopnoea” has the same meaning, referring to the problem encountered typically by those suffering from pulmonary oedema due to heart failure, and from acute asthmatic attacks and some lung infections). Inhalation is easier than expiration, and they keep their chests inflated. Concerning δυσπνοικοί, Aëtius is less clear than Galen, who cites Asclepiades and describes them as having thick and sticky liquids in their bronchi (perhaps equivalent to acute or chronic bronchitis in modern terminology), which require a

different treatment from lung abscesses, ἀσθματικοί, and ὀρθοπνοικοί (13.110.15-111.9).

Proposed translation of ἀσθματικοί: **those suffering from breathlessness.**

ἀσκαρίς, ἡ (usually in plural): 3 instances (113, 175, 189). LSJ: “worm in the intestines”. According to Aëtius, these are found in the rectum and around the anus, cause intense itching, and are prevalent in children (9.38.15). Elsewhere, however, he says they may occur in the small intestine (3.156.1). Unfortunately there is no description of their appearance, but the given details are highly suggestive of threadworm (*Enterobius vermicularis*) (Grist et al., 1993: 127-8).

Proposed translation: **threadworm.**

ἄφθαι, αἱ: 1 instance (62). LSJ: “thrush”. **ἀφθώδης**: 1 instance (238). LSJ: “suffering from ἄφθαι (thrush)”. Citing Galen, Aëtius describes ἄφθαι as causing a superficial ulceration in the mouth, associated with some burning heat, generally affecting the newborn. Through time they can become hard to remove and septic, and spread. They feel raised, and their colour can tend to red, yellow, white or livid. (8.42.1-14) Other types of mouth ulceration are possible (8.42.70). Thrush in modern medicine is a painful infection in which deposits of a whitish material are found strongly adherent to underlying inflammatory patches in the mouth, especially in infants, but usually without true ulceration; the causative organism, a yeast, can also infect moist flexures, and genital mucous membranes. Aphthous ulcers are a different condition, and usually affect older children and young adults, and, either spontaneous or post-traumatic, cause painful, self-limiting, temporary ulceration in the mouth (Braun-Falco et al., 1991: 232-3).

Proposed translation: **oral thrush; related to oral thrush.**

ἀγλός, ἡ: 1 instance (165). LSJ: “mist over the eyes”. According to Aëtius, this is a bluish mistiness which occurs when epiphora causes superficial damage to the dark part of the eye; visual impairment results when the pupil is involved (7.1-6). Whether this is cataract

or corneal opacification is unclear, but as Aëtius lists ἀχλυσ as a disease of the κερατοειδῆς χιτῶν (tough outer layer of the eye) (7.2.19-20), the latter translation seems more likely.

Proposed translation: **corneal opacification**.

ἀχωρ, ὁ (usually in plural): 3 instances (58, 117, 162). LSJ: “scurf, dandruff”. Oribasius, however, says that it consists of ulcers (ἔλκη) producing a mucoid moisture, and can occur on the cheeks and hairy pubic regions (*Ecl. Med.* 7.1.1-3). Aëtius, paraphrasing Oribasius (*Syn.* 8.28.1-2), says it is a disease of the scalp characterised by an efflux of thin, moderately sticky fluid through fine apertures in the skin, and that it is similar to κηρίον, around which there is a honey-like moisture (6.68.1-6). This does not sound like seborrhoeic dermatitis, in which the scalp becomes greasy and sheds flakes of skin (dandruff) (Braun-Falco et al., 1991: 319), but more like the fungal infection tinea capitis (ringworm of the scalp) (Braun-Falco et al., 1991: 223), with κηρίον translatable as “kerion” (scalp lesion due to cattle ringworm) (*OCMD*).

Proposed translation: **ringworm of scalp**.

βήξ, ὁ; βήττων; βηχικός; – cough; coughing; suffering from a cough: 4 instances (68, 141, 192, 370).

βλέφαρα, τά – eyelids: 2 instances; there is reference to πτίλα βλέφαρα [blepharitis] (325) and μυδῶντα βλέφαρα [purulent blepharitis] (343). In addition, πτίλωσις (255) can be translated as blepharitis. In each case, involvement of the canthi (corners of the eye) is mentioned.

βράγχος, ὁ – sore throat: 1 instance (378)

βρογχοκίλη, ἡ – throat tumour (non-specific – cf. Aëtius 15.6): 1 instance (64).

γάγγραινα, ἡ; **γαγγραινώδης**: 2 instances (13, 185). LSJ: “gangrene; of the gangrene kind”. Galen describes a disease in which, following inflammation and redness, there is lividity, numbness and loss of pain, and irretrievable destruction of the whole limb affected; this condition, however, which would fit a modern definition of

gangrene, he calls σφάκελος (which LSJ translates also as “gangrene”), and he says γάγγραινα is a mid-point stage between inflammation and σφάκελος (K18(1).687.5-17). No such condition of slight or partial gangrene is recognised in modern medicine.

Proposed translation: **gangrene; gangrenous.**

γαργαρέων, ὁ – uvula: 1 instance (209). [v. also κιονίς.]

γαστήρ, ἡ – bowel [For discussion of translation of anatomical terms, v. p. xxv]: 17 instances (39, 52, 112, 131, 180, 202, 221, 226, 227, 257, 283, 298, 305, 311, 342, 379, 387). Frequently, the simple is said to have an effect on bowel motility; on other occasions, the disorder treated includes flatulence, sharp humours, weakness and flaccidity. In addition, bowel fluxes are mentioned 10 times (listed separately under ρεύματα).

δῆγμα, τό; δηχθεῖς – bite/sting; bitten/stung: 6 instances, including ἐχιόδηκτος [q.v.], and (in 137) poisonous creature attack (5, 6, 22, 137, 175, 321). The animals involved include vipers, mad dogs, asses and pregnant field-mice.

διάνοιαν τετραγμένος – disturbed in thought: 1 instance (166).

διάρροια, ἡ – diarrhoea: 4 instances (5, 73, 96, 245).

δίδυμοι, οἱ – testicles; 1 instance, involving swelling (166).

δυσεντερία, ἡ – dysentery (i.e., a disease typified by diarrhoea, often mucosanguineous, fever and systemic upset, now known to be caused by microbial infection) (Grist et al., 1993: 113, 341-2): 21 instances (35, 61, 62, 85, 95, 96, 171, 202, 233, 245, 246, 251, 261, 262, 264, 283, 295, 327, 328, 341, 383). Various descriptions consistent with the modern definition of the disease appear in ancient texts (e.g., Oribasius *Coll. med.* 8.25.1; *Ecl. med.* 54.1), although there would have been no differentiation from salmonellosis or ulcerative colitis.

δυσηκοία, ἡ – hearing loss: 1 instance (105).

δυσουρία, ἡ – dysuria: 1 instance (128).

δυσπνοία, ἡ: 1 instance (192). LSJ: “difficulty of breathing, shortness of breath”. [For discussion, v. ἀσθματικός.]

Proposed translation: **dyspnoea**.

δυσπνοιικός (usually in plural): 2 instances (321, 412). LSJ: “short of breath”. [For discussion, v. ἄσθματικός.]

Proposed translation: **suffering from breathing difficulties**.

ἔδρικά, τά – anal conditions (unspecified): 1 instance (159).

ἔλεφαντίασις, ἡ: 1 instance (175). LSJ: “elephantiasis”. According to Galen, the name of the condition comes from its superficial resemblance to an elephant (10.82.12-13). In fact, blockage of lymphatic drainage, often caused by chronic or recurrent infection, or metastatic cancer, can lead to gross swelling of a limb, with thickening of the skin. Nowadays, the term is usually applied to the results of lymphatic filariasis, but as this is a tropical disease, it probably should not be included in Aëtius’ use of the word (Underwood, 2004: 53, 134).

Proposed translation: **elephantiasis**.

ἔλκος, τό (usually in plural): 31 instances (2, 4, 16, 28, 34, 36, 37, 61, 94, 121, 175, 193, 205, 229, 233, 237, 250, 255 (X2), 261, 307, 312, 318, 326, 327, 336, 351, 370, 400, 411, 414). These are sometimes qualified according to their anatomical site: buttocks (16), penis (37), ears and noses (205), anus (261), eyes (255, 370), mouth (237, 261, 318); or their nature: bleeding (4), swollen (16), septic (34, 307, 414), and weeping (121). [v. also ἔλκη κακοήθη.] LSJ: “wound; festering wound, sore, ulcer”. Galen defines ἔλκος as a breach in a fleshy part of the body (10.232.1-5). In modern medicine, an ulcer is an area of destruction in the skin or a mucous membrane. While reserving the word “wound” as a translation of τραῦμα [q.v.], I think “ulcer” is closest to the meaning of ἔλκος.

Proposed translation: **ulcer**.

ἔλκη κακοήθη, τά: 16 instances (46, 128, 145, 162, 172, 180, 193, 205, 221, 261, 277, 307, 312, 320, 329, 368). LSJ (for κακοήθη): “malignant”. Aëtius uses the term to describe progressive, painful, foul-smelling lesions which destroy the eye (7.34.1-8); similar ulcers can affect the lips (8.9.15), and he also talks of cancerous and κακοήθη ulcers in the intestine, which are generally incurable

(9.42.249-250). The problem is that nowadays the term “malignant ulcer” suggests cancer, whereas in ancient times it is unlikely that clear distinction could be made between some uncontrolled infections and neoplasm, especially of the skin. The less precise term “refractory” is almost suitable, but fails to convey the idea of progression or invasion. A compromise regarding accuracy is required.

Proposed translation: **malignant ulcers**.

ἔλμινς, ἡ (usually in plural, ἔλμινθες): 16 instances, of which 6, marked with asterisk, contain references to flat worms (1, 5*, 113, 156, 159, 162, 175, 182, 219*, 271, 278, 283*, 285*, 336*, 370, 413*). LSJ: “worm; intestinal worm”. Aëtius is expansive about worms, citing Herodotus. He says they can be red or white, vomited up or voided in the faeces, and can cause a variety of symptoms, including systemic upset; he also suggests various possible causes and treatments (9.37.1-74). Elsewhere, he says intestinal worms can be round or flat (3.156.1). Unfortunately, it is impossible to relate accurately Aëtius’ roundworms to those known to infest sufferers in Old World non-tropical regions at the present time: hookworms (*Necator americanus*, *Ankylostoma duodenale*), *Ascaris lumbricoides*, *Trichinella spiralis*, and whipworms (*Trichiuris trichiura*) (Longmore et al., 2001: 616). [Microscopic nematodes omitted; v. also ἀσκαρίς.] In 9.37.128-144 he gives us his views on flat worms: they are found in the small bowel and have a continuous attachment to the stomach, they compete for nourishment with their host, who is thin, sluggish and hungry, but afebrile. This description, based on clinical observation, possibly augmented with reported post-mortem findings, is highly suggestive of tapeworms (pork – *Taenia solium*; beef – *T. saginata*) (Longmore et al., 2001: 618).

Proposed translation: **worms** (**roundworms** as appropriate, **tapeworm** for “flat worm”, ἡ πλατεῖα ἔλμινς).

ἐμπυκός – affected by suppuration: 2 instances (241, 322).

έντεροκηλικός – suffering from intestinal hernia (precise anatomical site unspecified): 3 instances (171, 236, 381).

ἐπίκαιμα, τό – corneal ulceration (in this context): 1 instance (165). (From description in Aëtius 7.27.8-10).

ἐπιληψία, ἥ; ἐπιληπτικός – epilepsy; epilepsy sufferer: 7 instances (6, 43, 84, 196, 234, 318, 356). The grand mal form of the disease is referred to (e.g., Hipp. *Morb. sacr.* 7.2-7), and febrile convulsions of childhood were included (*ibid.* 10.3-6).

ἐπινυκτίς, ἥ: 1 instance (221). LSJ: “pustule which is most painful at night”. Oribasius, citing Rufus, describes them as spontaneously erupting, small, reddish, pustular sores, which contain a serous, blood-stained liquid. They are not very troublesome during the day, but painful at night, disproportionate to their size. (*Coll. med.* 44.17.1-3) This description does not match accurately any modern diagnosis, but bed-bug bites may be a possibility.

Proposed translation: **night-pustule**.

ἐπιφορά, ἥ – epiphora [in context]: 1 instance (255).

ἔρπηξ, ὁ (usually in plural): 9 instances (8, 113, 146, 221, 236, 261, 307, 327, 339). LSJ: “shingles” (also “an animal (? snake)”). In modern medicine, shingles (herpes zoster) is a vesicular eruption, followed by crusting and healing, nearly always confined to a dermatome, i.e. the area of skin served by a single sensory nerve root; this clearly demarcated distribution is pathognomonic. Moderate to severe pain, including prodromal hyperaesthesia and post-herpetic neuralgia, is a typical feature. In contrast, herpes simplex, a different viral disease, causes vesicles and crusting around the mouth and nostrils (“cold sores”), on genital mucous membranes and occasionally on the fingers, and on first infection in young children it can produce herpetic gingivo-stomatitis. The description of ἔρπηξ by the ancients has features, some of which accord with, some of which are at variance with, what is described in modern medicine. Galen says it can ulcerate the skin (7.722.8-12), and it produces superficial lesions with a thin juice derived from yellow bile (10.1006.16-1007.1). In a discussion of the

naming of diseases, he says it does not always ulcerate, but, when it does, it abandons its original site and spreads into neighbouring areas, in the custom of a creeping creature; this, he says, explains the derivation of its name [ἔρπω – I move, creep, roam] (10.83.17-84.3). The lesions of shingles can appear at one point and then spread within the dermatome, but the original site is not “abandoned”, and if the “neighbouring areas” are outwith the dermatome, the disease is almost certainly not shingles. Galen also mentions a case of ἔρπης on a woman’s ankle (10.1007.11). Aëtius refers to ἔρπης below the skin (15.44.18). The ancient term may well include different diseases including shingles and cold sores, but I feel it would be too specific to call it “shingles”, although no accurate alternative is available. (cf. Braun-Falco, 1991: 22-4, 32-5.)

Proposed translation: **herpes**.

ἐρυσίπελας, τό: 9 instances (5, 8, 23, 80, 113, 165, 220, 221, 339). LSJ: “erysipelas”. In modern medicine erysipelas is a clearly demarcated acute superficial inflammation of the skin, caused by bacterial infection (erysipeloid is a milder infection, caused by a different infective agent), and while the ancient term may include this disease, there are, however, clear differences which, I believe, render simple “erysipelas” unsuitable as a translation. According to Galen, ἐρυσίπελας causes burning and swelling in the skin (10.947.14-16); it can exfoliate the epidermis, and spread deep through time into the dermis, and cause ulceration. There are two forms of the disease, he says – ulcerating and non-ulcerating. It represents one extreme of a disease spectrum modified by humoral influences, with φλεγμονή [q.v.] at the other extreme; the predominance of blood produces the latter, yellow bile the former, with the possibility of intermediate forms – φλεγμονῶδες ἐρυσίπελας and ἐρυσίπελατώδης φλεγμονή, and also a mid-point disease (μέσον) (10.948.14-949.16). Φλεγμονή causes redness of the skin, ἐρυσίπελας a pale to dark yellow discolouration, thus matching their supposed humoral origins. A further differentiation

introduced by Galen is between swollen and hard forms (ἐρυσίπελας οίδηματῶδες (10.952.17); σκιρῶδες ἐρυσίπελας (10.953.1-2)). Aëtius says ἐρυσίπελας can affect internal organs and cause a serious fever, known as malignant intermittent, delirious, or chilling, depending on involvement of the stomach, liver, or lung, respectively (5.90.1-5); he also says it can affect the rectum and anus (3.159.50-51), and the brain, when it causes a burning global headache and chilling of the face and upper abdomen (6.26.2-4). Cellulitis is an acute infective inflammation which affects tissues deep to the skin and causes changes visible on the surface; if untreated, it can lead to necrosis, pointing and discharge of pus; it is, nowadays at least, more common than erysipelas. Aëtius' (and Galen's) ἐρυσίπελας may include both cellulitis and erysipelas, extrapolated to explain acute internal diseases associated with pyrexia; the described skin colour remains puzzling, and any label used for translation will be of admittedly limited accuracy. (cf. Braun-Falco, 1991: 174-5, 211; Grist et al., 1993: 62-5, 65-8.)

Proposed translation: **cellulitis**.

ἐσκληρυσμένα, τά – the hardened parts: 1 instance (123). [v. also σκληρία.]
 ἐσχάρα, ἦ – eschar (slough overlying burn, skin ulcer, etc.): 4 instances (128, 277, 321, 411).

ἔφηλις, ἦ (usually in plural): 9 instances (22, 31, 58, 101, 117, 219, 221, 234, 315). LSJ: “rough spots which stud the face” or “freckles” (also, “rivet, burr, clinch”). Suggested derivation is from ἦλος (stud) or ἥλιος (sun). Aëtius says of them: “[They] occur on the face, around the cheeks and nose; they appear however not to be very deep-set, but resemble a scum. Therefore, having gently raised them by rubbing, it is necessary to let them dry out and to recommend the application of one of the soaps. They are dispersed by these measures, if they are separated in such a way as to be removed with the fingers. This has to be accomplished not in a violent manner, but lightly and briefly.” (8.12.1-7) He then goes on to list a large number of prescriptions for the removal of

residual lesions. Keratoses are raised, non-inflamed skin lesions arising from the horny outer layer, and, when induced by sunlight (actinic or solar keratoses), commonly affect exposed areas such as the face, scalp and backs of hands (Braun-Falco et al., 1991: 6, 999-1000). They are, however, unlikely to be removed by rubbing, but judging by his list of prescriptions for their removal, Aëtius was not particularly successful at rubbing them off. Freckles are small, flat pigmented lesions, more common in fair-skinned peoples, arranged in clusters, and induced by sunlight on exposed parts of the body; these, possibly, are what are meant by φακοί [q.v.].

Proposed translation of ἐφηλίδες: **keratoses**.

ἐχιόδηκτος – bitten by a viper: 1 instance (5) [v. δήγμα].

ἦλος, ὁ (usually in plural): 2 instances (174, 271). LSJ: “wart, callus”.

Oribasius describes these as tender, hard lesions on the soles of feet, with a tendency to spread or recur (*Coll. med.* 45.13.1-2) (cf. Braun-Falco et al., 1991: 16).

Proposed translation: **plantar warts**.

ἦπαρ, τό; ἥπατικός – liver; sufferer from liver complaint: 39 instances (3*, 6, 31*, 46*, 51*, 56, 58, 84*, 89, 100, 110, 121, 131, 145, 146, 148, 150, 162, 175, 176, 179, 180*, 193, 196, 270, 277, 283, 289, 298*, 309*, 332*, 342, 379, 380, 384, 387, 406*, 414*, 415*). Those chapters in which the problem was said to involve blockage are marked with an asterisk (12/39); association with jaundice is marked by underlining (5/39). In 4 instances, the liver disease was said to be a potential side-effect of the drug (298, 379, 380, 406).

ἦχος, ὁ – tinnitus: 2 instances (105, 107).

θώραξ, ὁ – chest: 2 instances (135, 390); the problems were chilling and chronic pain, respectively. [v. also ἀναγωγή.]

θύμος, ὁ – genital wart: 1 instance (391). These are mentioned frequently by Galen, Oribasius and Aëtius in lists of warty growths, and in book 16.121 Aëtius is more expansive about anal and genital warts, which may be malignant or non-malignant, and discusses how to excise them from female genitalia, and prevent recurrence (16.121).

ικτερικός; ίκτεριῶν – jaundice sufferer (cause unspecified): 5 instances (5, 234, 332, 360, 396).

ἰονθος, ὁ (usually in plural): 2 instances (58, 107). LSJ: “eruption on the face, which often accompanies the first growth of beard, etc.” Its lesions, which Galen distinguishes from sycosis barbae (K12.822.16-824.2), produce a thick discharge. Aëtius says some call them ἀκνάς (8.14.1), and acne vulgaris would fit the diagnosis, although I should have expected many more references to what is, at least nowadays, such a common disease (Braun-Falco et al., 1991: 717-22).

Proposed translation: **acne**.

ἰσχιάς, ἡ; ἰσχιαδικός (usually in plural): 14 instances (81, 108, 148, 162, 164, 175, 181, 193, 196, 219, 318, 328, 400, 414). LSJ: “sciatica; suffering from sciatica” (also, “of the hips”). Sciatica in modern medicine is the symptomatic expression of interference to either or both the L5 and S1 roots of the sciatic nerve (*OCMD*), and such precise diagnosis does not appear in ancient texts. [v. also ἰσχίων πόνος.]

Proposed translation: **hip problems**.

ἰσχίων πόνος – hip pain: 3 instances (166, 180, 321).

καρδιαλγῶν – suffering from heartburn: 1 instance (346). Although the derivation, both of καρδιαλγία and heartburn, suggests that the organ involved is the heart rather than the gullet, it is clear from the context in ch. 346 that the problem is likely to be reflux oesophagitis, now commonly referred to as “heartburn”. [v. also ὀξυρεγμιῶν.]

καρκίνος, ὁ, καρκίνωμα, τό; καρκινώδης – cancer, cancerous: 5 instances (13, 94, 147, 162, 253). Galen says the name comes from a resemblance to the animal (crab) (10.83.14). It is unclear how it was determined whether a lesion was cancerous in our sense of the word.

κατακάυματα, τά – v. under πυρίκαυστα.

καταμήνια ἀμέτρως φέρομενα – menorrhagia: 1 instance (139).

καταμήνια ἐπεσχημένα – retained periods: 1 instance (54).

κατάρροι, οἱ – catarrhs: 2 instances (271, 378). The method of treatment (by smelling) in ch. 271, and the association with other upper respiratory tract diseases in ch. 378, suggest that the word had much the same meaning as it has today.

κασσοῦμενος – suffering from burning fever: 1 instance (35). [v. also πυρετός, ῥῖγος.]

κεφαλαλγία, ἤ; κεφαλῆς ὀδύνη, ἤ; κεφαλαλγῶν – headache; suffering from headache: 7 instances (146, 175, 181, 234, 288, 318, 360).

κεφαλαλγῆς – causing headache: potential side-effect of 10 plant simples (3, 95, 178, 186, 191, 213, 282, 379, 385, 406).

κιονίς, ἤ – uvula: 1 instance (16). [v. also γαργαρεών.]

κοιλία, ἤ; κοιλιακός – abdomen, or gut [For discussion of translation of anatomical terms, v. p. xliii.]; suffering from abdominal disorder: 21 instances (13, 15, 52, 57, 107, 111, 166, 203, 218, 233, 234, 246, 252, 261, 264, 270, 283, 291, 325, 341, 383). In addition, simples are said to be good for the gut (εὐκοίλιος) on 2 occasions (145, 210).

κολικός; κωλικός; κῶλον: 5 instances (κολικός 318, 321; κωλικός 156, 160 [LSJ considers the latter an incorrect form of the former]; κῶλον 31). LSJ: “suffering in the colon, having colic; colon”. [v. also στρόφος.]

κόλπος, ὁ (usually in plural): 5 instances (21, 46, 141, 193, 273). LSJ: “fistulous ulcer”; also, various cavities or folds. Galen defines it as a lesion which occurs when the skin is no longer adherent to the underlying structures (11.125.1-3), and goes on to describe how to drain pus from it. Aëtius’ simples are supposed to close the lesions (chh. 21. 46, 273), or lay them open (141). These comments suggest the meaning “sinus” in the medical sense of abnormal cavity associated with sepsis. The modern medical definition of “fistula” is “an abnormal communication between two body surfaces or cavities” (*OCMD*). The difference between κόλπος and σῦριγξ [q.v.] appears to be mainly one of depth of

penetration, with the latter extending through and beyond the subcutaneous tissues; furthermore, a σῶριγξ has some form of crust.

Proposed translation: **superficial sinus**.

κονίδες, αῖ – nits: 2 instances (108, 189); associated with φθειρες (lice) on each occasion.

κόρυζα, ἦ – nasal discharge: 1 instance (378). Whether the meaning is nasal catarrh due to common cold, vasomotor rhinitis or allergy, it seems surprising that there are not more references to it.

κρότωνες, οἱ – ticks (specifically, according to LSJ, *Ixodes ricinus*): 1 instance (190). [v. also φθειρες.]

λαιγήν, ὁ (usually in plural): 10 instances (108, 140, 141, 145, 209, 247, 322, 341, 391, 413). LSJ: “a lichen-like eruption on the skin, especially the chin, mentagra” (also, “tree-moss, lichen”). Aëtius (8.16), says the lesions of this disease appear on the chin and the rest of the body, and then, paraphrasing Oribasius (*Lib. Eun.* 3.59.1), that they change easily to scabby and scaly lesions. Citing Crito, he goes on to say that the lesions on the chin are very unpleasant, itchy and rather dangerous, and spread to involve the whole face and eyes. Oribasius says the spreading lesion is demarcated in a circular fashion (*Ecl. med.* 78.1.5-6). A long list of treatments includes such drastic measures as skin-removing agents (ἐκδόρια [426.17]). In modern dermatology the term “lichen” is used for some twenty-two different conditions, of which lichen simplex and lichen planus are the commonest (Braun-Falco et al., 1991: 447-9: 678-9); none of these resembles in the least what Aëtius has described, and so “lichen” or “lichenoid” are best avoided as translations. Impetigo, however, is a bacterial skin infection, causing itchy, yellowish, crusting, weeping lesions, especially on the face, spreading outwards as an increasing circular area if untreated (Grist et al., 1993: 69).

Proposed translation: **impetigo**.

λέπρα, ἦ (usually in plural): 10 instances (5, 30, 36, 58, 63, 140, 221, 271, 326, 335). LSJ: “leprosy, which makes the skin scaly”; it is a cognate of λεπίς, ἦ, “a flake or scale”. The adjective, λεπρός, is

applied to nails in chh. 322, 415. The LSJ translation of λέπρα is inappropriate. Although roughened, slightly scaly skin may be found in cases of leprosy (Grist et al., 1993: 349, 350), scaling is a much more prominent feature of various skin diseases, particularly psoriasis (Sneddon & Church, 1964: 128; Braun-Falco et al., 1991: 428). This diagnostic confusion is exemplified in the work of Aretaeus, a contemporary of Galen, when, in the course of a treatise on what otherwise appears to be leprosy, he claims that the skin manifestations appear on the elbows and knees, which is, in fact, a feature of psoriasis (*CD*, 2.13). [For further discussion, v. Grmek, 1989: 165-8; for illustration of leprosy, v. Braun-Falco et al., 1991: 148.] [For Oribasius' description, v. under ψώρα.]

Proposed translation: **scaly skin lesions**.

λίθος, ὁ (usually in plural) – stone. Specifically in kidney: 10 instances (48, 62, 64, 87, 145, 196, 245, 315, 363, 393). In bladder: 1 instance (311). In urine: 1 instance (160). Unspecified, but in absence of any suggestion of gallstones or any other location, assumed to be in urinary tract: 9 instances (4, 7, 89, 160, 194, 209, 220, 237, 298).

ληθαργικός – affected by lethargic fever: 2 instances (146, 321). This disease, possibly a form of encephalitis no longer identifiable, should be distinguished from sleeping sickness (trypanosomiasis), a tropical disease (Grist et al., 1993: 362-3), and is most likely different from the encephalitis lethargica of the first half of the twentieth century (*OCMD*), which, however, serves to remind us of how a new disease can appear and then disappear in a relatively short period of time.

λύζων – suffering from hiccups: 2 instances (43, 364).

μελαγχολικός, – suffering from melancholy (lit. “black bile”): 1 instance (166); some psychiatric condition is indicated by the context, in which other such conditions are listed.

μελανία, ἡ – pigmented lesion: 1 instance (107); dark patches anywhere on the body may be so called.

μυρμηκία, ἡ (usually in plural): 3 instances (63, 174, 271). LSJ: “wart; ant-hill”. Galen says that they are level with the skin (10.1011.8-

9), and should be removed along with their roots (10.1011.7-1012.3). Oribasius, citing Heliodorus, says they can occur in any part of the body, most often the fingers, they are rough projections rooted in the body, and sometimes they can become malignant – dark, thick, prickly, tender and painful; he suggests local excision for the non-malignant variety, and amputation of the affected finger followed by cautery for the malignant sort (*Coll. med.* 45.14.1-4). Aëtius mentions the occurrence of genital μυρμηκίαι (16.120.17). It would seem, therefore, that the term encompasses a variety of pathologies, all of which show close adherence to skin or mucous membrane.

Proposed translation: **sessile wart**.

μῦς, ὅ (usually in plural) – muscle: 3 instances (115, 125, 172); various disorders.

νεῦρον, τό (usually in plural) – sinew (possibly ligament, nerve or tendon, the last of which, however, appears also as τένων): 4 instances (125, 171, 193, 320); various disorders.

νεφρός, ὅ; νεφριτικός – kidney, sufferer from kidney complaint: 9 instances (5, 31*, 46*, 51*, 84*, 145, 160, 230, 298*). Asterisks mark those in which blockage is claimed to be the problem; in ch. 298, it is a supposed side-effect of the drug. (For kidney stones, v. λίθος, ψαμμώδη.)

ξηρόδερμοι – those with dry skin: 1 instance (108); ichthyosis, chronic eczema and lichen simplex are modern candidates for the diagnosis (Braun-Falco et al., 1991: 514-5, 316-8, 678-9).

ὄγκος, ὅ – mass, lump (variously described as “swollen”, “hard” and “unconcocted”, but otherwise not diagnostically specific): 2 instances (172, 322).

ὀδονταλγία, ἡ – toothache: 12 instances (15, 46, 51, 63, 180, 189, 245, 318, 326, 337, 391, 405). (In the first instance, ch. 15, the problem is referred to as ὀδόντας ἀλοῦντας – “those suffering from their teeth”; in ch. 337, it is ὀδόντων ἐψυγμένων ὀδύνας – “the pains of chilled teeth”.)

ὀδόντες σειόμενοι, οἱ – wobbly teeth: 2 instances (296, 318).

οἴδημα, τό – oedema: 4 instances (15, 19, 298, 307). For confirmatory description of pitting oedema, cf. Aëtius 15.1.

ὄξυρεγμιῶν – suffering from heartburn: 1 instance (196). [v. also καρδιαλγῶν.]

ὀπισθότονος, ὁ – opisthotonos (extreme backward spasm, e.g. in meningitis and tetanus): 1 instance (353).

ὄργανα, τά – organs: 3 instances (184, 329, 410); which organs are affected by the simples is not stated.

ὀρθόπνοια, ἡ: 3 instances (271, 341, 356). LSJ: “breathing only in an upright posture, orthopnoea”. [For discussion, v. ἀσθματικός.]
Proposed translation: **orthopnoea**.

ὄρχεις, οἱ – testicles: 2 instances, both involving hardening (145, 147). [v. also δίδυμοι.]

ὀσφύος πόνος – low back pain: 1 instance (166).

οὔλα, τά (σηπόμενα/φλεγμαίνοντα) – (septic/inflamed) gums: 2 instances (50, 110).

οὐλαὶ ἐν ὀφθαλμοῖς – scars in eyes: 5 instances (36, 43, 189, 250, 349); for a more detailed account by Aëtius, cf. 7.39. In addition, there is mention of old ulcers and discharges in the eyes (97), and corneal thickenings (17).

ὀφθαλμίων – suffering from conjunctivitis: 2 instances (166, 418).

ὀφθαλμός, ὁ – eye: 1 instance (94) (unspecified eye condition).

ὀφιάσεις, αἱ – serpiginous bald patches: 1 instance (108). For confirmatory description, cf. Aëtius 6.55.5-10.

παραλελυμένοι – those suffering from paralysis: 2 instances (148, 218).

παράτριμμα, τό – intertrigo: 2 instances (261, 325).

παρίσθμια, τά – fauces: 1 instance (209).

παρωνυχία, ἡ – whitlow (paronychia): 1 instance (261).

παρωτίς, ἡ (usually in plural): 3 instances (13, 145, 147). LSJ: “tumour of the parotid gland”. Nowadays a discrete tumour in the parotid is a fairly rare cancer (cylindroma); diffuse painful swelling of one or both glands was commonly caused by the mumps virus before vaccination became commonplace, bacterial infection can occasionally cause painful unilateral suppurative swelling in the

debilitated, and a stone in the parotid duct can cause temporary unilateral swelling at mealtimes (Ellis & Calne, 1968: 126-131). In the description of mumps in the Hippocratic Corpus, the term ἐπάσματα...παρὰ τὰ ὄτια (swellings beside the ears) was used (*Epid.* 1.1.14-5). Aëtius describes παρωτίδες as inflammatory swellings, usually painful, associated with fevers, sometimes hard, sometimes suppurating (6.89.1-41).

Proposed translation: **parotid swellings**.

πελιδνά, τά – bruises: 2 instances (162, 340). This translation is suggested by Aëtius' reference to “black eyes and the others, τὰ πελιδνά” (340.2-3), but there may be little difference between πελιδνά and πελιώματα [q.v.].

πελιώματα, τά – purpura: 1 instance (341). (By derivation – the phrase φλεβῶν αἰμορρόων πελιώσεις [extravasation of blood of bleeding veins] appears in the Hippocratic corpus [e.g., *fract.* 11.31].)

πιτύρον, τό – dandruff: 2 instances (108, 117).

πλευρῶν ἀλγήματα/πόννοι – pains in the side (or possibly in the ribs): 6 instances (31, 64, 219, 221, 368, 394).

ποδάγρα, ἡ: 6 instances (43, 166, 205, 238, 318, 321). LSJ: “gout”. Aëtius says it is a painful disease of sudden onset, affecting the foot, possibly the big toe, instep or heel; the distinction, he says, between ποδάγρα and ἀρθρίτις (which LSJ also translates as “gout”) is simply one of anatomical distribution, the latter term being used for parts of the body other than the foot (12.2.1-20). He also suggests that one of the causes is excessive consumption of wine (12.3.2), which is now known to be a trigger in those biochemically predisposed (Underwood, 2004: 131-2). There is skeletal evidence of gout in ancient times (Grmek, 1989: 72-3), and the differential diagnosis of acute arthritis of that time would include gout, traumatic, and septic arthritis. Rheumatoid arthritis would not appear for several centuries (Grmek, 1989: 83-4).

Proposed translation: **gout**.

πολύπους, ὁ – nasal polyp: 2 instances (94, 193). For confirmatory description, cf. Aëtius 6.90.1-8.

πρόπτωσις, ἡ – prolapse: 2 instances (197 [site unspecified], 383 [rectum and uterus]).

πυρετός, ὁ; πυρέσσω – fever; suffer from fever: 8 instances (38, 114, 115, 179, 318, 321, 359, 410). Although precise thermometric diagnosis was not possible, perception of the sequence of pallor, rigor, heat, flushing and sweating would have been a reliable guide to fever. [v. also καυσούμενος, ῥῆγος.]

πυρίκαστα, τά; πυρίκαστα, τά; κατακαύματα τά – burns; πυρίκαστοι, οἱ – sufferers from burns: 7 instances (175, 205, 229, 238, 325, 326, 400).

πτίλωσις, ἡ [v. βλέφαρα.]

ῥεῦματα, τά – fluxes: 12 instances (4*, 7, 61*, 62*, 78*, 84*, 95*, 97, 142*, 289*, 295*, 385*). Asterisks indicate involvement of the bowel (γαστήρ). It is unclear whether the pathological process is attributed to supposed humoral flow, or if there is an actual liquid discharge; in the case of the bowel, this would be distinct from diarrhoea or dysentery, which are mentioned separately. In one instance (97), the fluxes are probable discharges from the eye; the uterus is a source also in ch. 61. [v. also ῥοώδη πάθη.]

ῥέουσαι τρίχες, αἱ: 3 instances (204, 264, 318). LSJ: “hair dropping off”. Aëtius stresses that this is a different disease [from ἀλωπεκία, which he has discussed in the preceding chapter], and is caused by a porosity of the skin, due to poor nutrition, most often associated with [systemic] disease (6.56.1-9). Severe systemic disease is known to cause hair loss (Marks, 1983: 145).

Proposed translation: **diffuse hair loss**.

ῥήγματα, τά: 9 instances (20, 43, 146, 192, 196, 219, 341, 368, 381). LSJ: “breakage, fracture (joined with σπάσμα); laceration, lesion, rupture”. Consideration of Galen’s definitions (10.232.1-8), however, suggests that while κάταγμα is used to refer to a broken bone, ῥήγμα is used to indicate traumatic damage to vessels and muscles. When the word appears in association with σπάσματα [q.v.], it is perhaps best translated as “soft tissue injuries”. In 1

instance (64), where *σπάσματα* does not appear with it, it is translated as “ruptures”, the anatomical site remaining unknown.

Proposed translation: **soft-tissue injuries; ruptures.**

ῥῆγος, τό – rigor, shivering fit, ague: 6 instances (1, 6, 216, 219, 321, 337).

[v. also *καυσούμενος, πυρετός.*]

ῥοος γυναικεῖος, ὁ – female flow: 11 instances (16, 35, 171, 139, 203, 246, 261, 262, 264, 295, 327). The precise meaning is unclear. In ch. 139 it is referred to in addition to *καταμήνια ἀμέτρως φέρομενα*, suggesting it is a separate entity from menorrhagia; in ch. 171, red flow is added as an additional variety, suggesting that the term may include intermenstrual bleeding as well as non-bloody vaginal discharges, such as those known in modern times to be caused by trichomoniasis and bacterial vaginosis (Grist et al., 1993: 245). The term does not appear to be used by Soranus in his book on gynaecology, nor in the Hippocratic Corpus (*TLG*).

ῥοώδη πάθη, τά – diseases involving fluxion: 3 instances (171, 203, 405).

[v. also *ῥεύματα.*]

σηπεδών, ἡ – septic lesion: 3 instances (43, 71, 72); site specified in ch. 72 (mouth).

σκῆρρος, ὁ – hard lesion: 1 instance (398). [v. also *σκληρία.*]

σκληρία μήτρας; σκληρότης ὑστέρας: 4 instances (116, 128, 229, 250).

LSJ: “hardness, induration, of the uterus”. Soranus says it is a hard, rigid mass, involving all or part of the uterus, and is a consequence of previous inflammation (*Gyn* 3.35.1-2), and Aëtius claims that it can prevent conception (16.66.60-1). Fibroids (fibromyomata, or uterine leiomyomata) are very common, firm, benign uterine tumours, often large and easily felt on examination, and associated with reduced fertility (Underwood, 2004: 509).

Proposed translation: **fibroid.**

σκληρία, ἡ; σκληρότης, ἡ – induration, hard lesion: 4 instances (69, 147, 193, 414); site specified in chh. 147, 414 (breasts). [v. also *σκῆρρος.*]

σκόλοψ, ὁ – thorn: 2 instances (34, 43), in which the simple is supposedly able to remove thorns.

σκώληκες, οἱ: 5 instances (105, 108, 175, 180, 189) In ch. 108 the site is not specified; in all the others the ears are involved, and ulcers in ch. 175 in addition. LSJ: “grubs, larvae”. Galen mentions that the ear can rot and have them (10.352.7-8), Oribasius talks of removing them from septic ulcers (*Coll. med.* 43.57.27.1-28.1), and Aëtius says they are either created in the ears or attack them from outside (6.85.1-2). In modern times, the possibility of maggot infestation of wounds is well known, but their occurrence in the ear is rare enough to induce media attention (e.g., CBS News, Chicago, Nov. 30, 2012).

Proposed translation: **maggots**.

σπάσματα, τά – sprains: appears in 9 instances, only in association with **ρήγματα** [q.v.]. Galen defines **σπάσμα** as a breach in a sinew (10.232.1-5).

σπίλος, ὁ – spot, blemish: 1 instance (107). This appears to be not a disease entity, but simply a description of a sign, and may be any colour, etc. (cf. Aëtius 13.56.10-1).

σπλάγχνα, τά – internal organs, innards: 4 instances (113, 157, 166, 414). The simples are said respectively to have a fairly non-specific cooling, unblocking, purging or cleansing effect.

σπλήν, ὁ; **σπληνικός** – spleen, sufferer from disorder of spleen: 28 instances (3*, 5, 17, 30, 31*, 58, 84*, 145, 148, 162, 173, 180*, 193, 234, 298*, 205, 250, 260, 286, 296, 320, 328, 332*, 380, 386, 387, 406*, 410). Asterisks mark instances where blockage of the spleen is claimed, an erroneous concept in the modern meaning of “blockage”, since the spleen is neither an exocrine gland nor does it have hollow parts. Occurrence of induration is marked by underlining. In 3 instances (298, 380, 406), harm to the spleen is a supposed potential drug adverse effect.

σπόμενος – seized by a convulsion: 1 instance (15). Possibly indistinguishable from “epileptic”.

στίγμα, τό – mark (possibly tattoo): 1 instance (63).

στόμαχος, ὁ; **στομαχικός** – stomach; sufferer from stomach disorder: 23 instances (4, 15, 52, 99, 100, 110, 112, 113, 121, 131, 176, 179,

220, 252, 270, 289 (X2), 327, 342, 346, 372, 384, 387). The alternative meaning “throat, gullet”, offered by LSJ, seems less likely here, as Aëtius uses στόμα τῆς κοιλίας for “gullet” (but v. also Intro. p. xxiv-xxv). The problems besetting the stomach are varied, such as being inflamed and atonic (112), stinging by sharp bile (113), excessive moisture (121), and chilling and flaccidity (131), or they are often unspecified. In addition, some simples are said to be good for the stomach (εὐστόμαχος), on 9 occasions (21, 30, 41, 52, 79, 157, 185, 194, 279). On 8 occasions they are supposedly bad for the stomach (κακοστόμαχος) (1, 27, 29, 58, 86, 213, 257, 387).

στραγγουριῶν – suffering from retention of urine: 1 instance (160).

στρόφος, ὅ; στροφούμενος: 3 instances (20, 146; 364). LSJ: “twisting of the bowels, colic; seized with colic”. Consideration of, for example, Aëtius book 9, supports this translation, in that it is associated with flatulence (9.27, 28, 42), internal pain (9.37), and the intestine (9.43). The problem is to decide whether it should be distinguished in translation from the terms κολικός, κωλικός [q.v.], even if it is synonymous with the symptom to which they refer.

Proposed translation: **gripping**.

συναγχικός – suffering from a sore throat: 1 instance (360).

σῦριγξ, ἦ (usually in plural): 5 instances (128, 140, 141, 193, 318). LSJ: “fistulous sore, abscess” (also, various types of pipe). [v. also κόλπος.] Oribasius, who writes extensively about the surgical treatment of these lesions (cf. *Coll. med.* 44.19, 20), says they take their name from a resemblance to reed pipes, that each is “a sinus with a crust or projection” (κόλπος τετυλωμένος), and that they arise from incorrectly treated abscesses (*Ecl. med.* 100.1-3); bones can be affected (*Ecl. med.* 100.6-9). Aëtius describes treatment for a gumboil or dental root abscess, calling it a σῦριγξ (8.28), and says it can arise in various sites: parotid (15.13.223), hands (15.15.29.30), or leg (15.46.23-4). In the breast, he says, citing Leonidas, that they arise from an abscess which has burst or been

treated badly, and suggests that through time they can reach bone (16.44.1-4).

Proposed translation: **deep sinus**.

τραῦμα, τό (usually in plural) – wound: 30 instances (34, 41, 42, 43, 62, 72, 94, 95, 171 (X2), 172, 174, 190, 192, 193, 202 (X2), 208, 221, 236, 262, 293, 307, 322, 329, 335, 352, 368, 370, 414).

τραχύτητες, αἰ – rough patches: 3 instances (83, 214, 245).

τύλος, ὁ (usually in plural): 3 instances (140, 174, 193). LSJ: “callus; lump, knot”. (cf. τυλόω “make knobby, callous, hard”.) These are frequently associated with συρίγγες [q.v.], which Oribasius says are caused by τύλοι, which, when superficial, can be scratched off with a fingernail (*Ecl. med.* 100.4.4-5); they can be lesions of the fingers (*Ecl. med.* 114.5), and certain breast lesions are likened by Oribasius to a rather hard, fleshy τύλος (*Coll. med.* 45.6.7.1-2). Aëtius mentions the possibility of a τύλος in eye disease (7.90.7).

Proposed translation: **hard crust, callus**.

ὔδερρος, ὁ; ὔδερικός – oedema; suffering from oedema (dropsy): 2 instances (321, 413). [v. also οἴδημα.]

ὔδροκίλη, ἡ – hydrocele: 3 instances (64, 125, 128). Galen’s definition (7.729.11-13) adequately matches modern description.

ὑποχυσίς, ἡ – cataract: 1 instance (349). In addition, there are 2 instances (97, 174) of conditions in which overshadowing of the pupils (τὰ ταῖς κόρας ἐπισκοτοῦνται) occurs. Aëtius, citing Demosthenes, gives a convincing description of the disease as recognised today (7.53), which is an opacification of the lens.

ὑπόπιον, τό – black eye (periorbital haematoma): 4 instances (175, 261, 340, 398). The translation is confirmed by Aëtius’ description in book 8 (8.2).

ὑστέραι κατεψυγμένα – chilled uteruses: 1 instance (129) (possible similar condition in 131.28). The meaning is unclear, presumably related to elemental theory.

ὑστερική πνίξις, ἡ – hysteria (lit. “uterine choking”): 1 instance (321). The description in, for example, Galen 11.47.18-48.3 is consistent with one form of the modern psychiatric disorder.

φακός, ὁ (usually in plural): 5 instances (58, 101, 107, 221, 315). LSJ: “spot (on the body), mole, birthmark”; also “lentil”. In four chapters of book 1 (58, 101, 221, 315), Aëtius associates φακοί with ἐφήλεις, and suggests they can both be treated with “cleansing” simples. Similarly, in book 8.10 he says that on the face they should be treated like ἐφήλεις and ἴονθοι; he also goes on to say that φακοί can become raised with a hardened surface, and refractory (8.10.25-29), the implication being that they are normally flat and soft. Freckles are closest in appearance to lentils, and are commonest on the face and areas exposed to sunlight; they are, however, commoner in fair-skinned, northern peoples, and do not usually become raised or hardened (Braun-Falco et al., 1991: 689).

Proposed translation: **freckle**.

φοειῖρες, οἱ – lice: 3 instances (108, 189, 205). To distinguish between ἀγρίοι (wild) and ἥμεροι (domesticated) varieties (108), “ticks” and “lice” respectively may be appropriate translations, although the term κρότωνες [q.v.] is also used, possibly for a different species of the animal.

φθιστικός – consumptive: 1 instance (139).

φλεγμονή, ἡ (usually in plural): 24 instances (8, 9, 23, 56, 117, 128, 141, 159, 165, 170, 173, 176, 197, 220, 221, 238, 250, 253, 261, 326, 327, 348, 390, 393). LSJ: “inflamed tumour, boil” (related to φλέγω “I burn”). Aëtius uses the term in different books as an affliction of various parts of the body, usually with pain and burning: its description in the brain suggests meningo-encephalitis (6.25); it can affect the ears (6.81); the gums (8.22); the mouth (8.45); the fauces (8.48), where his description of gross swelling, redness and fever is consistent with tonsillitis or pharyngitis, and abscess formation is a possible complication (8.48.67); the eye (9.11.47); and the stomach, gut, liver, uterus and bladder (9.19.20-21); the anus (1.117, 261); the knee (1.326); and the breast or nipple (1.348). Redness is a feature when it appears on the skin (cf. Galen K10.946.10-11) [see above for comparison with

έρυσιπέλας]. In short, φλεγμονή exhibits Celsus' cardinal signs of inflammation – *rubor, tumor, calor, dolor* (*De med.* 3.10.3.1).

Proposed translation: **acute inflammation, inflammatory swelling.**

φλύκταινα, ἦ – blister in eye (in this context): 1 instance (97). The description given by Aëtius in book 7.31 of a lesion which can affect superficial parts of the eye, including the cornea, which can penetrate and result in damage to deep structures with resulting blindness, is hard to explain in terms of modern pathology.

φόβος ἄλογος, ὄ – phobia (lit., “irrational fear”): 1 instance (166).

φρενιτικός: 1 instance (146). LSJ: “suffering from *phrenitis* – i.e., inflammation of the brain”. Aëtius, citing Poseidonius, describes an inflammation of the meninges, associated with impairment only of one or other aspect of mental function, and with acute fever, which usually follows the onset by several days; photophobia is a feature in some cases (6.2). From a modern perspective, it is difficult to match this with a single disease. Bacterial meningitis is accompanied from the onset by fever, headache, photophobia and then delirium and opisthotonos, and, if untreated, is fatal within a very few days, except for tubercular meningitis, which runs a more prolonged course, likewise leading to death. Viral meningitis is typified by similar but milder symptoms and signs, but spontaneous complete recovery within a week is usual. A subacute delirious state, or a toxic delirium, may be accompanied by fever and hallucinations, but there is usually a generalised diminution of consciousness, rather than the loss of a single function, such as memory or logical thought. Brain abscess may start with fever and signs specific to one aspect of cerebral function, but, if untreated, will progress to generalised lowering of consciousness and death. When damage is caused to a functional unit in the brain by, for example, ischaemia or neoplasm, the patient usually remains afebrile. Psychiatric diseases can interfere with logical thought or imagination, but do not cause fever. The ancient physicians may have included several diseases under this

label, or there may well have been a disease known to them, which has fortunately become extinct. The translation remains moot.

Proposed translation: **“phrenitis” sufferer.**

φύγεθλον, τό: 2 instances (56, 141). LSJ: “a swelling of the glands”. Oribasius, citing Praxagoras, and calling the lesion φύγεθρον, says it is a cutaneous, pus-filled swelling, standing up on the skin like a blister caused by a burn; it does not come to a head [depending on the meaning of μολυτικός], but can be chronic and malignant, especially in children, and is accompanied by ulceration around lymph nodes (*Coll. med.* 44.18). Disregarding the possible lack of a head and the rarity of the lesion at least in Aëtius book 1, the nearest fit to the description appears to be boil or furuncle (Underwood, 2004: 680).

Proposed translation: **furuncle.**

φύματα, τά: 5 instances (13, 96, 162, 311, 348). LSJ: “growths, tumours, tubercles, etc.” Aëtius frequently includes φύματα in lists of cutaneous and subcutaneous swellings (e.g., 15.15), and mentions their appearance on eyelids, where they are neither inflamed nor painful (7.32.5-8), on lips (8.20.1), in the bladder, where they can lead to suppuration (11.28.1-2) or ulceration (11.29.1), and in breasts, where they can cause suppuration (16.44.9).

Proposed translation: **swellings.**

χείμεθλον, τό – chilblain: 1 instance (117).

χοιράδες, αἱ: 5 instances (7, 32, 162, 180, 234). LSJ: “scrofulous swellings in the glands of the neck, etc.; *or* like a boar *or* a rock, sow”. In his remarkably detailed account of χοιράδες (15.5.1-48), Aëtius, citing Leonidas, suggests that the name is derived from the appearance of clusters of glands under the jaws of swine or from the lesions’ ability to multiply like swine; he describes the variety of pathological presentations of lymph nodes, their various anatomical sites, and the difficulties and outcomes of treatment. Although scrofulous glands (i.e., those infected by tuberculosis) can be included, the description suggests other types of disease,

and the glands are not just confined to the neck. He concludes that surgery is the best therapy for those amenable to treatment.

Proposed translation: **diseased lymph nodes** (lymphadenopathy).

χολέρα, ἡ – cholera (infection resulting in very severe watery diarrhoea and usually vomiting) (cf. Grist et al., 1993: 342-3); described fairly accurately by Celsus, (*Med.* 4.18.1.1-2.4): 1 instance (315).

ψαμμώδη, τά – gravel (in kidney; different form of kidney stone): 1 instance (380).

ψώρα, ἡ (usually in plural): 14 instances (30, 53, 58, 63, 108, 140, 145, 162, 182, 190, 245, 342, 391, 413). LSJ: “itch, mange, scabies” (related to ψάω, ψάω “I rub”). Oribasius offers the following definition: “Λέπρα and ψώρα are each a roughening of the surface of the skin with itching and scratching of the lesions, which are fine and bran-like in ψώρα, and scaly in the case of λέπρα. The colour turns darker, then white and then red. Florid λειχήν differs by being demarcated in a circular fashion, whereas neither λέπρα nor ψώρα are demarcated in this way.” (*Ecl. med.* 78.1). Scabies, which causes intense itching (Braun-Falco et al., 1991: 255-7), would fit this description of ψώρα, as would some forms of eczema.

Proposed translation: **itchy scabby lesion**.

ὠταλγία, ἡ – earache: 4 instances (107, 141, 212, 332).

Weights and Volumes

The following units of weight and volume appear in Aëtius, book 1:

Table 2: Weights and Volumes.

Symbol	Greek name	Translated as	Value (LSJ)	Value (TLG)	Value (Hussey, 1836)
γρ	γράμμα	'gram'	1.2 gm		
	τριόβολον	three obols	(1/2 drachma)		2.15 gm
<	δραχμή	drachma		4.31 gm	4.30 gm
Γ	οὔγγια or ὀγκία	<i>uncia</i>		27.29 gm	
K	κύαθος	cyathus			46.93 ml
	ὀξύβαφον	<i>oxybaphon</i>	70.4 ml (1/8 <i>xestes</i>)		70.4 ml
	κοτύλη	<i>cotyle</i>	half <i>xestes</i> or 6 cyathi		6 cyathi
λι	λίτρα	<i>litra</i>	281.6 ml (half <i>xestes</i>); or, 327.5 gm		140.8 ml
ξ/ε	ξέστης	<i>xestes</i>	(nearly 1 pint)	approx. 500 ml	563.2 ml
X	χοῦς	<i>khous</i>	3379 ml (6 <i>xestes</i>)		1126 ml

Notes: Symbols are an approximation to those in the CMG text, owing to font deficiencies.

Additional information on symbols was obtained from Raeder, 1928: viii.

Where original values are expressed in avoirdupois, troy or imperial measures, conversion to metric has been done to facilitate comparison.

The term κοτύλη appears once only in book 1 (166.11), and appears to be equal to one *litra*. 1 *khous* = 12 *cotyles* = 48 *oxybapha* = 72 cyathi; 1 *cotyle* = 252 – 327 ml (Lang & Crosby, 1953: 44, 47-8).

Single inverted commas have been used to distinguish the translated ancient terms from the modern metric units with the same or similar names.

Some Considerations Regarding Therapeutics

In several instances, intended therapeutic effects as stated for various simples require discussion and an attempt at explanation. Given our knowledge of the molecular biology of pathological and pharmacological

processes, it is difficult to adopt Aëtius' perspective and to understand what he hoped his treatments would achieve. The following observations may supplement the translation of the more problematic terms, and give some explanation of the rationale behind their use.

Dispersive Drugs: 49 drugs are said to be διαφορετικός; the action of a further 18 is conveyed by the verb διαφορεῖν; in one instance, a drug is said to bring about διαφόρησις. Aëtius is, I believe, referring to a supposed dispersive capacity of these drugs, by which material is removed from a diseased area and voided (cf. Touwaide, regarding Galen, 1997: 280.) In 18 instances the object of this dispersal is specified: for example, swollen glands (chh. 7, 32), inflammations (9, 390), swellings or masses (13, 172, 311, 380), thick and sticky humours (288, 321), or bruises (340). Aëtius even posits a mode of action for such drugs: talking of henna (ch. 238), he says it has “something dispersive” (τι διαφορετικόν) (238.2-3), and when dealing with inflammations it “disperses what then is contained in the affected areas through invisible pores, just as if by sweat” (διαφορεῖ τὸ ἤδη ἐν τοῖς τόποις περιεχόμενον διὰ τῶν ἀδήλων πόρων, ὥσπερ δι' ἰδρῶτων) (238.13-14). The idea that passage of material throughout the body could be facilitated is further exemplified by the claims that cyclamen (ch. 234) could remove jaundice through sweat, horehound (332) could remove jaundice through the nose, and that golden thistle (367) could transfer bad smells from armpits to urine; camomile oil (114) was said to open the pores, and mastic oil (122) to close them. An alternative translation, “sudorific”, offered by LSJ for διαφορετικός seems unsuitable here, especially as on one occasion Aëtius indicates that a simple (mint) is both sudorific and dispersive: καὶ ἰδρῶτας κινεῖ καὶ διαφορεῖ... (174.4).

Emmenagogues: Plant simples are said to be emmenagogic (e.g., ἔμμενα...ἄγει/προκαλοῦνται; καταμήνια...ἐκίνησεν/προτρέπει; καταμηνίων κινετικόν) on 44 occasions, but nowhere in the work is it stated why such an effect should be desirable. Since menstruation is dependent on ovulation not followed by fertilisation, it could be argued that emmenagogues were used to enhance fertility in cases of amenorrhoea not due to pregnancy, but I have found no substantiation of this in ancient medical literature. It is possible that “emmenagogue” is being used as a euphemism for

“abortifacient”; according to the Hippocratic Corpus, emmenagogues can be used to terminate pregnancy (e.g., *Mul.* 78.35-36), and drugs in the Hippocratic Corpus may have been “disguised as emmenagogues” (Kapparis, 2002: 198). Induction of abortion had been declared illegal between AD198 and 211, during the reigns of Septimius Severus and Caracalla (Kapparis, 2002: 182), and was considered equivalent to murder during the Christian era (Kapparis, 2002: 198). However, the idea that Aëtius’ emmenagogues were covert abortifacients is directly contradicted by the fact that he lists 10 plants unequivocally as abortifacients [q.v.]. The real reason, I believe, for the use of supposed emmenagogues was to manipulate body fluids so as to prevent a harmful excess of blood, which, according to the medical thinking of the time, might lead to inflammation (Brain, 1982: 11, 12); indeed, “retained menses were thought to cause many female disorders” (King, 1998: 207). Amenorrhoea could therefore be dangerous and require treatment by phlebotomy (Brain, 1982: 13, 83).

Abortifacients: These are mentioned 10 times (e.g., τὰ ζῶντα τῶν ἐμβρύων διαφθείρει; ἔμβρυα διαφθείρει καὶ ἐν πεσσῶ προστιθέμενος ὁμοίως φθόριον γίγνεται). Apart from plant the materials listed as simples, various contraceptive and abortifacient recipes are to be found in book 16; “Aëtius ... displayed a knowledge of contraceptives and abortifacients greater than anyone else in antiquity, except Soranus and Dioscorides” (Riddle, 1994: 92). In two instances (chh. 162, 234), the agent is administered in a pessary, in clear contravention of the Hippocratic Oath: ...οὐδὲ γυναικὶ πεσσὸν φθόριον δώσω (*Jus.* 15-16). [For discussion of the implications of this, see Riddle, 1994: 7-8; Kapparis, 2002: 66-76.] If any defence of Aëtius’ claims were required in the anti-abortion climate of a Christian age, it could be argued that he was simply passing on scientific information in a privileged, doctor-to-doctor communication, rather than acting on it.

Diuretics/ Drugs which Facilitate Urination: 22 plant simples are said to have a diuretic effect (διουρητικός; οὐρητικός); 18 are said to “move urine” (κινεῖ οὖρα). What is meant by the latter description is unclear. It may suggest an effect on an atonic bladder or obstructed outflow, but there is only one reference to obstruction, or strangury (ch. 160), and no suggestion

that it is relieved by a drug which “moves urine”. It is likely that “diuretic” and “moving urine” are synonyms, although this is called into question by attribution of both effects to a single simple (watermelon, ch. 315). In modern medicine, diuretics are used to relieve oedema, both subcutaneous and pulmonary, and to treat hypertension; in no instance however, is a diuretic capacity attributed to a simple used by Aëtius to treat swelling or breathlessness, the manifestations of diseases in which diuretic therapy is indicated, with the exception of hartwort (ch. 356), which is considered suitable for cases of orthopnoea. It seems, therefore, that elemental theory provides the rationale for the use of diuretics, which are presumed to remove a potentially harmful excess of water from the patient. In actual fact, there is only one such simple (ajowan, ch. 26) which, according to modern evidence, may promote diuresis, and so it is tempting to suggest that Aëtius is treating imaginary conditions with drugs with imagined effects.

Aphrodisiacs/Anaphrodisiacs/Flatulence-modifying Drugs: A concept that has not received much attention to date is the positive relationship, as perceived by the ancient physicians, between flatulence and libido. Aëtius lists 14 plants whose ingestion, he claims, produces flatus; he describes them as φουσώδης or, in one instance, πνευματώδης. 6 of those are also said to be aphrodisiacs: nettle (ch. 13), purse tassels (66), turnip seed (86), wild carrot (88), spice root (219) and male orchid (353). In all of those except purse tassels a causative link is stated between flatus production and increased libido. In two other instances Aëtius lists plants as being aphrodisiac, while omitting Galen’s claim that they are also flatus-producers: green mint (Aët. ch. 156; Gal. 11.882.16) and dog orchid (Aët. 306; Gal. 12.92.7). Only plant simples are said to have aphrodisiac properties.

Of the 11 plants supposed to suppress flatus production (ἄφυσος), two are also said to have anaphrodisiac properties: agnus castus (ch. 3) and rue (321). Another of the flatus-inhibitors, calavances, listed by Aëtius (ch. 93) but not by Galen, is said to reduce pleasure, without specifying what sort of pleasure. The only listed anaphrodisiac agent which is not a plant is a sheet of lead placed over the groin muscles (Aët. 2.66; Gal. 12.230.6).

An explanation for the involvement of flatus in sexual activity can be found in the works of Aristotle, who was a major influence on Galen

(van der Eijk, 2009: 266-7). In his *Historia Animalium*, Aristotle claims that ejaculation is driven by πνεῦμα:

Ἐν δὲ τῇ τοῦ σπέρματος ἐξόδῳ πρῶτον μὲν ἡγεῖται πνεῦμα (δηλοῖ δὲ καὶ ἡ ἐξοδος ὅτι γίνεται ὑπὸ πνεύματος· οὐδὲν γὰρ ῥιπτεῖται πόρρω ἄνευ βίας πνευματικῆς). (*H.A.* 7.7 586a 15-17)

[In the emission of semen, wind/gas is the initial driving force (and it is clear that the emission is engendered by wind/gas; for nothing is thrown far without pneumatic force).]

Moreover, in his *Problemata*, he attributes the supposed lustfulness of those suffering from melancholy, the aphrodisiac effects of wine, especially red, and the mechanism of erection and ejaculation to the action of πνεῦμα (*Prob.* 30.1 953b 23-39). The involvement of πνεῦμα in the mechanics of procreation, at least on the male side, is reflected in Galen's thoughts on priapism (K7.226.16-18), which, he says, occurs in the absence of sexual arousal, because of inflation due to φυσῶδες πνεῦμα; that this substance, perhaps translatable as "flatulent wind", occurs in the gastro-intestinal tract and is relieved by belching and passing flatus is consistent with Galen's description in *De semine* (K4.521.9-12):

ὥσπερ ἐπὶ τῆς
γαστρὸς ἐμφυσηθείσης ἐρυγαί τε καὶ φύσαι κάτω διερχόμε-
ναι κενοῦσί τε τοῦ πνεύματος αὐτὴν καὶ προστέλλουσι τὸν
ὄγκον.

[...just as in the case of an inflated bowel, eructations and wind passing downwards empty it of πνεῦμα and send forth its burden.]

We have, therefore, the concept of erection and ejaculation being dependent on πνεῦμα, which is also present in flatulence, which, in turn, is known to be caused by some foodstuffs. Lust, clearly, is also a relevant factor in procreation. I think, therefore, that it is reasonable to surmise that the ancient physicians, especially Galen, combined, and extrapolated from, these supposed facts, and decided that flatulence increased sexual desire in both sexes, and could be promoted by some plant simples, and inhibited by others.

Sternutatory Drugs: Induction of sneezing was obviously thought to be of therapeutic benefit. Ranunculus (ch. 63) and ivy (ch. 205) were described

as sternutatory drugs (παρμικὸν φάρμακον and ἔρρινον φάρμακον respectively); in the latter case, the effect was associated with the treatment of discharging ears. Soapwort (377) was said to cause sneezing (παρμιοῦς κινεῖ), but without any indication whether this was useful or a side-effect.

Modern Pharmacological Assessment

Analysis of Aëtius' claims regarding therapeutics, in the light of modern pharmacological knowledge, as detailed in each chapter's commentary, gives the following results: on 29 occasions what was said about some aspect of a plant's capabilities was compatible with present medical beliefs; on 100 occasions it could be said that a potential link, however tenuous, existed; 27 plants had toxic potential, not noted by Aëtius; 14 plants, included for therapeutic use, would have caused definite harm. For the vast majority of statements regarding therapeutic effect, no substantiation could be found among the results of modern research.

In most instances, presence or absence of a link between plant simple and therapeutic action can only be inferred from the plant's chemistry, and occasionally from *in vitro* or animal experimentation. The most reliable procedure for modern pharmaceutical research is the double-blind controlled clinical trial, subject to statistical analysis and independent repeat performance. Such a method cannot usually be employed to assess ancient medical treatments for the following reasons: doubt may exist as to which variety of plant was named in the ancient text, or exactly which disease it was expected to benefit, or what exactly was meant by some action, such as moistening or warming, based in elemental theory. More importantly, in cases where effective modern treatments are available, it would be totally unethical, unforgiveable even, to withdraw them, or not to initiate them, in an attempt to validate an ancient medical assertion; no-one, surely, would stop a child's anticonvulsants, hang a paeony root around his neck (cf. ch. 84), and count his seizures, or suggest that a toothache sufferer chewed plantain root (cf. ch. 46) instead of consulting his dentist. Such claims must remain untested and unproven. Only rarely are there occasions when a sufferer from a condition hitherto unhelped by modern medicines

can be asked to volunteer for ancient plant therapy, such as the topical application of onion juice to reverse hair loss (cf. ch. 232).

We are left, therefore, with a few instances where Aëtius was certainly correct, a few where he was certainly dangerously wrong, and a very large number where we can make no definite judgment. The contents of this book give no reason to contradict Grmek's assertion that: "... until the beginning of the nineteenth century, therapeutics and prophylaxis had practically no effect whatever on the nature and frequency of diseases present in any society" (Grmek, 1989: xi).

Insight into Morbidity

We have no reliable comprehensive information about the health of ancient communities. Non-medical ancient literature gives us descriptions of varying clarity of epidemics and individual diseases, when appropriate to the narrative of the work in which they occur. For example, Homer tells us only that the cause of the deadly epidemic which afflicts the Greek army is retribution from Apollo (*Il.* 1.43-53). Thucydides gives us detailed information about symptoms, signs, circumstances and outcomes of one particular historical episode, the Plague of Athens (*Thuc.* 2.47-55). Herodotus mentions individuals who were affected by conjunctivitis (*Hdt.* 7.229), and Horace refers also to this disease when he himself was a sufferer (*S.* 1.5.30). Such glimpses, however, tell us little about the day-to-day health concerns of the general population.

Palaeopathology avoids the bias or misunderstanding of the reports of an ancient writer, and can yield data from a wider range of people, of different sex, ages, localities and social strata. Such data, however, are limited by funerary practices and the availability of human remains, and reveal only those conditions which have a permanent effect on the remains, whether bones, teeth or occasionally mummified tissues. (This topic is extensively discussed in Grmek, 1989: 47-86.)

Ancient medical literature gives us a clearer idea of which diseases were encountered by the various writers at various times. Occasionally the writer tries to provide an overview of the health of a community in relation to its environment (e.g., *Epid.* 1.1-3, 2.1 and 7.1). More often individual

cases are discussed, or the cause and treatment of individual diseases, with sporadic epidemiological generalisations.

The information in Aëtius' list of simples can be considered to complement what has been obtained from the above sources, and to offer a different perspective on health concerns. The frequency with which diseases to be treated are mentioned reflects the health concerns of his patients, admittedly in a way subject to distortion and inaccuracies. Allowance must be made for the fact that many simples may be listed for a single refractory condition, since the therapeutic failure of each one leads to the increasingly desperate use of the next, or of a combination of several in a compound drug. In contrast, if one simple is supremely effective against a particular disease, there may be no need to mention that disease elsewhere with regard to other simples. If, however, no remedy exists for a certain disease, or if its treatment is exclusively by non-pharmacological means such as surgery or diet, then this disease, even if common, will not appear in a list of drugs. Aëtius may also have added more information about those areas in which he had personal expertise. Despite these considerations, I believe the following table showing how often diseases or conditions considered to require treatment appear in the plants list gives us an interesting view of what led patients to consult a physician (table 3).

The preponderance of skin conditions is understandable, since their lesions are immediately obvious and many such diseases are chronic, recurrent or refractory, even in the modern medical era. Problems with the gut requiring anti-diarrhoeals reflect poor hygiene, as most bowel infections, including most worm infestations, are spread by the faecal-oral route; the use of laxatives may have been indicated for the treatment of constipation, or may have been an attempt to achieve some form of purgation in keeping with humoral theory, and the fact that many plants have definite laxative properties may have given them a position of prominence in an ancient pharmacopoeia. Attempts to treat supposed liver and spleen disorders may have been prompted by clinical observation of enlargement of these organs; liver disease may also have been recognised by concomitant jaundice. Splenic enlargement would frequently be found in malaria sufferers in an endemic area (Grist et al., 1993: 329). It is also possible that the mistaken

attribution of conditions to disordered function of the liver and spleen led to treatment directed at them. Eye conditions comprise 14 different disorders, many of which appear only once or twice in the text; this may be related to Aëtius' ophthalmological expertise, consistent with the information he gives in book 7. It is interesting, perhaps surprising, that consumption is mentioned only once, whereas haemoptysis, a common sign of pulmonary tuberculosis, and "bringing up blood", which may mean haemoptysis rather than haematemesis, appear 20 times.

Consideration must also be given to the likelihood that Aëtius' preparations, especially his oils, were intended for cosmetic purposes. As Weigel comments, he combined cosmetic art with surgery, for in that age the leading doctors were considered to cultivate elegance as a medical duty (Weigel, 1791: 25-6).

It would be desirable to expand this analysis of therapeutic uses to include animal and mineral simples, but unfortunately this is at present beyond the scope of this work.

Table 3: Types of condition listed as amenable to treatment with plant simples, in order of frequency. (Omitted if mentioned fewer than 5 times.)

Nature of Condition to be Treated	No. of Mentions in Book 1	Comments
Skin diseases	161	Includes 47 lesions due to infection, 68 non-infective, and 47 ulcers, of which 16 were “κακοήθη”
Gut problems	87	Includes reference to γαστήρ, κοιλία and έντερον, and 21 dysentery cases
Hepatic	39	
Gynaecological	32	Includes 10 suggested abortifacients
Wounds	30	
Ophthalmological	28	Comprises 14 different specific conditions
Splenic	28	
Acute inflammation	24	
Stone	22	Urinary tract, stated or presumed
Haemoptysis	20	Includes “bringing up blood”
Worms	19	Includes round-, tape-, and threadworms
Headache	17	
Hip problems	17	
Fevers	15	
Hair loss	15	Includes patchy, diffuse and serpiginous
Breathlessness	12	Includes all forms
Toothache	12	
Sinuses	10	5 superficial + 5 deep
Kidney disease	9	
Soft tissue injuries	9	
Cough	8	
Gout and arthritis	8	
Epilepsy	8	
Psychiatric	8	Includes 3 suggestions for hypnotics
Burns	7	
Bites and stings	6	
Pains in sides	6	
Diseased lymph nodes	5	
Jaundice	5	
Maggots	5	
Oedema	5	Includes οιδήματα, ύδρωπικοί, άνά σάρκα
Swellings	5	Nature unspecified (φύματα)

Text

I have used the text of the Olivieri edition (*CMG* vol. 8.1, 1935), as emended recently from a recollation (as yet unpublished) of the most ancient codices – *Messanensis* gr. 84; *Leidenensis Voss. gr. fol.* 58; *Parisinus* gr. 2191 – by Irene Calà, working in conjunction with Prof. Philip van der Eijk and Dr Matteo Martelli of Humboldt University, Berlin, to all of whom I am greatly indebted. These emendations are shown in the *Apparatus Criticus*. Passages which appear in the Olivieri edition but are now considered to be later insertions, rather than Aëtius' original text, are bracketed thus: {...}; five such passages (49.7-7, 66.5-29 [ch.131.33-57], 101.9-25, 117.11-13 [ch.308.1-3], 134.14-18 [ch. 374.1-5]) are included, with translation but without commentary, to avoid unexplained gaps in the Olivieri text. Each original section of the prooemium or chapter of the list of simples is followed by translation and pertinent commentary.

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WARNING The following work is intended to be of academic interest only, and under no circumstance should any part of it be taken as a basis for medical treatment; accordingly, the author bears no responsibility for any clinical inference drawn from it.

Text, Translation and Commentary

Πίναξ τοῦ πρώτου τμήματος τῶν κεφαλαίων Ἀετίου.

Table of Aëtius' Chapter Headings of the First Section.

α´	Ἀβρότονον	1. Wormwood (1)	page 44
β´	Ἀβρότονον κεκαυμένον	2. Burnt wormwood	46
γ´	Ἄγνος ἢ λύγος	3. Agnus castus or withy	47
δ´	Ἄγρωστις	4. Dog's tooth grass	49
ε´	Ἄγχουσαι δ´	5. Four alkanets	50
ς´	Ἀγαρικόν	6. Agaric	52
ζ´	Ἀδιάντον	7. Maidenhair	53
η´	Ἀείζωον	8. Houseleek	54
θ´	Αἰγίλωψ	9. Haver-grass	55
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ΑΕΤΙΟΥ ΑΜΙΔΗΝΟΥ ΛΟΓΩΝ ΙΑΤΡΙΚΩΝ

BIBLION A

Σύνοψις τῶν ἀπλῶν Γαληνοῦ

Αἱ διαφοραὶ τῶν κατὰ μέρος ἐνεργειῶν ἐν ἐκάστῳ τῶν φαρμάκων γίνονται τῷ ἐπὶ τοσόνδε θερμὸν ἢ ψυχρὸν ἢ ξηρὸν ἢ ὑγρὸν ἢ λεπτομερὲς ἢ παχυμερὲς ὑπάρχειν ἕκαστον αὐτῶν. τὸ δὲ ἐπὶ τοσόνδε προήκειν ἐν ἐκάστῳ τῶν εἰρημένων ἄρρητόν ἐστιν πρὸς γε τὴν ἀκριβεστάτην ἀλήθειαν. ἀλλ' ἡμεῖς καὶ αὐτὸ περιλαβεῖν ἐπειράθημεν ὅροις σαφέσιν ἱκανοῖς εἰς τὴν χρείαν τῆς τέχνης, ἐν μὲν εἶναι γένος φαρμάκων ἐπιδείξαντες εἰς ὁμοίαν τοῖς σώμασιν ἡμῶν ἀφικνούμενον κράσιν, ἐπειδὴν ὑπὸ τῆς ἐν αὐτοῖς θερμότητος ἀρχῆν τινα δέξεται μεταβολῆς τε καὶ ἀλλοιώσεως, ἕτερον δὲ θερμότερον ἢ καθ' ἡμᾶς γιγνόμενον. τούτου δὲ τέσσαρας ἔδοξέ μοι ποιήσασθαι τάξεις· πρώτην μὲν τὴν ἀσαφῆ πρὸς αἴσθησιν, ὡς λόγου δεῖσθαι τοὺς φωράσαντας· ἐτέραν δὲ ἐπ' αὐτῇ δευτέραν, ἥδη πῶς σαφῆ τὴν αἴσθησιν· ἄλλην δὲ τρίτην θερμαίνουσαν ἰσχυρῶς, οὐ μὴν ἥδη γέ πῶς καίουσαν· ἐφ' ἣ τετάρτην τε καὶ ἐσχάτην τὴν καυστικὴν. οὕτω δὲ καὶ τῶν ψυχόντων πρώτην μὲν τάξιν τῶν λόγου δεομένων εἰς ἀπόδειξιν τοῦ ψύχειν, δευτέραν δὲ τῶν αἰσθητῶς ψυχόντων, καὶ τρίτην τῶν ἰσχυρῶς, καὶ τετάρτην τῶν νεκρῶν. ἀνάλογον δὲ ταύταις καὶ περὶ τῶν ὑγραινόντων τε καὶ ξηραινόντων.

[17.14] <μὲν> omitted after θερμαίνουσαν.

AETIUS OF AMIDA'S MEDICAL WORKS

BOOK ONE

Summary of Galen's *Simples*

The differences in the relative effects in each of the drugs come about according to how great an extent each of them is hot, cold, dry, moist, fine-grained or coarse-grained. But the extent cannot be defined in each of the aforementioned aspects with any very exact degree of accuracy. Yet I have also tried to encompass this very problem in clear limits suitable to the service of the art [of medicine], by demonstrating that, while there is one class of drugs which approaches a composition similar to our bodies whenever it receives some stimulus both to change and to alter engendered by the warmth in them, there is another class which becomes warmer in relation to ourselves. I think there are four degrees of the latter: the first is what cannot be clearly sensed, as those who detect it lack a term for it; next,

the second of them after that, the sensation is now somewhat clear; another, thirdly, strongly warming, but not yet really burning; after which, the fourth and final, namely, burning. So also the first degree of cooling drugs [p18] is of those lacking a term to reveal the cooling, the second is of those producing a sensation of cooling, the third those cooling strongly, and the fourth those resulting in death. Also, those concerned in moistening and drying are arranged in an equivalent manner.

Commentary

Prooemium

Showing a remarkable familiarity with Galen's writings, Aëtius has put together an introduction largely consisting of sixty-four passages selected variously from books 1, 3, 4, 6 and 7 of Galen's work and mainly quoted verbatim (cf. Intro. xxiv-xxix). In this a framework is laid down for the classification of individual pharmaceutical ingredients (the "simples" or ἀπλᾶ) according to their composition from the supposed essential elemental qualities hot, cold, moist and dry, further modified according to whether they are fine-grained or coarse-grained [17.3,4]; the intensity of effect of each is rated on a four-degree scale [17.11]. The principal instrument for analysis is the human tongue [18.16]. An explanation is attempted as to how the four elements are reflected by the flavours, a greater range of which was claimed to be discernible to Galen than perhaps we could distinguish nowadays; in particular, the distinctions between "astringent" and "harsh" [18.19; 18.20], "stinging" and "sharp" [18.25; 18.26], and "adherent" [19.27] and "sticky" [20.1] are difficult, if not impossible, to imagine. In fairness, many examples are supplied, often added by Aëtius. Even so, the confusing complexity of this system and the highly contrived attempts to make it universally applicable are such that we may wonder that it would have been difficult for physicians to have become familiar with it.

For the sake of consistency and clarity, I have limited the translation of words pertaining to flavours to the following terms:

ἄλεις, οἱ	salty (materials)
άλυκός	salty
ἀποξύνεσθαι	to be made sour
αὐστηρός	harsh
γλίσχος	sticky
γλυκύς	sweet
γλυκύτης	sweetness
δάκνειν	to sting
δάκνειν, τό	pungency
δάκνος	pungent
δακνώδης	pungent
δάκνων	pungent
δριμύς	sharp
δριμύτης, ἡ	sharpness
ἐκπικροῦσθαι	to become very bitter
ἐμπλαστικός	adherent
ἥδυσμα, τὸ	sweetening material
λιπαρός	greasy
λιπαρότης, ἡ	greasiness
ὀξέσθαι	to be made sour
ὄξος, τὸ	vinegar
ὀξύκρατον, τὸ	dilute vinegar
ὀξύς	sour
ὀξύτης, ἡ	sourness
πικρός	bitter
πικρότης, ἡ	bitterness
στρυφνός	astringent
στρυφνότης, ἡ	astringency
στυψις, ἡ	astringency
στύφων	astringent
ὑπόπικρος	fairly bitter
χυμός, ὁ	flavour/fluid/humour

Page17, line 2 **Αἱ διαφοραὶ**: Aëtius has chosen to begin his introduction by quoting Galen, mainly verbatim, starting from the middle of the fifth sentence of the introduction to book 7 of *SMT*. The result, however, produces a seemingly natural beginning, and emphasises the importance of elemental theory.

[17.2-3] **θερμὸν...αὐτῶν**: For consideration of Elemental Theory, see Introduction, xii-xviii. The term **λεπτομερές** and its opposite, **παχυμερές**, are used in this instance to indicate modification of the heating, cooling, moistening and drying effects of drugs. It is difficult to understand and express in modern terminology, inevitably influenced by current knowledge of physical chemistry and atomic theory, what the ancients envisaged regarding the enhancement of a drug's effect according to its ability to penetrate and spread. *Χυμοί*, by definition, flow, and translating *λεπτομερές* as “fine-grained/less dense/less viscous/more porous” (with the opposite terms “coarse-grained/more dense/more viscous/less porous” for *παχυμερές*) is probably a reasonable approximation, and matches the nature of some of the substances so described. (For full discussion, v. Debru, 1997: 85-101.)

[17.6] **αὐτὸ**: τοῦτο in Galen (12.3.3) has been rendered as αὐτὸ either by Aëtius or a copyist. This reflects the emergence of the latter as a demonstrative in the centuries between Galen and Aëtius (Horrocks, 1997: 73).

[17.8] **ὑπὸ... δέξεται**: the elemental capacities of drugs were thought to interact with the inherent elemental qualities of the recipient (Debru, 1997: 91).

[17.11] **τέσσαρας** in Aëtius for τέτταρας in Galen (12.3.9): this loss of Atticisation (Horrocks, 1997: 83) is an inconstant feature throughout the work.

[18.4-14]

γινέσθω δὲ τούτων αὐτῶν εὐσήμου διδασκαλίας ἕνεκα τάξις τῶν ἀποστάσεων, ἐπὶ μὲν τὸ ψυχρὸν ἢ πρώτη μὲν ἐξ ἧς ἂν τις θεῖη τὸ ῥόδιον ἔλαιον ἢ τὸ ῥόδον αὐτό· δευτέρα δὲ ἐξ ἧς ταύτη, οἶον ὁ τοῦ ῥόδου χυλός· καὶ τρίτη καὶ τετάρτη μέχρι περ ἂν ἐπὶ τὰ ψυχρότατα τῶ λόγῳ παραγενώμεθα, κώνειόν τε καὶ μηκόνειον καὶ μανδραγόραν καὶ ὑοσκύαμον. ἐπὶ δὲ τὸ θερμὸν, ἄνηθον μὲν καὶ τῆλιν πρῶτα, δευτέρα δὲ ἐφεξῆς ἅ τούτων φαίνεται δευτέρα, καὶ τρίτα καὶ τέταρτα, μέχρι περ ἂν ἐπὶ τὰ καίοντα παραγενώμεθα.

[10]

κατὰ δὲ τὸν αὐτὸν τρόπον καὶ ἐπὶ τῶν ὑγραινόντων καὶ ξηραινόντων φαρμάκων, ἀρξάμενοι πάλιν ἀπὸ τοῦ συμμετροῦ, τάξεις ἐφεξῆς ἄχρι τῶν ἄκρων ποιησόμεθα.

For the sake of clearly distinguished instruction of these very principles, let there be postulated a scale of levels: as far as cold is concerned, the first level is that from which one might put rose-oil or the rose itself; the second in order here might be the sap of the rose; and so on with the third and fourth levels until we come in the scheme of things to the coldest – hemlock, opium, mandrake and henbane. When it comes to heating, we rate dill and fenugreek in the first level; then second in succession, the ones which appear to be second among them, then third and fourth, until we arrive right at those with a burning effect. In the same way, with regard to the moistening and drying drugs, we shall begin again in a commensurate manner and set levels one after the other, all the way to the extreme examples.

- [18.4] **γγνέσθω**: Aëtius (or his copyists) can also appear more Atticising than Galen: here he has γγνέσθω for γινέσθω (11.571.15).
- [18.6] **ρόδον**: Whereas Aëtius classifies both rose-oil and the rose in the first category, Galen places rose-oil or perfume (τὸ ρόδιον [sc. ἔλαιον or μύρον]) in the first category, and the rose in the second category (11.571.17). This may represent the first of many examples of Aëtius' demonstrating his individuality and personal knowledge, as opposed to his simply being a copyist of a reduction of Galen's original work. (cf. notes, pr. 21.9,10; 27.25-6; 27.28-9; 27.29-30)
- [18.12] **καὶ ξηραινόντων**: This does not appear in Galen after τῶν ὑγραινόντων. Whether it is a deliberate insertion by Aëtius or was present in the manuscript available to him is impossible to determine.

τῆς γὰρ τοιαύτης γνώσεως εἰς τὴν
 ἰατρικὴν μέθοδον οὐ σμικρὰ τις ἢ χρεία. προσήκει δὲ γεγυμνᾶσθαι [15]
 κατὰ τὴν γευστικὴν αἴσθησιν καὶ ἐπὶ μνήμῃς ἔχειν ἐκάστης ποιότητος
 τῶν χυμῶν τὴν ιδιότητα, οἷον αὐτίκα ὅταν τὸ πλησιάζον τῇ γλώσσει
 σῶμα ξηραίνῃ σφοδρῶς καὶ ἀνάγῃ καὶ τραχύνη μέχρι βάθους πλείονος αὐτήν,
 ὥσπερ ἀχράδες ἄωροι καὶ κράνα καὶ τὰ ὅμοια, στρυφνὸν ἅπαν τὸ [20]
 τοιοῦτον ὀνομάζεται, ὅπερ ἐστὶν ἐπιτεταμένον αὐστηρόν. ὅσα δὲ ἐν
 τῷ ψαύειν τῆς γλώττης οὐ συνάγει μὲν αὐτήν, οὐδὲ σφίγγει καθάπερ
 τὰ στύφοντα, τὸ δὲ ἐναντίον ἅπαν φαίνεται ποιῶντα, ῥύπτοντά τε
 καὶ ἀποπλύνοντα, ταῦτα σύμπαντα προσαγορεύομεν ἄλυκά. τὰ δὲ ἔτι
 μᾶλλον τούτων ῥύπτοντα, μέχρι τοῦ καὶ τραχύνειν ἀνιαρῶς, πικρὰ [25]
 προσαγορεύεται. τὰ δὲ γε δάκνοντα καὶ διαβιβρώσκοντα μετὰ θερμό-
 τητος ἰσχυρᾶς, δριμέα. τὰ δὲ ἄνευ θερμότητος δάκνοντα καλεῖται μὲν
 ὀξέα, πρόσσεσι δ' αὐτοῖς καὶ τὸ ζυμοῦν τὴν γῆν ἐπιχειρομένοις αὐτῇ. [p19]
 ὅσα δὲ οἷον ὑπαλείφει τε καὶ ἀναπληροῖ καὶ καθίστησι τὰ τετρα-
 χυσμένα τε καὶ οἷον διαβεβρωμένα τῆς γλώττης μόρια, ταῦτα μεθ'
 ἡδονῆς ἐναργοῦς ψαύοντα, γλυκέα ὀνομάζεται, χωρὶς δὲ τῆς ἐναργοῦς
 ἡδονῆς, λιπαρὰ προσαγορεύεται.

[18.18] σφοδρῶς added after ξηραίνῃ.

Indeed, the usefulness of such knowledge in the field of medical research is not small. It is proper to have been trained in the sense of taste and to know off by heart the individual character of each sort of the flavours; for example, whenever the material approaching the tongue strongly dries, stimulates and roughens it to the full depth, such as unripe wild pears, cornelian cherries and the like, all of this sort is called astringent, which is classified as “harsh”. All that do not contract the tongue on touching it and do not choke like astringents, but appear to do the complete opposite, both cleansing and washing off, those we group all together by name as “salty”. The ones still more cleansing than these, even to the extent of causing distressing roughness, are called “bitter”. The ones that sting and eat away with intense heat are “sharp”. Those stinging without heating are called [p19] “sour”; making the ground effervesce when poured on it is also a property of them. All things that, as it were, spread like salve and fill up and settle the parts of the tongue that have been roughened and, as it were, eaten away are called, when touching it with distinct pleasure, “sweet”, but, when without distinct pleasure, they are labelled “greasy”.

[19.1] τὸ ζυμοῦν: Galen simply refers in this instance (11.453.17) to τὸ ζυμοῦν as being a property of sour substances, without mentioning their being poured on the ground, although elsewhere (8.177.3; 10.974.13) he does have γῆν as the object of ζυμοῦν. If the ground in question contained adequate amounts of limestone or chalk, as is the case in large areas of Greece, Turkey and Italy, presumably Aëtius considered τὸ ζυμοῦν to be the effervescence now known to be due to the release of carbon dioxide when calcium carbonate reacts with acids; a simple experiment, namely pouring vinegar on soil treated (heavily) with garden lime, easily demonstrates this effect.

[19.5-24]

[5]

[10]

[15]

[20]

εἰ μὲν οὖν τὴν δριμύτητα κατανοῆσαι σαφῶς ἐθέλοις, ἐπὶ σκοροδίου τε καὶ κρομύου καὶ τῶν ὁμοίων αὐτοῖς, ἀπογευόμενός τε συνεχῶς καὶ μασώμενος ἐπὶ πλεῖστον καὶ τῆ μνήμη πειρώμενος ἀκριβῶς παρατίθεσθαι τοῦ γιγνομένου πάθους τὴν αἴσθησιν· εἰ δὲ τὴν στύψιν κατανοῆσαι σαφῶς ἐθέλοις, ἐπὶ κικίδος τε καὶ ῥοῦ καὶ τῶν ὁμοίων· εἰ δὲ τὴν πικρότητα κατανοῆσαι βούλει, νίτρου καὶ χολῆς γευόμενος· εἰ δὲ τὴν γλυκύτητα, σιραίου καὶ μέλιτος, ἔτι δὲ πρὸς τούτοις εἴ τε οὖν ἄποιον ἐθέλοις εἴ τε μέσον ἐν ποιότητι τῆ πρὸς τὴν γεῦσιν, τὸ ὕδωρ ἀξιῶ σ' ἐκλαμβάνειν καὶ τούτου γευόμενον, ἀκριβῶς ἔχειν ἐν τῆ μνήμη, καὶ μάλιστα τοῦ καθαρωτάτου ὕδατος καὶ μηδεμίαν ὧν προειρήκαμεν ἐμφαίνοντος ποιότητα, μήτε γλυκύτητα μήτε δριμύτητα μήτε ὀξύτητα μήτε πικρότητα καὶ πρὸς τούτοις ἔτι μήθ' ἰκανῶς θερμοῦ μήθ' ὑπερβαλλόντως ψυχροῦ. ἐντεῦθεν γὰρ ὀρμώμενος, ἐτοιμότερον ἐπὶ τε τὴν τῶν ἀμυδρῶν χυμῶν ἀφίξιν διάγνωσιν ἐπὶ τε τὴν τῶν, ὡς ἔγωγέ φημι, μετρίως γλυκέων, ὡς δὲ ἄλλοι τινές, ὕδατωδῶν, οἷός ἐστιν ὃ τε τῶν χλωρῶν καλάμων καὶ ἀγρώστεως χυλός, πυρῶν τε καὶ κριθῶν καὶ ἄλλων πολλῶν τῶν συμμέτρως γλυκέων, ὁποῖόν τέ σοι τὸ ἀποιότατον ὕδωρ θερμότητός τε καὶ ψυχρότητος ἐπιφανές ἐστι, μέσην ὡς οἷόν τε μάλιστα κατάστασιν ἔχον καὶ μικρόν τι ῥέπον ἐπὶ τὸ ψυχρόν.

[19.15] προειρήκαμεν replaces προείρηκα ποιεῖν.

Accordingly, if you want to have a clear knowledge of sharpness, you should continually sample the taste of garlic, onions and things like them, and chewing them to the greatest extent and trying to compare accurately the perception of the occurring sensation with your recollection. If you want a clear knowledge of astringency, you should compare perceptions by tasting the castor-oil plant, sumac or the like; if you wish a

clear knowledge of bitterness, by tasting natron and bile; for sweetness, concentrated new wine and honey.

In addition to these, if you want to experience neutrality or know the mid-point of gustatory quality, I think it worth your while to take water, taste it and keep a precise recollection of it – really the purest water, and exhibiting none of the qualities which we have already mentioned, neither sweetness, sharpness, sourness nor bitterness, and in addition to these, neither too hot nor excessively cold. For, taking this as a starting-point, you will arrive more readily at discriminating the flavours that are hard to discern, and, as I call them, the moderately sweet ones, or, as certain others say, the aqueous ones, such as in the juice of fresh reeds and dog’s-tooth grass, grains of wheat and barley; and at discriminating many other similarly sweet things, and what sort of indicator of hotness and coldness very pure water is for you with, as far as possible, an intermediate nature, and inclining a little towards the cold.

[19.10] **βούλει**: Having previously copied Galen’s use of the optative ἐθέλοις (11.632.10), Aëtius now inserts the present indicative βούλει.

[19.20] **ἄλλοι τινές**: Galen cites Theophrastus in this part of the discussion (11.633.11). Why Aëtius has not referred to him by name is unclear; perhaps he is being consistent, and this is part of his method of reducing Galen’s text (cf. pr.22.9n).

[19.24-20.12]

εἰ δὲ τὴν τοιαύτην
γεῦσιν ἔχον οὐχ ὑγρὰν ἀλλὰ ξηρὰν ἔχει τὴν σύστασιν, ἀνάγκη γεῶδες [25]
ὑπάρχειν αὐτὸ καὶ ξηραίνειν ἀδήκτως. ὀνομάζεται δὲ τὰ τοιαῦτα
ἐμπλαστικά, καθάπερ ἄμυλος καὶ τὰ πλεῖστα τῶν ἀκριβῶς πεπλυμέ-
νων μεταλλικῶν, πομόλυξ, ψιμμύθιον, καδμία, κιμωλία, σάμιος ἀστήρ
καὶ τὰ παραπλήσια. τινὰ δὲ ἐξ αὐτῶν οὐ γεῶδη μόνον, ἀλλὰ καὶ [30]
ὑδατώδη τὴν φύσιν ἐστίν, ἔνια δὲ καὶ ἀέρος οὐκ ὀλίγον ἐν ἑαυτοῖς
περιέχει, γλίσχρα μὲν ταῦτα καὶ διὰ τοῦτο ἐμπλαστικά. διττὴ γὰρ τῶν [p20]
ἐμπλαστικῶν φαρμάκων ἡ φύσις, ἢ μὲν ἑτέρα γεῶδης ἀκριβῶς καὶ ξηρά,
ἢ δὲ ἑτέρα γλίσχρα μὲν πάντως, μικτὴ δὲ ἐξ ὑδατος καὶ γῆς καὶ τὰ
πολλὰ ἀέρος, ὥσπερ τὸ γλυκὺ ἔλαιον. τὸ δὲ τοῦ ὠοῦ λευκὸν ὅμοιον
μὲν πως, γεωδέστερον δὲ ἐλαίου, καὶ τὸ τυρῶδες τοῦ γάλακτος [5]
ἐμπλαστικόν ἐστὶ καὶ ἢ τοῦ ὑὸς πιμελή. ταύρου μὲν γὰρ καὶ τράγου
πιμελή ἤτοι στέαρ δριμῦ καὶ γεωδέστερον τῆς τῶν ὠν πιμελῆς.

χηγός δὲ καὶ ἀλεκτρυόνος ἐστὶ μὲν καὶ θερμότερα καὶ ξηρότερα τῆς τῶν ὑδῶν, ἀλλὰ λεπτομερῆς τε καὶ οὐδαμῶς γεώδης. αἱ γοῦν πιμελαὶ εἰ μὴ που δριμύτητά τινα ἔχουσιν, ἐμπλαστικά τε τῶν πόρων εἰσὶ, καὶ μᾶλλον αἱ ξηρότεραί τε καὶ γεωδέστεραι. τοιοῦτος δὲ ἐστὶ καὶ ὁ πεπλυμένος ἀκριβῶς κηρός. τὰ μὲν οὖν ἐμπλαστικά φάρμακα τοιαῦτα. [10]

And if something has such a taste but has not a moist but a dry composition, it must belong to the earthy group and must dry without pungency. Such materials are termed “adherent”, such as starch, most of the minerals which have been carefully washed, zinc oxide, white lead, calamine, Cimolian earth, Samian clay and similar materials. Certain of them are not only naturally earthy but also aqueous, and some encompass within themselves no small amount of air, [p20] and so these are sticky and for this reason cause adherence. The nature of adherent drugs is two-fold: the one aspect is strictly earthy and dry, while the other is completely sticky, compounded from water, earth and mostly air, like sweet oil. The white of an egg is rather similar but earthier than olive oil, and the cheesy material in milk is adherent, also pig-fat. The fat of bulls and billy-goats is really a pungent hard fat and earthier than the fat of swine; that of the wild goose and the cockerel is both hotter and drier than that of swine, but fine-grained and not at all earthy. In any case, if fats do not have at all any sharpness, they are adherent to the pores, and more so the drier and earthier ones. Of such a sort also is carefully washed beeswax. So, that is what adherent drugs are like.

[19.29] **καὶ τὰ παραπλήσια:** Galen lists in addition chalk or gypsum, Cretan earth, “coarse” material, and painters’ earth (11.634.7-9).

[20.4] **ὥσπερ τὸ γλυκὺ ἔλαιον:** Galen expands on the nature of sweetness, and says it is derived from airy, earthy and moist essence (11.634.17-8).

[20.5] **τὸ τυρώδες τοῦ γάλακτος:** This fits with modern knowledge of the water-soluble protein casein which is denatured to insoluble casein in the cheese-making process (White et al., 1964: 719-20).

[20.13-21.17]

τὰ δὲ στύφοντα γεώδη τέ ἐστὶ καὶ παχυμερῆ ταῖς τῶν ὄγκων συστάσεσι, ψυχρὰ δὲ ταῖς ποιότησι· τὰ δὲ ὀξεῖα λεπτομερῆ μὲν τοῖς σώμασι, ψυχρὰ δὲ ὡσαύτως τοῖς στύφουσι. ὅσα δὲ τοῖς χυμοῖς ἐμφέρεται [15]

γεώδη μόρια, κατατηκόμενα ταῦτα καὶ συνάγοντα καὶ ἀποξηραίνοντα
 τὰ νοτερὰ τῶν τῆς γλώττης αἰσθητικῶν μορίων, τραχύτερα μὲν ὄντα
 στρυφνὰ φαίνεται, ἤττον δὲ τραχύτερα αὐστηρά. καὶ ὀρθῶς ψυχρὰν
 τὴν κρᾶσιν τῶν τοιούτων χυμῶν ἐροῦμεν· ἐπεὶ δὲ ἀνωμάλως ξηραίνει, [20]
 τοῦτο γὰρ ἦν τὸ τραχύνον, εἴη ἂν πάντως καὶ γεώδης. ὁμαλῶς γὰρ
 ἅπαν τὸ ὑδατῶδες διεξέρχεται τὰ σώματα καὶ διασπασθὲν πάλιν
 ῥαδίως ἐνοῦται· τὸ δὲ γεῶδες διασπᾶται μὲν, οὐκέτι δὲ ῥαδίως
 συνέρχεται. καὶ μέντοι καὶ τὸ περὶ τῆς αἰσθήσεως ἴδιον ἑκατέρου
 πάθους ἀναμνησθέντι σοὶ τοῖς αὐτοῖς μαρτυρήσει. ταχεῖα μὲν γὰρ ἢ
 τῶν ὀξέων χυμῶν διέξοδος ἐν τοῖς αἰσθητικοῖς μορίοις φαίνεται [25]
 γινομένη, βραδεῖα δὲ ἢ τῶν στρυφνῶν. καὶ τὰ μὲν ὀξέα διὰ βήθους
 τῶν σωμάτων ἐνεργεῖν φαίνεται μᾶλλον, ἐπιπολῆς δὲ τὰ στρυφνά.
 ἐπειδὴν δὲ δοκιμάζειν ἐθέλοις ἐνέργειαν εἰλικρινοῦς στρυφνότητος, εἰ
 μὲν γευομένῳ σοὶ φαίνοιτο στρυφνὸν ἅμα καὶ δάκνον ταῦτό, τοῦτο [p21]
 μὲν ἀπολείπειν σε κελεύω τὸ εἶδος, ἔρχεσθαι δὲ ἐπὶ τὸ στρυφνὸν
 ἄνευ τοῦ δάκνειν, καὶ μηδὲ ὀξὺ μηδὲ γλυκὺ μηδὲ πικρὸν ἀλλ’ ὡς
 οἶόν τε μάλιστα μίαν ἔχον ποιότητα καὶ δύναμιν ἐπιμεμιγμένην τῇ
 στύψει. περιττὸν γὰρ καὶ μάταιον εἰς πείραν ἄγειν τὸ τοιοῦτον φάρ- [5]
 μακον. ἄδηλον γὰρ εἴτε διὰ τὴν στύψιν, εἴτε διὰ τινὰ τῶν ἐπιμεμιγ-
 μένων αὐτῇ ποιότητων, εἴτε δι’ ἀμφοτέρας ἐνήργησε περὶ τὸ πλη-
 σιάζον αὐτῷ σῶμα. χαλκίτις οὖν καὶ μίσυ καὶ χάλκανθος καὶ λεπίς
 χαλκοῦ καὶ σῶρι καὶ πρὸς τούτοις ἔτι τῶν ζωγράφων ἀρμενιακὸν
 ὑδράργυρός τε καὶ ἕτερα μυρία, στύφοντά τε ἅμα καὶ δάκνοντα, δρᾶ [10]
 μὲν κατ’ ἀμφοτέρας τὰς ποιότητας εἰς ἕκαστον τῶν ὁμιλούντων σω-
 μάτων, οὐ μὴν διδάξει γε ἡμᾶς δύναται σαφῶς εἴτε διὰ τὴν στύψιν
 ἔχει τὸ καίειν, εἴτε διὰ τὴν δριμύτητα. ἐνδοθεν γὰρ τοῦ σώματος εἰ
 ληφθεῖν τὰ τοιαῦτα παχυμερῆ ὄντα καὶ μᾶλλον τῇ δυνάμει θερμὰ καὶ [15]
 διὰ τοῦτ’ ἐκπυρούμενα τῷ χρόνῳ κατὰ τὴν ἐν τῷ σώματι τοῦ ζῴου
 μεταβολήν, ὁμοίως τοῖς διαπύροις λίθοις ἢ σιδήροις ἔλκοι καὶ κατα-
 καίει τὰ κατὰ τὴν γαστέρα, μηδὲ ἀναδοθῆναι δυνάμενα διὰ βάρος.

[20.25] μορίοις replaces σώμασι.

The astringent drugs are both earthy and coarse-grained in the
 composition of their particles but cold in their quality; the sour ones are
 fine-grained in substance, and cold like the astringent ones. As for all the
 earthy fractions that are brought into the fluids, dissolving, collecting and
 completely drying the moist elements of the tongue’s sensory parts, that
 which is rougher appears astringent, whereas the less rough appears harsh.
 We shall be correct in calling the composition of the aforementioned fluids
 cold; when one causes uneven drying (for this was what was doing the
 roughening), it would be also completely earthy. For all aqueous material
 passes evenly through particles, and after it has been separated it is easily
 united again; but earthy material is separated, and no longer easily comes
 together.

What is more, the specific nature of the experience will be your evidence for the same things when you recall each sensation. Whereas the passage of the sour fluids in the sensory receptors clearly occurs quickly, that of the astringent ones is slow. And while the sour materials appear to operate more by means of the deep part of the receptors, the astringent ones do so by means of the surface. Whenever you want to estimate the effect of pure astringency, if [p21] the same thing appears astringent and pungent at the same time to you when you taste it, I urge you to leave aside this kind and go to the astringent sort without pungency, and neither sour, sweet nor bitter, but as far as possible what has one quality and capacity blended in the astringency. It is excessive and idle to conduct a trial of such a drug. For it is unclear whether it exerts its effect on the body which comes into contact with it through astringency or through the qualities mixed into it, or through both. Rock-alum, therefore, and copper ore, copper sulphate solution, copper flake, ferrous sulphate, and in addition to these, limestone coloured blue by copper carbonate as used by painters, mercury and great many others, which are both astringent and pungent at the same time, act according to both qualities on each of the bodies that come together; in fact, they are unable to teach us clearly whether they have a burning effect on account of astringency or sharpness. For, inside the body, if those materials are taken that are coarse-grained, more heating in their capacity, and in consequence eventually burnt up according to the process of change that occurs in the body of a living creature, they wound in the same manner as red-hot stones or irons and burn up what is in the bowel, and are not able to be assimilated because of heaviness.

Although in this passage Aëtius appears to engage with his readers in an authoritative manner, with repeated use of the first person, he has, in fact, closely copied it from Galen, using sections taken mainly from *SMT* 4.7, as noted in Table 1 (Intro. xxv). The fact, however, that he has reproduced it, especially near the beginning of his work, shows his endorsement of Galen's ideas in this respect, and his eagerness to bring it to his readers' attention.

- [20.27] **τῶν σωματίων**: apparently inserted by Aëtius, possibly to clarify his concept of the physiology of the tongue, or again, this may reflect a difference between the texts of Galen available to Aëtius and to ourselves.
- [21.4] **δύναμιν** This word, which appears very frequently throughout the text, is translated as “capacity” in an ancient pharmacological context (van der Eijk, 2012).
- [21.9] **σῶρι**: “σῶρυ” in Galen (11.641.1), also mentioned by Dioscorides (5.118 (119) (K25.1.783.11)), Celsus (6.9.5) and Pliny the Elder (*HN* 34.117), is an ore whose exact nature is uncertain, possibly ferrous sulphate or melanterite (LSJ).
- [21.9,10] **τὸ τῶν ζωγράφων ἄρμενιᾶκόν, ὑδράργυρος**: added by Aëtius (cf. pr.18.6n.).

[21.18-22.6]

ἄμεινον οὖν γεύεσθαι πολλῶν ἐφεξῆς ἄλλων ἐπισκοπούμενον εἰλικρινῆ
 στύψιν ἰδίᾳ καθ’ ἑαυτὴν ὡς οἶόν τε μάλιστα, κάπειδὸν εὐρῆς τοιαύ-
 την, οὕτως ἤδη κρίνειν ἐκεῖνο τὸ φάρμακον αἷς ἔμπροσθεν ἤκουσας [20]
 μεθόδοις, οἶον εἰ γευσαμένῳ σοι φαίνοιτο βαλαύστιον ἢ κικίς ἢ κύτι-
 νος ἢ ὑποκυστίς ἢ ἀκακία ἢ ῥοῦς ἢ τι τοιοῦτον ἕτερον ἀκριβῶς εἶναι
 στρυφνόν, εὐδηλον δὲ ἐτέραν ποιότητα μηδεμίαν ἔχον, ἐξετάζειν ἐπὶ
 τῶν τοιούτων ἤδη καὶ βασανίζειν ἀκριβῶς ἐνέργειαν στύψεως· τὸ μὲν [25]
 οὖν στρυφνὸν σῶμα γεῶδές τε ἐστὶ καὶ ψυχρόν, ἐκλυθήσεται δὲ ἐξ
 ἀνάγκης τριχῶς, ἢ θερμαίνόμενον ἢ ὑγραινόμενον ἢ συναμφοτέρων
 ἅμα πάσχον. ἂν μὲν οὖν θερμαίνεται μένον, οὐκ ἔσται μὲν οὐθ’ ὑγρό-
 τερον οὔτε μαλακώτερον, ἀλλὰ σκληρότερον μένον ἐπικτήσεται γλυκύ-
 τητα, καθάπερ αἱ τῶν δρυῶν βάλανοι καὶ μάλιστα αἱ ὀνομαζόμεναι [30]
 καστανεῖαι, ἂν δὲ ὑγραίνεται μόνον, ἂν μὲν παχυμερῆς τε καὶ ὑδατώ-
 δης ἢ ὑγρότης εἴη, αὐστηρὸν ἀποτελεσθήσεται· τὸ γὰρ στρυφνὸν [p22]
 ἐκλυόμενον τὸν αὐστηρὸν ποιεῖ χυμόν. παντὸς γὰρ χυμοῦ δύναμιν
 ἢ ὑδατώδης ὑγρότης ἀμβλύνει. ἐὰν δὲ λεπτομερῆς τε καὶ ἀερώδης ἢ
 ὑγρότης προσγένηται, ὅξυ ἀποτελεσθήσεται. τὸ γὰρ λεπτομερὲς ψυχρόν
 ὀξεῖαν ἀπεργάζεται ποιότητα. ἂν δὲ ὑγραίνεται τε ἅμα καὶ θερμαίνη-
 ται, μετὰ μὲν ὑδατώδους ὑγρότητος εἰς γλυκύτητα τὴν μετάπτωσιν [5]
 ἴσχει, μετὰ δὲ ἀερώδους εἰς λιπαρότητα.

[21.22] εἶναι replaces ὄν.

[21.28] μένον replaces μόνον.

[21.30] καστανεῖαι: καστανεῖαι (Gal.).

It is better, therefore, to taste many others in turn, sampling pure astringency separately on its own as far as possible, and whenever you have found such a material, to judge that drug now in this way by the systems

you have previously heard about – for example, if tasted, it might seem to you like the wild pomegranate flower seems, or the castor-oil plant, pomegranate flower, hypocist, acacia, sumac, or any other such which is definitely astringent, and very clearly has no other quality; that is, to estimate according to previous experience and to test accurately the activity of astringency.

Astringent matter, then, is earthy and cold, and will be necessarily released by triple means, namely when heated, wetted or by being subjected to both together at the same time. If it is only heated, it will not be either wetter or softer, but, remaining harder, it will gain in addition a sweetness, just like the acorns of oak trees, and especially like the ones called sweet chestnuts, but if it is only wetted it will, if the liquid is dense and watery, be rendered harsh. For the [p22] released astringency creates harsh flavour. Solution in water, in fact, takes the edge off the capacity of every flavour. But if the solution has become in addition rarefied and aerated, it will be rendered sour. For rarefied cold creates the sour quality. If it is simultaneously wetted and heated, in aqueous solution it is transformed to sweetness, whereas in aerated solution, to greasiness.

[21.22] **βαλαύστιον...ἢ ῥοῦς**: Galen adds to this list στρύχνος, which may be *Datura* or a solanaceous species (LSJ), and γλαύκιον, the juice of the horned poppy (11.641.11).

[21.30] **καστανέαι**: Aëtius has καστανέαι (chestnut trees) whereas Galen has καστανεῖαι (11.647.12) (their fruit), which makes better sense.

[22.2] **ὕδατώδης ὑγρότης**: literally “watery wetness”.

[22.4-6] **ὕγραίνηται...λιπαρότητα**: What precisely the ancient physicians meant by the terms ὑγραίνω and ὑγρότης must remain a matter for conjecture. If the former is taken to mean “moisten/dissolve” [i.e., with any liquid], or possibly, in the passive, “be liquefied/dissolved”, and the latter to mean “liquid” or “solution”, then the concepts of aqueous or aerated solutions become possible. The ancients must have observed the effects of solvents, but we can only speculate on how they expressed this.

[22.6-20]

οἱ γὰρ ἀπὸ τῶν δένδρων
καρποὶ πάντες, ὅσοι γλυκεῖς ἡμῖν φαίνονται πεπανθέντες, ἄρτι γενόμενοι στρυφνοὶ τέ εἰσι καὶ ξηροὶ ταῖς συστάσεσι, καὶ κατὰ τὴν τοῦ γεννῶντος δένδρου φύσιν ἕκαστος, προιόντος δὲ τοῦ χρόνου γίνονται μὲν ὑγρότεροι, προσλαμβάνουσι δὲ ἔνιοι ὀξύτητα τῇ στρυφνότητι καὶ ταύτην ἀποτιθέμενοι κατὰ βραχὺ γλυκεῖς αὐθις γίνονται τελειούμενοι. τινὲς δὲ οὐδὲ ἐπὶ τοῖς δένδροις, ἀλλὰ ἀφαιρούμενοι μετὰ χρόνον ἀπολαμβάνουσι τὴν γλυκύτητα. ἄλλοι δὲ τινες οὐδὲ διὰ μέσης ὀξύτητος, ἀλλ' ἀντικρυς ἀπὸ τῆς στρυφνότητος ἐπὶ τὴν γλυκύτητα παραγίνονται, καθάπερ ὁ τῆς ἐλαίας καρπός. τῷ θερμῷ δὲ πέπτονται πάντες· διττὸν δὲ τοῦτο φύσει, τὸ μὲν ἴδιον σύμφυτον ἐκάστω, τὸ δὲ ἕξωθεν ἀπὸ τοῦ ἡλίου προσγιγνόμενον ἐκάστω. ἀλλ' εἴπερ στρυφνότεροι μὲν κατ' ἀρχὰς εἰσι, πεπαινόμενοι δὲ γίνονται γλυκεῖς, ἐκ θερμασίας μὲν ἢ γλυκύτης αὐτοῖς, ἐκ ψύξεως δὲ ἢ ὀξύτης καὶ στρυφνότητος ὑπῆρχε.

[22.10] ὀξύτητα τῇ στρυφνότητι replaces ὀξύτητιν στρυφνότητα.

All tree-fruits, all that when ripened seem sweet to us, are, when just produced, astringent and dry in substance, and, each according to the nature of the tree which produced it, become more moist in the course of time; but several acquire in addition sourness in the astringency, and gradually losing this, they again become sweet as they mature. Some not on the trees, but removed from them, receive sweetness after a time. Certain others reach sweetness not through the medium of sourness but directly from astringency, just like the fruit of the olive tree. All are ripened by heat. In nature this heating process has two elements: the individual heat innate in each, and what is added externally to each by the sun. But if they are more astringent from the beginning, and become sweet on ripening, then sweetness arises in them from heat, but sourness and astringency from cooling.

[22.9] **ἕκαστος**: Here Galen adds a list of fruits (11.637.1-3) which he says Theophrastus mentions.

[22.15] **τῷ θερμῷ**: The importance of sunlight rather than heat as a factor in ripening and sweetening fruit is overlooked, an understandable error in a Mediterranean climate, where, unlike in more northern latitudes, summer sunshine is invariably associated with high temperatures. (cf. White et al., 1964: 392-400.)

[22.16-7] **διττὸν... ἐκάστω**: The internal heat of an organism interacts with extrinsic heat, in this case from sunlight, similar to the interaction between the recipient of a drug and the drug (cf. pr. 17.8n.).

[22.20-23.7]

καὶ πρόδηλον ἤδη γέγονεν ὡς οἱ καρποὶ κατ' [20]

ἀρχὰς ὄντες στρυφνοί, προιόντος τοῦ χρόνου τινὲς μὲν γίνονται
 γλυκεῖς, τινὲς δὲ ὀξεῖς, τινὲς δὲ ἀσθηροί, τινὲς δὲ ἀεὶ μένουσι στρυ-
 φνοί, τινὲς δὲ ἀποτελοῦνται λιπαροί· καὶ δὴ καὶ κατὰ τὰς τῶν εἰρη-
 μένων ποιοτήτων ἐπιμιξίας παμπόλλην ἔξουσι τὴν ποικιλίαν. στρυφνὰ
 μὲν οὖν ἄχρι τέλους ἐστὶν ὁ τῆς πρίνου καὶ κομάρου καὶ κρανίας [25]
 καρπὸς καὶ τὰ τοιαῦτα, ὅτι καὶ ψυχρὰ καὶ ξηρὰ οἷά περ ἦν ἐξ ἀρχῆς
 διαμένει, μόνον μὲν ἀξανάμενα, οὐδεμίαν δὲ ἀλλοίωσιν ἐτέραν ἐπι-
 κτόμενα. στρυφνὸς δὲ ἅμα καὶ γλυκὺς ὁ τε τῆς μυρσίνης καὶ ὁ τῆς
 ἀχράδος καὶ ὁ τῆς δρυὸς καρπός· ἀσθηρὸς δὲ μόνον ὁ τῶν ἀμιναιῶν
 ἀμπέλων καρπὸς καὶ οἶνος, καὶ ὅσοι τούτοις παραπλήσιοι. ἀσθηρὸς [p23]
 δὲ ἅμα καὶ γλυκὺς ὁ τοῦ φοίνικος καρπὸς καὶ τῶν οἴνων ὁ σουρεντῆ-
 νος καὶ ὅσοι γλυκύτητα τῇ στύψει συμμεμιγμένην ἔχοντες. γλυκὺς δὲ
 μόνον ἐστὶν ὁ θήραιος καὶ ὁ σκυβελλίτης καὶ τὸ σίραιον ὃ καλοῦσιν
 ἔψημα, ὅσα τε ἄλλα τούτοις ἔοικεν. λιπαρὸς δὲ ἅμα καρπὸς καὶ χυλὸς [5]
 ἀκριβῶς μὲν ὁ τῆς ἐλαίας ἐστίν, ἤδη δὲ καὶ οἱ ἄλλοι πάντες ἐξ ὧν
 ἔλαιον σκευάζεται.

It has already become clear that after the passage of time some fruit which are astringent to begin with become sweet, some sour, some harsh, some still remain astringent and some are rendered greasy. Above all, according to the combination of the aforementioned qualities, they will have complete diversity. So, the fruit of the holm-oak, strawberry tree, Cornelian cherry and similar are astringent until the end, because they remain both cold and dry, just as they were from the start, being only intensified, but otherwise gaining nothing in addition. The fruit of the myrtle, wild pear and oak are both astringent and sweet; the fruit and wine of the Aminaian vines, and all that are akin to them, are only harsh. [p23] The fruit of the date palm, and as far as wines are concerned the Sorrentine, and all that have sweetness commingled with astringency, are harsh and sweet at the same time. The wine of Thera, of Skubela, the concentrated new wine they call “boiled-down” and all the others like them, are sweet only. The fruit of the olive tree together with its juice are distinctly greasy, and all the others from which oil is prepared as well.

23.2-3 **ὁ σουρεντῖνος**: Acquainted with Italian wines, Galen cites in addition Sabine (Σαβῦνος) and Alban (Ἀλβάτης) (11.648.17).

[23.7-24]

ὥσπερ δὲ ὁ στρυφνὸς χυμὸς ἐν τῷ χρόνῳ γλυκύτερος μὲν πρῶτον, ἐξῆς δὲ καὶ δριμύτερός τε καὶ πικρότερος ἀποτελεῖται καὶ τελευτῶν ἐκπικροῦται, κατὰ τὸν αὐτὸν τρόπον ὃ τε ῥιγώσας χυλὸς ὀξύτερος εὐθὺς γίνεταί καὶ εἰ τελέως ἀποψυχθεῖ ταχέως ὀξύνεται· οἱ τε εὐθὺς ἐν τῇ κομιδῇ τῶν καρπῶν πολλῆς ὑγρότητος πληρωθέντες, οἱ τε ἄλλως ὕδατος προσλαβόντες, ὀξεῖς ἐτοιμῶς οἱ τοιοῦτοι γίνονται ἐπὶ μικραῖς προφάσεσιν. εἰ γὰρ ἡ ὄμφαξ μὲν ὀξεῖα, γλυκεῖα δὲ ἢ σταφυλῇ καὶ τὸ πεπαίνεσθαι τοῖς καρποῖς ἅπασιν παρὰ τῆς ἡλιακῆς ἐγγίγνεται θερμότητος, εὐδηλον ὡς τὸ μὲν ἀτελέστερον καὶ ψυχρότερον ὀξύ, τὸ δὲ τελεώτερον καὶ θερμότερον ὑπάρχει γλυκύ. ὅταν οὖν ὁ οἶνος ἐν τῷ ψύχεσθαι ἀποξύνηται, πρόδηλον ὡς εἰς τὸν αὐτὸν πάλιν ἐπανέρχεται χυμὸν, ἐξ οὗπερ ἐγένετο, λέγω δὲ τοῦ τῆς ὄμφακος. διενήνοχε μέντοι τοσοῦτον κατὰ τὴν δύναμιν τοῦ τῆς ὄμφακος χυλοῦ ὄξος, ὅτι τῷ μὲν ὄξει προσέρχεται τις ἐκ σηπεδονώδους θερμότητος δριμύτης, ὃ δὲ τῆς ὄμφακος χυλὸς οὐκ ἔχει τὴν ἐπίκτητον θερμότητα, καὶ διὰ τοῦτο οὐδὲ τὴν δριμύτητα τοῦ ὄξους. διὰ τοῦτο καὶ λεπτομερέστερόν ἐστι τὸ ὄξος τοῦ τῆς ὄμφακος χυλοῦ, ὥσπερ ἢ αἴσθησις τῷ λεγομένῳ μαρτυρεῖ.

[23.7] ἐν τῷ χρόνῳ added after χυμὸς.

[23.24] λεγομένῳ replaces λόγῳ.

Just as the astringent flavour, while sweeter at first, is also rendered over time progressively sharper and more bitter, and finally becomes very bitter, in the same manner the juice which is chilled becomes immediately sourer and, if completely cooled, is quickly made sour. Those of the fruits that are filled with a lot of moisture at the moment of harvesting, and those otherwise receiving water, are the ones that readily become sour for the slightest reason. For if the unripe grape is sour and the ripe bunch is sweet, and if ripening occurs for all fruits from the warmth of the sun, it is perfectly clear that the more immature and colder material is sour, but the more mature and warmer is sweet. So, when wine is soured by being cooled, clearly it is returning again to the same flavour from which it came (I mean the flavour of the unripe grape). Sour wine [sc. vinegar] has, however, become different only to the extent determined by the potential of the juice of the unripe grape, because some sharpness from the heat of fermentation is added to vinegar, but the juice of the unripe grape does not have any added heat, and for this reason it does not have the sharpness of vinegar either.

Also for this reason vinegar is less dense than unripe grape juice, as the perception of it testifies to what is said.

[23.11] **πολλῆς ὑγρότητος πληρωθέντες:** This is due to rainfall, Galen explains (11.656.11-12).

[23.17] **ὁ οἶνος...ἀποζύνηται:** Wine is soured by exposure to air, resulting in the oxidation of ethanol to acetic acid, a process likely to be slowed by cooling and accelerated by warmth (White et al., 1964: 386).

[23.24-24.11]

ἡ δὲ τοῦ ὄξους δριμύτης οὐχ ἰκανή ἐστὶν
ἐκνικῆσαι τὴν ἀπὸ τῆς ὀξύτητος ψύξιν, εἰς δὲ τὸ τῆς διεξόδου τάχος [25]
ὑπερέτης. εἰς ὅσον γὰρ ἐστὶ τὸ θερμὸν τοῦ ψυχροῦ ποριμώτερον, εἰς
τοσοῦτον καὶ ὁ δριμύς χυμὸς τοῦ ὄξεος ἐτοιμότερον διεξέρχεται τῶν
αἰσθητικῶν σωμάτων τοὺς πόρους, ὥστε ὁ μὲν δριμύς οἶον ὀδοποιεῖ
φθάνων, ὁ δὲ ψυχρὸς οὐκ εἰς μακρὰν ἔπεται, κὰν τούτῳ τὸ τῆς αἰσθή-
σεως ἐπίμικτόν τε καὶ δυσερμηνευτόν οὐχ ἀπλῶς ψυχρὸν ἀποφῆνα- [30]
σθαι τὸ ὄξος συγχωρεῖ. αἰσθανόμεθα γὰρ τινος ἐν αὐτῷ πυρώδους
δριμύτητος. ἡ δὲ ἐκ τῆς ἐπομένης ὀξύτητος ψύξις [p24]
ἀμαυροῖ καὶ κατασβέννυσι παραχρῆμα τὴν δριμύτητα καὶ διὰ τοῦτο πολὺ
πλείων ἐστὶν ἢ ἐκ τῆς ψύξεως αἰσθησις ἢπερ ἢ ἐκ τῆς θερμότητος· καὶ γὰρ
θέρους ὥρα πίνοντες ὀξύκρατον ἐνίοι σαφῶς ἐμψύχονται τε καὶ ἄδιψοι
διατελοῦσιν. ἐπειδὴ δὲ τὸ δίψος διττῶς γίνεται, τὸ μὲν ὑγρότητος ἐν- [5]
δεία, τὸ δὲ πλεονεξία θερμότητος, τὸ μὲν ἐπὶ ξηρότητι γιγνόμενον οὐκ
ἰᾶται, τὸ δὲ ἐπὶ θερμότητι ἰᾶται. ὑγραίνειν μὲν γὰρ οὐ δύναται ὄξος
καθ' αὐτό, ψύχει δὲ οὐκ ἀγεννῶς. οὐκ οὐκ οὐδὲ τὴν ἐπὶ ξηρᾷ δυσκρασία
δίψαν οὔτε τὴν ἐπὶ θερμῇ καὶ ξηρᾷ δυνατόν ποτε ἰάσασθαι πινόμενον
ὄξος. εἰ δὲ συνδράμοι ποτὲ εἰς ταῦτόν ὑγρότης θερμότητι, τῆς τοιαύ- [10]
της δίψης ἄριστον ἴαμα ὄξος ἔσται.

[24.1] θάλψιν ἐμποιοῦσης omitted after δριμύτητος.

[24.8] δυσκρασία replaces διαθέσει.

The sharpness of vinegar is not sufficient to counteract completely the cooling effect derived from sourness and is subordinate with respect to the speed of its penetration. The more heat there is available than cold, the more readily the sharp flavour passes through the pores of the sensory corpuscles than the sour flavour, so that sharpness is able to make a pathway first, and coldness follows not long after. In this way a confused, hard to explain type of sensation allows that vinegar is revealed not simply as

something cool. For we feel in it a certain burning [p24] sharpness. The coolness from attendant sourness dims and extinguishes instantly the sharpness, and in consequence the sensation derived from cold is much more than that derived from heat. And some people by drinking dilute vinegar in summertime are clearly refreshed and finally lose their thirst. Since thirst is of double origin, one cause being lack of moisture and the other being excess of heat, the former due to becoming dry is not cured, but the latter due to heat is cured. For while vinegar is incapable of moistening by itself, it is by no means ineffective at cooling. Therefore, drinking vinegar cannot cure thirst either due to a dry imbalance, or due to a hot and dry imbalance; but if ever moisture and heat come together in the same place, vinegar will be the best remedy for such a thirst.

[24.5-7] **ἐπειδή...ἰᾶται**: Thirst is now known to be caused by depletion of total body water and is best quenched by drinking water.

[24.10] **εἰ...θερμότητι**: Galen inserts that this is a rare condition, occurring in dropsy (11.437.12-4). If Aëtius has omitted this reference to dropsy on account of his professional judgment rather than simply to reduce the size of the text, then it is to his credit, as the idea of an interrelationship between heat, moisture, thirst and oedema is problematic. It would have been better, however, for him to have omitted the whole sentence.

[24.11-25.10]

τοῖς δὲ ἄλλως διψῶσιν ἔν τε

καύσοις πυρετοῖς καὶ τοῖς ἄλλοις περικαέσιν ἅπασιν καὶ τοῖς ἐν θέρει
καὶ θάλπει σφοδρῶ σύνθετος ἢ διάθεσις ἐστὶν ἐκ θερμότητός τε καὶ
ξηρότητος, ὥστε εἰκότως αὐτοῖς σύνθετόν ἐστι καὶ τὸ ἴαμα ἐξ ὄξους καὶ ὕδατος· τὸ
μὲν

ὄξος οὐκ ἀγεννῶς μὲν ψῦχον καὶ πάντη ῥαδίως διεξερχόμενον τῇ [15]
λεπτομερίᾳ, τὸ δὲ ὕδωρ πρὸς τὸ ψύχειν ἔτι καὶ ὑγρότατον ἀπάντων
ὑπάρχον· οὐδὲν γὰρ ἐστὶν ὑγρότερον ὕδατος. κατὰ δὲ τῶν ἐγκαλιομέ-
νων ὑποχονδρίων ἀμείνων τοῦ ὄξους ἐστὶν ὁ τῆς ὄμφακος χυλὸς
ἔξωθεν ἐπιτιθέμενος, αὐτῷ τε τῷ μῆτε βιαίαν ἔχειν καὶ πληκτικὴν
τὴν ἔξιν, μῆτε ἐπίμικτον δακνώδει θερμότητι. δέονται γὰρ οἱ οὕτως [20]
πάσχοντες παρηγορηθῆναι μὲν ἀβιάστως, ἔξωθεν δὲ μηδεμίαν ἐπικτή-
σασθαι δακνώδη δριμύτητα. ὁ τοίνυν τῆς ὄμφακος χυλὸς οὐκ ὀξὺς
μόνον ἐστίν, ἀλλὰ καὶ στρυφνός. καὶ γὰρ, ὡς προεῖρηται, πάντες
σχεδὸν οἱ τῶν δένδρων καρποὶ κατὰ τὴν πρώτην γένεσιν στρυφνοὶ [25]
γευομένοις εἰσίν. οὐ μόνον δὲ τὸ ὀξὺ ψυχρόν ἐστίν, ἀλλὰ καὶ τὸ

στρυφνὸν καὶ τὸ ἀσθηρὸν· καὶ εἴ τις γεύσαιτό ποτε κυδωνίων μή-
λων ἢ μύρτων ἢ μεσπίλων, οἶδε μὲν δὴ σαφῶς ἑτέραν μὲν τὴν ἀπὸ [p25]
τῶν ὀξέων ἡμῖν ἐν τῇ γλώττῃ γιγνομένην αἴσθησιν, ἑτέραν δὲ τὴν
ἀπὸ τῶν στρυφνῶν ἢ ἀσθηρῶν. τὰ μὲν γὰρ στύφοντα συνωθεῖν εἴσω
φαίνεται τὸ μόριον ὃ ψαύει ἐκ παντὸς μέρους ὀμαλῶς, οἷον ἐκθλί-
βοντά τε καὶ πιλοῦντα καὶ συνάγοντα· τὰ δὲ ἀσθηρὰ κατὰ βάθους τε [5]
δύεσθαι δοκεῖ καὶ τραχεῖάν τινα καὶ ἀνώμαλον αἴσθησιν ἐπάγειν, ὥστε
ἀναζηραίνοντα πᾶσαν ἐξωθεῖσθαι τὴν ἰκμάδα τῶν αἰσθητικῶν μορίων,
ὥσθ' ἑτέραν εἶναι τὴν τῶν παθῶν ιδιότητα, μηδὲ ῥηθῆναι σαφῶς
δυναμένην, ἐπὶ τε τῶν στυφόντων ἡμᾶς σωμάτων καὶ τῶν ἀσθηρῶν
χυμῶν. [10]

[24.14] ἐξ ὄξους καὶ ὕδατος added after ἴαμα.

[24.20] ἔξιπν replaces ψύξιπν.

[25.7] ἐξωθεῖσθαι replaces ἐκβόσκεσθαι.

[25.7] μορίων replaces σωμάτων.

For those thirsting otherwise in burning fevers and all other pyrexias, and those in summer and excessive heat, the condition is compounded from heat and dryness, so that the remedy also is compounded in the same way for them, from vinegar and water. Whereas vinegar is not feeble in its cooling effect and easily penetrates everywhere on account of its low viscosity, water is even further the wettest of all for cooling, for nothing is wetter than water. For inflammations of the upper abdomen, unripe grape juice is better than vinegar when applied externally, because it does not have in itself either a violent and striking state, nor is it mingled with pungent heat. Those suffering in this way need to be comforted gently, and to receive no additional pungent sharpness from external sources. Well, unripe grape juice is not only sour but also astringent.

And, as previously stated, almost all the fruits of the trees when first borne [i.e. before ripening] are astringent to taste. Not only is sourness cooling, but also astringency and harshness; and if anyone has ever tasted quinces, [p25] myrtles or medlars, he knows perfectly well that one sensation arises in our tongue from sour materials, and a different one from astringent or harsh ones. The astringent materials appear to compress inwards the particle which they touch, evenly from every part, by squeezing out, compacting and gathering. Harsh materials seem to be inserted deep

down and to impart a certain roughness and irregular sensation, so as to dry up and displace all the moisture of the sensory corpuscles, and so that they are another specific type of feeling, not able to be clearly stated, with respect both to materials which have an astringent effect on us, and to harsh flavours.

[24.15-6] **τῆ λεπτομερίᾳ**: “low viscosity” seems apt here, in describing a penetrating liquid.

[24.17-8] **ἐγκαιομένων**: or “burning pains”.

[25.1-3] **οἶδε...αὐστηρῶν**: The recognition expressed here that the tongue responds differently to different tastes is significant, but does not extend to our modern understanding that receptors for sour materials are found predominantly on the sides of the tongue, for bitter on the posterior aspect, for sweet on the tip and for salty on the sides near the tip (Bell *et al.*, 1961: 687).

[25.10-26.1]

ἀλλ' ὅστις γε ἄνθρωπός ἐστιν οἶδεν ὃ λέγω, ἐκ τῶν ἤδη [10]
 προειρημένων ὀρμώμενος. πᾶν μὲν οὖν στῦφον σῶμα, τό τε τῶν
 ἄλλων ποιοτήτων καθαρεῦον, ἀεὶ πειρώμενος εὖρον ψυχρόν. τὸ δὲ
 γλυκὺ πᾶν θερμόν ἐστι καὶ οὐκ ἀμέτρως ὑπερβάλλει τὴν ἐν ἡμῖν
 θερμότητα, ἀλλ' ὥσπερ τὸ ὕδωρ τὸ θερμόν, οὐ ψαύοντες ἠδόμεθα, [15]
 καὶ μάλισθ' ὅταν ὤμεν ἐρριγκότες, ἄχρι μὲν τοῦ διαχεῖν τὰ πεπη-
 γότα πρὸς τοῦ ψυχροῦ μόρια τοῦ σώματος ἐκθερμαῖνον ἡμᾶς, οὐ
 μὴν διαλυθόν γε οὐδὲ τέμνον αὐτῶν τὸ συνεχές, ἠδιστόν γέ ἐστι καὶ
 ὠφελιμώτατον. οὕτω καὶ πᾶν ἔδεσμα γλυκὺ θερμόν μὲν ὑπάρχει πάν- [20]
 τως, οὐ μὴν ἐπὶ πλέον γε ἠκεῖ θερμότητος ὡς ἀνιᾶν, ἀλλ' ἐν τοῖς
 ὄροις μένει τοῦ διαχέοντος καὶ ὀμαλύνοντος καὶ μαλάττοντος. τὰ γὰρ
 τρέφοντα πάντα σύμφυλά τε ἐστὶ καὶ οἰκεῖα ταῖς ὄλαις τῶν τρεφο-
 μένων οὐσίαις. εὐθύς δὲ τούτοις ὑπάρχει δηλονότι συμμέτρως εἶναι
 θερμοῖς, ὡς πρὸς τὰ τρεφόμενα σώματα. καὶ διὰ τοῦτο τῶν ἔδεσμά- [25]
 των καὶ τῶν φαρμάκων οὐχ ἐν εἶδος ἅπασιν τοῖς ἀνθρώποις. κατὰ
 γὰρ τὴν οἰκεῖαν ἕκαστος αὐτῶν οὐσίαν τε ἅμα καὶ διάθεσιν ἠδεταί τε
 καὶ ὠφελεῖται πρὸς ἀμφοῖν. ἀλλ' εἴπερ οὕτως ταῦτ' ἔχει, τὸ μὲν
 ἥττον γλυκὺ τῶν ἔδεσμάτων ἥττον ἔσται θερμόν, τὸ δὲ μᾶλλον γλυκὺ
 τοσούτω θερμότερον, ὅσῳ περ καὶ γλυκύτερον. εἰ δὲ εἰς ἀμετρίαν
 ἐκπέσοι θερμότητος, οὐδὲ γλυκὺ τὸ τοιοῦτον, ἀλλ' ἤδη φαίνεται πικρόν, [30]
 ὥσπερ τὸ μέλι παλαιούμενόν τε καὶ ἐπὶ πλεῖον καθεψόμενον, ἕκαστόν
 τε τῶν ἄλλων γλυκέων. [p26]

But, starting from the aforesaid, anyone who is a human knows what I am saying. On testing, therefore, I always have found every item which is astringent and free from all other qualities to be cooling. Every sweet thing is heating, and does not immoderately exceed the warmth within ourselves, but, just as warm water, whose contact we enjoy especially when we have been shivering with cold, warming us thoroughly until liquefying the parts of the body solidified by cold but not breaking up nor cutting their continuity, it is really most pleasant and advantageous. Thus also, while every sweet food is completely warming, it does not reach the maximum temperature to the extent of causing distress, but remains within the limits of dispersal, equalisation and softening.

For all nutrients are related and proper to the total essence of those being nurtured. Quite simply, it is clearly right for them to be warm in due proportion to the bodies which are being nurtured. And in view of this, there is not just one type of foodstuffs and drugs for all mankind. Each of them, according to their personal nature and condition, enjoys and is benefited in both respects. But if in fact this is the case, the less sweet of foods is less warming, the sweeter is more warming as much as it is sweeter. If it loses warmth extensively, in that case it is not in fact sweet but now seems bitter, like honey which has aged and been completely boiled down, [p26] and each of the other sweet things.

25.15-6 **τὰ πεπηγότα...σώματος**: Perhaps Galen (and Aëtius) believed that something akin to freezing occurs internally when we are chilled.

25.24 **ἀνθρώποις**: Galen extends this comment to cover all species (ζῴοις) (11.653.1); perhaps Aëtius considered this unnecessary in a practical handbook for physicians.

[26.1-24]

τὰ γὰρ ὁμοιότατα ταῖς κράσεσι τῶν τρεφο-
μένων σωμάτων χωρὶς ἐψήσεως τε καὶ σκευασίας ἤδη φαίνεται γλυκέα,
τὰ δὲ ἀνόμοια πάντα μὲν ἀηδῆ, πρὶν σκευασθῆναι. δεῖται δὲ τὰ μὲν
θερμὰ τῷ ψυχρῷ κολασθῆναι, τὰ δὲ ἰκανῶς ψυχρὰ τῆς τῶν θερμῶν
ἡδυσμάτων μίξεως καὶ πυρός. κατὰ δὲ τὸν αὐτὸν τρόπον ὑγρότητι
μὲν κολάζεται ὅσα γεώδη τε καὶ ξηρά, ξηρότητι δὲ τὰ πλέον ἢ προσ-
ῆκεν ὑδατώδη τε καὶ ὑγρά. τὸ μὲν οὖν γλυκὺ πρὸς τὸ θερμὸν ὑπάρ-

[5]

χει μᾶλλον ἢ ἤττον, ἐξ ἀνάγκης δῆπου καὶ ὑγρὸν μᾶλλον ἢ ἤττον
 ἐστὶ. τὸ δὲ οἷον ὑπεροπτηθέντος τούτου γιγνόμενον πικρὸν ὁμοιον
 τιτάνῳ καὶ τέφρᾳ, ξηρὸν καὶ θερμὸν ἐξ ἀνάγκης ἀποτελεῖται. καὶ μὲν [10]
 δὴ καὶ δι' αὐτὸ τοῦτο ῥύπτειν τε πέφυκεν ἅπαν τὸ πικρὸν καὶ κατα-
 θραύειν καὶ τέμνειν τοὺς γλίσχρους καὶ παχεῖς χυμούς, ὥσπερ ἡ τέφρα
 καὶ τὸ νίτρον. ὅτι δὲ ξηρὸς τὴν κρᾶσίν ἐστὶν ὁ πικρὸς χυμὸς καὶ
 γεώδης κάκ τοῦ δυσσηπτότατα πάντων εἶναι τὰ πικρά καὶ οὐδαμῶς
 σκώληκάς τε καὶ τὰ ἄλλα ζῶα γεννᾶν, οἷα δὴ πέφυκεν ἐν ρίζαις καὶ [15]
 βοτάναις καὶ καρποῖς σηπομένοις ἐγγίγνεσθαι πάρεστι συλλογίσασθαι.
 μάλιστα γὰρ ὁρῶμεν ἐν τοῖς ὑγροῖς σώμασι καὶ σκώληκας καὶ σηπε-
 δόνας ἐγγιγνομένας. τὰ δὲ ἀκριβῶς πικρά, καλῶ δὲ οὕτως ὅσα μηδε-
 μιᾷς ἐτέρας ποιότητος αἰσθητῆς μετέσχηκεν, ἅπασιν σχεδὸν τοῖς ζῴοις,
 οὐκ ἀνθρώποις μόνον, ἐστὶν ἄβρωτα, τῷ πᾶν μὲν ζῶον ὑγρὸν ἢ μᾶλ- [20]
 λον ἢ ἤττον ὑπάρχειν, ξηρὰ δὲ εἶναι τὰ πικρά, τέφρα καὶ κονία παρα-
 πλησίως. ὥσπερ οὖν τὸ μὲν ἀκριβῶς γλυκὺ τρέφει, τὸ δ' εἰλικρινῶς
 πικρὸν ἄτροφον, οὕτως τὰ μεταξὺ τρέφει μὲν, ἀλλ' ἤττον τοῦ γλυ-
 κέως.

[26.13] νίτρον replaces λίτρον.

Without boiling or preparation, the things most similar to the composition of the bodies being nurtured already appear sweet and all the dissimilar ones are unpleasant, before they are prepared. Hot things need to be kept in check by cold, and sufficiently cold things need a mixing with warm, sweetening materials and fire. In the same manner, all the earthy and dry materials are restrained by moisture, and those fully or nearly watery or moist, by dryness. Therefore, sweet is more or less proportionate to hot, and, I suppose, necessarily it is wet too, more or less. The bitter quality such as occurs when sweet material is overcooked, like chalk or ashes, is of necessity rendered hot and dry. Moreover, because of this very property, all bitter material is naturally able to cleanse, and break up and cut through sticky and thick fluids, like ashes and natron do. Because bitter flavour is dry in composition and earthy, and, being least likely to rot of all, bitter things also never produce maggots and other organisms, it is possible to reckon what sort of things have naturally occurred in roots, plants and rotten fruit. For we certainly see maggots and putrefaction arising in moist bodies. Distinctly bitter things (and I give this name to the ones that have had no share in any other sort of taste) are inedible to nearly all creatures, not only to humans, because, while every creature is more or less moist, bitter things are dry, almost as much as ash or dust. So, just as the distinctly sweet is

nourishing, the purely bitter has no nutrient value, and so the intermediate sort nourishes, but less than the sweet.

[26.11] **ρύπτειν...πικρόν**: It has been long known that alkaline materials generally have a bitter taste and tend to lower the surface tension of water so as to feel soapy in solution; sodium carbonate (“washing soda”) and bicarbonate, which were originally found occurring naturally in natron, are used as cleaning agents in the present day.

[26.24-27.18]

πλησίον δὲ ὁ ἀλυκὸς χυμὸς τοῦ πικροῦ, καὶ γὰρ καὶ γεώδεις ἀμφοτέρω καὶ θερμοί. διαφέρουσι δὲ ὁμῶς ἀλλήλων οὐκ ἀσαφεῖ διαφορᾷ ἐν τῷ λελεπτύνθαι μὲν καὶ κατειργάσθαι μᾶλλον ὑπὸ θερμότητος ξηρᾶς τὸν πικρόν. οὕτω δὲ καὶ αὐτῶν τῶν ἀλῶν ὅσοι μὲν σκληροὶ τέ εἰσι καὶ πυκνότεροι καὶ γεωδέστεροι, τοιοῦτοι δὲ εἰσιν ὀλίγου δεῖν οἱ ὀρυκτοὶ πάντες, ἤττον θερμοὶ ὄντες καὶ λεπτομερεῖς, ὅσοι δὲ εὐθρυπτοὶ καὶ χαῦνοι, λεπτομερέστεροι τε ἅμα καὶ θερμότεροι τὴν δυνάμιν εἰσι, καὶ τινες ἐξ αὐτῶν ὑπόπικροι, μεταξὺ πως ὑπάρχοντες ἀλῶν τε τῶν σκληρῶν καὶ ἀφρονίτρου. καὶ γὰρ ὅ τι ἂν ἀλυκὸν ἐπὶ πλέον ἐκθερμαίνῃς, εὐθὺς ἔσται πικρόν. οὕτω γὰρ καὶ τὸ τῆς ἀσφαλτίτιδος λίμνης ὕδωρ, ἣν νεκρὰν θάλατταν ὀνομάζουσιν, ἐν κοίλῳ καὶ θερμῷ χωρίῳ περιεχόμενον ἐξοπτώμενόν τε ὑπὸ τοῦ ἡλίου γίνεταί πικρόν· διὰ τοῦτο γε καὶ θέρους μᾶλλον ἢ χειμῶνός ἐστι πικρόν. καὶ εἰ ἀρυσάμενός τις αὐτοῦ καταθεῖ ἐν ἀγγεῖῳ κοίλῳ ἐν προσηλίῳ τόπῳ ὥρα θέρους, αὐτίκα μᾶλλον πικρότερον αὐτοῦ φαίνεται σοι γεγονός. φαίνεται γὰρ ἐν ἐκείνῳ τῷ ὕδατι μήτε ζῶον ἐγγιγνόμενόν τι μήτε φυτόν, ἀλλὰ καὶ τῶν εἰς αὐτὴν ἐμβαλλόντων ποταμῶν μεγίστους καὶ πλείστους ἐχόντων ἰχθύς, καὶ μάλιστα τοῦ πλησίον Ἰεριχοῦντος, ὃν Ἰορδάνην ὀνομάζουσιν, οὐδεὶς τῶν ἰχθύων ὑπερβαίνει τὰ στόματα τῶν ποταμῶν. κἂν εἰ θηρεύσας δέ τις ἐμβάλλῃ τῇ λίμνῃ, διαφθειρομένους ὄψεται ῥαδίως· διὰ τοῦτο καὶ νεκρὰν τὴν λίμνην ἤτοι λιμνοθάλατταν ὀνομάζουσιν. οὕτως τὸ γε ἀκριβῶς πικρόν ἅπασιν ἐστὶ τοῖς φυτοῖς καὶ ζῴοις πολέμιον, ἀχμῶδές τε καὶ ξηρόν τὴν φύσιν οἷόν περ αἰθάλη ὑπὸ τῆς κατοπτήσεως γιγνόμενον.

[26.27] σκληροὶ replaces σκληρότεροί.

[26.29] ὄντες replaces τέ εἰσι.

The salty flavour is close to the bitter, as they are both types of earthy and hot. Nevertheless, they differ from one another with no unclear distinction in becoming thin and in the bitter flavour being more overpowered by dry heat. So too, all of the salty ones themselves are rough, denser and earthier (and all the minerals are near enough such, since they

are less hot and thin), while all [p27] the friable and porous ones are more rarefied and hotter in their capacity, and some of them are fairly bitter, being somewhat in the middle of the rough salt materials and carbonate of soda. For if you completely heat up something salty, it will immediately be bitter. Accordingly, when the water of the bituminous lake which they call the Dead Sea is held in a hollow and hot place, and roasted by the sun, it becomes bitter; for this reason as well, it is also bitter more in summer than in winter. And if someone were to draw its water and put it in a hollow vessel in a sunny place in summertime, immediately it clearly appears to have become much more bitter to you than its original self.

For plainly neither animal nor plant actually grows in that water. But while the rivers which discharge into it [the Dead Sea] have very many huge fish, especially the Holy Stream nearby, which they call Jordan, none of the fish goes beyond the rivers' mouths. If anyone on a hunt were to go on the lake, he would easily see them being killed; and for this reason they call the lake dead or, in fact, the lagoon. So, the strictly bitter is hostile to all plants and animals, and it is parched and dry in nature like soot becomes from roasting.

[26.27] **αὐτῶν τῶν ἁλῶν ὅσοι:** What precisely Galen meant by this (11.695.12) must remain in doubt, as many centuries were to pass before “salts” would be defined as molecules comprising a combination of basic and acidic radicals, typically crystalline and often water-soluble, although many substances referred to by the ancients as salts, while still lacking precise definition, would include those now known to be true salts. As far as taste is concerned, only sodium chloride tastes “salty”, with potassium chloride a close second; flavour seems to be conferred both by the cationic and anionic components – cf., for example, considering the cationic component, the taste of ferrous sulphate (in some iron tablets) and magnesium sulphate (Epsom salts), and, considering the anionic component, the difference between sodium chloride and sodium bicarbonate.

[27.5] **νεκρὰν...ὀνομάζουσιν:** apparently inserted by Aëtius, or possibly present in the text he was summarising; at any rate, the meaning is made clearer.

[27.12] **Ίεροχοῦντος**: Galen also uses this term (11.693.16), which is consistent with his familiarity with Jewish and Christian teaching, as also evidenced in 8.579.16 and 8.657.1.

[27.14] **εἰ θηρεύσας ... λίμνη**: Aëtius quotes Galen (693.18-19), and substitutes θηρεύσας for συλλαβῶν [“collecting”]; there is no evidence that either ever went on such an expedition to the Dead Sea.

[27.18-28.7]

περὶ μὲν οὖν τῶν πικρῶν
χυμῶν τῆς δυνάμεως ἀφορισάμενοι καὶ τμητικούς αὐτοὺς εἰπόντες
εἶναι καὶ ῥυπτικούς καὶ λεπτυντικούς καὶ δηλονότι θερμούς εἰς το- [20]
σοῦτον ὡς μήπω καίειν, ἐπὶ τοὺς δριμεῖς αὐθις ἴωμεν τῷ λόγῳ. καὶ
πρῶτον μὲν θερμούς ἀκριβῶς αὐτοὺς εἴπωμεν, εἶτα διαβρωτικούς τε
καὶ καυστικούς ἐσχαρωτικούς τε καὶ συντηκτικούς κατὰ τοῦ δέρματος
ἐπιτιθεμένους ἔξωθεν, εἴσω δὲ τοῦ σώματος λαμβανομένους· ὅσοι μὲν [25]
ὄλαις ταῖς οὐσίαις ἐναντιώτατα διάκεινται πρὸς τινὰ ζῶα, σηπτι-
κούς τε πάντας εἶναι καὶ δηλητήρια ἐκείνων τῶν ζῴων, ὡς κάνθαρις
καὶ βούρηστις ἀνθρώπου. ὅσοι δὲ κατὰ τὴν ἀμετρίαν τῆς θερμότητος
μόνης, εἰ μὲν παχύτεροι καὶ γεώδεις εἶεν, ὡς ἀρσενικὸν καὶ σανδαράχη
καὶ τὰ ὅμοια, ἐλκωτικούς τῶν ἐντὸς εἴπωμεν, εἰ δὲ λεπτομερεῖς, οἷά [30]
ἐστὶ τὰ συνήθη σπέρματα δαῦκος καὶ ἄνισον καὶ τὰ παραπλήσια, οὐρη-
τικούς τε καὶ ἰδρωτικούς καὶ ἀπλῶς εἰπεῖν τμητικούς τε καὶ διαφορη-
τικούς. συναίρονται δὲ τινες ταῖς τε ἐκ τοῦ θώρακος ἀναπτύσσει καὶ [p28]
ταῖς τῶν καταμηνίων φοραῖς. οἱ δὲ δριμεῖς χυμοὶ οὐ μόνον ἰσχυρᾶ
θερμότητι διαλλάττειν τῶν πικρῶν εὐόικασιν, ἀλλὰ καὶ τῷ τοὺς μὲν
πικροὺς ἅπαντας οὐ θερμούς μόνον ἀλλὰ καὶ ξηροὺς τὴν δύναμιν
ὑπάρχειν, παραπλησίως τῇ τέφρᾳ, ἐν δὲ τοῖς δριμέσιν, ὅσοι τέ οὐκ [5]
εἰσι πικροί, πολλήν γε ἐνίοτε μεμίχθαι τὴν ὑγρότητα, καὶ διὰ τοῦτ'
ἐσθίειν ἡμᾶς οὐκ ὀλίγα τῶν δριμέων.

[27.25] οὖν omitted before ὄλαις.

[27.28] σανδαράχη replaces σανδαράκη.

Having made definitions about the capacity of the bitter flavours and having said that they are cutting, cleansing and thinning, and, as is clear, warming to the extent that they do not quite burn, let us proceed again in our discussion to the sharp ones. Firstly let us say that they are distinctly hot, then corrosive and burning, tending to form sloughs and liquefying when applied externally to the skin and when taken inside the body. All that with their entire nature are disposed most contrarily towards certain creatures are putrefactive and harmful to those animals, like a blister beetle or poison beetle for humans. As for all that are excessive in heat alone, let us say

some tend to ulcerate the innards, if they are denser and earthy, like yellow orpiment [arsenic trisulphide] and realgar [arsenic monosulphide] and similar; whereas, if they are not dense, such as the usual seeds, wild carrot, anise and similar, they are diuretic and dispersive, and, to speak simply, cutting and dispersing. [p28] Some assist expectoration and bringing on menstruation. The sharp flavours not only seem to differ from the bitter in great heat, but also by the fact that all the bitter ones are not only hot but also dry in effect, nearly like ash; and from the fact that in the sharp ones that are not bitter sometimes much water has been mixed, and that for this reason we eat not a few of the sharp ones.

[27.25-6] **ὡς κάρθαρις καὶ βούρηστις ἀνθρώπου:** inserted by Aëtius (cf. pr.18.6n).

[27.28-9] **ὡς ἀρσενικὸν...ὄμοια:** inserted by Aëtius (cf. pr. 18.6n).

[27.29-30] **οἷα...παραπλήσια:** These examples are inserted by Aëtius (cf. pr.18.6n.); *δαῦκος* has various meanings in LSJ, “wild carrot” being given as one used by Galen (11.862.1).

[28.7-29.13]

ἐπειδὴ καὶ περὶ χυμῶν ἀπάντων εἴρηται τὰ εἰκότα, λείποιτ' ἂν ἔτι καὶ περὶ τῶν ἀτμῶν εἰπεῖν. οἱ μὲν δὴ πλεῖστοι τῶν ἀτμῶν τοῖς χυμοῖς αὐτοῖς ὁμοίως ἡμᾶς διατιθέασιν. τὰ τε γὰρ ὄξεα ἅπαντα καὶ πρὸς τούτοις τὸ ὄξος αὐτὸ τὴν ὄσφρησιν τε καὶ τὴν γεῦσιν ὡσαύτως κινεῖ, τὰ τε δριμέα, καθάπερ τὰ σκόρδα καὶ τὰ κρόμυα, καὶ ταῦτ' οὐδὲν ἤττον τῆς γεύσεως ἀνιᾶ τε καὶ δάκνει τὴν ὄσφρησιν. οὕτω δὲ καὶ καθ' ἕκαστον τῶν ἄλλων ὁμοία σχεδὸν ἢ τῆς ὁσμῆς αἴσθησις ἐστὶ τῆς γεύσεως, ὥστε ἐνίων σωμάτων οὐδὲ γευσάμενοί ποτε, καθάπερ τῆς κόπρου, γινώσκουν πεπεσμεθα τὴν ποιότητα, καὶ κατὰ τοῦτο γε τὴν ἀρχὴν οὐδὲ ἐπιχειροῦμεν τῶν τοιούτων γεύσασθαι, τῷ πάνυ σφόδρα πιστεύειν τῆς ὄσφρησει. καὶ μέντοι καὶ τῶν εὐωδῶν ἐδεσμάτων ὅσα διασαπέντα κατὰ τὴν ὁσμὴν ἡμᾶς ἀνιᾶ, καὶ ταῦτ' εὐθέως ἀπορρίπτομεν, οὐδ' ἐπιχειροῦντες γεύσασθαι. καὶ σχεδὸν ἐπὶ πάντων ὁμολογοῦσιν ἀλλήλαις ὄσφρησις καὶ γεῦσις. εἰς δύο δὲ ταύτας ἀνάγομεν προσηγορίας τὰ πλεῖστα τῶν ὄσφρητῶν, εὐώδη καὶ δυσώδη προσαγορεύοντες· εὐώδη μὲν ἀνάλογον τοῖς πρὸς τὴν γλῶτταν γλυκέσι, δυσώδη δὲ τοῖς μὴ γλυκέσιν. εἶκοι δὲ τῶν οὐκ ὁσμωδῶν σωμάτων ἤτοι παντελῶς ὀλίγον ἀπορρεῖν, ἢ τοῖς ὄγκοις ἀσύμμετρον, ὡς ἐπὶ τῶν ἀλυκῶν καὶ μάλιστα τῶν στρυφνῶν. παχυμερῆς γὰρ καὶ ψυχρὰ ἢ οὐσία τῶν στρυφνῶν, ὥστε εἰκὸς καὶ τὸ ἀπορρέον αὐτῶν ὀλίγον τε εἶναι καὶ παχὺ καὶ οἶον γεῶδες τοῖς ὄγκοις, καὶ διὰ τοῦτο μὴδ' ἐμπίπτειν ταῖς ἀναπνοαῖς εἰς τὸν ἐγκέφαλον. ὅθεν οὐδὲ ἀσφαλές ἐστὶν ἐξ ὁσμῆς τεκμαίρεσθαι τι περὶ τῆς κράσεως αὐτῶν, ὡσπερ ἐκ τῆς γεύσεως. τὰ μὲν γὰρ ἄσμμα παχυμερῆ

[10]

[15]

[20]

[25]

[30]

ταῖς οὐσίαις ἀλλ' οὐπω δῆλον ὅπως ἔχει θερμότητός τε καὶ ψύξεως, τὰ δὲ ὁσμώδη λεπτομερῆ μὲν πῶς ἐστὶ καὶ θερμά. τὸ μέντοι ποσὸν ἢ τῆς λεπτομερείας ἢ τῆς θερμότητος οὐκέτ' ἐκ τῆς ὁσμῆς ἐνδείκνυται, ἀλλ' ἐκ τῆς γεύσεως. τοῦ δὲ μηδὲν ἐνδείκνυσθαι σαφὲς ὑπὲρ τῆς κράσεως τὰ ὁσμώδη ἢ ἀνωμαλία τῆς οὐσίας αὐτῶν αἰτία γίνεσθαι, καὶ διὰ τοῦτο ἐπὶ τοῦ ρόδου οὐκ ἔστιν ἐκ τῆς ὁσμῆς τεκμαίρεσθαι [p29] [5] περὶ πασῶν τῶν ἐν αὐτῷ ποιοτήτων. ἐπὶ δὲ τῆς γεύσεως ἅπανθ' ὁμοίως τὰ μόρια τῶν γευστῶν σωμάτων προσπίπτει τῇ γλώττῃ καὶ κινεῖ τὴν αἴσθησιν ἕκαστον αὐτῶν κατὰ τὴν ἑαυτοῦ φύσιν, [λέγω δὴ τὸ ἐν αὐτῷ στρυφνόν, ὅπερ ἐστὶ γεῶδες καὶ παχυμερές <καὶ> ψυχρόν, καὶ τὸ πικρόν, ὃ δὴ λεπτομερές τέ ἐστὶ καὶ θερμόν, καὶ τρίτον ἐπὶ τούτοις τὸ ὕδατῶδες, ψυχρόν ἐξ ἀνάγκης] ὥστε οὐκ ἀσφαλές, ὡς εἴρηται, περὶ τῆς τῶν ἀπλῶν φαρμάκων δυνάμεως ἀπάσης ἐξ ὁσμῆς τεκμαίρεσθαι. [10]

Since appropriate things have been said about all the flavours, it would still leave things to say about the vapours. In fact, most of the vapours have the same effect on us as the flavours themselves. For all the sour ones and, in addition to these, vinegar itself, stimulate the sense of smell and taste in like manner; and, what is more, the sharp ones, such as garlic and onions, distress and sting the sense of smell no less than the sense of taste. And in every other case, olfactory perception is nearly similar to that of taste, so that we have been convinced that we know the quality of some materials although we have never tasted them, such as faeces; on this principle we do not make at all any attempt to taste such things, in very complete reliance on our sense of smell. Moreover, we throw away immediately all sweet-smelling foodstuffs that distress us by their smell when thoroughly rotten, and we do not attempt to taste them. And in nearly every instance, smell and taste correspond to each other.

We refer to the majority of smells by the following two terms, calling them pleasant-smelling and unpleasant-smelling; pleasant-smelling corresponds to things that are sweet to taste, unpleasant-smelling to what are not sweet. It seems that either really very little is emitted from odourless materials, or it is disproportionate to their bulk, as with salty or, in particular, astringent ones. For the essence of astringent matter is dense and cold, so that it is reasonable that its emission is both little, thick and of an earthy sort in its molecules, and for this reason it is not inhaled into the head. Therefore it is unsafe to base evidence concerning their composition on their smell, as it is when based on taste. Materials without smell are dense in

essence, but it is not at all clear how they are for heat and cold, [p29] whereas those with a smell are somewhat fine-grained and warm. However, the degree of rarefaction or heat is not further indicated by smell, but by taste. The irregularity of their substance is responsible for materials with a smell not clearly indicating anything of their composition, and for this reason, where roses are concerned, it is not possible to prove anything from the smell as to all the qualities in them. As far as taste is concerned, all the particles of the materials to be tasted in the same way come into contact with the tongue, and each of them stimulates perception according to its nature; [I am talking in fact of the astringent nature in it, which is earthy, dense and cold; and of the bitter, which is rarefied and hot; and thirdly, in addition, of the wet, which is of necessity cold] as a result, as has been said, it is not safe to gather evidence about the power of simples entirely from the smell.

[28.20-1] **καὶ σχεδὸν...γεῦσις**: Galen and Aëtius seem unaware of the fundamental differences between the senses of taste and smell. The former is now understood to be crude and to register only four components, whereas olfaction, even in humans, is highly developed, partially determined by heredity, and can distinguish hundreds of individual entities. There would, I believe, have been adequate evidence in ancient times for this distinction to have been made: for example, the effect of the common cold on the perception of food, or the lack of smell of saline. There are no fewer than seventy-six references to coryza in Galen's works (*TLG*), although he does not mention concomitant anosmia. Admittedly, the passages subsequently presented by Aëtius rather contradict the assertion regarding the correspondence of taste and smell. (cf. Bell et al., 1961: 682-5.)

[29.8-11] **[λέγω...ἀνάγκης]**: The sense dictates that this sentence is out of place. Olivieri, citing Deichgraeber in his *apparatus criticus*, suggests that Aëtius has inserted it in the wrong place, and that it refers to the discussion of the qualities of the rose, in which case it would have been more appropriate if it had appeared immediately after ποιότητων [29.6]. Galen refers to the nature of the rose in the original (11.701.14-8).

ἔτι δὲ μᾶλλον οὐδὲ ἐκ τῶν χρωμάτων ἔστι στοχάσασθαι
 περὶ τῆς τῶν φαρμάκων δυνάμεως, καθ' ἑκάστην γὰρ χροάν εὐρίσκεται
 καὶ θερμὰ καὶ ψυχρὰ καὶ ξηρὰ καὶ ὑγρὰ. καθ' ἕκαστον μέντοι γένος [15]
 ἢ σπέρματος ἢ ρίζης ἢ χυλοῦ δυνατόν ἐστι κάκ τῆς χροᾶς ἔνδειξιν
 τινα λαβεῖν τῆς κράσεως, οἷον αὐτίκα κρόμμον καὶ σκίλλα καὶ οἶνος,
 εἰς ὅσον ἂν ἦ λευκότερα καὶ ἥττόν ἐστι θερμὰ. τὰ δὲ ὑπόξανθά τε
 καὶ κίρρα θερμότερα, καὶ πυροὶ δὲ καὶ ὄχροι καὶ φάσηλοι καὶ ἐρέβιν-
 θοὶ καὶ ἡ τῆς ἴρεως ρίζα καὶ ἡ τοῦ ἀσφοδέλου καὶ πολλῶν ἄλλων [20]
 ὁμοίον τι πεπόνθασιν. ἐν ἑκάστῳ γὰρ γένει τὸ ἐπίπαν, ὅσα κίρρα καὶ
 ἐρυθρὰ καὶ ξανθὰ, θερμότερα τῶν λευκῶν ἐστίν, ὥστε εἴ τι κἀντεῦθεν
 ἐγγωρεῖ περὶ φαρμάκων δυνάμεως τεκμαίρεσθαι, προσκείσθω τῷ λόγῳ
 κάλλιστον μὴν, ὡς εἴρηται καὶ δέδεικται πολλάκις, ἐκ τῆς διωρισμένης
 πείρας ἐξευρίσκειν τὰς δυνάμεις ἑκάστου. οὐ γὰρ ἂν σφαλεῖς οὐδὲν [25]
 ἐν τῇδε, πρὶν μέντοι τῇ πείρᾳ διαγνῶναι τὴν δύναμιν, ἢ γεῦσις ἐν-
 δείκνυται τὰ πολλά, συνεπιμαρτυρούσης, ὡς εἴρηται, βραχέα καὶ τῆς
 ὁσμῆς. τούτων δὲ ἀπάντων ὥσπερ καὶ ἐτέρων τινῶν χρησιμωτάτων
 ἐν κεφαλαίῳ τὴν σύνοψιν ποιήσομαι, μετὰ τὸ διελθεῖν με κατ' εἶδος [30]
 ὡς οἶόν τε τὰς καθόλου δυνάμεις τε ἑκάστου καὶ ἐνεργείας. ἐπεὶ δὲ [p30]
 τὰ φάρμακα τὰ μὲν ἐστὶν ἐκ ζώων, ἢ φυτῶν ἢ καρπῶν ἢ τινες ὅποι
 τούτων ἢ χυλοῖ, τὰ δὲ ἐκ τῶν μεταλλικῶν λαμβάνεται, κάλλιον ἔδοξε
 μοι περὶ τῶν φυτῶν πρῶτον διελθεῖν, οὐ πάντων δηλονότι τῶν καθ'
 ὄλην τὴν οἰκουμένην, ἀλλ' ὅσων ἡμεῖς πείραν ἔσχομεν, ὅτι τε πλεῖ-
 στον αὐτῶν ἐστὶ τὸ γένος ἰσχυρότατόν τε τὴν δύναμιν, εἴθ' ἐξῆς περὶ [5]
 τῶν μεταλλευομένων εἰπεῖν, εἴθ' οὕτως ἐπὶ τὰ τῶν ζώων ἀφικέσθαι μόρια.

[30.6] μεταλλευομένων replaces μετάλλων.

Even more so, no guess concerning the capacity of drugs can be
 made from colours, for materials are found, as far as each superficial
 appearance is concerned, that are both hot and cold, dry and moist.
 However, for each kind of seed, root or juice it is possible to take, even
 from the appearance, some indication of its composition, so that for instance
 in the case of onions, squill and wine, the paler it is, the less warming it will
 be. Yellowish and orange materials are more warming. Flame-coloured
 and yellow materials, beans, chick-peas, root of iris, asphodel and many
 others are in a rather similar situation. Generally, all of each sort that are
 orange, red and golden yellow are more warming than the white ones, so
 that if it is possible from this sense also to get some information regarding
 the capacity of drugs, let it be added to the discussion that, as has often been
 said and demonstrated, it is really best to find out the capacities of each
 from individual experimentation. For you would not slip up at all in this

way, but before determining the capacity by experiment, the taste is indicative of many things, while the smell, as has been said, also adds a few pieces of evidence.

I shall make an overview of the main points of all these things and likewise several of the others that are most useful, after discussing, one sort at a time, as much as possible the complete capacity and effect of each. Since [p30] some of the drugs are from animals, plants or fruit, or certain saps or juices of these, and some are taken from minerals, I thought it better to discuss the plants first, not all of them, obviously, throughout the entire civilised world, but all that we have had experience of, because their sort is the most numerous and strongest in capacity, then next, to talk about the minerals, and so then to arrive at parts of animals.

[29.21-2] **ἐν ἐκάστῳ...θερμότερα τῶν λευκῶν ἔστιν:** So too in modern times these colours are referred to as “warm”, presumably because they are the colours of hot objects such as the setting sun, fire etc.

[30.2-6] **κάλλιον ἔδοξε μοι...μόρια.:** This order is followed both by Galen and Aëtius, the latter listing plants, which are, in fact, the most numerous and contain in some instances highly pharmacologically active ingredients, in his book 1.

List of Plant Simples

[30.7-17]

(α') Ἀβρότονον θερμόν τέ ἐστι καὶ ξηρὸν τὴν δύναμιν, ἐν τῇ τρίτῃ που τάξει τε καὶ ἀποστάσει μετὰ τὰ σύμμετρα τεταγμένον, πικρὸν δὲ τῇ γεύσει ἰκανῶς. ὁ δὲ τοιοῦτος χυμὸς ἐδείκνυτο γεώδης μὲν ὢν τὴν οὐσίαν, ὑπὸ δὲ θερμότητος δαψιλοῦς λελεπτύνθαι, ὥστε καὶ θερμαίνειν καὶ ξηραίνειν οὐκ ἀγεννῶς· ὅθεν ἐπομένη ἢ κόμη τῆς βοτάνης σὺν τοῖς ἄνθεσιν ἐν ἐλαίῳ, καὶ ἀλειφομένου τοῦ ἐλαίου ἐπὶ τῶν κατὰ περίοδον ῥίγει ἀλισκομένων πρὸ τῆς εἰσβολῆς ἦττον ῥιγώσουσιν. ἀναίρει δὲ καὶ ἔλμινθας τὸ ἀφέψημα αὐτῆς πινόμενον καὶ διὰ κλυ- [10] στήρος ἐνιέμενον, μᾶλλον τοῦ ἀψιθίου. ἐλαχίστης δὲ τινος μετέχει [15] στρυφνότητος τὸ ἀβρότονον καὶ διὰ τοῦτο καὶ κακοστόμαχον. δύο δὲ εἶδη ἔστι τοῦ ἀβροτόνου, τὸ μὲν ἄρρεν, τὸ δὲ θῆλυ. 10

[30.9] ὢν added after μὲν.

[Galen 11.798.17-806.9]

1) Wormwood (*Artemisia arborescens* L.) is both warm and dry in its capacity, somewhere in the third rank and degree when arranged in comparison with similar materials, and it is considerably bitter in taste. Such a flavour was shown to be earthy in essence, and to be rendered fine by abundant heat, with the result that it is very productive in both warming and drying. For this reason, the foliage of the herb is boiled in olive oil along with its flowers, and, when the oil is anointed, before the attack, on those who are seized by a recurrent shivering bout, they shiver less. Also, when its decoction is drunk and inserted by means of an enema, it destroys worms, more than *Artemisia absinthium* LSJ does. But wormwood has some very small share of harshness, and, because of this, it is also bad for the stomach. There are two forms of wormwood, one male, the other female.

1) Aëtius has reduced Galen's 1,210 words on wormwood to 113, by omitting in particular the passages in which the latter is expansive, in a didactic tone, about taste and elemental theory (11.800.13-6; 801.3-9, 15-804.3). Galen includes *Artemisia absinthium* and "other species" in this entry (11.798.17-799.1), and argues for his choice of nomenclature and taxonomy (11.804.7-805.2). He also includes a digression of dubious relevance about treating assorted diseases with unrelated substances (11.801.12-5). Aëtius' treatment here of Galen's entry exemplifies his approach to creating a practical volume, possibly a handbook, from the much larger work. (For further details, v. Intro. xx-xxxv).

1. 2 [30.8] **τάξει τε καὶ ἀποστάσει**: The difference between these terms, used repeatedly together or separately, both by Aëtius and Galen, remains unclear. From consideration of the way in which Galen frequently uses either one, and Aëtius substitutes the other in his synopsis, it would seem safe to say that they are being used synonymously throughout book 1.

1.6-7 [30.12-3] **καὶ ἀλειφομένου...ῥιγώσουσιν**: *Artemisia* species contain artemisinin, a proven anti-malarial when taken internally (Bruneton, 1995: 506; Evans, 2009: 16, 432); there is no evidence, however, to suggest that such an effect would be achieved from transdermal absorption from an oily suspension of wormwood.

1.8-9 [30.14-5] **ἀναρεῖ...ἐνιέμενον** Coumarin glycosides in various *Artemisia* species are known to be anthelmintic (Lewis, 1977: 20); santonin, in particular, found in Eurasian mugwort (*A. maritima* L.), is an effective nematocide (Lewis, 1977: 290; Bruneton, 1995: 503). While Galen gives a detailed account in terms of tastes and humours of why wormwood should kill worms, and claims empirical evidence for this (K 11.800.13-6), he fails to give the important, practical information, now provided by Aëtius, as to how it should be prepared and administered.

1.9 [30.15] **ἀψινθίου** *Artemisia absinthium*, or possibly *A. monospermum* (LSJ).

1.10 [30.16] **κακοστόμαχον** Gastro-intestinal distress is a recognised side-effect of santonin (Bruneton, 1995: 503).

[30.18-25]

(β´) ἀβρότονον κεκαυμένον θερμὸν καὶ ξηρὸν ἐστὶ τὴν δύναμιν ἔτι
 μᾶλλον κολοκύνθης ξηρᾶς κεκαυμένης καὶ ἀνήθου ρίζης. ἐκεῖνα μὲν
 γὰρ ἔλκεσιν ὑγροῖς τε ἅμα καὶ χωρὶς φλεγμονῆς τετυλωμένοις ἀρμότ- [20]
 τει καὶ διὰ τοῦτο μάλιστα καὶ τοῖς ἐν πόσθῃ αἰδοίου συμπεφωνηκέναι
 δοκεῖ. τοῦ δὲ κεκαυμένου ἀβροτόνου ἢ τέφρα δακνώδης ἅπασιν ἔλκεσιν 5
 ὑπάρχει. καὶ διὰ τοῦτο καὶ πρὸς ἀλωπεκίας ἀρμόττει σὺν ἐλαίῳ κικίνῳ
 ἢ ῥαφανίνῳ ἢ σικυωνίῳ ἢ σχοινίνῳ ἢ παλαιῷ δευόμενον. [24]

[30.24] σχοινίνῳ replaces σχινίνῳ. δευόμενον replaces δεδαμασμένον.

[Galen 11.806.9-807.5]

2) Burnt wormwood is warm and dry in its effect, even more so than burnt dry gourd and dill root. For those materials suit ulcers, both those that are weeping and, at the same time, those that are crusted without inflammation, and, accordingly, they seem to be suitable also for those on the foreskin. The ash of burnt wormwood has a biting effect on all ulcers. And for this reason it is also suitable for patchy hair loss, when it is mixed with castor oil, radish oil, cucumber oil, mastic oil or wetted oil.

2) Aëtius has chosen to list burnt wormwood as a separate entry, whereas Galen includes it under the wormwood heading. Aëtius quotes the first half of Galen's passage almost verbatim. In the part omitted by Aëtius, Galen says it promotes beard growth (11.806.17-8), and then concludes with yet

another exhortation to learn about the effects based on elemental theory (11.807.2-5).

2.4 [30.21] **ἐν πόσθῃ αἰδοίου** (Galen has ἐπὶ πόσθαις αἰδοίου (11.806.13))

Consideration of Galen's *De usu partium* (3.898, 910) suggests "foreskin" as the most likely translation (cf. Intro p. xli).

I can find no reference specifically to wormwood ash in modern works on pharmacognosy.

[31.1-11]

(γ') Ἄγνος ἢ λύγος. Τούτου τοῦ θάμνου τὰ φύλλα καὶ τὰ ἄνθη καὶ τὸ σπέρμα θερμὰ μὲν καὶ ξηρὰ τὴν δύναμιν ἐστὶ κατὰ τὴν τρίτην πού τῶν ἀποστάσεων, λεπτομερῆ δὲ ἰκανῶς· ἐστὶ δὲ ἐδώδιμος ὁ καρπὸς καὶ θερμαίνει σαφῶς μετὰ τοῦ κεφαλαλγῆς ὑπάρχειν. εἰ δὲ φρυχθείη, ἥττον ἄπτεται τῆς κεφαλῆς, τροφήν δὲ ὀλίγην δίδωσι τῷ σώματι καὶ ταύτην ξηραίνουσιν μὲν καὶ θερμαίνουσιν· ἄφυσον δὲ ἰκανῶς καὶ διὰ τοῦτο καὶ τὰς ἀφροδισίους ὁρμὰς ἐπέχει, διὸ οὐ μόνον ἐσθιόμενον καὶ πινόμενον πρὸς ἀγνείαν πεπίστευται συντελεῖν, ἀλλὰ καὶ ὑποστρωννυόμενον. καὶ πρὸς ἦπαρ δὲ καὶ σπλῆνα σκιρροῦμενά τε καὶ ἐμφραττόμενα τὸ σπέρμα τοῦ ἄγνου μᾶλλον ἀρμόττει ἢ περὶ τὸ πῆγανον.

5 [5]

10 [10]

[Galen 11.807.6-810.8]

3) *Agnus castus* or *withy* (*Vitex agnus-castus* L.). This bush's leaves, flowers and seed are warm and dry in their effect, somewhere in the third of the degrees, and considerably fine-grained. The fruit is edible and clearly warms, and causes headaches. If it is roasted, it affects the head less, and gives little nourishment to the body, and that of a drying and warming sort. It is rather effective in suppressing flatus, and for this reason it keeps sexual impulses in check, and therefore, not only when eaten and drunk but also when spread below, it is believed to be effective in regard to chastity. Also, the seed of the *agnus castus* is more suitable even than rue for the liver and for spleens which are both indurated and blocked.

3) Aëtius has reduced Galen's 525 words to 110; the latter has details about taste (11.807.9) and different parts of the plant (11.807.10-11, 16), and is expansive about its effects on flatulence and consequent properties (11.807.17-809.1). Galen also reinforces once more the need for adherence to his ideas regarding the interrelationships of elements, tastes and effects (11.809.1-9, 11-810.5).

- 3.4 [31.4] **κεφαλαλγῆς** Headache is a recognised adverse effect of use of this plant (Daniele et al., 2005).
- 3.5-6 [31.5-6] **τροφήν...θερμαίνουσιν** Information absent in Galen.
- 3.6 [31.6] **ἄφυσον** LSJ (1996) translates this both as “causing no flatulence”, the meaning I consider appropriate here, and “expelling flatus”, and cites Galen in both instances. (Earlier editions of LSJ give only the former meaning.) In the first of these references (6.540.4), the meaning is clearly “causing no flatulence” or “suppressing flatulence”, for, in a list of opposites, ἄφυσος is contrasted with φουσώδης. In the second reference (12.101.3-5), reproduced in Aëtius (ch. 321), it is used to describe rue, which, being ἄφυσον, is suitable for treating cases of flatulence, and keeps sexual impulses in check. The relationship between flatus and libido is dealt with more expansively in Galen’s entry concerning *Vitex agnus-castus* L.. He claims that if the plant were productive of gas, it would inflate the abdomen and stimulate sexual impulses, but it does not, in fact, cause such stimulation (11.808.13-15). As a further illustration of its anaphrodisiac property, he mentions that women celebrating the Athenian Thesmophoria use it to promote chastity, hence the provenance of the name of the bush (ἀγνός = chaste). Clearly, Galen’s belief, accepted by Aëtius, is that flatus-producing material increases libido, a proposition which, I fear, would be difficult to submit to the rigours of a double-blind controlled trial. (v. also Intro. lxxiv-lxxv)
- 3.9 [31.9] **ὑποστρωννύμενον** Literally “spread under”, but what? As it follows ἐσθιόμενον καὶ πινόμενον in Aëtius (3.8), quoting Galen (11.808.3-5), it seems part of a list of ways of administering it to the body. This, I believe, is substantiated by Galen’s observation that the Athenian ladies ὑποστρωννύουσιν ἑαυταῖς ὅλον τὸν θάμνον (11.808.6) [they spread the complete bush under themselves]. It may be that, to promote chastity, they sat on a layer of the bush during the Nesteia, the second day of the festival, spent fasting and sitting on the ground in huts (Fehrle, 1910: 138-141; Deubner, 1962: 56). It may even be that his use of the reflexive pronoun, admittedly with the verb in the active rather than middle voice, is consistent with topical application to their nether regions.

Aëtius omits Galen’s claim that it is an emmenagogue (11.810.6).

Modern science has shown *agnus castus* to have some effect in treating premenstrual tension (Schellenberg et al., 2001: 322, 134), and to inhibit prolactin secretion (Bruneton, 1995: 602). Although modern writers cite its supposed effect on libido (Lewis, 1977: 332; Bruneton, 1995: 602; Evans, 2009: 254), no explanation is given for this; in particular, no mention is made of any mechanism involving flatus.

[31.12-20]

(δ') Ἀγρώστεως ἡ ρίζα μετρίως ἐστὶ ψυχρὰ καὶ ξηρὰ καὶ διὰ τοῦτο κολλητικὴ τῶν ἐναίμων ἐλκῶν. αὐτὴ δὲ ἡ πόα καταπλασσομένη ψύχει μὲν οὐκ ἰσχυρῶς, ὑγρότητος δὲ καὶ ξηρότητος ἐν τῷ μέσῳ καθέστηκε. τὸ δ' ἐν τῇ ρίζῃ δακνώδες τε καὶ λεπτομερές ἐστὶ μὲν ὀλίγον, ἐστὶ δὲ ὅτε εἴωθε καὶ λίθους θρύπτειν, εἴ τις αὐτὴν ἀφειψήσας πίνει. τὸ δὲ σπέρμα τῆς μὲν ἐν παντὶ τόπῳ εὕρισκομένης ἀσθενές, τῆς δὲ ἐν Παρνασσῷ διουρητικόν τε ἐστὶ καὶ ρεύματα ξηραίνει γαστρὸς καὶ στομάχου. δύναμις δ' αὐτοῦ ἐστὶ ξηραντικὴ τε καὶ λεπτομερῆς καὶ ὑπόστρυφος.

[15]

5

[20]

[Galen 11.810.9-811.9]

4) The root of dog's tooth grass (*Cynodon dactylon* Pers.) is moderately cold and dry, and for this reason it has a tendency to close bleeding wounds. When the herb itself is applied as a plaster, it cools, not strongly, but it is situated in the middle between moistening and drying. The material in the root is both biting and fine-grained to a small extent, but it is sometimes wont even to crush stones, if one boils it down and drinks it. While the seed of the plant found in every location is weak, that found on Parnassus is both diuretic and dries fluxes of the bowel and stomach. Its capacity is drying, fine-grained and somewhat astringent.

4) The first part of Galen's entry (11.810.9-18) deals mainly with aspects of taste and humoral properties, repeated in the second half (11.810.18-811.9), which Aëtius quotes almost verbatim. Aëtius omits Galen's assignation of the plant to the first rank of cooling (11.810.11-12).

4.2 [31.13] **αὐτὴ...ἡ πόα** In contrast to the root.

4.2 [31.13] **καταπλασσομένη** As this plant is known to cause contact allergy and photosensitivity (Lewis, 1977: 80,1), topical application is potentially harmful.

- 4.5 [31.16] **λίθους** Whether urinary tract stones or gallstones is unclear. There is some evidence that components of this material may reduce experimentally induced kidney stones in rats (Khajavi et al., 2011).
- 4.6 [31.17] **τῆς...ἐν παντὶ τόπῳ** Galen has τῆς ἄλλης (11.811.6), which makes much better sense.
- 4.7 [31.18] **γαστρὸς καὶ στομάχου** For discussion of translation of these terms here and on subsequent occasions, see Intro. xxxvi-xxxix.

Cynodon dactylon Pers., also known as Bermuda grass, is known to contain cyanogenic glycosides, which, under certain environmental conditions, can produce hydrocyanic acid, and poison cattle (Lewis, 1977: 18, 59).

[31.21-32.16]

(ε΄) Ἄγχουσαι τέσσαρες. Οὐ τῆς αὐτῆς ἅπασαι δυνάμεως. ἡ μὲν γὰρ ὀνοκλεία προσαγορευομένη στύφουσαν ἅμα καὶ ὑπόπικρον ἔχει τὴν ρίζαν ἰκανῶς, ὡς καὶ πυκνῶσαι τὰ σώματα καὶ μετρίως λεπτῶναι τε καὶ ἀπορρῦσαι καὶ ἀποπλῦναι τοὺς χολώδεις τε καὶ ἀλμώδεις χυμούς. οὕτως τε καὶ ἰκτερικοῖς καὶ σπληνικοῖς καὶ νεφριτικοῖς ὠφέλιμος ὑπάρχει καὶ ψύχει δὲ ἰκανῶς, ὅθεν καταπλασσομένη μετ' ἀλφίτων ἐρυσίπελας ὠφελεῖ. ἀπορρῦπτει δὲ καὶ ἔξωθεν ἐπιτιθεμένη καὶ διὰ τοῦτο καὶ ἀλφουὸς καὶ λέπρας ἰᾶται σὺν ὄξει. τὰ δὲ φύλλα τῆς βοτάνης ἐστὶ μὲν ἀσθενέστερα τῆς ρίζης, οὐκ ἀπήλλακται δὲ τοῦ ξηραίνειν τε καὶ στύφειν, ὥστε καὶ διάρροϊαν ἰᾶται σὺν οἴνῳ πινόμενα καὶ ἡ λυκαμὸς δὲ προσαγορευομένη τοῖς ἐρυσιπέλασιν ὁμοίως ἀρμόττει καὶ ρίζαν ἔχει στυπτικωτέραν ὀνοκλείας. τῆς δὲ ὀνοχείλου τε καὶ ἀλκιβιαδίου καλουμένης ἡ δυνάμις ἐστὶ φαρμακωδεστέρα καὶ ἐχιοδήκτιος ἰκανῶς ἀρμόττει καταπλαττομένη τε καὶ ἐπιπαττομένη καὶ ἐσθιομένη. ἡ δὲ τετάρτη μικρὰ καὶ σχεδὸν ἀνώνυμος, παραπλησία μὲν ἐστὶ τῇ ἀλκιβιαδίῳ, πικροτέρα καὶ πλέον ἔτι φαρμακωδεστέρα καὶ διὰ τοῦτο πρὸς τὰς πλατείας ἔλμινθας ἐπιτηδεῖα, πλῆθος ὄξυβάφου σὺν ὑσώπῳ καὶ καρδάμῳ πινομένη.

[32.2] ἀλμώδεις replaces ἀνχμώδεις.

[Galen 11.811.10-813.10]

5) Four alkanets (*Anchusa tinctoria* L. and *Echium* spp.). Not all have the same capacity. For the one called *Anchusa* has a root which is considerably astringent and at the same time fairly bitter, so as both to contract bodies and make them moderately thin, to cleanse them thoroughly and wash away both bilious and salty humours. Thus it has a helpful and sufficiently cooling effect for those who are jaundiced and those suffering from

conditions of the spleen and kidneys, and hence it aids cellulitis when applied in a barley-meal poultice. It also cleanses thoroughly when applied topically, and for this reason it heals both pale skin lesions and scaly skin lesions when used along with vinegar. The plant's leaves are weaker than the root, but they are not free from the warming and astringent effect, so that they cure diarrhoea when drunk with wine; the one called viper's herb (*Echium italicum* L.) is similarly suitable in cases of cellulitis, and has a more astringent root than *Anchusa*. The capacity of the one called both ass's hoof and Cretan bugloss (*E. parviflorum* Moench) is more medicinal, and is suitable enough for those bitten by a viper, when the material is applied as a dressing, sprinkled on, and eaten. And the fourth is small and generally unnamed, closely resembling Cretan bugloss, more bitter and even more medicinally effective, and for this reason it is suitable for tapeworms when it is drunk in a quantity of an *oxybaphos* along with hyssop (*Satureia graeca* L.) and nose-smart (*Lepidium sativum* L.).

5) Omitting some discussion of the comparative elemental effects of the plants, Aëtius quotes Galen largely verbatim. Confusion exists as to the species under discussion. Galen adds to this confusion by entitling his entry *περὶ ἄγχουσης καὶ τεττάρων ἀγχουσῶν* (11.811.10). The terms which appear are: ἄγχουσα (plural in Aëtius 5.1, singular in Galen 11.811.10); ὀνοκλεία (Aët. 5.2, 5.12; Gal. 11. 812.4,11,17); λυκαψός (Aët. 5.11; λυκοψίς in Gal. 812.16); ὀνόχειλος (Aët. 5.12; Gal. 812.18), synonymous with ἀλκιβιάδιον (Aët. 5.12; ἀλκιβιάδειον in Gal. 813.2); and “the fourth, small and generally unnamed” (Aët. 5.15; Gal. 813.6-7). From this it would appear that ἄγχουσα is a generic term for alkanets, of which the four forms under review are ὀνοκλεία (= ἄγχουσα, *Anchusa tinctoria* L.), λυκαψός (viper's herb, *Echium italicum* L.), ὀνόχειλος (Cretan bugloss, ass's hoof, *E. parviflorum* Moench, synonymous with ἀλκιβιάδειον, which, however, according to LSJ, = ἔχιον, *E. plantagineum* L., or = ἄγχουσα, *A. tinctoria* L.), and the small unnamed variety. Dioscorides, to whom Galen refers in various places but not in this instance, lists two varieties of ἄγχουσα. For the first of these he lists twelve synonyms, including ὀνοκλεία and Ἀλκιβιάδιον (4.23 (K25.1.523.12)); for the other he gives two synonyms,

Ἀλκιβιάδιον and ὀνόχειλος (4.24 (K25.1.524.13)). In addition, he says that Ἀλκιβιάδιον is also a synonym of a different plant, ἔχτιον (4.27 (K25.1.526.6)). At least Dioscorides provides us with highly detailed botanical descriptions.

5.8 [32.6] **ἀλφοῦς καὶ λέπρας** For discussion of these terms and their translation here and in subsequent frequent instances, see Intro. xliii, lvii.

Echium species contain a hepatotoxic pyrrolizidine alkaloid, potentially fatal to cattle (Lewis, 1977: 56; Bruneton, 1995: 678). There appears nothing in the modern literature to substantiate Aëtius' claims for therapeutic effects.

[32.17-24]

(ζ´) Ἀγαρικὸν δύναμιν ἔχει θερμαντικὴν καὶ διαφορητικὴν καὶ πάχους τμητικὴν, διακαθαίρει τε τὰς ἐν τοῖς σπλάγγνοις ἐμφράξεις καὶ διὰ τοῦτο ἰκτεριῶντας ἰάται, τοὺς ἐπ' ἐμφράξει τῶν καθ' ἥπαρ οὕτω κάμνοντας, ὀνίνησι δὲ καὶ τοὺς ἐπιληπτικοὺς καὶ ῥίγη τὰ κατὰ περι- [20]
 οδον, ὅσα παχέων ἢ γλίσχρων ἐστὶ χυμῶν ἔγγονα. ὠφελεῖ δὲ καὶ 5
 τοὺς ὑπὸ τῶν κατὰ ψύξιν ἀδικούντων θηρίων ἢ δηχθέντας ἢ νυγέν-
 τας, ἔξωθέν τε κατὰ τοῦ πεπονθότος τόπου ἐπιτιθέμενον καὶ πινό-
 μενον ὀλκῆ δραχμῆς α' μετ' οἴνου. ἐστὶ δὲ καὶ καθαρτικόν.

[Galen 11.813.11-814.11]

6) Agaric (*Agaricus dryinus* LSJ, *Amanita muscaria* LSJ, or *Boletus agaricum* LSJ) has a capacity which is warming, dispersive and able to cut through thick materials, and it purges stoppages in the innards; because of this it is a remedy for those who are jaundiced, that is, those who are suffering in this way on account of blockage of the hepatic drainage. It also benefits epileptics and intermittent rigors, all that are engendered by thick or sticky humours. And it also helps those who have been bitten or stung by animals which cause harm by cooling, when it is placed externally on the affected site and drunk in the volume of 1 drachma with wine. It is also purgative.

6) Aëtius quotes the latter part of Galen's entry (11.814.1-11) with very few changes, mainly omissions. In the first part (11.813.11-814.1), Galen gives details of taste, elemental relationships, and alludes to his previous work.

6.1 [32.17] **Ἀγαρικὸν** The problem is to decide which species is or are meant by this word. As translation for it, LSJ lists various tree-fungi, namely *Boletus*

agaricum for ἀγαρικὸν ἄρρεν, *Agaricus dryinus* for ἄ. θῆλυ, and fly agaric (*Amanita muscaria*) for ἄ. μέλαν. That it is a tree-fungus is consistent with Galen's first sentence, where its root is described as ἐπιφουμένη πρέμνω (11.813.12).

6.3 [32.19] **τῶν καθ' ἥπαρ** Literally, “of the things below the liver”, possibly the hepatic ducts and common bile duct, obstruction of which certainly causes jaundice (Underwood, 2004: 408).

Boletus species contain ephedrine, a bronchodilator with stimulant effects (Lewis, 1977; 190). Fly agaric, which grows in the North Temperate Zone, contains muscarine and related compounds, which are hallucinogenic and can be lethal (Bruneton, 1995: 790; Evans, 2009: 20).

[32.25-33.4]

(ζ') Ἀδιάντων ξηραίνει λεπτόνει διαφορεῖ· καὶ γὰρ ἀλωπεκίας δασύ-
νει καὶ χοιράδας καὶ ἀποστήματα διαφορεῖ καὶ λίθους θρύπτει πινό-
μενον καὶ ταῖς ἐκ θώρακός τε καὶ πνεύμονος ἀναγωγαῖς τῶν γλίσχρων
καὶ παχέων χυμῶν οὐ σμικρὰ συντελεῖ καὶ ρεύματα κοιλίας ἴστησι.
μέσον δέ ἐστι κατὰ θερμότητα καὶ ψυχρότητα τὴν κρᾶσιν.

[p.33]

5

[Galen 11.814.14-815.5]

7) Maidenhair (*Adiantum capillus-veneris* L.) dries, rarefies and disperses; and accordingly it renders bald patches hairy, and it disperses diseased lymph nodes and abscesses, and it crumbles stones when it is drunk. It facilitates in no small measure the expectoration of sticky and thick fluids from the chest and the lungs, and it holds in check discharges of the abdomen. It is between warmth and coldness in its composition.

7) Omitting comments about elemental qualities, Aëtius quotes Galen almost verbatim.

7.2 [33.1] **λίθους** Whether gallstones or kidney stones is not stated, the latter more likely.

7.3-4 [33.2-3] **ταῖς ἐκ θώρακός...συντελεῖ** The British Herbal Pharmacopoeia lists maidenhair paradoxically as an antitussive and expectorant, but whether this is based on ancient lore or verifiable research is not stated (Evans, 1996: 474).

7.5 [33.4] **μέσον...κρῶσιν** Aëtius succinctly summarises what it takes Galen three times as many words to convey (11.815.2-5).

There is no apparent substantiation of the above claims in modern scientific literature.

[33.5-6]

Αγήρατον δυνάμεώς ἐστὶ διαφορητικῆς καὶ ἀτρέμα πῶς ἀφλεγ- [5]
μάντου.

[Galen 11.814.12-13]

[unnumbered] Pot-marjoram (*Origanum onites* LSJ or *Achillea ageratum* L.) is of a dispersive and somewhat gentle anti-inflammatory capacity.

Apart from the position of ἐστὶ, Aëtius exactly quotes Galen, who has numbered this entry ζ´ and inserted it between agaric and adiantum.

.1 [33.5] **δύναμεώς** Genitive of quality instead of the usual accusative of respect or as object of ἔχει.

The oil of this plant contains thymol, which has antiseptic properties (Evans, 2009: 271).

[33.7-11]

(η´) Αἰρίζων ἐκάτερον, καὶ τὸ μικρὸν καὶ τὸ μέγα, ξηραίνει μὲν ἐπ' ὀλίγον, ὅτι καὶ στύφει μετρίως, ἐμπύχει δὲ οὐ μετρίως. ἐστὶ γὰρ τῆς τρίτης ἀποστάσεώς τε καὶ τάξεως τῶν ψυχόντων καὶ διὰ τοῦτο καὶ πρὸς ἐρυσιπέλατα καὶ ἔρπητας καὶ πρὸς τὰς ἐκ ῥευμάτων φλεγμονὰς ἀρμόττει. [10]
5

[Galen 11.815.6-13]

8) Each of the houseleeks (*Sempervivum* spp.), both the small (*S. tectorum* L.) and the large (*S. arboreum* L.), dries to a small extent, because it is also moderately astringent, but it cools immoderately. For it is of the third degree and rank of cooling materials, and for this reason it is suitable both for cases of cellulitis and herpes, and for acute inflammations arising from fluxes.

8) Galen is quoted almost verbatim, with the omission of a short passage regarding the plants' moist nature (11.815.8-9).

No substantiation of the therapeutic claims appears in modern scientific literature.

[33.12-13]

(θ') Αιγίλωψ διαφορητικὴν ἔχει δύναμιν· τὰς γούν σκληρυνόμενας φλεγμονὰς καὶ αἰγίλωπας καὶ ἀλωπεκίας ἰᾶται.

[Galen 11.815.14-17]

9) Haver-grass or goat grass (*Aegilops ovata* L.) has a dispersive capacity; at least, it heals indurated acute inflammations, cases of dacryocystitis and patchy hair loss.

9) Aëtius quotes Galen largely verbatim.

9.1 [33.12] **Αιγίλωψ...δύναμιν** Aëtius omits Galen's explanation regarding taste (11.815.15-6).

9.2 [33.13] **αἰγίλωπας** How the same word came to be used for the plant and one of the diseases treated by it is unclear; Dioscorides uses it in the same way (4.137 (139) (K25.1.619.11)). Perhaps if the plant in question is a *Quercus* species, an alternative given in LSJ and Carnoy, who says also that goat grass is a type of oats, the slight resemblance of a stye to an acorn could be postulated as an explanation; this, however, is contradicted by Dioscorides' description of what is obviously a graminaceous plant with some resemblance to wheat.

No substantiation of the therapeutic claims appears in modern scientific literature.

[33.14-17]

(ι') Αἶρα ξηραίνει καὶ θερμαίνει, ὡς ἐγγύς εἶναι τῶν δριμέων ἱρεως μᾶλλον. οὐκ ἔστι δὲ ὡς ἐκεῖνη λεπτομερής, ἀλλ' ἀπολείπεται συχνῶ καὶ κατὰ τοῦτο θεῖη ἂν τις αὐτὴν ἐν ἀρχῇ μὲν τῆς τρίτης τάξεως τῶν θερμαινόντων, ἐπὶ τέλει δὲ τῆς δευτέρας τῶν ξηραίνόντων.

[15]

[33.17] τέλει replaces τελευτῇ.

[Galen 11.816.1-6]

10) Darnell (*Lolium temulentum* L.) dries and warms, with the result that it is nearer to the pungent materials than the iris. It is not as fine-grained as that one is, but it is far inferior, and, in view of this, one would place it in the beginning of the third rank of warming materials, but at the end of the second rank of drying materials.

10) Aëtius quotes Galen's entire entry almost verbatim.

Darnell, for which Aëtius makes no specific therapeutic claims, is potentially toxic when taken internally (Lewis, 1977: 59).

[33.18-20]

(ια') Αιγείρου τὰ μὲν ἄνθη θερμὰ τὴν δύναμιν, ἐστὶ δὲ ἐκ τῆς πρώτης τάξεως ἀπὸ τῶν εὐκράτων, ξηραίνει δὲ μετρίως· ἐστὶ δὲ καὶ λεπτομερῆ, καὶ ἡ ῥητίνη δὲ αὐτῆς θερμότερα τῆς τῶν ἀνθῶν ἐστὶ δυνάμεως. [20]

[Galen 11.816.7-16]

11) The flowers of the black poplar (*Populus nigra* L.) are warm in capacity, but belong to the first rank of the mild ones, and dry moderately. It is also fine-grained, and its resin is warmer than the capacity of the flowers.

11) Galen is much more expansive on this plant's position in respect of elemental theory, and adds comments regarding its leaves (11 816.12) and seeds (11.816.15).

11.2 [33.19] **τάξεως** Galen uses ἀποστάσεως in the same context, further evidence of the minimal difference between these terms.

Neither Aëtius nor Galen make any specific therapeutic claims for black poplar, which, however, modern science has shown to be the source of phenolic glycosides such as salicin, a potential anti-inflammatory, rubefacient and antiseptic (Lewis, 1977:151).

[33.21-24]

(ιβ') Ἀκακία τῆς τρίτης μὲν τάξεώς ἐστὶ τῶν ξηραίνοντων, τῆς δὲ δευτέρας τῶν ψυχόντων, ἐπειδὴν πλῆθῃ· ἡ δὲ ἄπλυτος, τῆς πρώτης. οὐκ οὔσα γὰρ ὁμοιομερῆς ἔχει τινὰ μόρια παρεσπαρμένα λεπτομερῆ καὶ θερμὰ, κατὰ τὴν πλῆσιν ἀποχωροῦντα.

[Galen 11.816.17-817.12]

12) Acacia tree (*Acacia arabica* LSJ) belongs to the third rank of drying materials, but to the second of the cooling ones, when it has been washed; but when unwashed, it belongs to the third. Since it is not of uniform composition, it has some fine-grained and warm parts diffused all over it, and these leave it when it is washed.

12) Galen gives a more detailed account of the taste and elemental properties of this plant's fruit and juice, together with a therapeutic suggestion, namely that, when used topically, it immediately renders a moist part drier and tightly drawn (11.817.2-4). Aëtius quotes most of the last and second last sentences in reversed order, which amounts to less than a third of Galen's text.

12.1 [33.21] **Ἀκακία** LSJ translates rather archaically as “shittah tree”, and gives *Genista acanthoclada* LSJ as an alternative meaning.

Acacia species contain potentially harmful cyanogenic glycosides (Lewis, 1977:18).

[34.1-9]

(ιγ') Ἀκαλήφη ἢ κνίδη. Ἀκαλήφης τὰ φύλλα καὶ ὁ καρπὸς διαφορη-
 τικῆς ἰκανῶς ἐστὶ δυνάμεως, ἄνευ τοῦ θερμαίνειν σφοδρῶς. ἰᾶται γοῦν
 φύματα καὶ παρωτίδας καὶ τὰ ἐκ θώρακος καὶ πνεύμονος ἀνάγει τῶν
 ὑγρῶν τὰ παχέα τε καὶ γλίσχρα. ἔχει δέ τι καὶ φυσῶδες, ᾧ καὶ τὰς
 πρὸς συνουσίαν ὀρμὰς ἐπεγείρει, καὶ μάλισθ' ὅταν μετὰ γλυκέος πίνη-
 ται τὸ σπέρμα. κοιλίαν δὲ ὑπάγει μετρίως τῷ ῥύπτειν τε καὶ οἶον 5 [5]
 γαργαλίζειν, οὐ τῷ καθαίρειν. καὶ τὰ γαγγραινώδη δὲ καὶ τὰ καρκι-
 νῶδη καὶ ὅλως ὅσα ξηρανθῆναι δεῖται χωρὶς τοῦ δάκνεσθαι προση-
 κόντως ἰᾶται.

[Galen 11.817.13-818.11]

13) Stinging nettle or nettle (*Urtica L. spp.*). The leaves and fruit of nettle are of a fairly dispersive capacity, without warming excessively. Accordingly, it heals swellings and parotid swellings, and it brings up from the chest and lung both thick and sticky sorts of liquids. It also has a flatulence-producing quality, for which reason it also arouses impulses towards sexual intercourse, and especially whenever the seed is drunk with grape-syrup. It regulates the abdomen moderately both by cleansing and by, as it were, tickling, not by purging. And it effectively heals both gangrenous and cancerous lesions, and all entirely that need to be dried without being eroded.

13) Aëtius quotes just under half of Galen's words, mainly by omitting details of the effects of contact (11.818.3-4), of how the ability to produce

flatulence is released only by digestion (11.818.4-6), and of the relationship between elemental composition and supposed pharmacological effect (11.818.9-11).

13.1 [34.1] **Ἀκαλήφη ἢ κνίδη** Galen entitles this entry simply *περὶ ἀκαλύφης*; it is possible that Aëtius added *κνίδη* to avoid confusion with the alternative meaning of *ἀκαλήφη*, namely “sea-urchin”.

13.4 [34.4] **φυσῶδες** Here we have further evidence regarding the association of increased flatulence with increased libido (cf. 31.6 n). Galen uses *φυσῶδες* synonymously in this context with *πνευματῶδες* (11.818.4), and as an antonym of *ἄφυσον* (6.540.4). It seems very unlikely, however, that nettle seeds would contain enough material for intestinal bacteria to ferment to produce the volumes of methane required for flatus.

The stinging hairs of nettles contain pharmacologically active substances such as acetylcholine, histamine and leucotrienes, and there is evidence to suggest that extracts from the roots, possibly containing phytosterols, may be effective against benign prostatic hypertrophy and prostatic adenoma, and may also be diuretic (Bruneton, 1995: 604), but there is no apparent substantiation of Aëtius’ claims in modern scientific literature.

[34.10-12]

(ιδ´) Ἄκανθος. οἱ δὲ μελάμφυλλον οἱ δὲ παιδ-
έρωτα. τὰ μὲν φύλλα διαφορητικὴν μετρίως ἔχει τὴν δύναμιν, ἢ δὲ
ρίζα ξηραντικὴν τε καὶ τμητικὴν ἀτρέμα καὶ λεπτομερῆ.

[34.10] [ἢ παιδέρωτα Ἄκανθος] omitted after Ἄκανθος.

[Galen 11.818.12-15]

14) Bearsfoot (*Acanthus* L. spp.). Some call it dark-leaved, and some purple-coloured. The leaves have a moderately dispersive capacity, whereas the root has a drying, gently cutting and fine-grained one.

14) Aëtius’ entry is the identical to Galen’s, apart from nominative endings in the last three adjectives in the latter’s text: “the root is drying...”

14.1-2 [34.10-11] **οἱ δὲ...παιδέρωτα** A verb such as ὀνομάζουσιν may be understood to complete the grammatical sense. The choice of translations offered by the LSJ for παιδέρωτα includes holm-oak, chervil, an opal, and a purple dye-stuff; Carnoy's preferred translation is *Acanthus spinosissimus* Host.

No relevant modern pharmacological information was found regarding *A. mollis* L. or *spinosissimus* Host.

[Galen next lists cotton thistle (*Onopordum illyricum* L.), omitted by Aëtius, supposedly beneficial to those suffering from convulsions (Περὶ ἀκανθίου 11.818.16-18).]

[34.13-18]

(ιε´) Ἄκανθα λευκὴ· ταύτης ἡ ρίζα
ξηραντικὴ μετρίως καὶ στύφουσα, διὸ καὶ κοιλιακοὺς καὶ στομαχικοὺς
ὠφελεῖ καὶ τὰς τοῦ αἵματος ἀναγωγὰς ἐπέχει καὶ τὰ οἰδήματα κατα- [15]
πλασσομένη προσστέλλει, καὶ ὀδόντας ἀλγοῦντας ὀνίνησιν, εἴ τις δια-
κλύζοιτο τῷ ἀφεψημάτι. τὸ δὲ σπέρμα λεπτομεροῦς τε καὶ θερμῆς ἐστὶ 5
δυνάμεως, ὥστε καὶ τοῖς σπωμένοις ἀρμόττει πινόμενον.

[34.13] ἦν ἔνιοι λευκάκανθαν καλοῦσιν omitted after λευκὴ.

[Galen 11.819.1-8]

15) White thistle (possibly fish-thistle, *Cnicus acarna* L.): the root of this is moderately drying and astringent, whence it benefits those suffering both from abdominal and from stomach problems, and it suppresses the bringing up of blood. When applied as a poultice, it disperses swellings, and it helps toothache sufferers, if one were to wash the mouth out with a boiled-down residue. The seed is of both a fine-grained and warming capacity, so that when drunk it is suitable for those suffering from convulsions.

15) Aëtius quotes Galen almost verbatim.

15.1 [34.13] **Ἄκανθα λευκὴ** Possibly fish-thistle, *Cnicus acarna* L.(LSJ), or various spiny plants (Carnoy).

There is nothing in modern literature to support Aëtius' therapeutic claims, although cnicin, from *C. benedictus* L., has an antibiotic effect against Gram-positive bacteria (Bruneton, 1995: 501).

[34.19-22]

(ιζ') Ἄκανθα αἰγυπτία. Ἐκ ταύτης ἡ ἀκακία κατασκευάζεται. στυπτικὴ δὲ καὶ ξηραντικὴ τὴν δύναμιν ἔστιν, ὥστε καὶ ῥοῦν γυναικεῖον ὀνί- [20]
νησιν αὐτῆς ἡ ρίζα καὶ ὁ καρπὸς καὶ τὴν κιονίδα ὀνίησι καὶ τὰ καθ'
ἔδραν ἔλκη ἐμφυσώμενα εἰς οὐλὴν ἄγει.

[Galen 11.819.9-16]

16) Smaller milk-thistle (*Notobasis syriaca* Cass.). From this, acacia is rendered. It is astringent and drying in capacity, with the result that its root helps female flow, and the fruit helps the uvula, and facilitates scarring of swollen ulcers on the buttocks.

16) There is some confusion regarding the name of this plant (cf. LSJ entry). I have translated it as *N. syriaca* Cass., as Galen says some people call it Ἀραβικὴ; he then goes on to say that, for him, it resembles white thistle, and compares its properties to those of the previous entry (11.819.10-11).

16.2 [34.20] **ῥοῦν γυναικεῖον** Whether the problem is amenorrhoea, menorrhagia or dysmenorrhoea is unclear.

16.3 [34.21] **κιονίδα** Substituted by Aëtius for Galen's σταφυλὴν (11.819.15). Aëtius discusses the use of the terms γαργαρέων, ἰμάς, κίων and σταφυλὴ with regard to pathology of the uvula, in book 8, chapter 43, 1-6. It seems likely, therefore, that he has deliberately emended Galen's term.

No mention is made of *Notobasis* species in modern works of pharmacognosy.

[34.23-35.2]

(ιζ') Ἀκόρου ἡ ρίζα τῆς τρίτης ἐστὶ τάξεως τῶν θερμαινόντων καὶ ξηραίνόντων καὶ λεπτομερῆς τὴν σύστασιν. κινεῖ γοῦν οὖρα καὶ σπλῆ- [p.35]
νας ὠφελεῖ ἐσκιρρωμένους· ὁ δὲ χυλὸς αὐτῆς ἀπορρῦπτει τε καὶ
καθαίρει τὰ πάχη τοῦ κερατοειδοῦς.

[Galen 11.819.17-820.7]

17) The root of yellow flag (*Iris pseudacorus* L.) is of the third rank of warming and drying materials, and is fine-grained in composition.

Accordingly, it facilitates urination and helps indurated spleens. Its juice both cleanses thoroughly and purifies the thickenings of the cornea.

17) Galen includes details of this item's taste and smell (11.819.18-820.1), and is more long-winded in describing its elemental composition and usage.

17.2 [34.24] **κινεῖ...οὔρα** Whether this means “moves urine” from the bladder in a case of retention, or by an effect on the kidneys, is unclear, but, as the latter function may be represented by the word διουρητικός, I have translated κινεῖ...οὔρα as “facilitates urination”, here and in subsequent entries (cf. Intro lxxiii).

17.4 [35.2] **καθαίρει** Aëtius, whose knowledge of ophthalmology is displayed in his book 7, replaces Galen's λεπτόνειν (11.820.4).

Material from iris species is known to be purgative and emetic (Lewis, 1977:283), but no effect similar to those described by Aëtius is mentioned.

[35.3-7]

(ιη') Ἀκόνιτον ἢ παρδαλιαγγές παρέοικε μὲν τῇ ἀγρία σέριδι, σηπτικῆς δέ ἐστι καὶ δηλητηριώδους δυνάμεως, ὅθεν αὐτὸ φυλακτέον ἐν ἐδέσματι λαβεῖν ἢ ποτῶ. πρὸς μέντοι τὸ ἀποσῆψαί τινα τῶν ἐκτὸς τοῦ σώματος ἢ καθ' ἔδραν ἐπιτήδειόν ἐστι. χρησιμωτέρα δὲ ἡ ρίζα ἐστὶν εἰς ταῦτα. λέγεται δὲ ὁ χυλὸς τῆς πόας ἄτριχον εἶναι. [5]

[35.3] σέριδι replaces ἴριδι.

[Galen 11.820.8-12]

18) Leopard's bane (*Aconitum anthora* L.) somewhat resembles chicory (*Cichorium intybus*), but is of a putrefactive and noxious capacity, for which reason one must guard against taking it in food or drink. It is, however, suitable for rotting away something on the outside of the body or on the buttocks. The root is more useful for these purposes. It is said that the juice of the herb is a substance which prevents the growth of hair.

18) Aëtius quotes Galen almost verbatim, but adds that aconite resembles the wild iris, and that it is said to inhibit hair growth.

Modern research confirms the toxicity of this plant, 10gm of the tuber being enough to kill an adult (Bruneton, 1995: 868).

[There follows in Galen a separate short entry about “aconite or wolfbane”, omitted by Aëtius, which differs only in being better at destroying wolves than leopards (Περὶ ἀκονίτου ἢ λυκοκτόνου 11.820.13-16).]

[35.8-11]

(ιθ') Ἀκτὴ, ἢ τε μεγάλη καὶ δενδρώδης καὶ ἡ χαμαιάκτη καλουμένη, ξηραντικῆς ἀμφοτέραι δυνάμεως εἰσί, κολλητικῆς τε καὶ μετρίως διαφορητικῆς· ὠφελεῖ δὲ καὶ ὑδρωπικοὺς τὸ ἀφέψημα τῆς ῥίζης πινόμενον.

[10]

[Galen 11.820.17-821.2]

19) The elder tree (*Sambucus nigra* L.), both the large and tree-like variety, and the one called deadwort (*S. ebulus* L.), are of a drying capacity, both adhesive and moderately dispersive. When drunk, the boiled-down residue of the root also helps those suffering from oedema.

19) Aëtius has added the therapeutic indication regarding oedema.

The fruit of the European elder is still traditionally used as a diuretic, “despite a glaring lack of pharmacological data” (Bruneton, 1995: 310).

[35.12-18]

(κ') Ἄλιμον ἢ ἀλμυρίς. Τούτου τοῦ θάμνου τοὺς βλαστοὺς ἐσθίουσί τινες καὶ εἰς ἀπόθεσιν θησαυρίζουσιν. ἐστὶ δὲ καὶ σπέρματος καὶ γάλακτος γεννητικὸν καὶ κατὰ τὴν γεῦσιν ἀλυκόν τε καὶ στῦφον ἔχον καὶ δῆλον ὡς ἀνομοιομερές ἐστὶ· τὸ δὲ πλεῖστον αὐτοῦ τῆς οὐσίας θερμὸν εὐκράτως ὑπάρχει μεθ' ὑγρότητος ἀκατεργάστου τε καὶ φυσώδους ἀτρέμα. τῆς δὲ ῥίζης < ᾧ ποθεῖσα σὺν μελικράτῳ σπάσματα ῥήγματα καὶ στρόφους πρᾶννει καὶ γάλα κατασπᾶ.

[15]

5

[Galen 11.821.3-11]

20) Tree purslane (*Atriplex halimus* L.). Some people eat the shoots of this bush and preserve them in store. It is productive of semen and milk, and it is both salty and astringent in taste, and it is clear that it consists of unlike parts; most of its essence is mildly warming with a moisture both indigestible and gently flatus-producing. When 1 drachma of the root is

drunk with a mixture of honey and water, it soothes sprains, soft-tissue injuries and griping, and lets down milk.

20) Galen says that the main source of this plant is Cilicia (11.821.4). Otherwise, Aëtius quotes him almost verbatim, and then adds the therapeutic uses, absent in Galen, in the last sentence.

20.4-5 [35.15-16] **φυσώδους** (cf. 13.4n)

There is no apparent substantiation of the above claims in modern scientific literature.

[35.19-36.11]

(κα΄) Ἀλόη τῶν μὲν ξηραίνοντων ἐστὶ φαρμάκων τῆς τρίτης τάξεως, τῶν θερμαίνοντων δὲ ἦτοι τῆς πρώτης ἐπιτεταμένης ἢ τῆς δευτέρας ἐκλελυμένης· στύφει δὲ μετρίως κατὰ τὴν γεῦσιν καὶ πικρίζει ἰσχυρῶς, ὑπάγει δὲ γαστέρα, τῶν ἐκκοπρωτικῶν καλουμένων οὕσα φαρμάκων. ἐστὶ δὲ εὐστόμαχον φάρμακον, εἴπερ τι καὶ ἄλλο, καὶ κόλπων κολλη- τικόν, ἰᾶται δὲ τὰ δυσασπούλωτα τῶν ἐλκῶν καὶ μάλιστα τὰ κατὰ τὴν ἔδραν καὶ αἰδοῖα τῷ ξηραίνειν ἀδήκτως. ὠφελεῖ δὲ καὶ τὰς φλεγ- μονὰς αὐτῶν ὕδατι διηθεῖσα καὶ κολλᾷ τραύματα κατὰ τὸν αὐτὸν τρόπον. ἀρμόζει δὲ ὠσαύτως χρωμένῳ καὶ πρὸς τὰς ἐν στόματι καὶ ῥίσι καὶ ὀφθαλμοῖς φλεγμονάς. καὶ ὅλως ἀποκρούεσθαι τε ἅμα καὶ διαφορεῖν πέφυκε μετὰ τοῦ καὶ ῥύπτειν ἐπ' ὀλίγον, εἰς ὅσον ἔλκεσι καθαροῖς ἄλυπον. τοὺς δὲ καθυγραιομένους συνεχῶς ὀφθαλμοὺς καὶ μάλιστα παίδων ἀνεθεῖσα ὕδατι παχυτέρα καὶ τοῖς κανθοῖς διὰ μήλης πυρῆνος προσασομένη παραδόξως ἰᾶται.

[Galen 11.821.12-822.18]

21) Aloe (*Aloe vera* L.) belongs to the third rank of the drying drugs, but either to the top of the first, or bottom of the second rank of warming ones; it is moderately astringent and exceedingly bitter to taste, and it purges the bowel, being one of the drugs called laxatives. It is a drug which benefits the stomach, as much as anything else can, and it closes superficial sinuses, and it heals those ulcers that are hard to cicatrize, especially those on the buttocks and genitals, by drying without being erosive. An aqueous filtrate of it also helps inflammatory swellings of the same parts, and mends wounds by the same means. It is also suitable, if anyone uses it in like manner, for inflammatory swellings in the mouth, nostrils and eyes. Furthermore, it is overall naturally inclined both to break up and

simultaneously disperse, along with washing out to a small degree, inasmuch as it is painless in clean wounds. And it has an exceptional healing effect on unremittingly weeping eyes, and especially those of children, when the thicker part of the plant is dissolved in water and introduced into the corners by means of an apple-pip.

21) Galen devotes much of the first half of his entry to a discussion of the provenance of aloes, and of the relative merits of Syrian, Arabian and Indian types (11.821.12-822.1).

35.19 [21.1] **τάξεως** Again substituted by Aëtius for Galen's ἀποστάσεως (11.822.7).

21.12 [36.9] **ἄλυπον** The alternative translation, herb terrible (*Globularia alypum* L.) (LSJ), makes no sense here. It is not listed as one of Galen's simples, and its supposed properties, as detailed by Dioscorides (4.177 (180) (K25.1.671.6)), are unrelated.

21.12-4 [36.9-11] **τοὺς δὲ...ἰᾶται.** Added by Aëtius, this may be taken as further evidence of his ophthalmological expertise (cf. 35.2n).

21.13-4 [36.10-11] **μήλης πυρήνος** The “apple-pip” used to introduce eyedrops is not mentioned in Galen, and may be an actual pip, or possibly a piece of equipment so named.

Although no clear distinction is made by Aëtius, this plant has two separate pharmacologically active components: the juice obtained from the pericyclic cells when the leaf is cut transversely yields, on drying, a bitter resin which contains hydroxyanthraquinones with definite laxative properties (Bruneton, 1995: 363; Evans, 2009: 216, 247); the gel obtained by squeezing the mucilaginous parenchymal cells of the leaf is currently marketed as aloe vera, and the claims that it has anti-inflammatory and antibacterial properties when used topically are to some extent substantiated by research (Bruneton, 1995: 364; Reynolds & Dweck, 1999; Banu et al., 2012). Modern science, therefore, can be said to endorse Aëtius' comments regarding purgation, and healing of wounds, ulcers and infected eyes.

(κβ') Ἄλυσσον. Τὴν ἄλυσσόν φασι εἶναι τὴν ἡρακλείαν καλουμένην σιδηρίτην, ἣτις παρὰ τὰς ὁδοὺς φύεται πανταχῆ, ἔχουσαν πορφυρίζον τὸ ἄνθος καὶ τὰ φύλλα τραχύτερα. ὠνόμασται δὲ οὕτως διὰ τὸ θαυμαστῶς ὀνινάναι τοὺς ὑπὸ λυσσῶντος κυνὸς δεδηγμένους. δυνάμει δὲ ἐστὶ μετρίως ξηραντικῆς καὶ διαφορητικῆς, ἔχει δὲ τι καὶ ῥυπτικόν, ὃ καὶ τοὺς ἄλφρους καὶ τὰς ἐφήλεις ἀποκαθαίρει. 15 [5]

[Galen 11.823.1-10]

22) Galen's madwort (*Sideritis romana* L.). They say madwort is the ironwort called Heracleon, such as grows everywhere beside the roads, and has a purple flower and fairly rough leaves. And it has been so named [madwort] because of its wondrous benefit to those who have been bitten by a mad dog. It is of a moderately drying and dispersive capacity, and it also has some cleansing quality, by which it clears away pale skin lesions and keratoses.

22) Aëtius quotes closely the beginning and end of Galen's entry, but omits the latter's claim, based on experience, that madwort often cures even when given to someone already raving.

22.1 [36.12] Ἄλυσσον LSJ translates as "madwort (*Farsetia clypeata* L.) or Galen's madwort (*Sideritis romana* L.)", whereas Carnoy prefers the latter translation, while mentioning various other crucifers. (v. also ch.285, p.262.)

22.1-3 [36.12-14] **Τὴν ἄλυσσόν...τραχύτερα.** These botanical details and identification have been added by Aëtius.

22.4 [36.15] **ὀνινάναι...δεδηγμένους.** Such an effect would indeed be wondrous, as hydrophobia from the bite of a rabid dog is invariably fatal. Galen, however, asserts that it has often brought about a complete cure (11.823.3-4).

22.6 [36.17] **ἐφήλεις** For discussion of translation of this term, here and in subsequent entries, see Intro. liii.

There is no apparent substantiation of Aëtius' claims in modern scientific literature.

[36.18-21]

(κγ') Ἀλσίνη ἢ μυδὸς ὄτα. Ὅμοίαν ἔχει καὶ τοῦτο τὸ βοτάνιον τὴν δύνανμιν ἐλξίνην ψύχουσαν τε καὶ ὑγραίνουσαν. ἐστὶ γὰρ οὐσίας ὑδατώδους ψυχρᾶς, διὸ καὶ χωρὶς στύψεως ἐμψύχει· ταῦτ' ἄρα καὶ πρὸς ζεούσας ἀρμόττει φλεγμονὰς καὶ ἐρυσσιπέλατα τὰ μέτρια. [20]

[Galen 11.823.11-15]

23) Lichwort (*Parietaria lusitanica* L.) or mouse-ears. This little plant also has the same capacity, both cooling and moistening, as pellitory (*P. officinalis*). For it is of a moist, cold essence, whereby it cools even without astringency. These features are, in fact, suitable for suppurating inflammatory swellings and cases of cellulitis which are moderately severe.

23) Aëtius quotes Galen almost verbatim.

23.1 [36.18] Ἀλσίνη *P. officinalis*, according to Carnoy.

There is no apparent substantiation of the above claims in modern scientific literature.

[36.22-24]

(κδ´) Ἀμάρακον θερμαίνει μὲν οὐκ ἀγεννῶς, ξηραίνει δὲ οὐ σφοδρῶς. ἀλλ´ ἐν τῇ θερμότητι τῆς τρίτης ἐστὶ τάξεως, ἐν δὲ τῷ ξηραίνειν τῆς δευτέρας.

[Galen 11.823.16-18]

24) Marjoram (*Origanum marjoranum* LSJ or *Majorana hortensis* Moench) warms very effectively, whereas it dries not excessively. But it is of the third rank as regards warmth, and of the second as regards drying.

24) Aëtius quotes Galen virtually verbatim.

Origanum species are known to contain thymol, which has antiseptic properties (Evans, 2009: 272).

[36.25-26]

(κε´) Ἄμβροσία καταπλαττομένη δύναμιν ἔχει στύφουσάν τε καὶ ἀποκρουστικὴν.

[Galen 11.824.1-2]

25) When applied as a poultice, ambrose (*Ambrosia maritima* LSJ) has an effect both astringent and dispelling.

25) Aëtius quotes Galen verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[36.27-37.3]

(κζ') Ἄμι. Ἄμεως τὸ σπέρμα μάλιστα ἐστὶ χρήσιμον, θερμαντικῆς καὶ
ξηραντικῆς δυνάμεως ὑπάρχον κατὰ τὴν τρίτην ἀπόστασιν. ἐστὶ δὲ καὶ [p.37]
λεπτομερές, γευομένοις δὲ ὑπόπικρόν τε καὶ δριμύ καὶ δηλονότι διου-
ρητικόν τε καὶ διαφορητικόν.

[Galen 11.824.3-8]

26) Ajowan (*Carum copticum* Benth, & Hook. f). The seed of ajowan certainly is useful, since it has a warming and drying capacity of the third degree. It is also fine-grained, and both fairly bitter and pungent to those who taste it, and clearly both diuretic and dispersive.

26) Galen's entry is a little longer; he includes a causative link between taste, effect and elemental classification, which he puts more precisely at the top of the third rank of warming and drying (11.824.7-8).

26.2 [37.1] ἀπόστασιν Galen uses τάξις.

This plant appears to have a diuretic effect on rats (Lahlou et al., 2007).

[37.4-8]

(κζ') Ἀμάραντον δυνάμεώς ἐστὶ λεπυτικῆς καὶ τμητικῆς· ἔμμηνα γοῦν
ἄγει σὺν οἴνῳ ποθεῖσα ἢ κόμη καὶ θρόμβους αἵματος τήκειν πεπίστευ- [5]
ται, οὐ τοὺς ἐν γαστρὶ μόνον ἀλλὰ καὶ τοὺς ἐν κύστει, σὺν οἰνομέλιτι
πινομένη, καὶ πάντων δὲ ἐστὶν ἀπλῶς ῥευμάτων ξηραντικὴ πινομένη,
κακοστόμαχος δὲ ἐστὶν.

5

[Galen 11.824.9-15]

27) Everlasting flower (*Helichrysum siculum* L.) has a thinning and cutting capacity. At least, it brings on menstruation when the foliage has been drunk with wine, and it has been believed to dissolve blood-clots, not only those in the bowel but also those in the bladder, when it is drunk with honey-wine; when drunk on its own, it has a drying effect on fluxes, but it is bad for the stomach.

27) Aëtius quotes Galen, who calls it ἀμάρανθον, almost verbatim.

27.1 [37.4] **Ἀμάραντον** LSJ suggests three synonyms for this: ἐλιχρυσον (*Helichrysum siculum* L.), which is listed by Dioscorides (4.57 (K 25.546.14)) as having the same uses as stated here; κενταύρειον μικρόν (*Erythrea centaurium* LSJ), which has a separate entry in Aëtius; χρυσοκόμη (*Helichrysum orientale* L.), which is listed separately in Galen (12.157.16-18) but does not appear in Aëtius. Carnoy favours *H. siculum* L. It is most likely, therefore, that the plant in question is *H. siculum* L.

No substantiation of Aëtius' therapeutic claims for everlasting flower can be found in modern literature.

[37.9-11]

(κθ´) Ἀμόργη τῆς δευτέρας ἐστὶ τάξεως τῶν θερμαινόντων καὶ ξηραίνοντων ἐπιτεταμένης. οὕτω γέ τοι καὶ τὰ τῶν ξηρῶν τῇ κράσει σωμάτων ἔλκη θεραπεύει, τὰ δὲ ἐν τοῖς ἄλλοις ἅπασι παροξύνει.

[Galen 11.824.16-825.8]

28) Aqueous olive juice is at the top end of the second rank of warming and drying materials. For this reason, in fact, it treats even ulcers of bodies that are dry in constitution, but irritates them in all other sorts.

28) Galen is more expansive about this material. He gives more details of its nature in terms of his ideas about taste and elements (11.824.16-825.1), and likens its astringency to that of pine-resin and pitch, so that it may be used for wounds and sinuses, but only of sturdy bodies (11.825.4-8).

28.1 [37.9] **Ἀμόργη** As Carnoy points out, ἀμόργη can also mean *Malva silvestris*, but it is clear both from LSJ and consideration of Dioscorides 1.140 [K25.1.134.10] that aqueous olive juice is meant here.

Fresh olives contain 40-45% water, but no pharmacological effect is now claimed for any solutes or residue (Bruneton, 1995:127).

[37.12-16]

(κθ´) Ἀμπελόπρασον. Μεταξὺ πράσου τε καὶ σκόρδου τὴν δύναμιν ἐστὶ, κακοστομαχώτερον δὲ τοῦ ἡμέρου ὑπάρχει καὶ γλίσχρων χυμῶν τμητι-

κώτερον καὶ ἐκφρακτικώτερον τῶν ἐμπεφραγμένων ὀργάνων. ταύτη
τοι καὶ οὖρα καὶ καταμήνια πολλάκις ἐκίνησεν, ὅταν ὑπὸ ψυχροῦ καὶ [15]
παχέος ἴσχηται χυμοῦ. 5

[Galen 11.825.9-826.2]

29) Wild leek (*Allium ampeloprasum* L.). It is between leek (*A. porrum* L.) and garlic (*A. sativum* L.) in capacity, and it is more unkind to the stomach than the cultivated variety, and better at cutting sticky fluids and more likely to unblock blocked organs. Accordingly, it has often facilitated urination and menstruation, whenever they are checked by cold and thick fluid.

29) Galen expands on the differences between wild and cultivated species, and gives a ranking in elemental terms; he also includes an additional therapeutic use, namely poulticing wounds (11.825.18-826.1).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next has entries, omitted by Aëtius, for wild vine, whose fruit, he claims, helps superficial skin lesions (Περὶ ἀμπέλου ἀγρίας 11.826.3-7), and for cultivated vine, which has similar, weaker properties (Περὶ ἀμπέλου ἡμέρου 11.826.8-10).]

[37.17-24]

(λ') Ἄμπελος λευκή. Ἀμπέλου λευκῆς, ἣν δὴ καὶ βρυωνίαν ὀνομάζουσι καὶ ψιλῶθρον, οἱ μὲν πρότοι βλαστοὶ συνήθως ὑπὸ πάντων ἐσθίονται κατὰ τὸ ἔαρ, ὡς εὐστόμαχον ἔδεσμα διὰ τὸ στύφειν· ὑπόπικρον δὲ καὶ δριμεῖαν ἀτρέμα ἔχουσι τὴν στύψιν, διὸ καὶ οὖρησιν κινουῦσιν. ἡ δὲ ρίζα ῥυπτικὴν καὶ ξηραντικὴν καὶ λεπτομερῆ δύναμιν ἔχει καὶ συμμέτρως θερμὴν, διὸ καὶ σπλῆνας τήκει σκιρρουμένους, πινομένη τε καὶ ἔξωθεν ἐπιτιθεμένη μετὰ σύκων καὶ ψώρας καὶ λέπρας ἰᾶται. ἡ δὲ μέλαινα παραπλήσιός ἐστι τὰ πάντα τῇ προειρημένῃ, πλὴν ἀσθενεστέρα. [20]
5

[Galen 11.826.11-827.2]

30) White vine (*Vitis silvestris* L.). The first shoots of wild vine, which, in fact, they also call bryony and depilatory, are eaten habitually by everyone in the spring, as food that is good for the stomach through being astringent. They have to some extent a fairly bitter and pungent astringency, whereby

they also facilitate urination. The root has a capacity which is cleansing, drying, fine-grained and moderately warm, whereby it causes indurated spleens to shrink, and when it is both drunk and applied externally with figs, it heals both itchy scabby lesions and scaly skin lesions. Black bryony (*Tamus communis* L.) (black vine) closely resembles the aforesaid in every respect, except that it is weaker.

30) Aëtius quotes Galen almost verbatim, except that the latter mentions that the fruit of wild vine is useful for leather-dressers (11.827.1-2), and puts black vine into a separate entry (11.827.3-5).

30.1 [37.17] Ἄμπελος Or “wild vine” (LSJ, Carnoy).

The berries of black bryony are poisonous (Evans, 2009:41), which, if known by the ancient physicians, might have warranted a warning from them. No other relevant information appears in modern scientific literature.

[37.25-38.7]

(λα´) Ἀμύγδαλα. τὰ μὲν πικρὰ φανερώς τῆς λεπτινούσης ἐστὶ δυνά-
μεως, ὡς καὶ ἔφηλιν ἀποκαθαίρειν καὶ ταῖς ἐκ θώρακος καὶ πνεύ-
μονος ἀναπτύσεισι τῶν γλίσχρων τε καὶ παχέων χυμῶν ἱκανῶς συντε-
λεῖν. ἀλλὰ καὶ ἐκφράττει καὶ ἐκκαθαίρει τὸ ἥπαρ καὶ σπλῆνα καὶ
κῶλον καὶ νεφροὺς καὶ πλευρῶν ἀλγῆματα παύει. καὶ τὸ δένδρον δὲ
αὐτὸ σύμπαν ὁμοίαν ἔχει τὴν δύναμιν, ὥστε καὶ τούτου τὰς ρίζας
ἐφθᾶς ἐπιπλάττοντες ἀποκαθαίρουσιν ἔφηλιν. τὰ δὲ γλυκέα τῶν ἀμυγ-
δάλων ἀσθενέστερα τῶν πικρῶν ἐστίν.

[p.38]

5
[5]

[Galen 11.827.6-828.11]

31) Almonds (fruit of *Prunus amygdala* Stokes). The bitter ones clearly have a thinning capacity, so as both to clear up keratoses and to bring about adequately the expectoration of sticky and thick fluids from the chest and lung. But they also unblock and cleanse out the liver, spleen, colon and kidneys, and bring an end to pains in the sides. And the tree itself has generally the same effect, so that people also use its boiled-down roots as a plaster and clear away keratoses. The sweet varieties of almonds are weaker than the bitter ones.

31) Aëtius omits, paraphrases or significantly reduces two-thirds of Galen's entry mainly by rejecting Galen's repetitive thoughts on taste and elemental theory, while preserving the salient therapeutic points.

31.5 [38.4] **κόλον** It makes better sense in context to consider this as = κόλον (cf. LSJ); furthermore, Galen uses it in this sense, when, for example, he lists the abdominal contents in *De naturalibus facultatibus* (2.219.12).

Bitter almond oil does have a mild laxative effect, but contains potentially poisonous cyanogenic glycosides (Evans, 2009: 187). Although sweet almonds are edible, consuming three nuts of the bitter variety can cause severe poisoning in children, and seven to ten can be fatal in children, and fifty to seventy in adults (Lewis, 1977: 41). There is *in vitro* evidence of a possible anti-inflammatory effect (Lin et al., 2011).

[38.8-10]

(λβ') Ἀμμωνιακόν. Ἀμμωνιακόν μαλακτικῆς ἐστὶ δυνάμεως ἐπιτεταμένης, ὥστε καὶ τοὺς περὶ τὰ ἄρθρα πόρους διαλύειν καὶ σπλήνας ἐσκίρρωμένους ἰᾶσθαι καὶ χοιράδας διαφορεῖν.

[10]

[Galen 11.828.12-15]

32) Giant fennel juice (*Ferula communis* L.). Giant fennel juice is of a highly emollient capacity, so that it dissolves the stones around the joints, heals indurated spleens and disperses diseased lymph nodes.

32) Aëtius quotes Galen almost verbatim.

32.1 [38.8] **Ἀμμωνιακόν** Carnoy translates as *F. ammoniaca* L. The mythological significance of this plant, a stalk of which was used by Prometheus to carry fire to mortals (Hesiod *Theog.* 561-84), is ignored by Aëtius, who fairly consistently avoids non-medical digressions in his attempt to create a practical handbook.

32.2 [38.9] **τοὺς περὶ τὰ ἄρθρα πόρους** Possibly a reference to osteophyte formation in osteoarthritis (Underwood, 2004: 721).

Although no therapeutic benefit is reported in modern scientific literature, there is evidence that *F. communis* L. may be poisonous at least to livestock (Rubiolo *et al.*, 2006).

[38.11-12]

(λγ') Ἄμωμον ἔοικε τὴν δύναμιν ἀκόρω, πλὴν ὅτι ξηρότερόν ἐστι τὸ ἄκορον, πεπτικώτερον δὲ πῶς τὸ ἄμωμον.

[Galen 11.828.16-18]

33) Indian spice-plant (greater cardamom, *Amomum subulatum* Roxb.) resembles yellow flag (*Iris pseudacorus* L.) in capacity, except that yellow flag is drier, and Indian spice-plant promotes digestion somewhat more.

33) Aëtius quotes Galen almost verbatim.

There is some evidence that *A. subulatum* Roxb. contains antispasmodic and gastroprotective compounds (Jamal et al., 2006: 103, 149).

[38.13-18]

(λδ') Ἀναγαλλίς ἐκατέρα, ἢ τε τὸ κυανοῦν ἄνθος ἔχουσα καὶ ἡ τὸ φοινικοῦν, ῥυπτικῆς ἱκανῶς εἰσι δυνάμεως, ἔχουσαί τι καὶ ὑπόθερμον καὶ ἐλκτικόν, ὡς καὶ σκόλοπας ἐπισπᾶσθαι. ὁ δὲ χυλὸς αὐτῶν ἐκ ῥινῶν καθαίρει τὴν κεφαλὴν διὰ τὴν αὐτὴν αἰτίαν, καὶ καθόλου φάναι ξηραντικὴν ἔχουσι δύναμιν ἄδηκτον, ὅθεν καὶ τραύματα κολλῶσι καὶ τοῖς σηπομένοις ἔλκεσι βοηθοῦσιν.

[15]

5

[Galen 11.829.1-7]

34) Each pimpernel (*Anagallis arvensis* L. or *A. caerulea* L.), both the one which has the dark blue flower and the one which has the crimson one, has a fairly strong cleansing capacity, having something both fairly warm and drawing, so that it even draws out thorns. Their juice purges the head through the nostrils for the same reason, and, to speak in general terms, they have a capacity that is drying without being erosive, for which reason they cause adhesion of wounds and help festering ulcers.

34) Aëtius quotes Galen almost verbatim, but makes the following helpful insertions: κεφαλὴν (38.16); ἔλκεσι (38.18).

34.6 [38.18] **σηπομένοις...βοηθοῦσιν** Extracts from *Anagallis* spp. do appear to have some antimicrobial and anti-inflammatory activity, at least *in vitro* (López et al., 2011:1014-7).

[Galen next lists three plants, omitted by Aëtius, namely stinking bean-trefoil (*Anagyris foetida* L.), supposedly dispersive and emetic (11.829.8-15 Περὶ ἀναγύρου); St John's wort (*Hypericum perforatum* L.), supposedly cathartic and helpful in scalds and wounds (11.829.16-830.6 Περὶ ἀνδροσαίμου); and sea-navel (*Acetabularia mediterranea* L.), supposedly diuretic and dispersive (11.830.7-10 Περὶ ἀνδροσάκου).]

[38.19-39.12]

(λε΄) Ἀνδράχνη. Ἐν μὲν τῇ τοῦ ψύχειν δυνάμει τῆς τρίτης ἐστὶν τάξεως καὶ ἀπο-
στάσεως, ἐν δὲ τῇ τοῦ ὑγραίνειν τῆς δευτέρας. ὀλίγου δὲ αὐστηροῦ [20]
μετέχει, διὸ καὶ ἀποκρούεται ρεύματα καὶ μάλιστα τὰ χολώδη καὶ
θερμὰ μετὰ τοῦ μεταβάλλειν αὐτὰ καὶ ἀλλοιοῦν κατὰ ποιότητα καὶ
ικανῶς ψύχειν. αὐτὴ τοι καὶ τοὺς καυσουμένους ὀνίνησιν, εἴπερ τι 5
καὶ ἄλλο, κατὰ τε τοῦ στόματος τῆς κοιλίας λεία ἐπιτιθεμένη καὶ ὄλων [p.39]
τῶν ὑποχονδρίων· ἀλλὰ καὶ λειουμένη εὔ μάλα, εἴτ' ἐπιβαλλομένου
ὠοῦ ὠμοῦ τό τε λευκὸν καὶ τὸ πυρρὸν, μίγνυμένου δὲ καὶ ῥοδίνου
συμμέτρου καὶ βραχέος ὄξους καὶ ἀλειφομένου τοῦ παντὸς σώματος
παραχρῆμα μὲν ῥαστώνην, οὐ τὴν τυχοῦσαν, ἐπιφέρει ἐπὶ τῶν διακαῶς 10 [5]
πυρεττότων. τὰ πολλὰ δὲ καὶ τὸν πυρετὸν παντάπασι σβέννυσιν, ὡς
μηκέτι αὐτοὺς ἐπιπαροξύνεσθαι. καὶ αἰμωδίας δὲ ἐστὶν ἴαμα. καὶ ὁ χυ-
λὸς δὲ αὐτῆς ὁμοίας ἐστὶ δυνάμεως, ὥστε οὐ μόνον ἐξῶθεν ἐπιτιθέ-
μενος, ἀλλὰ καὶ πινόμενος ψύχει. τοῦτο μὲν γε καὶ αὐτῇ τῇ βοτάνῃ
συμβέβηκεν ὅλη βρωθείση. διὰ δὲ τὸ ὑποστύφειν καὶ δυσεντερικοῖς ἐστὶν 15 [10]
ἐπιτήδειον ἔδεσμα καὶ γυναικείῳ ῥῶ καὶ αἵματος ἀναγωγαῖς. εἰς ταῦτα
μέντοι πολὺ δραστικώτερος αὐτῆς τῆς πάας ἐστὶν ὁ χυλός.

[38.19] τάξεως καὶ added after ἐστὶν.

[39.1] λεία added after κοιλίας.

[Galen 11.830.11-831.10]

35) Purslane (*Portulaca oleracea* L.). In its cooling capacity it belongs to the third rank and degree, whereas in its moistening effect, to the second. It shares a little harshness, on account of which fluxions are cleared away, especially also bilious and warm ones, by means of changing them and altering them with respect to their quality, and by adequately cooling them. By this means, then, it also benefits those who have burning fever, as much as anything else can, if applied as a smooth layer in the region of the gullet and the whole of the hypochondrial areas. But also, when it is rendered really very smooth, if raw egg is added, both white and yolk, and an equal amount of rose-water and a small volume of vinegar are mixed in, and the whole body is smeared with this, it brings relief forthwith, not just

coincidentally, to those who are burning up with fever. It often even quenches fever entirely, so that they [the patients] suffer no further recurrences. And it is also a remedy for having the teeth set on edge. Its juice has a similar effect, so that it cools not only when applied externally but also when drunk. This, in fact, is an attribute of the plant itself when eaten whole. Through being fairly astringent, it is also suitable food for dysentery patients, and also for female flow and incidences of bringing up blood. For those indications, however, the juice is much more active than the herb itself.

35) Aëtius quotes most of what Galen has written, with a few changes and omissions; the major difference is Aëtius' insertion of the extended recipe for the would-be antipyretic topical preparation (35.7-12). This concoction, which also does not appear in *Alim.Fac.* or Dioscorides, may represent an innovation by Aëtius.

35.1 [38.19] **Ἀνδράχνη** Carnoy offers *Arbutus andrachne* L. or *Sedum stellatum* L. as alternative translations.

35.6 [39.1] **τοῦ στόματος τῆς κοιλίας** i.e. gullet (cf. Intro xxxvii).

35.16 [39.11] **γυναικείῳ ῥῶ** One modern trial (Shobeiri et al., 2009: 1411-4) supposedly demonstrated a reduction of abnormal uterine bleeding by use of extracts from this plant, but was of such poor scientific integrity (only ten subjects, no controls, no double-blinding) as to be barely worth publishing, far less citing.

No other relevant therapeutic effect is apparent in modern literature regarding purslane, but its high levels of oxalates could render it potentially toxic if ingested (Lewis, 1977: 20, 33).

[39.13-18]

(λζ´) Ἄνεμῶναι πᾶσαι δριμείας καὶ ῥυπτικῆς, ἐπισπαστικῆς τε καὶ ἀναστομωτικῆς εἰσι δυνάμεως, ὅθεν ἢ τε ρίζα διαμασωμένη φλέγμα προκαλεῖται καὶ ὁ χυλὸς ἐκ ῥινῶν καθαίρει καὶ τὰς ἐν ὀφθαλμοῖς οὐλὰς λεπτύνει. καὶ τὰ ῥυπαρὰ δὲ τῶν ἐλκῶν ἐκκαθαίρουσιν αἱ ἀνεμῶναι καὶ λέπρας ἀφιστᾶσιν, ἔμμηνά τε προκαλοῦνται προστιθέμεναι καὶ γάλα κατασπῶσιν. [15] 5

[Galen 11.831.11-17]

36) All the anemones (*Anemone* L. spp.) have a pungent and detergent capacity, both drawing in and opening up, whence the root when chewed calls forth phlegm, and the juice purges via the nostrils, and thins scars in the eyes. And anemones clean away dirt in ulcers and remove scaly skin lesions, and when used in a pessary they bring on periods and let down milk.

36) Aëtius quotes Galen almost verbatim.

Anemone spp. contain protoanemonine, a potentially harmful vesicant, but which also has an antibacterial effect (Evans, 2009: 27, 448).

[39.19-40.4]

(λζ') Ἄνηθον θερμαίνει μὲν εἰς τοσοῦτον ὡς ἦτοι τῆς δευτέρας αὐτὸ
τάξεως ἐκλελυμένης ἢ τῆς πρώτης ἐπιτεταμένης ὑπολαμβάνειν. τῶν
ξηραίνοντων δὲ τῆς δευτέρας ἐστὶ τάξεως ἀρχομένης ἢ τῆς πρώτης
τελευτώσης. ἐναφεισόμενον δὲ ἐλαίῳ διαφορητικὸν τε καὶ ἀνώδυνον
καὶ ὑπνοποιὸν καὶ πεπτικὸν ὤμων καὶ ἀπέπτων ὄγκων ὑπάρχει. 5
καυθὲν δὲ τῆς τρίτης τάξεως γίνεταί τῶν θερμαινόντων τε καὶ ξη-
ραίνοντων, καὶ διὰ τοῦτο πλαδαροῖς ἔλκεσιν ἐπιπαττόμενον ὀνίνησι 25
καὶ μάλιστα τοῖς ἐν αἰδοίῳ· τὰ δὲ ἐπὶ τῆς πόσθης χρόνια καὶ ἐπουλοῖ. [p.40]
ὑγρότερον δὲ δηλονότι καὶ ἥττον θερμόν ἐστι τὸ χλωρόν ἔτι καὶ
ἔγχυλον, ὥστε καὶ πεπτικώτερον μὲν ἐστὶ τοῦ ξηροῦ μᾶλλον καὶ 10
ὑπνοποιόν, διαφορητικὸν δὲ ἥττον.

[Galen 11.832.1-18]

37) Dill (*Anethum graveolens* L. or *umbellifer* L.) warms to such an extent as would support its being at the bottom of the second, or top of the first, degree. And it belongs to the beginning of the second, or end of the first, degree of drying substances. When it is boiled down in oil, it is both dispersive and analgesic, hypnotic, and aids coction of raw and undigested masses. When roasted, it becomes part of the third rank of warming and drying substances, and because of this, it benefits, when sprinkled over them, weeping ulcers, and especially those on the genitals; it also cicatrizes chronic ones on the penis. The still fresh and juicy variety is clearly moister and less warm, so that it is even more digestive, more soporific and less dispersive than the dry variety.

37) Aëtius omits Galen's comments about dill oil, and about the use of the plant for crowning those at symposia, but otherwise he quotes him fairly accurately.

37.3-4 [39.21-2] **τῆς δευτέρας ... τελευτώσης** This imprecision in classification reflects the highly subjective method of analysis by taste and by observed action, as described in the prooemium [cf. 17.1-19.5].

Modern pharmacological usage of dill seems to be limited to its inclusion in gripe-water (Evans, 2009: 274).

[Galen next lists *Cressa cretica* L., omitted by Aëtius, which supposedly heals ulcers and helps epileptics (11.833.1-5 Περὶ ἀνθυλλίδος).]

	[40.5-24]
(λη´) Ἄνθεμις ἢ χαμαιμήλον θερμαίνει καὶ ξηραίνει κατὰ τὴν πρώτην τάξιν· ἐστὶ δὲ λεπτομερῆς καὶ διὰ ταῦτα καὶ διαφορητικὴ καὶ ἀραιωτικὴ καὶ χαλαστικὴ τὴν δυνάμιν ἐστὶ. εἰ μὲν οὖν εἴη χλωρόν, ἐναφειν αὐτὸ δεῖ τῷ ἐλαίῳ, μὴ παρόντος δηλονότι τοῦ χαμαιμηλίνου ἐλαίου ἐν ᾧ βραχὲν τὸ ἄνθος ἠλιώθη. εἰ δὲ ξηρὸν εἴη, ὄξει ὀλίγῳ προνοτισθέν, ἔπειτα ἐψόμενον σὺν τῷ ἐλαίῳ, ἐπιτήδειον γίνεταί ἐφ' ὧν οὐπω τέλεον ἢ ὕλη πέπανται τῆς ἐπὶ τὴν κεφαλὴν ἀναφορᾶς· τὴν γὰρ οὕσαν ἐν τῇ κεφαλῇ διαφορεῖ καὶ ἐτέραν οὐκ ἐπισπᾶται, ὅπερ οὐδενὶ τῶν ἄλλων συντετύχηκε φαρμάκων. Νεχεψῶ δὲ ὁ Αἰγύπτιος παρακελεύεται αὐτὸ τὸ ἄνθος καθαρὸν τοῦ χαμαιμηλίου ἀκμαιότατον συλλέγειν καὶ κόπτειν ἐν ὄλμῳ, ἔπειτα λειοῦν εὖ μάλα ἐν θυίᾳ, καὶ ἀναπλάττειν τροχίσκους συμμέτρους καὶ ξηραίνειν ἐν σκιᾷ ἀκριβέστατα καὶ ἀποτίθεσθαι. ἐπὶ δὲ τῆς χρείας λειώσαντα τροχίσκον ἓνα καὶ ἐπιβαλόντα ἐλαίου πρωτείου τὸ ἀρκοῦν, χρίειν τὸ πᾶν σῶμα ἀπὸ κεφαλῆς μέχρι ποδῶν ἐπὶ τῶν πυρεττόντων πάντων καὶ θάλπειν σκέπη. κινηθήσεται γὰρ ἰδρῶς χρηστός, φησί, ἐπὶ τῶν σωθησομένων καὶ ἀπαλλαγῆσονται τοῦ πυρετοῦ. καὶ πεπεύραται τοῦτο ἐπὶ πλείστων καὶ ἀρμόδιόν ἐστὶ μάλιστα ἐν ὀδοιπορίαις ἔχειν τοῦτο διὰ τὸ εὐμετακόμιστον. παρακελεύεται δὲ καὶ ποτίζειν τοῦ τροχίσκου τοὺς πυρεττοντας ὅσον <α´ μεθ' ὕδατος θερμοῦ.	[5] 5 [10] 10 [15] 15 [20] 20

40.23 τοῦ τροχίσκου replaces τοῦτου τροχίσκους.

40.24 α replaces β.

[Galen 11.833.6-11]

38) Camomile or earth-apple (*Anthemis* L. spp.) warms and dries at the level of the first degree. It is fine-grained and for this reason it is also dispersive, rarefying and loosening in effect. So if it is fresh, it must be

boiled down in oil, unless however camomile oil clearly is present, in which the flower has been steeped and exposed to the sun. If it is dry, when it is moistened beforehand with a little vinegar, then boiled with the oil, it becomes suitable in those cases in which the drug has not yet completely stopped the upward flow to the head; for it disperses the one that is in the head and does not induce any other, and this has happened in the case of none of the other drugs. Nechepso the Egyptian advises collecting purely the camomile flower itself when it is most fully in bloom, and chopping it up in a mortar, then pounding it very fine in a mortar, fashioning round tablets of equal size, drying it most thoroughly in the shade, and setting it aside. When the need arises, [he suggests] pounding fine one tablet and adding a sufficiency of top quality oil, and smearing the whole body from head to feet of all those suffering from fever, and keeping them warm under cover. For, he says, wholesome sweat will be induced in the cases of those who will be saved, and they will be delivered from fever. And this has been experienced by very many, and it is certainly useful to have this on road-journeys, because of its portable form. He also advises giving the tablet to drink, in a dose of 1 drachma with warm water, to those suffering from fever.

38) Galen's entry here is much shorter, comprising a couple of sentences about its qualities, and a claim of a more extensive mention in his third book (τρίτῳ γράμματι) (11.833.7); in fact, in book 3 of *SMT* there is an account, much less practical than Aëtius', of camomile's use in fevers, together with a reference to an unnamed learned Egyptian, with whom Galen disagrees (11.562.6-563.5). Aëtius claims to have practised in Alexandria (131.1-2 [65.4-5]), and it may be that while working and studying there he became acquainted with, and acquired a respect for, Egyptian medicine.

No support for Aëtius' claims appears in modern scientific literature.

[40.25-29]

(λθ') Ἄνισου τὸ σπέρμα μάλιστα ἐστὶ χρήσιμον, δριμύ καὶ ὑπόπικρον ὑπάρχον, ὥστε ἐγγυὲς ἦκειν θερμότητι τῶν καυστικῶν· ἐστὶ γὰρ κἀν τῷ θερμαίνειν καὶ ξηραίνειν ἐκ τῆς τρίτης ἀποστάσεως, ταῦτ' ἄρα καὶ οὐρητικόν ἐστὶ καὶ διαφορητικόν, ἐμπνευματώσεις τε τὰς κατὰ γαστέρα

[Galen 11.833.12-17]

39) The seed of anise (*Pimpinella anisum* L.) is very useful, being sharp and fairly bitter, so that it comes near in heat to the caustic materials; for it is both in the warming and drying ones of the third degree, and accordingly it promotes the passage of urine, and is dispersive, and settles attacks of bowel wind.

39) Aëtius quotes Galen almost verbatim.

No support for Aëtius' claims appears in modern scientific literature; on the contrary, animal experiments suggest anise may reduce urine output (Kreydiyyeh et al., 2003: 663-73).

[Galen next discusses snapdragon or calf's snout (*Antirrhinum orontium* L.), omitted by Aëtius, which, Galen says, is useless for treatments (11.834.1-5 *Περὶ ἀντιρρόνιου*).]

[41.1-2]

(μ') Ἀπαρίνη ἢ φιλόανθρωπος μετρίως ῥύπτει καὶ ξηραίνει· ἔχει δέ τι καὶ λεπτομερές.

[Galen 11.834.6-8]

40) Cleavers (*Galium aparine* L.) or *philanthropos* cleanses moderately and dries; it also is somewhat fine-grained.

40) Aëtius quotes Galen almost verbatim.

40.1 [41.1] **Ἀπαρίνη** Or “goosegrass or catchweed bedstraw” (LSJ).

There is a claim by a nineteenth century doctor that this material is effective in healing chronic lower limb ulcers when applied topically (Quinlan, 1883;1173-4).

[41.3-8]

(μα´) Ἄπιος ἐδώδιμος. Ἀπίου τὰ μὲν φύλλα καὶ οἱ ἀκρεμόνες αὐστηροί, ὁ δὲ καρπὸς ἔχει τι καὶ γλυκύτητος ὑδατώδους, ἐξ ὧν δήλη ἢ κρᾶσις ἐστὶν ἀνώμαλός τε τις ὑπάρχουσα κατὰ τὰ μέρη. καὶ διὰ τοῦτο ἐσθιόμενα μὲν εὐστόμαχοι καὶ ἄδιψοι· καταπλαττόμενα δὲ ξηραίνουσί τε καὶ μετρίως ψύχουσιν, ὥστε ἔγωγε καὶ κολλήσας αὐτοῖς οἶδα τραύματα.

[5]

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[Galen 11.834.9-17]

41) Edible pear (*Pyrus communis* LSJ). The leaves and the branches of the pear are harsh, but the fruit has something of even a watery sweetness, from which it is obvious that its composition is irregular in its parts. And because of this, they are good for the stomach and thirst-quenching when eaten; but when applied externally, they both dry and cool moderately, as I myself also know, having used them to close wounds.

41) Aëtius adds that the pears are specifically edible ones, and omits some of Galen's details regarding the nature of their composition.

41.7 [41.5] **οἶδα** Quoted from Galen.

No relevant modern medical information is available.

41.9-12

(μβ´) Αἱ δὲ ἀχράδες ὀνομαζόμενα καὶ στύφουσι μᾶλλον καὶ ξηραίνουσι καὶ διὰ τοῦτο κολλῶσι τραύματα μείζονα καὶ ἀποκρύνονται ρεύματα καταπλαττόμενα, καθὼς ἐν τῷ περὶ τῶν μήλων λόγῳ τελεώτατα ῥηθήσεται.

[Galen 11.834.18-835.2]

42) The ones called wild pears (*Pyrus amygdaliformis* Vill.) are both more astringent and drying, and accordingly, they cause large wounds to close and they disperse discharges when applied as a plaster, just as will be said most fully in the passage about fruit.

42) This entry, obviously relevant to the previous one, appears not in alphabetical order in both Galen and Aëtius; the latter adds the reference to fruit (cf. ch. 281, p.259).

No relevant modern medical information is available.

[Galen next lists three plants, omitted by Aëtius, namely dog's bane (*Marsdenia erecta* R.B.), which, he says, drives away dogs, is harmful to humans but is an external dispersive (11.835.3-9 Περὶ ἀποκύνου); wind-rose (*Papaver argemone* L.), supposedly cleansing and dispersive (11.835.10-11 Περὶ ἀργεμόνης); and hooded arum (*Arisarum vulgare* Targ.-Tozz.), which he compares briefly with *Arum dioscorides* L. (11.835.12-14 Περὶ ἀρισάρου).]

[41.13-42.4]

(μγ') Ἀριστολοχίας ἡ ρίζα χρεωδεστάτη πρὸς τὰς ἰάσεις, πικρὰ καὶ ὑπόδριμυς ὑπάρχουσα. λεπτομερεστάτη δὲ αὐτῶν ἐστὶν ἡ στρογγύλη καὶ κατὰ πάντα δραστικώτερα. διὸ ἐφ' ὧν παχὺν χυμὸν ἰσχυρῶς δεῖ λεπτῶναι, τῆς στρογγύλης ἐστὶ χρεία. διὰ τοῦτο καὶ τὰ δι' ἔμφραξιν ἢ πάχος [ἢ] ἀπέπτου πνεύματος ἀλγήματα θεραπεύει καὶ σκόλοπας ἀνάγει καὶ σηπεδόνας ἰᾶται καὶ τὰ ῥυπαρὰ τῶν ἑλκῶν καθαίρει καὶ ὀδόντας καὶ οὐλὰς ἐν ὀφθαλμοῖς λαμπρύνει. βοηθεῖ δὲ καὶ ἀσθματικοῖς καὶ λύζουσιν, ἐπιληπτικοῖς τε καὶ ποδαγρικοῖς μεθ' ὕδατος πινομένη καὶ ῥήγμασι δὲ καὶ σπᾶσμασιν, εἴπερ τι καὶ ἄλλο φάρμακον, ἐπιτήδειόν ἐστὶ. τῶν δὲ ἄλλων δυοῖν, ἡ μὲν κληματῖτις εὐωδεστέρα μὲν, ὡς πρὸς τὰ μύρα χρῆσθαι τοὺς μυρεψοὺς αὐτῇ, εἰς δὲ τὰς ἰάσεις ἀσθενεστέρα ἢ μακρὰ δὲ ἦττον μὲν λεπτομερῆς ἐστὶ τῆς στρογγύλης, οὐ μὴν οὐδ' αὐτὴ γε ἄπρακτος, ἀλλ' ἐστὶ τῆς ῥυπτικῆς τε καὶ θερμαντικῆς δυνάμεως· διὰ τοῦτο καὶ ἕλκη σαρκῶν καὶ ταῖς τῶν ὑστέρων πυρίας χρησιμωτέρα καθέστηκεν.

42.3 ὑστέρων replaces γαστέρων.

[Galen 11.835.15-836.17]

43) The root of birthwort (*Aristolochia* spp.) is most necessary for remedies, being bitter and fairly sharp. The finest grained of them, and more effective in all respects, is the round variety (*A. rotunda* L.). For this reason, there is need of the round variety in those cases where it is necessary forcibly to relieve thick fluid. Accordingly, it also treats the pains caused by blockages or thick, undigested wind, draws out thorns, heals septic lesions, purifies the dirty areas of wounds, and it brightens teeth and corneal scars. It is helpful both to those with breathing difficulties and to hiccup-sufferers, and, when drunk with water, to epileptics and gout-sufferers, and it is suitable for both soft-tissue injuries and sprains, as much as any other drug is. Of the other two, *A. clematis* L. is more sweet-smelling, so that perfumers make use of it for unguents, but it is weaker for remedies; *A. longa* L. is less fine-grained

than *A. rotunda* L., yet not at all ineffective itself, but has both a cleansing and warming capacity. For this reason it both fleshes up wounds and is more useful for uterine hot fomentations.

43) Aëtius has closely copied most of Galen's entry.

43.5 [41.17] **πνεύματος** Translation as “wind” is very much a simplification of Galen's concept of the processing of refined air within the body (cf. Nutton, 2004: 233-4).

43.7 [41.19] **ἀσθματικοῖς** Despite the similarity, the English term “asthmatic” refers to a disease entity too specifically defined to be used as a translation here (cf. Grmek, 1991: 34). (cf. Intro. xlv.)

Although there is some *in vitro* and rat experimental evidence of anti-inflammatory activity (Battu *et al.*, 2011: 1210-4), the use of *Aristolochia* has been prohibited in the United Kingdom since 1991 because of its proven nephrotoxicity and carcinogenicity (Evans, 2009: 127, 385).

[42.5-7]

(μδ´) Περί ἀράκων. Παραπλήσιόν ἐστι τὸ σπέρμα τοῦτο τῶ λαθύρων κατὰ τε τὴν χρῆσιν καὶ τὴν δύναμιν· σκληρότεροι δὲ καὶ διὰ τοῦτο δυσπεπτότεροι τῶν λαθύρων οἱ ἄρακοι.

44) About wild chicklings (*Lathyrus annuus* L.). This seed is similar to that of chicklings (*L. sativus* L.), both in use and capacity. But wild chicklings are harder and therefore more indigestible than chicklings.

44) Although he considers *L. sativus* L. (12.56.4-9), Galen makes no mention of *L. annuus* L. in *SMT*, but provides information in *Alim.Fac.* which Aëtius has quoted (6.541.6-9).

The seeds of *Lathyrus* species are known to be highly toxic to humans, and can cause irreversible damage to the nervous and skeletal systems, and death (Bruneton, 1995: 163-4).

[42.8-9]

(με´) Ἄρκευθος θερμὴ καὶ ξηρὰ τῆς τρίτης τάξεως κατ' ἄμφω· ὁ δὲ

καρπὸς αὐτῆς θερμὸς μὲν ὁμοίως, ξηραίνει δὲ κατὰ τὴν πρώτην τάξιν.

[Galen 11.836.18-837.3]

45) Juniper (*Juniperus macrocarpa* L.) is warm and dry at the level of the third rank in both respects; while its fruit is warm to the same extent, its drying effect belongs to the first rank.

45) Aëtius conveys the same information a little more succinctly than Galen.

No information relevant to the above passage appears in modern scientific literature.

[Galen next lists two plants omitted by Aëtius, namely bearwort (*Inula candida* L.), supposedly useful for toothache, burns and chilblains (11.837.4-12 Περὶ ἀρκτίου); and the other bearwort, also called προσωπίς, supposedly useful for old wounds (11.837.13-18 Περὶ ἐτέρου ἀρκτίου).]

[42.10-23]

(μς´) Ἀρνόγλωσσον ψύχει καὶ ξηραίνει κατὰ τὴν δευτέραν ἀπόστασιν· ἔχει δὲ τι καὶ αὐστηρόν, διὸ πρὸς ἔλκη κακοήθη καὶ ρεύματα καὶ σηπεδόνας ἀρμόττει. καὶ διὰ τοῦτο καὶ πρὸς δυσεντερίας ποιεῖ καὶ αἱμορραγίας ἴστησι καὶ εἴ τι διακαῆς ἐμψύχει καὶ κόλπους παρακολλᾷ· ἐστὶ δὲ καὶ τῶν ἄλλων ἐλκῶν προσφάτων τε ἅμα καὶ παλαιῶν ἴαμα. ξηραίνει γὰρ ἀδήκτως καὶ μετέχει ψύξεως μηδέπω ναρκούσης· καὶ ὁ καρπὸς δὲ αὐτοῦ καὶ ἡ ρίζα παραπλησίως εἰσὶ δυνάμεως, πλὴν γε ὅτι ξηροτέρας τε καὶ ἥττον ψυχρᾶς. ἀλλ´ ὁ μὲν καρπὸς λεπτομερέστατος, αἱ δὲ ρίζαι παχυμερέστεραι. αὐτὰ δὲ τὰ φύλλα τῆς πώας ξηρανθέντα λεπτομερεστέρας τε καὶ ἥττον ψυχρᾶς γίνεταί δυνάμεως· ταῦτ´ ἄρα ταῖς μὲν ρίζαις καὶ πρὸς ὀδόντων ἀλγήματα χρώμεθα, διαμασσωμέναις τε καὶ διακλύσμασιν αὐτῶν ἐνεψομέναις. πρὸς δὲ τὰς καθ´ ἥπαρ καὶ νεφροὺς ἐμφράξεις καὶ ταύταις μὲν, ἀλλὰ καὶ τοῖς φύλλοις καὶ πολλῶ μᾶλλον ἔτι τῷ καρπῷ χρώμεθα.

[10]

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[15]

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[20]

[Galen 11.838.1-839.8]

46) Plantain (*Plantago major* L.) cools and dries at the level of the second degree; it also has a modicum of harshness, whereby it is suitable for malignant ulcers, discharges and septic lesions. And accordingly, it is both efficacious for dysenteries and checks haemorrhages, and if there is a case of high fever, it cools, and it closes up superficial sinuses; it is also a remedy

for the other ulcers, both acute and chronic. For it dries non-erosively, and it has a share of cooling but not quite to the extent of numbing; its fruit and root are of a similar capacity, except this capacity is both drier and less cooling. But whereas the fruit is finest-grained, the roots are thicker-grained. When the leaves of the herb themselves have been dried, they come to have a finer-grained and less cooling effect. For this reason, then, we use the roots also for toothache, both chewed up and as mouthwashes when they are boiled down. We even use the roots for blockages of the liver and kidneys, but also the leaves and even more especially the fruit.

46) Aëtius retains the gist of Galen's entry almost verbatim, but discards approximately one-third of it, mainly that dealing with elemental details.

46.2 [42.11] **ἔλκη κακοήθη** There is some *in vitro* evidence of cytotoxic compounds in *Plantago* spp. (Gálvez et al.,2003: 125-30).

The seeds are known to be bulk laxatives (Bruneton, 1995:97).

[42.24-29]

(μζ´) Ἄρου ἡ ρίζα τῆς πρώτης τάξεώς ἐστὶ τῶν θερμαινόντων καὶ
ξηραινόντων· ἐστὶ δὲ καὶ ῥυπτικῆς δυνάμεως ἀλλ' οὐκ ἰσχυρᾶς, ὥσπερ [25]
τὸ δρακόντιον· ἐσθιόμεναι δὲ αἱ ρίζαι τέμνουσι πάχος χυμῶν μετρίως
τε καὶ ταῖς ἐκ θώρακος ἀναπτύσσειν ἐπιτήδαιοι. τὸ δὲ δρακόντιον εἰς
ταῦτα ἐπιτηδειότερον. σκευάζεται δὲ καὶ ἐσθίεται, ὡς τὸ δρακόντιον, 5
ἀποζεννυμένη.

[Galen 11.839.9-16]

47) The root of cuckoo pint (*Arum maculatum* L.) belongs to the first rank of warming and drying substances; it also has a cleansing capacity, but not powerful, just as edder-wort (*Dracunculus vulgaris* Schott). When eaten, the roots cut the thick liquids moderately, and are suitable for promoting expectoration. Edder-wort is more suitable for these purposes. It [cuckoo pint] is prepared and eaten boiled, as edder-wort.

47) To Galen's account, Aëtius adds the last sentence about preparation and administration.

47.4 [42.27] **ταῖς ἐκ θώρακος ἀναπτύσσειν ἐπιτήδευοι** Literally, “suitable for coughing up out of the chest”, but it is uncertain whether this means cough suppression or expectoration.

No substantiation of the above claims is apparent in modern scientific literature.

[43.1-4]

(μη´) Ἀρτεμισία διττή. Θερμαίνουσι δὲ ἀμφοτέραι κατὰ τὴν δευτέραν τάξιν, ξηραίνουσι δὲ ἢ κατὰ τὴν πρώτην ἐπιτεταμένην ἢ τὴν δευτέραν ἀρχομένην. εἰσὶ δὲ καὶ λεπτομερεῖς μετρίως, ὥστε καὶ πρὸς τοὺς ἐν νεφροῖς λίθους ἀρμόττειν μετρίως καὶ εἰς πυρίας ὑστερῶν.

[Galen 11.839.17-840.5]

48) Two sorts of *Artemisia* L. Both warm at the level of the second rank, and they dry either at the top of the first or the beginning of the second. They are moderately fine-grained, so that they are moderately suitable for stones in the kidneys and for hot applications to the uterus.

48) Aëtius closely copies Galen’s entry. It is unclear which plants are meant, and what distinction there is from Ch. 1 (Ἀβρότονον).

43.2 [48.2] **τάξις** Galen has ἀπόστασις (11.840.2).

[43.5-7]

(μθ´) Ἄσαρον. Ἀσάρου αἱ ρίζαι χρήσιμαί, παραπλήσια μὲν ταῖς τοῦ ἀκόρου, ἐπιτεταμέναι δὲ μᾶλλον, ὥστε ἐξ ὧν ὑπὲρ ἐκείνου προεῖρηται καὶ περὶ τούτου χρὴ γινώσκειν.

[Galen 11.840.6-9]

49) Hazelwort (*Asarum europaeum* L.). The roots of hazelwort are useful, similar to those of yellow flag (*Iris pseudacorus* L.), but higher in ranking, just as, with regard to these plants, previous mention has been made about the latter, and it is necessary to know about the former.

49) Aëtius quotes Galen almost verbatim.

49.2 [43.6] **ἀκόρου** (cf. ch.17, p.60)

This plant is known to be potentially toxic to humans (Evans, 2009: 127).

[Galen next lists swallow-wort (*Vincetoxicum officinale* Moench), omitted by Aëtius, about which Galen has no experience, but refers his readers to Dioscorides, book 3 (11.840.10-12 Περὶ ἀσκληπιάδος).]

[43.8-12]

(ν') Ἀσπάλαθος ἐξ ἀνομοιομερῶν σύγκειται δριμέων γε καὶ στυφόντων καὶ τοῖς μὲν δριμέσιν ἑαυτοῦ μέρεσι θερμαίνει, τοῖς δὲ αὐστηροῖς στύφει, ὥστε ξηραίνει κατ' ἄμφω καὶ διὰ τοῦτο πρὸς σηπεδόνας καὶ τὰ ρεύματα χρήσιμος ὑπάρχει, πρὸς δὲ τὰ σηπόμενα ἐν τῷ στόματι οὖλα, ἐν οἴνῳ ἐψομένη, διάκλυσμα δίδεται θερμόν. [10] 5

[43.10] στύφει replaces ψύχει.

[Galen 11.840.13-18]

50) Camel's thorn (*Alhagi maurorum* L.) is composed of dissimilar parts, sharp and astringent, and while it warms by means of its sharp constituents, it is astringent by means of its harsh ones, so that it dries by virtue of both, and, because of this, it is useful for septic lesions and discharges, and, when boiled in wine, it is given as a warm mouth wash, for rotten gums in the mouth.

50) Aëtius omits some of Galen's comments about taste, but adds information regarding preparation and administration at the end.

50.1 [43.8] Ἀσπάλαθος Or possibly thorny trefoil (*Calycotome villosa* Link), or *Genista acanthoclada* DC.

There is no apparent substantiation of the above claims in modern scientific literature.

[43.13-17]

(να') Ἀσπάραγος πετραῖος ἢ μυακάνθινος ῥυπτικῆς ἐστὶ δυνάμεως, οὐ μὴν οὐδὲ θερμαίνει σαφῶς οὔτε ψύχει. ταύτη τοι καὶ νεφρῶν καὶ ἥπατος ἐκφρακτικὸς ὑπάρχει, καὶ μάλισθ' αἱ ρίζαι τῆς βοτάνης καὶ τὸ σπέρμα. καὶ μὲν δὴ καὶ ὀδονταλγίας ἰᾶται τῷ ξηραίνειν ἄνευ τοῦ θερμαίνειν. [15] 5

[Galen 11.841.1-7]

51) Stone asparagus (*Asparagus acutifolius* L.) or *muakanthinos* (“mouse-thorn”) has a cleansing effect, and really it neither clearly warms nor cools. So, for this reason, it is suitable for clearing obstructions of the kidneys and liver, especially the roots and seed of the plant. Furthermore, it even heals toothaches by drying without warming.

51) Aëtius’ text mainly copies that of Galen, who states also that Athenians spell ἀσπάραγος with a φ instead of π.

51.1 [43.13] **μυακάνθινος** Carnoy translates this as spring myrtle (*Ruscus aculeatus* L.).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists three plants omitted by Aëtius, namely miltwaste (*Asplenium ceterach* LSJ), which supposedly crumbles stones and shrinks spleens (11.841.8-10 Περὶ ἀσπλήνου); milk vetch (*Orobus niger* L.), which supposedly promotes cicatrisation and settles abdominal fluxes (11.841.11-15 Περὶ ἀστραγάλου); and, slightly out of alphabetical order, Attic aster (*Aster amellus* L.), which supposedly cures buboes (11.841.16-842.4 Περὶ ἀστέρος Ἀττικοῦ).]

[43.18-44.8]

(νβ΄) Ἀσταφίς ἡμερος. Ἡ μὲν ἡμερος πεπτικῆς τε ἅμα καὶ στυπτικῆς καὶ διαφορητικῆς μετρίως μετέχει δυνάμεως· τὸν αὐτὸν γὰρ λόγον ἔχουσιν αἱ ἀσταφίδες πρὸς τὰς σταφυλάς ὃν καὶ αἱ ἰσχάδες πρὸς τὰ σῦκα. καὶ αἱ μὲν γλυκύτεραι θερμότεραι, αἱ δὲ αὐστηρότεραι ψυχρότεραι καὶ ἔτι μᾶλλον αἱ στρυφναί. τὸν μὲν οὖν στόμαχον ῥωννύουσιν αἱ αὐστηραὶ καὶ τὴν κοιλίαν στεγνοῦσι καὶ δηλονότι μᾶλλον αὐτῶν αἱ στρυφναί. μέσην δὲ πῶς κατάστασιν ἐν αὐταῖς αἱ γλυκεῖαι ποιοῦσι, μήτ’ ἐκλύουσαι σαφῶς τὸν στόμαχον, μήθ’ ὑπάγουσαι τὴν γαστέρα. τό γε μὴν ἐκφρατικὸν ὑπάρχει ταῖς γλυκεῖαις· αἰεὶ καὶ τὸ μετρίως ῥυπτικόν, ὅθεν τὰς μικρὰς κατὰ τὸ στόμα τῆς κοιλίας ἀμβλύνοῦσι δῆξεις· αἱ γὰρ μεῖζους τῶν δῆξεων τῶν γενναιότερων χρήζουσι βοηθημάτων. ἀμείνους δὲ ἐν ταῖς ἀσταφίσιν εἰσὶν αἱ λιπαρώταται τε καὶ τὸν οἶον φλοῖον ἔχουσαι λεπτόν. ἦττον δὲ ἰσχάδων αἱ ἀσταφίδες τό θ’ ὑπακτικὸν ἔχουσι καὶ τὸ ῥυπτικόν, εὐστομαχώτεραι δὲ εἰσὶν ἰσχάδων.

[44.3] ἐκφρατικὸν replaces ἐπικρατικόν.

[Galen 11.842.5-9]

52) Cultivated raisins. The cultivated variety shares a capacity that is digestive, and at the same time astringent and moderately dispersive. For raisins have the same relationship to grapes which dried figs also have to figs. And the sweeter are warmer, whereas the harsher are cooler, and even more so the astringent ones. So the harsh ones strengthen the stomach and constipate the bowel, and the astringent ones do so obviously more than them. The sweet ones form something of a middle rank among them, and they neither clearly relax the stomach nor purge the bowel. You see, unblocking is a feature of the sweet ones; there is still also a moderately cleansing effect, whence they [i.e., the raisins] dull the little pains in the gullet; for the greater of the pains need more powerful remedies. But among raisins, both the greasiest ones and those which have a sort of thin skin, are better. Raisins are both less aperient and cleansing than dried figs, and they are better for the stomach than dried figs.

52) Aëtius' entry is considerably longer than that of Galen in *SMT*, where he combines information about cultivated and wild raisins in a single entry, and whose information about cultivated raisins merely consists of the first part of the first sentence, as quoted exactly by Aëtius (ἡ μὲν...δυνάμεως) (Galen: 11.842.5-7). Aëtius includes more information about supposed properties and effects, taken mainly from *Alim.Fac.* (6.581.8-584.4).

There is no apparent substantiation of the above claims in modern scientific literature.

[44.9-11]

(νγ') Ἀσταφίς ἀγρία. Ἡ δὲ ἀσταφίς ἀγρία δριμείας ἰσχυρῶς ἐστὶ δυνάμεως, ὡς ἀποφλεγματοῖσιν καὶ ῥύπτειν σφοδρῶς, ὥστε καὶ πρὸς ψώρας ἀρμόττει. μετέχει δὲ καὶ καυστικῆς τινος δυνάμεως. [10]

[Galen 11.842.5-9]

53) Wild raisins. Wild raisins have a strongly sharp capacity, so as to purge away phlegm and cleanse powerfully, and thus they are suitable for itchy scabby skin lesions. They also share a certain burning capacity.

53) Aëtius quotes the second part of Galen's entry almost verbatim. What is meant by ἀσταφίς ἀγρία is unclear. As both Galen and Aëtius discuss it immediately after ἀσταφίς ἡμερος, one may surmise that it is dried wild grapes. Dioscorides, however, makes no mention of ἀσταφίς ἀγρία, but does say that ἀσταφίς is a synonym of an entirely different plant, namely σταφίς ἀγρία, stavesacre (*Delphinium staphisagria* L.) (4.153 (K 25.639.13)).

There is no apparent substantiation of the above claims in modern scientific literature.

[44.12-18]

(νδ´) Ἀσφόδελος. Ἀσφοδέλου ἡ ρίζα χρήσιμος ὥσπερ ἄρου καὶ ἀσάρου καὶ δρακοντίου, ῥυπτικῆς τε καὶ διαφορητικῆς ὑπάρχει δυνάμεως, ὅθεν ἀφευγομένη μετ' οἴνου λευκοῦ παλαιοῦ καὶ πινομένου τοῦ οἴνου θερμοῦ ἀκράτου ὅσον κύαθον νήστης ἀπὸ βαλανείου, καταμήνια ἐπεσχημένα [15] κινεῖ τάχιστα· καυθείσης δὲ αὐτῆς ἡ τέφρα θερμότερα τε καὶ ξηραντικωτέρα καὶ λεπτομερεστέρα καὶ διαφορητικωτέρα γίνεται καὶ διὰ τοῦτο καὶ ἀλωπεκίας ἰᾶται. 5

[Galen 11.842.10-15]

54) Asphodel (*Asphodelus ramosus* L.). The root of asphodel is useful, like that of hazelwort (*Asarum europaeum* L.) and edder-wort (*Dracunculus vulgaris* Schott), and has a cleansing and dispersive capacity. Hence, when it is boiled down with old white wine, and the wine is drunk hot and undiluted in a quantity of a cyathus, on an empty stomach after a bath, it very quickly moves retained periods. When it is burnt, the ash becomes warmer, more drying, finer-grained and more dispersive, and because of this it also treats patchy hair loss.

54) Aëtius quotes Galen almost verbatim, but adds a fairly large insertion (ὅθεν...τάχιστα; 54.2-5 [44.13-16]) regarding preparation and use.

44.15 [54.4] **νήστης** Nominative singular. Elsewhere (108.14), Aëtius uses it as a transferred epithet – ἐν λουτρῶ [sic] νήσται – to signify that it is the bather who is fasted.

There is no apparent substantiation of the above claims in modern scientific literature.

[44.19-20]

(νε΄) Ἀτρακτυλὶς ἢ κνήκος ἄγριον, οἱ δὲ ἀνδρόσαιμον καλοῦσιν, ξηραν-
τικῆς καὶ μετρίως θερμῆς ὑπάρχει δυνάμεως. [20]

[Galen 11.842.16-18]

55) Spindle-thistle (*Carthamus lanatus* L.) or wild thistle, which some call *androsaimon*, has a drying and moderately warming capacity.

55) Aëtius quotes Galen accurately, apart from omitting the latter's comment, useful in view of the confusion regarding nomenclature, that the plant is one of the thorns. According to LSJ, κνήκος ἄγριον is thought to be either *Carthamus leucocaulos* L. or blessed thistle (*Cnicus benedictus* L.), but ἀνδρόσαιμον is a variety of St. John's wort (*Hypericum perforatum* L.), an entirely different type of plant; Carnoy has *C. lanatus* L. for Ἀτρακτυλὶς.

There is apparently no relevant information in modern scientific literature.

[44.21-45.3]

(νεζ΄) Ἀτράφαξις τῆς δευτέρας τάξεως ἐστὶ τῶν ὑγραινόντων, τῆς πρώ-
της δὲ τῶν ψυχόντων· οὐ μετέχει δὲ στύψεως, ἀλλ' ἐστὶν ὑδατώδης
ὁμοίως τῇ μαλάχῃ καὶ δὴ καὶ κατὰ γαστέρα διέρχεται. εἰσὶ δὲ αἱ κη-
πευόμεναι ὑγρότεραι τῶν ἀγρίων καὶ ψυχρότεραι. διὸ καὶ φλεγμοναῖς
καὶ φυγέθλοις ταῖς μὲν ἀρχομέναις τε καὶ αὐξανομέναις αἱ κηπευόμε- 5 [25]
ναι, ταῖς δὲ ἀκμαζούσαις καὶ παρακμαζούσαις αἱ ἄγριαι συμφορώτεραι. [p.45]
ὁ δὲ καρπὸς ῥυπτικῆς ἐστὶ δυνάμεως, ὅθεν καὶ πρὸς ἰκτερικοὺς τοὺς
ἐπὶ ἥπατος ἐμφράζει χρῆσιμος ὑπάρχει.

[Galen 11.843.1-15]

56) Orach (*Atriplex rosea* L.) is of the second rank of moistening agents, and of the first of the cooling ones; it has no share in astringency, but is watery like mallow (*Malva silvestris* LSJ). What is more, it passes down through the bowel. The garden varieties are moister and cooler than the wild ones. Accordingly, the garden varieties are more useful for both acute inflammations and furuncles, both when they begin and are growing, whereas the wild varieties are more useful for those at their height and those

abating. The fruit has a cleansing capacity, whence it is useful for those jaundice sufferers who have a blockage on the liver.

56) Galen is more expansive especially when dealing with elemental properties in the first part of his entry; thereafter, Aëtius quotes him largely verbatim.

56.3 [44.23] **καὶ δὴ καὶ...διέρχεται** Aëtius omits the remainder of Galen's sentence, namely: ...ταχέως, ὥσπερ ἐκείνη διὰ γλισχρότητα (11.843.6-7). Its inclusion would have rendered Aëtius' version more understandable: "What is more, it passes quickly down through the bowel, as mallow does on account of stickiness."

56.8 [45.3] **ἐμφράξει** Galen has ἐμφράξεις. It seems very doubtful whether ancient physicians could distinguish what is now recognised as obstructive jaundice from other forms, such as those due to hepatitis, haemolysis and various causes of liver failure (Underwood, 2004: 407-8).

There is no apparent substantiation of the above therapeutic claims in modern scientific literature.

[Galen next lists tare (*Vicia angustifolia* L.), omitted by Aëtius, and compares its qualities with lentils, a very similar plant (11.843.16-844.2 Περὶ ἀφάκης).]

[45.4-14]

(νζ') Ἀψίνθιον θερμὸν μὲν ἐστὶ κατὰ τὴν πρώτην ἀπόστασιν, ξηρὸν δὲ κατὰ τὴν τρίτην· ὁ δὲ χυλὸς αὐτοῦ πολὺ τῆς πόας θερμότερος, μετέχει δὲ καὶ στυφείως οὐκ ἀμυδρᾶς καὶ μάλιστα τὸ ποντικόν, διὸ ῥύπτει καὶ τονοῖ καὶ ξηραίνει καὶ διὰ τοῦτο καὶ τοὺς ἐν κοιλίᾳ χολῶδεις χυμοὺς ἐπὶ τε τὴν κάτω διαχώρησιν ἀπάγει καὶ δι' οὖρων ἐκκενοῖ. μᾶλλον δὲ τὸ ἐν φλεψὶ χολῶδες ἐκκαθαίρει δι' οὖρων. δι' αὐτὸ δὲ τοῦτο καὶ φλέγματος ἐν τῇ κοιλίᾳ περιεχομένου προσφερόμενον οὐδὲν ὀνίνησιν· οὕτω δὲ καὶ εἰ κατὰ θώρακα καὶ πνεύμονα τύχοι. ἢ γὰρ στυπτικὴ δύναμις ἐν αὐτῷ τῆς πικρᾶς ἐστὶν ἰσχυροτέρα· τῷ δὲ καὶ δριμύτητός τινος μετέχειν πλέονι μέτρῳ θερμὸν ἐστὶν ἤπερ ψυχρόν. 10

[Galen 11.844.3-17]

57) Wormwood (2) (*Artemisia absinthium* L.) is warm at the level of the first degree, but dry at the level of the third; its juice is much warmer than the other plant material. It also shares a very clear astringency, and especially the Pontic variety, whereby it cleanses, is bracing and dries, and because of this it both disperses the bilious fluids in the abdomen through defaecation, and removes them through urine. Even more so it clears out through urine the bilious material in veins. But for the very same reason, this is of no benefit, if administered when inflammation pervades the abdomen; and this is also the case if inflammation affects the chest or lungs. For the astringent capacity in it is more powerful than the bitter one; and by sharing a certain sharpness it is warm by a greater extent than cold.

57) While omitting some of Galen's comments about elemental qualities, Aëtius quotes most of Galen verbatim.

57.1 [45.4] Ἀψίνθιον Carnoy gives the same botanical name, but "absinthe" as the common name. This is the same genus, but different species, from ἄβρότονον (ch.1, p. 44).

57.3 [44.6] τὸ ποντικόν Although LSJ offers a variety of plants (*Prunus pada* L., liquorice, hazel-nut and rhubarb) as a translation for τὸ Ποντικόν, it seems more likely that a variety of wormwood is meant here.

It is noteworthy that the possible hallucinogenic or psychotomimetic properties of thujone, a constituent of *A. absinthium* L. which acts similarly to tetrahydrocannabinol derived from cannabis (del Castillo et al., 1975: 365-6), seem to have been unknown to the ancient physicians; although Dioscorides even provides a recipe for a beverage comprising a prolonged maceration of wormwood and other herbs in wine, none of the therapeutic properties he attributes to it can be described as psychotropic (5.49 (K 25.1.724)). Admittedly, some doubt has recently been cast on the effects of modern absinthe (Eadie, 2009: 73-8).

What Aëtius does claim here for wormwood has no apparent substantiation in modern scientific literature.

(νη΄) Βάλανος μυρευική, ἦν μυροβάλανον ὀνομάζουσι, ῥυπτική καὶ τμη-
 τική τὴν δύναμιν ἔστιν ἅμα στύψει τινί, καὶ διὰ τοῦτο ῥυπτικήν τε [15]
 ἅμα καὶ τμητικήν καὶ συνακτικήν τε καὶ πιλητικήν ἔχει τὴν ἐνέργειαν,
 ὥστε καὶ πρὸς ἰόνθους καὶ φακοὺς ἐφηλίν τε καὶ κνησμὸν καὶ ψώρας
 καὶ λέπρας καὶ ἀχώρας καὶ ἐξανθήματα ἐλκώδη καὶ παχύσματα ἀρμότ- 5
 τειν, καὶ μάλιστα μετ' ὄξους· καὶ οὐλάς δὲ λαμπρύνει, ποιεῖ καὶ πρὸς
 ἦπαρ ἐσκιρρωμένον καὶ σπλήνας τήκει καὶ μάλιστα μίγνυμένου αὐτῆ [20]
 τινος τῶν ξηραντικῶν ἀλεύρων, οἷον αἰρίνου ἢ ὀροβίνου. ὁ μέντοι
 φλοιὸς αὐτῆς πάνυ δραστικός ἐστιν, ὥστε χρηστέον αὐτῶ ἐφ' ὧν ἰσχυ-
 ροτέρας χρεῖα στύψεως. εἰ δέ τις τῆς σαρκὸς αὐτῆς πίνει < α΄ μετὰ 10
 μελικράτου, ἐμέσει εὐκόλως. πολλάκις δὲ καὶ διὰ τῆς κάτω κοιλίας
 ὑπάγει δαψιλῶς· ὅθεν ἐπειδὴν καθῆραι ἦπαρ ἢ σπλήνα βουλόμενοι [25]
 τῶ φαρμάκῳ χρῶμεθα, μετ' ὄξυκράτου διδόμεν αὐτὸ διὰ τὸ κακο-
 στόμαχον αὐτοῦ. χαίρει γὰρ τῶ ὄξει καὶ ἐξωθεν προσαγομένη καὶ διὰ
 στόματος διδομένη. 15

[45.17] κνησμὸν replaces κνησιν.

[Galen 11.844.18-846.11]

58) Desert date (*Balanites aegyptica* LSJ), which they call *myrobalan*, is cleansing and cutting in capacity along with a certain astringency, and because of this it has a cleansing, cutting, constrictive and contractive action, so that it is suitable, especially with vinegar, for acne, freckles, both keratoses and itching, and itchy scabby spots, scaly lesions, ringworm of the scalp, ulcerated rashes and thickenings. It also lightens scars, acts on an indurated liver, and resolves spleens, especially when one of the dry meals is mixed with it, such as darnel or bitter vetch. Its bark, however, is exceedingly effective, so that one must use it in those cases where there is need of more powerful astringency. And if someone drinks 1 drachma of its pulp with honey-water, he will vomit effortlessly. Often it purges also through the bowels profusely; hence, when we want to purify the liver or spleen and use the drug, we give it with vinegar-water, because of its tendency to upset the stomach. For it improves in vinegar, both when administered externally and given orally.

58) Aëtius has significantly altered Galen's entry, by quoting only some 20% of the original, by concisely summarising the remainder, and by adding extra information especially regarding therapeutic indications and usage.

45.26 [58.13] **διδόαμεν** This later form (LSJ) replaces δίδομεν in Galen (11.845.14).

There is some *in vitro* and animal-experimentation evidence that *B. aegyptica* constituents may inhibit growth of bacteria, *Candida* and herpes simplex virus, and lower bilirubin levels in bile-duct ligated rats (Chothani DL & Vaghasiya HV, 2011: 55-62); it is possible, therefore, that Aëtius' preparations may have benefited skin eruptions where infection was a factor.

[46.1-2]

(νθ') Βάλανος δρυΐνη. Περὶ δὲ τῆς δρυΐνης βαλάνου ἐν τῷ περὶ τῆς δρυὸς τόπῳ δηλωθήσεται.

59) Oak acorn. An explanation about the oak acorn will be given in the section about the oak (*Quercus* L. spp.).

59) No such entry appears in Galen. Aëtius provides more information in ch. 95, p. 116.

[46.3-8]

(ξ) Βαλσάμου τὸ ξύλον καὶ ὀπὸς καὶ καρπός. Θερμαίνει μὲν καὶ ξηραίνει κατὰ τὴν δευτέραν ἀπόστασιν· ἐστὶ δὲ καὶ λεπτομερές· ὁ δὲ ὀπὸς αὐτοῦ λεπτομερεστέρας ἐστὶ δυνάμεως, οὐ μὴν εἰς τοσοῦτόν γε θερμός, εἰς ὅσον οἴονται τινες, ὑπὸ τῆς λεπτομερείας ἐξαπατάμενοι. ὁ δὲ καρπὸς αὐτοῦ παραπλησίας μὲν ἐστὶ κατὰ γένος δυνάμεως, ἀπολείπεται δὲ μακρῶν κατὰ τὸ λεπτομερές. [5] 5

[Galen 11.846.12-847.2]

60) The wood, juice and fruit of the balsam-tree (*Commiphora opobalsamum* Engl.). It warms and dries at the level of the second degree; and it is also fine-grained. But its sap has a finer-grained capacity, yet it is certainly not as warm as some people think, who are deceived by its fine-grained quality. Its fruit is similar in so far as the nature of its capacity, but it is left far behind as far as being fine-grained is concerned.

60) Both Aëtius and Galen listed this entry out of alphabetical order, between Βάλανος and Βαλαύστιον. Aëtius largely copies Galen, but adds that he is dealing with the wood, sap and fruit.

60.1 [46.3] **Βαλσάμου** LSJ has as an additional translation “costmary (*Chrysanthemum balsamita* L.)”, but in view of the mention of wood and fruit, balsam-tree seems the more likely meaning, which is Carnoy’s translation.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[46.9-15]

(ξα´) Βαλαύστιόν
 ἰσχυρῶς δὲ στύφει τὴν γεῦσιν καὶ δὴ καὶ ξηραντικῆς τε [10]
 καὶ ψυκτικῆς ἐστὶ δυνάμεως, ὅθεν εἰ παρατρίμμασι καὶ τοῖς ἄλλοις
 ἔλκεσιν ἐπιπάτοις αὐτὸ ξηρὸν λειότατον, τάχιστα ἂν ἴδοις εἰς οὐλήν
 ἰόντα ἀδήκτως· ταύτη τοι κάπι τῶν αἷμα ἀναγόντων καὶ δυσεντερι- 5
 κῶν καὶ τῶν κατὰ γαστέρα καὶ μήτραν ρευμάτων οὐκ ἔστιν ὅστις
 ἰατρὸς οὐ χρῆται τούτῳ τῷ φαρμάκῳ. [15]

[46.9-10] ἐστὶν ἀγρίας ροιᾶς ἄνθος, οἷόνπερ τῆς ἡμέρου ὁ κύτινος. omitted.

[Galen 11.847.3-18]

61) Wild pomegranate flower is strongly astringent as regards taste, and moreover, it has a drying and cooling capacity, and hence if you were to sprinkle it dry and very finely ground on friction abrasions and the other ulcers, you would see them very rapidly becoming cicatrised without erosion. For this reason, then, there is not anyone who is a doctor who does not use this drug for those bringing up blood, and cases of dysentery, and discharges affecting the bowel and uterus.

61) Aëtius quotes much of Galen’s first and last sentences, but omits a large centre section (11.847.6-13) in which Galen expands on elemental aspects in a rather didactic manner.

61.2 [46.10] **ἰσχυρῶς...στύφει** Although this information is lacking about the flowers, pomegranate rind is known to contain 28% tannins (Evans, 2009: 232), which would cause astringency.

61.5 [46.13] **αἷμα ἀναγόντων** Whether this is haematemesiis or haemoptysis is unknown.

Recent animal experiments (Hazouni et al., 2011: 976-84) suggest that constituents of pomegranate rind (no mention is made of flowers), used topically, may promote wound healing, and have antibacterial and

antifungal properties; unfortunately, as only twelve guinea pigs were used, and there is no mention of controls either untreated or treated with excipient only, this work must be regarded as interesting rather than scientific.

Pomegranate flower infusion does appear to have a possible hepatoprotective effect in rats (Celik et al, 2009: 145-9), but Aëtius does not mention the liver in this entry.

[46.16-25]

(ξβ') Βάτος. Βάτου τὰ φύλλα καὶ μάλιστα τὰ μαλακὰ καὶ οἱ βλαστοὶ μετρίως ἐστὶ στυπτικά, ὥστε καὶ διαμασώμενα ἄφθας τε καὶ τὰ ἄλλα τὰ ἐν τῷ στόματι θεραπεύει ἔλκη καὶ μέντοι καὶ τὰ τραύματα κολλᾷ. ὁ δὲ καρπὸς εἰ μὲν εἴη πέπειρος, ἔχει τι καὶ συμμέτρου θερμότητος· ὁ δὲ ἄωρος ὑπὸ ψυχρᾶς οὐσίας γεώδους ἐπικρατεῖται καὶ διὰ τοῦτο σφοδρῶς ξηραντικός ἐστὶ. ξηρανθεὶς δὲ ἀποτίθεται καὶ γίνεται ξηραντικώτερος τοῦ ὑγροῦ. καὶ τὸ ἄνθος δὲ τῆς αὐτῆς ἐστὶ τῷ ἄωρῳ καρπῷ δυνάμεως· εἰς δυσεντερίας οὖν καὶ ρεύματα γαστρὸς καὶ ἀτονίας καὶ τὰς τοῦ αἵματος πτύσεις ἐπιτήδειον. ἡ δὲ ῥίζα πρὸς τῷ στύφειν ἔτι καὶ λεπτομερής ἐστὶ, διὸ καὶ τοὺς ἐν νεφροῖς θρύπτει λίθους.

10 [25]

[Galen 11.848.1-849.3]

62) Bramble (*Rubus ulmifolius* Schott). The leaves of bramble, and especially the soft ones and the shoots, are moderately astringent, so that when chewed, they treat oral thrush and the other ulcers in the mouth, and in addition cause adhesion of wounds. If the fruit is ripe, it even has something of a commensurate warmth; but the unripe fruit is prevailed over by an earthy, cold essence, and because of this it is powerfully drying. And when it is dried and put aside, it becomes more capable of drying than the moist kind. And the flower has the same capacity as the unripe fruit; it is therefore suitable for cases of dysentery, bowel fluxions, cases of enervation, and haemoptysis. The root is, in addition to being astringent, fine-grained as well, whereby it also breaks up stones in the kidneys.

62) Aëtius quotes approximately half of Galen's text, and what he omits concerns the qualities of the plant's materials in terms of taste and elemental theory.

There is some *in vitro* evidence of antimicrobial activity in constituents of bramble (Panizzi et al, 2002: 165-8), which would accord with the claimed ability to promote wound healing.

[46.26-47.6]

(ξγ') Βατράχιον. Τέσσαρας μὲν ἔχει τὰς κατ' εἶδος διαφοράς. ἅπαντα δὲ δριμείας ἰσχυρῶς ἐστὶ δυνάμεως, ὡς ἐλκοῦν μετὰ πόνου. ταῦτ' ἄρα καὶ συμμέτρως χρωμένῳ καὶ ψώρας καὶ λέπρας ἀποδέρει καὶ ὄνυχας ἀφίστησι λεπρούς καὶ στίγματα διαφορεῖ καὶ ἀκροχορδόνας καὶ μυρμηκίας ἀφαιρεῖ. καὶ μέντοι καὶ ἀλωπεκίας ὠφελεῖ πρὸς ὀλίγον χρόνον ἐπιτεθέντα· χρονιζόντων γὰρ οὐκ ἐκδέρεται μόνον, ἀλλὰ καὶ ἐσχαροῦται τὸ δέρμα. καὶ ταῦτα μὲν τὰ φύλλα χλωρὰ μετὰ τῶν καυλῶν καταπλαττόμενα ποιεῖ. ἢ δὲ ρίζα ξηρανθεῖσα παρμικόν ἐστὶ φάρμακον, ὁμοίως τοῖς ἄλλοις ἅπασιν τοῖς ἰσχυρῶς ξηραίνουσι. καὶ ὀδόντων δὲ ὀδύνας ὠφελεῖ μετὰ τοῦ θραύειν αὐτούς. 5 [p.47] [5] 10

[Galen 11.849.4-17]

63) Ranunculus. There are four different types according to appearance. They all have a powerfully sharp capacity, as they cause painful ulceration. For if one uses them even in moderation, they strip off itchy scabs and scaly patches, separate off thickened scaly nails, destroy marks, and remove warts, both pedunculated and sessile. Furthermore, they help cases of patchy hair loss if applied for a short time; for, when applied for a long time, they not only excoriate, but also cause an eschar on the skin. Even the fresh leaves, when plastered on with the stems, do these things. The dried root is a sternutatory drug, similar to all the others that dry powerfully. It also helps cases of toothache by shattering the teeth.

63) Aëtius quotes Galen almost verbatim, but omits the latter's last sentence, which expands on the plant's elemental properties.

The vesicant properties of Ranunculus species, due to protoanemonin derived from a glycoside, ranunculin, are well documented (Evans, 2009: 27; Akbulut et al., 2011: 4-7).

[47.7-15]

(ξδ') Βδέλλιον. Τὸ μὲν σκυθικὸν ὀνομαζόμενον, ὃ δὴ καὶ μελάντερον ἐστὶ καὶ ῥητινωδέστερον, μαλακτικῆς ἐστὶν ἱκανῶς καὶ δραστηρίου δυνάμεως. τὸ δὲ ἕτερον τὸ ἀραβικόν, ὃ δὴ καὶ διαυγέστερόν ἐστιν, ἐπὶ

μᾶλλον ξηραίνει τῶν μαλακτικῶν. χρῶνται δὲ αὐτοῖς τινες καὶ μά- [10]
λιστα τῷ ἀραβικῷ ἐπὶ τε βρογχοκήλων καὶ ὑδροκήλων ἀσίτου πτυέλῳ 5
δεύσαντες, ὡς ἐμπλαστώδη σύστασιν ἔχειν. τὸ δ' ἀραβικὸν καὶ τοὺς ἐν
νεφροῖς λίθους δοκεῖ θρύπτειν πινόμενον, οὗρά τε προτρέπει καὶ τὰς
τῶν ἀπέπτων πνευμάτων διαδρομὰς ἐξιᾶται καὶ πόνους πλευρῶν καὶ
ρήγματα.

[47.11] πτυέλῳ replaces πτυάλῳ.

[Galen 11.849.18-850.14]

64) Bdellion [the aromatic gum obtained from *Balsamodendron africanum* LSJ or *Commiphora mukul* Engl.]. The variety called Scythian, which is darker and more resinous, has a suitably emollient and active capacity. But the other, the Arabian variety, which is also brighter, dries much more than the emollient ones. Several people use them, and especially the Arabian variety, after moistening them with the saliva of one who has fasted so as to obtain a plaster-like consistency, in the treatment of throat tumours and hydrocoeles. When drunk, the Arabian variety seems also to crumble stones in the kidneys, and promote the passage of urine, to cure completely the movements of undigested wind, and pains in the sides, and ruptures.

64) Aëtius copies almost verbatim approximately the first and last thirds of Galen's entry, and omits the middle section, mainly concerning the qualities of young and old examples of the Arabian variety.

Although evidence exists that *Balsamodendron* extract can suppress laboratory-induced tumours in mice (Sharma et al., 2005: 43-51), this hardly endorses its use, cited by Aëtius, in throat tumours.

[Galen next lists colt's-foot (*Tussilago farfara* L.), omitted by Aëtius, the smoke from whose leaves and roots was believed to relieve coughs and breathlessness (11.850.15-851.7 Περὶ βηγίου).]

[47.16-17]

(ξε') Βλίτον ἐδώδιμὸν ἐστὶ λάχανον ὑγρὸν καὶ ψυχρὸν τῇ κράσει ἐν
τῇ δευτέρᾳ μάλιστα ἀποστάσει τεταγμένον.

[Galen 11.851.8-10]

65) Edible blite (*Amaranthus blitum* L.) is a garden herb, moist and cold in composition, ranked certainly in the second degree.

65) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[47.18-20]

(ξζ') Βολβὸς ἐσθιόμενος μὲν ψυχροτέρου τε καὶ παχύτερου καὶ γλίσχρου χυμοῦ γεννητικός· καὶ γὰρ καὶ δύσπεπτός ἐστι καὶ φυσώδης καὶ ἀφροδισιαστικός. ἐπιπλαττόμενος δὲ κολλητικός ἐστι καὶ ξηραντικός.

[Galen 11.851.11-18]

66) Purse-tassels (*Muscari comosum* Mill.) when eaten is productive of a rather cold, rather thick and sticky humour; in addition, it is hard to digest, productive of flatus, and aphrodisiac. When plastered on, it is adhesive and drying.

66) Aëtius quotes almost half of Galen's entry almost verbatim, and omits material regarding taste and elemental qualities.

66.2 [47.19] **φυσώδης καὶ ἀφροδισιαστικός** (v. 3.6 n.; Intro. lxxiv-lxv.)

There is no apparent substantiation of the above claims in modern scientific literature.

47.21-22

(ξζ') Βολβὸς ἐμετικός θερμότερας ἐστὶ πολὺ <τῆς> τοῦ προειρημένου κράσεως.

[Galen 11.852.1-2]

67) Emetic bulb (*Narcissus tazetta* LSJ) is of a much warmer composition than the aforesaid.

67) Aëtius quotes Galen verbatim.

Although no therapeutic use is given here, in view of this plant's name it should be stated that *N. tazetta* contains lycorine, a toxin with an emetic effect (Evans, 2009: 390).

[Galen next lists Attic aster, again omitted by Aëtius, under the heading of βουβώνιον, which he asserts is a synonym for ἀστὴρ Ἀττικὸς in both entries, and largely repeats its supposed therapeutic details (11.852.3-8 Περὶ βουβωνίου; cf. 11.841.16-842.4).]

[47.23-25]

(ξη´) Βούγλωσσον ὑγρὸν καὶ θερμὸν ἐστὶ τὴν κρᾶσιν, ὅθεν καὶ τοῖς οἴνοις ἐμβαλλόμενον εὐφροσύνης αἴτιον γίγνεται. ἀρμόζει δὲ καὶ τοῖς διὰ τραχύτητα φάρυγγος βήητουςιν ἐν μελικράτῳ ἀφεισόμενον. [25]

[Galen 11.852.9-12]

68) Bugloss (*Anchusa italica* Retz.) is moist and warm in composition, and hence when tossed into wines it becomes the cause of good cheer. When boiled down in honey-water, it is suitable for those who are coughing because of roughness of the throat.

68) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature. Although preparations containing honey are still sold for coughs, they have only a placebo effect.

[47.26-48.3]

(ξθ´) Βούφθαλμον ὠνόμασται μὲν οὕτως ἀπὸ τῶν ἀνθῶν εἰκέναι δοκούντων κατὰ τὸ σχῆμα βοῶς ὀφθαλμῶ, ἐπεὶ τοὶ τὴν γε χροῖαν <τοῖς τῆς> ἀνθέμιδος ἐστὶν ὅμοια. μείζω δὲ ἐστὶν αὐτῶν συχνῶ καὶ δριμύτερα, καὶ διὰ τοῦτο καὶ διαφορητικώτερα, μέχρι τοῦ καὶ σκληρίας ἰᾶσθαι μινύμενα κηρωτῆ. [p.48] 5

[Galen 11.852.17-853.4]

69) Ox-eye (*Anacyclus radiatus* Loisel.) has been so named from the flowers' seeming resemblance in form to an ox's eye, since, in fact, it is similar, at least in colour, to the flowers of camomile (*Anthemis* L. spp. or *Matricaria chamomilla* L.). But it is far greater than them, and sharper, and because of this more dispersive, to the extent even of healing indurations, when mixed with a waxy excipient.

69) Here Aëtius, but not Galen, reverses the order of βούφθαλμον and βούνιον, contrary to their alphabetical position. Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[48.4-6]

(ο´) Βούνιον, οἱ δὲ ἄρκτιον, τῶν θερμαινόντων ἐστὶν εἰς τοσοῦτον ὡς οὐρητικόν τε εἶναι καὶ καταμηνίων ἀγωγόν. καὶ τὸ ψευδοβούνιον δὲ παραπλησίως αὐτῷ θερμόν ἐστιν. [5]

[Galen 11.852.13-16]

70) Earth-nut (*Bunium ferulaceum* Sm.), which some call bear-wort (*Inula candida* L.), belongs to the warming substances, to the extent that it is both diuretic and emmenagogic. And Cretan pimpinell (*Pimpinella cretica* Vis.) is warm in a similar way to it.

70) Aëtius quotes Galen verbatim, apart from changing (? emending) ἄρκτικόν (11.852.13) to ἄρκτιον (70.1 [48.4]).

There is no apparent substantiation of the above claims in modern scientific literature.

[48.7-15]

(οα´) Βράθυ θερμαίνει καὶ ξηραίνει κατὰ τὴν τρίτην ἀπόστασιν. ἐστὶ δὲ καὶ λεπτομερὲς καὶ διὰ ταῦτα καὶ διαφορητικόν καὶ καταμηνίων ἀγωγόν, εἴπερ τι καὶ ἄλλο, καὶ δι' οὐρῶν αἷμα κινεῖ καὶ τὰ ζῶντα τῶν ἐμβρύων διαφθείρει καὶ τὰ νεκρὰ ἐκβάλλει· εἰς δὲ τὰς σηπεδόνας ἀρμόττει καὶ μάλισθ' ὅσαι κακοηθέστεραί τε εἰσι καὶ χρονιώτεραι. φέρουσι γὰρ ἀλύπως αἱ χρόνιαι τὴν ἰσχὺν τοῦ φαρμάκου. καὶ τοίνυν καὶ τὰ μεμελασμένα καὶ λίαν ῥυπαρὰ μετὰ μέλιτος ἀποκαθαίρει καὶ ἄνθρακας ἀπολύει. ἔνιοι δὲ καὶ ἀντὶ κινναμώμου διπλάσιον αὐτὸ βάλλουσι. [10] 5 [15]

[Galen 11.853.5-854.11]

71) Savin (*Juniperus sabina* L., or possibly *J. foetidissima* L.) warms and dries at the level of the third degree. It is also fine-grained, and, because of this, it is both dispersive and an emmenagogue, as much as anything else, and it moves blood through the urine, and destroys living foetuses and

expels dead ones; it is suitable for septic lesions, and especially all those that are more malignant and more chronic. For the chronic conditions bear the strength of the drug painlessly. So too, when used with honey, it cleanses blackened and extremely dirty lesions, and clears away carbuncles. And some people also add it in double quantities in preference to cassia (*Cinnamomum cassia* Nees).

71) Aëtius rejects about two-thirds of Galen's entry, mainly concerning details of taste, elemental theory and comparisons with cypress (*Cupressus sempervivens* LSJ), and quotes the remainder almost verbatim.

71.3 [48.9] **δι' οὔρων αἷμα κινεῖ** Haematuria is known to be a toxic effect of ingestion of the essential oil of juniper (Bruneton, 1995: 474).

71.3-4 [48.9-10] **τὰ ζῶντα...ἐκβάλλει** There is experimental evidence that juniper essential oil is embryotoxic, but not foetotoxic, in mice (Page et al., 1989: 144-6); its effect in humans in this respect is not recorded in modern literature. It is unclear whether Aëtius and Galen include this information as a warning to those treating pregnant women, or as a prescription to facilitate therapeutic abortion; perhaps the latter use could have been considered not to be in contravention of the Hippocratic Oath, which specifically forbids the administration of abortifacient *pessaries* (Hipp. *Jus.* 15-6) (v. also Intro. lxxiii). By modern definition (Romanes, 1964: 71), the term embryo is applied to the organised cells undergoing differentiation until reaching eight weeks of gestation and some 25 – 30 mm in length; thereafter, the term foetus is used, and this latter term is therefore a more apt translation of ἔμβρυον.

There is no other information relevant to Aëtius' claims apparent in modern scientific literature.

[48.16-20]

(οβ') Βετονίκης τῆς πόας ἐστὶ μὲν καὶ τὰ φύλλα στυπτικά τε καὶ μαλακτικά τραυμάτων, ὅμοια τοῖς τῶν ἀγρίων λαπάθων, πλὴν ὅσον μελάντερά τε καὶ δασύτερα. ἐστὶ δὲ καὶ ὁ ἐξ αὐτῶν χυλὸς ὁμοίως στυπτικός, ὥστε καὶ ἔψοντές τινες ἀποτίθενται αὐτὸν ὡς δραστηκώτατον τῶν ἐν τῷ στόματι σήψεων φάρμακον.

5 [20]

[Galen 11.854.12-18]

72) Scurvy-grass (*Cochlearia anglica* L.): the leaves of the herb are both astringent and emollient to wounds, like those of dock (*Rumex conglomeratus* Murray), except by how far they are darker and shaggier. The sap from them is also similarly astringent, so that some people boil it and apply it as a most effective drug for septic lesions in the mouth.

72) There is some confusion over the name of this plant. Aëtius calls it βετονίκη, which, according to LSJ (where it is spelt βεττονίκη), can also mean “Paul’s bettany (*Sideritis purpurea* Talbot)”. Galen, however, calls it βρετανική, “scurvy-grass”, and as Aëtius has copied the rest of his entry largely verbatim, this meaning seems more appropriate.

There is no apparent substantiation of the above claims in modern scientific literature.

[48.21-22]

(ογ´) Βρόμος ψυχρότερόν ἐστι μετρίως τῇ κράσει καί τι καί στύψεως ἔχει, ὡς καί τὰς κατὰ γαστέρα διαρροίας ὠφελεῖν.

[Galen 11.855.1-6]

73) Oats (*Avena sativa* L.) are moderately colder in composition and are somewhat astringent, so that they also help cases of diarrhoea.

73) Aëtius omits Galen’s first two sentences, in which the latter says oats are one of the pulses (which they certainly are not, being of the family gramineae rather than leguminosae (Evans, 2009: 41)), compares their efficacy to barley, and lists their effects when applied externally (11.855.1-4). Aëtius quotes only Galen’s last sentence, largely verbatim.

73.1 [48.21] **Βρόμος** LSJ and Carnoy also offer “wild oats (*A. barbata* Link)” as a translation.

There is some evidence, admittedly of doubtful scientific validity in view of lack of controls, that oat bran may be effective in the treatment of diarrhoea in immunocompromised patients (Vasquez, 1999: 16).

[48.23-24]

(οδ´) Βρύον θαλάττιον στύφει καί ψύχει, ὅθεν καταπλαττόμενον ὄσα

ἐστὶ θερμὰ ἐναργῶς ἐμψύχει καὶ ὠφελεῖ.

[Galen 11.7-10]

74) Oyster-green (*Ulva lactuca* L.) is astringent and cools, for which reason, when applied as a poultice, it visibly cools and helps all parts that are warm.

74) Aëtius omits roughly half of Galen's entry, which mainly concerns elemental properties, and quotes the remainder verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature about this species of seaweed.

[48.25-49.2]

(οε΄) Βρύον ἢ ὕπνον ἢ σπλάγχνον στύφει καὶ ψύχει μετρίως ὡς ἐγγύς [25]
τῶν εὐκράτων ὑπάρχειν, ὅτι καὶ διαφορητικῆς καὶ μαλακτικῆς με-
τείληφε δυνάμεως καὶ μάλιστα τὸ ἐπὶ τῶν κεδρίνων εὕρισκόμενον
ξύλων.

[Galen 11.855.11-16]

75) Tree-lichen (*Usnea barbata* LSJ) (*bryon* or *hypnon* or *splanchnon*) is astringent and cools moderately, so as to be near the temperate materials, because it shares both a dispersive and emollient capacity, and this is especially true of the variety found on cedar trees.

75) After omitting Galen's comments about provenance and condensing those about elemental properties, Aëtius quotes part of the last sentence verbatim. He does, however, add that ὕπνον is a synonym for βρύον and σπλάγχνον.

48.25 [75.1] **Βρύον ἢ ὕπνον ἢ σπλάγχνον** LSJ suggests five different meanings for βρύον, one being the tree-lichen (*U. barbata*), and says that σπλάγχνον is identical to βρύον, and that ὕπνον is a lichen, unspecified; I have, therefore translated them as *U. barbata*, which is also Carnoy's preferred translation.

Usnea species have antibiotic and antifungal properties (Evans, 2009: 21, 416), but may be hepatotoxic if taken internally (Guo et al., 2008: 317-38).

[49.3-4]

(οζ´) Βρυωνία. Περὶ βρυωνίας προεῖρηται ἐν τῷ περὶ ἀμπέλου λευκῆς τόπῳ.

76) Bryony (*Vitis silvestris* LSJ). Mention has already been made about bryony in the section about white vine [Ch. 30, p. 69].

76) This entry does not appear in Galen, but is added by Aëtius.

[Galen next lists bedstraw (*Galium verum* L.), omitted by Aëtius, which is supposed to curdle milk, and be useful for haemorrhages and burns (11.855.17-856.3 Περὶ γαλλίου).]

[49.5-6]

(οζ´) Γεντιανή. ταύτης ἡ ῥίζα δραστήριός ἐστιν, ἐνθα χρὴ λεπτῶναί τε καὶ διακαθῆραι καὶ ἀπορρῦσαι καὶ ἐκφράξαι.

[Galen 11.856.4-7]

77) Gentian (*Gentiana* L. spp.). The root of this is effective when there is need to thin, purge thoroughly, cleanse thoroughly and unblock.

77) Omitting a comment about taste, Aëtius quotes Galen largely verbatim.

Although there is no apparent substantiation of any purgative effect, gentian violet, obtained from the root, is known to have antiseptic, antibiotic and antimycotic properties when used topically (Berrios & Arbiser, 2011: 69-73; Kondo et al., 2012, 21-5).

[49.7-8]

{ Γουβώνιον ἢ ἀστὴρ ἀττικός. προεῖρηται περὶ αὐτοῦ ἐν τῷ δευτέρῳ στοιχείῳ.

Attic aster. Previous mention has been made of it under the heading of the second letter.

Γουβώνιον is presumably a misrepresentation of Βουβώνιον. }

[49.9-11]

(οη´) Γίγαρτα ξηρά μὲν ἐστὶ κατὰ τὴν δευτέραν ἀπόστασιν, ψυχρὰ δὲ κατὰ τὴν πρώτην· ἐστὶ δὲ καὶ στρυφνὰ τῇ γεύσει, διὸ καὶ τοῖς κατὰ γαστέρα ῥοώδεσι πάθεσιν ἰκανῶς ἀρμόττει.

[Galen 11.856.8-12]

78) Grape pips are dry at the level of the second degree, and cool at the level of the first; they are also astringent to taste, on account of which they are adequately suitable for diseases involving bowel fluxes.

78) Omitting a comment about taste, Aëtius quotes Galen largely verbatim.

78.1 [49.9] **Γίγαρτα** Grape pips or possibly olive stones, according to Carnoy.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[49.12-17]

(οθ´) Γιγγίδιον ὡσπερ τῇ γεύσει πικρότητός τε καὶ στύψεως μετέχει. οὕτως καὶ τῇ κράσει θερμότητός τε καὶ ψύξεως. ξηραντικὸν δὲ ἐστὶ κατ' ἀμφοτέρας τὰς ποιότητας καὶ μέντοι καὶ πάνυ εὐστόμαχον, ὅτι στύψεως οὐκ ὀλίγης μετείληφεν, πολλῶ δὲ μᾶλλον εὐστομαχώτερον γίγνεται ἀποζεσθὲν καὶ μετ' ὄξους ἐσθιόμενον. θερμασίαν μὲν οὖν οὐ πάνυ τι σαφῆ κέκτηται. ξηραίνει δὲ κατὰ τὴν δευτέραν ἀπόστασιν.

[15]

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[Galen 11.856.13-857.2]

79) Pepperwort (*Daucus gingidium* L.) shares, according to its taste, bitterness and astringency, and thus also both warmth and coldness in its composition. It is drying in keeping with both qualities, and nevertheless it is thoroughly good for the stomach, because it shares not a little astringency, but it becomes much better for the stomach when boiled and eaten with vinegar. It has therefore acquired a not completely distinct warmth. And it dries at the level of the second degree.

79) Aëtius quotes Galen almost verbatim, but inserts his own comment about preparation and effect (πολλῶ...ἐσθιόμενον 79.4-5).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[49.18-19]

(π') Γλαύκιον στύφει μετά τινος ἀηδίας, ἀλλὰ καὶ ψύχει σαφῶς οὕτως, ὡς θεραπεύειν ἐρυσιπέλατα, ὅσα γε μὴ ἰσχυρά.

[Galen 11.857.3-8]

80) Juice of the horned poppy (*Glaucium corniculatum* Curtis) is astringent with a certain nauseousness, but also definitely cools in such a way that it treats cases of cellulitis, at least all the ones that are not potent.

80) Aëtius quotes Galen's first sentence almost verbatim, and omits his remaining one concerning elemental considerations. [v. also ch.277, p.256.]

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists wart cress (*Coronopus procumbens* Gilib.), omitted by Aëtius, and speculates about its ability to produce milk and requisite elemental properties (11.857.9-11 Περὶ γλαυκός).]

[49.20-24]

(πα') Γλήχων θερμαίνει καὶ λεπτύνει σφοδρῶς, ὅθεν τὰ ἐκ θώρακος καὶ πνεύμονος ὑγρὰ παχέα καὶ γλίσπρα ῥαδίως ἀναπτύεσθαι ποιεῖ καὶ καταμήνια προτρέπει μετ' οἴνου λευκοῦ ἐνομένη καὶ πινομένου τοῦ οἴνου θερμοῦ ἀκράτου. καὶ καταπλαττομένη δὲ ἐξωθεν ἐπὶ ἰσχιαδικῶν καὶ τῶν ἄλλων κατεψυγμένων φοινίσει.

5

[Galen 11.857.11-18]

81) Pennyroyal (*Mentha pulegium* L.) warms and thins powerfully, for which reason it causes thick and sticky liquids from the chest and lung to be coughed up easily, and promotes menstruation, when boiled with white wine and the wine is drunk warm and undiluted. Also, it causes redness when applied topically on cases of hip problems and other conditions caused by chilling.

81) Aëtius quotes roughly half of Galen's text, omits details of taste and a warning that it can ulcerate if applied for too long, but adds information

about preparation and administration, and the indication regarding hip problems.

81.1-2 [49.20-21] **ἐκ θώρακος καὶ πνεύμονος** θώρακος is pleonastic since what is coughed up comes from the lungs, invariably situated in the chest.

81.3 [49.22] **καταμήνια προτρέπει** Pennyroyal has been used in modern times in abortion attempts, and can cause uterine contractions (Glaister & Rentoul, 1966: 367, 645).

49.24 [81.5] **φοινίσσει** This may be explained by its ability on occasions to cause contact urticaria (Pérsey-Calderón et al., 2007: 285-6) and contact dermatitis (Roé et al., 2005: 355).

[49.25]

(πβ´) Γλοιὸς ὁ ἀπὸ βαλανείου μετρίως ἐστὶ μαλακτικός.

[Galen 11.858.1]

82) Acorn gum is moderately emollient.

82) Aëtius has apparently added ὁ ἀπὸ βαλανείου to Galen's words, but, to make sense, I believe this must be emended to ὁ ἀπὸ βαλάνου ("from acorn" rather than "from bath", according to LSJ).

There is nothing relevant to Aëtius' claim apparent in modern scientific literature.

[49.26-50.4]

(πγ´) Γλυκύριζα. Τούτου τοῦ θάμνου τῶν ριζῶν ὁ χυλὸς μάλιστά ἐστι χρήσιμος, γλυκὺς ὑπάρχων ἅμα βραχεῖα τινὶ στύψει. διὸ καὶ τραχύτητας ἐκλεαίνει, οὐ μόνον ἐν ἀρτηρίᾳ, ἀλλὰ καὶ ἐν ψωρώδει κύστει. ἐπεὶ δὲ καὶ ὑγρὸν ἐστὶ τῇ κράσει τὸ μετρίως γλυκὺ, κατὰ λόγον ἄδιψόν ἐστι.

[p.50]

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[Galen 11.858.2-15]

83) Liquorice (*Glycyrrhiza glabra* L.). The juice of the roots of this shrub certainly is useful, being sweet with, at the same time, a slight astringency. Hence it even smoothes out roughnesses, not only in a windpipe, but also in a scabby bladder. Since what is moderately sweet is also moist in composition, it follows logically that it is thirst-quenching.

83) Aëtius quotes less than half of Galen's words, after excising his comments mainly concerning taste and elemental qualities, but also a reference to Dioscorides' use of the root in the treatment of pterygia (11.858.13-15).

83.3 [50.1] **ψωρόδει κύστει** How Aëtius and Galen reached this diagnosis is unimaginable.

83.4-5 [50.2-3] **ἄδιψον** Dioscorides says this word is a synonym for liquorice (3.5(7).3 (K 25.1.346.13)).

There is *in vivo* and *in vitro* evidence that a constituent of liquorice can relax tracheal smooth muscle in guinea-pigs (Liu et al., 2008: 257-66), which may be relevant to Aëtius' claims. Another important therapeutic property of a liquorice derivative, namely the ability to heal peptic ulcer and thus relieve dyspepsia (Langman, 1968: 5-6; Jones, 1973: 105), has gone unnoticed by Galen and Aëtius, but not by Dioscorides (3.5(7).13 (K 25.1.347.7): ἀρμόζει δὲ καὶ πρὸς καῦσον στομάχου).

[50.5-18]

(πδ') Γλυκυσίδης ἢ παιωνία. Ταύτην καὶ παιωνίαν καὶ πεντόβορον καὶ ἐφιαλτίαν ὀνομάζουσι. λεπτομερῆς δὲ ἡ ρίζα καὶ ξηραντικὴ καὶ μετρίως θερμὴ· ἀτρέμα γὰρ στύφουσαν ἔχει δύναμιν μετὰ τινος γλυκῦτητος, ἐπὶ πλέον δὲ μασσόμενη καὶ δριμύτητος ὑποπίκρου. ταῦτ' ἄρα καταμήνια κινεῖ, ὅσον μέγεθος ἀμυγδάλου κεκομμένη καὶ σεσησμένη σὺν μελικράτῳ πινομένη. ἐκκαθαίρει δὲ καὶ ἧπαρ ἐμπεφραγμένον καὶ σπλήνα καὶ νεφρούς. τῇ στύψει δὲ καὶ τὰ κατὰ γαστέρα ρεύματα ἴσθησιν, ἐν οἴνῳ τινὶ τῶν αὐστηρῶν ἐψηθεῖσα καὶ πινομένου τοῦ οἴνου. ὅλως δὲ ξηραντικὴ τὴν δύναμιν ἐστὶν ἰσχυρῶς, ὥστε οὐκ ἂν ἀπελπίσαιμεν καὶ περιηπτομένην αὐτὴν εὐλόγως πεπιστεῦσθαι παίδων ἐπιληψίας ἰᾶσθαι· καὶ ποτε παιδίῳ ὀκταμηνιαίῳ ἐπιληψία ἀλισκομένῳ μέγα μέρος τῆς ρίζης προσφάτου ἀπηρτήσαμεν τοῦ τραχήλου κελεύσαντες αὐτὸ διὰ παντὸς ἔχειν, κἀντεῦθεν ἤδη τοῦ λοιποῦ τελέως ὑγιῆς ὁ παῖς ἐγένετο καὶ οὐκέτι ἐπελήφθη ἢ ἐσπάσθη.

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[Galen 11.858.16-861.2]

84) Paeony (*Glukusides* or paeony) (species unspecified). They call this paeony, *pentoboron* and *ephialtia*. The root is fine-grained, drying and moderately warm; for it has a gentle astringent effect with a certain sweetness, and with a slightly bitter sharpness when chewed completely. These properties bring on menstruation, when it is chopped up and packed with an equal amount of almond, and drunk with honey-water. It also

purges a liver which has been blocked, and spleen and kidneys. On account of its astringency, it also settles fluxes in the bowel, when boiled in some wine of the harsh sort, and the wine is drunk. It is completely, powerfully drying in capacity, with the result that we would not hesitate also to trust it with good reason, when fastened around, in the treatment of children's epileptic fits; and we once hung a large piece of the aforesaid root around the neck of an eighth-month old child after he had contracted epilepsy, and ordered that it should remain there continuously, and hence the child became perfectly well from this time onward, and no longer was affected by seizures and convulsions.

84) Aëtius considerably reduces Galen's long entry, by paraphrasing, quoting small parts, and omitting material mainly concerning taste and elemental qualities, in the first two-thirds; he then omits in its entirety the remainder (11.860.3-861.2), in which Galen provides complicated prescriptions for upper respiratory tract problems, and a final sentence concerning elemental qualities.

84.11 [50.15] **παιδίω... άλισκομένω** Epileptic fits in infancy are frequently provoked by fever, self-remitting and non-recurrent (Nelson et al., 1969: 1247-9). The story of the epilepsy cure, told here in the first person, is taken from Galen, and is a paraphrase of *SMT* 11.859.12-860.3.

There is nothing relevant to Aëtius' other claims apparent in modern scientific literature.

50.19.20

(πε') Γναφάλιον στυπτικῆς ἐστὶ μετρίως δυνάμεως καὶ διὰ τοῦτο δόασιν αὐτὸ δυσεντερικοῖς μετὰ τινος τῶν αὐστηρῶν οἴνων.

[Galen 11.861.3-7]

85) Cotton-seed (*Diotis maritima* Sm.) has a moderately astringent capacity, and because of this they give it with one of the harsh wines to dysentery sufferers.

85) Aëtius omits Galen's explanation of the plant's name, and then quotes him on its properties and usage.

There is no apparent substantiation of the above claims in modern scientific literature.

[50.21-51.5]

(πς´) Γογγυλῖς. Γογγυλίδος τὸ σπέρμα πρὸς ἀφροδίσια παροξύνει, φυ-
σώδους πνεύματος ὑπάρχον γεννητικόν· οὕτως τε καὶ ἡ ρίζα δύσπεπτός
τε καὶ φυσώδης ἐστὶ καὶ σπέρματος γεννητικῆ. χυμὸν δὲ ἀναδίδωσιν
εἰς τὸ σῶμα παχύτερον. διὸ κὰν πλεονάσῃ τις ἐπὶ τῆς ἐδωδῆς αὐτῆς
καὶ μάλιστα ἐὰν ἐνδεῶς ἐν τῇ γαστρὶ πέττων ἀθροίσῃ τὸν καλούμενον 5 [p51]
ῶμὸν χυμὸν, εἰ δὲ ὠμοτέρα ἐν τῇ ἐψηθεῖ γένηται, δύσπεπτός τε καὶ
φυσώδης καὶ κακοστόμαχος. ἐνίοτε δὲ καὶ δῆξει ἐργάζεται κατὰ τὴν
γαστέρα. κρείττων δὲ γίνεται δις ἐψηθεῖσα· χρῆζει γὰρ πλείονος ἐψη-
σεως. εἰς διαχώρησιν δὲ γαστρὸς οὔτε συντελεῖ οὔτε ἐναντιοῦται. [5]

[Galen 11.861.8-11]

86) Turnip. Turnip seed (*Brassica rapa* L. or *rutabaga*) is a sexual stimulant, as it is productive of flatulent wind. Thus the root is both difficult to digest and induces flatulence, and is productive of semen. And they give out the juice to the thicker body. Accordingly, if anyone overdoses on eating it, and especially if he has taken in what is called the raw juice while insufficiently digesting it in his bowel, and if it [the turnip] has become coarser in boiling, he will suffer from indigestion, flatulence and stomach problems. Sometimes it also has biting effects on the bowels. When twice boiled it becomes more powerful; therefore it needs more boiling. It neither accomplishes nor opposes passage through the bowel.

86) Aëtius' first sentence comprises Galen's total *SMT* entry, quoted accurately; the remaining text has been largely added by Aëtius, who has also incorporated text (χυμὸν δὲ ... ὠμον χυμὸν 86.3-6) from *Alim.Fac.* 6.649.3-6.

86.1-2 [50.21-2] πρὸς ἀφροδίσια... γεννητικόν (cf. Intro. lxxiv-lxxv; 3.6n.)

86.3 [50.23] σπέρματος γεννητικῆ Turnip has been shown to increase sperm motility and count in experimental animals (Qureshi et al., 1989: 57-63), although any link between these microscopic findings and Aëtius' claim must be extremely tenuous. Nothing else of any relevance appears in modern scientific literature.

[51.6-8]

(πζ´) Δαμασώνιον. Ταύτης τῆς ρίζης πεπειράμεθα ἐψομένης ἐν ὕδατι καὶ πινομένου τοῦ ὕδατος, τοὺς ἐν νεφροῖς συνισταμένους λίθους θρύπτειν.

[51.6] ἢ ἄλισμα omitted after Δαμασώνιον.

[Galen 11.861.12-19]

87) Water-plantain (*Alisma plantago* L.). We have had experience that, when the root of this plant is boiled in water, and the water is drunk, it crumbles stones formed in the kidneys.

87) After omitting Galen’s mention of Dioscorides’ use of the root to treat dysentery, abdominal problems and swellings, Aëtius quotes Galen largely verbatim, and omits a final comment about its cleansing effect.

There is no apparent substantiation of the above claims in modern scientific literature.

[51.9-15]

(πη´) Δαῦκος, ὃν καὶ σταφυλῖνον ὀνομάζουσιν. ὁ μὲν ἄγριος ἤττον ἐδώδιμος τοῦ ἡμέρου, σφοδρότερος δὲ ἐν πᾶσιν· ὁ δὲ ἡμερος ἐδώδιμος μὲν, ἀσθενέστερος δέ. δριμείας δέ εἰσι καὶ θερμαντικῆς δυνάμεως καὶ διὰ τοῦτο καὶ λεπτυντικῆς. ἢ μὲν οὖν ρίζα κέκτηται τι καὶ φυσῶδες, καὶ διὰ τοῦτο ἀφροδισιαστική. τὸ δὲ σπέρμα τοῦ ἡμέρου μὲν ἔχει τι καὶ αὐτὸ παροξυντικὸν εἰς ἀφροδίσια· τοῦ δὲ ἀγρίου τελέως ἐστὶν ἄφυσον, καὶ διὰ τοῦτο διουρητικὸν καὶ καταμηνίων κινητικόν.

51.14 οὐ omitted after ἀγρίου.

[Galen 11.862.1-10]

88) Daucus, which they also call wild carrot (*Daucus carota* L.). The wild variety is less edible than the cultivated variety but more active in every respect; and while the cultivated variety is edible, it is weaker. They have a sharp and warming capacity, and, because of this, they have also a thinning one. The root, in fact, possesses something even of a flatus-producing quality, and, because of this, it also enhances libido. The seed of the cultivated variety has also something in itself which stimulates sexual appetite; but, on the other hand, that of the wild variety is completely

lacking in the ability to produce flatus, and, because of this, it is diuretic and emmenagogic.

88) Aëtius quotes Galen almost verbatim.

88.4-5 [51.12-13] **φυσῶδες... ἀφροδισιαστική** (cf. Intro lxxiv-lxxv; 3.6n.)

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists wild carrot seed, omitted by Aëtius, which is supposedly warming, diuretic, emmenagogic and dispersive, as is the rest of the plant above ground (11.862.11-18 *Περὶ τοῦ δαύκου σπέρματος*).]

[51.16-20]

(πθ') Δάφνης τοῦ δένδρου καὶ τὰ φύλλα καὶ ὁ καρπὸς ξηραίνει καὶ θερμαίνει σφοδρῶς καὶ μᾶλλον ὁ καρπός. ὁ δὲ φλοιὸς τῆς ρίζης ἦττον μὲν ἐστὶ δριμύς καὶ θερμός, μᾶλλον δὲ πικρός, καὶ τι καὶ στυψέως ἔχει. ταῦτ' ἄρα καὶ λίθους θρύπτει καὶ ἡπατικούς ὠφελεῖ. πίνεται δὲ ἐν οἴνῳ εὐώδει τριοβόλου σταθμός.

5 [20]

[Galen 11.863.1-7]

89) Both the leaves and the fruit of the bay tree (*Laurus nobilis* L.) dry and warm strongly, and the fruit does even more so. The outer layer of the root is less sharp and warm, but more bitter, and is even somewhat astringent. For this very reason, it fragments stones and helps liver patients. And a weight of three obols is drunk in wine with a good bouquet.

89) Aëtius quotes Galen almost verbatim.

89.5 [51.20] **οἴνω εὐώδει** Here, and in several subsequent instances, translated as “wine with a good bouquet”. What Galen and Aëtius were presumably trying to ensure was that the wine had not oxidised or gone off, i.e. in modern parlance, “corked”.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists a herb, Alexandrian daphne (*Ruscus hypoglossum* L.), together with spurge laurel (*Daphne laureola* L.) and periwinkle (*Vinca herbacea* L.), all omitted by Aëtius, and all of which have supposedly similar properties, in that they are diuretic and emmenagogic (11.863.8-14 Περὶ δάφνης τῆς πόας).]

[51.21-22]

(ρ´) Δίκταμνον λεπτομερέστερόν ἐστι τῆς γλήχωνος, τὰ δὲ ἄλλα παραπλήσιον αὐτῇ. τὸ δὲ ψευδοδίκταμνον ἀσθενέστερον.

[Galen 11.863.15-18]

90) Dittany of Crete (*Origanum dictamnus* L. or *Amaracus tomentosus* Moench) is finer-grained than pennyroyal (*Mentha pulegium* L.), but in other respects it resembles it. False dittany (*Ballota acetabulosa* Benth.) is weaker.

90) Aëtius quotes Galen fairly closely.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[51.23-24]

(ρα´) Δίψακος. Διψάκου ἡ ρίζα τῆς δευτέρας τάξεώς ἐστι τῶν ξηραίνοντων, ἔχει δὲ τι καὶ ῥυπτικόν.

[Galen 11.864.1-2]

91) Teasel (*Dipsacus fullonum* L.). The root of teasel belongs to the second rank of the drying substances, and it also has a certain cleansing quality.

91) Aëtius quotes Galen fairly closely.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[51.25-26]

(ρβ´) Δορύκνιον ὁμοίον ἐστι τῇ κράσει μήκωνι καὶ μανδραγόρα καὶ τοῖς οὕτω ψυκτικοῖς· ὀλίγον μὲν οὖν ληφθὲν καροῖ, πλέον δὲ ἀναίρει.

[Galen 11.864.3-6]

92) *Convolvulus oleaefolius* Desr. is similar in composition to opium poppy (*Papaver somniferum* L.) and mandrake (*Mandragora* L. spp.), and to the substances that cool in this fashion; therefore, when a little is taken it stupefies, but more kills.

92) Aëtius lists this plant slightly out of alphabetical order. He quotes Galen fairly closely, but omits a few elemental details.

There is no apparent substantiation of the above claims in modern scientific literature.

[51.27-52.5]

(ργ´) Δόλιχοι ἢ λόβια. Οἱ νῦν παρὰ πάντων ὀνομαζόμενοι λοβοὶ δό-
λιχοι καὶ φασιόλοι παρὰ τοῖς ἀρχαίοις ἐκαλοῦντο, παρὰ τισὶ δὲ μῖλαξ [p.52]
κηπαία. τρέφουσι δὲ οὐχ ἦττον τῶν πίσων· ἄφουσι δὲ εἰσι παραπλη-
σίως, πρὸς ἡδονὴν τε καὶ διαχώρησιν χεῖρους. λοβοὶ δὲ ἐξαιρέτως 5
ὀνομάζονται, ἐπειδὴ τούτων μόνων ἐν τοῖς ἔχουσιν ἀμφίεσμα λοβὸν [5]
ὄλος ὁ καρπὸς ἐσθίεται ὡς ἐπὶ τὸ πολὺ.

93) Calavances (*Vigna sinensis* Endl.) or “little pods”. The things generally called “little pods” used to be called *dolichoï* and *phasioloi* by the ancients, but kidney-bean (*Phaseolus vulgaris* L.) by some. They nourish no less than peas (*Pisum sativum* L.). And similarly they cause no flatulence, and are worse [than peas] both for pleasure and excretion. “Little pods” are given this name especially, since the whole fruit is usually eaten of these alone which have a pod wrapping them.

93) This plant is not listed by Galen in *SMT*, either as δόλιχοι, λοβιοί, or φασιόλοι, but in *Alim.Fac.* he discusses at length which plant is meant, and its effect on the gut and nutritive value (6.541.14-546.11). Dioscorides includes a short note about it under the last of these names, and states unequivocally that it does cause flatulence (2.130; K 25.1.251), which accords more closely to modern experience.

93.3-4 [52.1-2] ἄφουσι... διαχώρησιν χεῖρους This link between excretion, presumably from the bowel, and the production or absence of flatus, helps our understanding of the term ἄφυσος and its opposites, φυσώδης and πνευματώδης; it would seem, therefore, that what was thought to have been

produced by the ingestion of certain substances was an actual physical presence – what we would now call “gas” – rather than an essence or potential effector. Attempts to visualise what the ancients understood by πνεῦμα and the four elemental qualities and humours engender a certain caution in interpretation of superficially simple concepts, when, for example, what is labelled “hot” or “cold” is clearly not, from our scientific perspective.

93.4 [52.2] ἡδονήν Presumably the pleasure referred to is sexual (cf. 3.6n, 13.4n).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[52.6-18]

(ρδ´) Δρακόντιον δριμύτερόν ἐστι τοῦ ἄρου καὶ πικρότερον καὶ θερμαντικώτερον καὶ λεπτομερέστερον· ἔχει δέ τινα στύψιν βραχεΐαν σὺν τῇ δριμύτητι καὶ πικρότητι, ὅθεν δραστήριον γίνεταί τὸ φάρμακον ἐν τούτοις μάλιστα. καὶ γὰρ ἡ ῥίζα διακαθαίρει τὰ σπλάγγνα πάντα, τοὺς παχεῖς καὶ γλίσχρους λεπτύνουσα χυμοὺς καὶ τῶν κακοήθων ἐλκῶν ἀριστόν ἐστι φάρμακον, ἀποκαθαίρει τε καὶ ἀπορρύπτει γεννικῶς τὰ τ´ ἄλλα τὰ ρύψεως δεόμενα καὶ ἀλφοὺς σὺν ὄξει. τὰ δὲ φύλλα ἔλκεσί τε καὶ τραύμασι νεοτρότοις ἀρμόττει, καὶ ὅσῳ ἂν ἦττον ἢ ξηρά, τοσοῦτῳ μᾶλλον κολλᾷ· τὰ γὰρ ξηρότερα δριμύτερα τὴν δύναμίν ἐστίν ἢ ὡς τραύμασι πρέπει. πεπίστευται δὲ καὶ τυρὸν ἄσηπτον διαφυλάττειν ἕξωθεν αὐτῷ περιτιθέμενα. ὁ δὲ καρπὸς ἰσχυρότερος καὶ τῆς ῥίζης ὑπάρχων, καρκίνους καὶ πολὺποδας ἐκτῆκειν πεπίστευται. καὶ ὁ χυλὸς δὲ τοῦ καρποῦ τὰ ἐν ὀφθαλμοῖς ἀποκαθαίρει.

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[Galen 11.864.7-865.9]

94) Edder-wort (*Dracunculus vulgaris* Schott) is sharper than cuckoo-pint (*Arum italicum* Mill.) and more bitter, more warming and finer-grained. It has a certain brief astringency along with the sharpness and the bitterness, for which reason the drug becomes more efficacious especially in these aspects. For the root also purges thoroughly the innards, thinning thick and sticky fluids, and it is the best drug for malignant ulcers; and it clears away and thoroughly purges in a vigorous manner the other conditions requiring cleansing, and especially pale skin lesions, when used with vinegar. The leaves are suitable for skin ulcers and fresh wounds, and the less dry they are, the more they bring about closure; for the drier substances are sharper in capacity than is appropriate for wounds. They have been believed also to

protect cheese from rotting when wrapped around the outside of it. As the fruit is even stronger than the root, it has been believed to melt away cancers and nasal polyps. In addition, the juice of the fruit cleanses away lesions in the eyes.

94) Aëtius quotes Galen largely verbatim.

94.10-1 [52.10-1] **πεπίστευται... περιτιθέμενα** A rare excursion by Galen into non-medical usage for a simple.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists black oak-fern (*Asplenium onopteris* L.), omitted by Aëtius, which is supposedly a hair-remover (11.865.10-13 Περὶ δρυοπτερίδος).]

52.19-53.3

(ρε´) Δρυὸς ἅπαντα τὰ μόρια στυφούσης μετέχει ποιότητος, ἐπὶ πλεόν
 δὲ τὸ ὑπὸ τὸν φλοιὸν τοῦ πρέμνου εὕρισκόμενον ὑμενῶδες καὶ τὸ [20]
 ὑπὸ τῷ κελύφει τῆς βαλάνου περὶ τῆ σαρκὶ τοῦ καρποῦ. διὸ καὶ πρὸς
 ῥοῦν γυναικεῖον, αἱματὸς τε πτύσεις καὶ δυσεντερίας καὶ γαστρὸς ρεύ-
 ματα χρόνια χρήσιμον εἶναι πεπίστευται, μάλιστα δὲ ἀφέψιοντες αὐτῷ 5
 χρῶνται. σφοδρότερον δὲ ἔτι στύφει φηγὸς καὶ πρῖνος. τὰ δὲ φύλλα
 πάσης δρυὸς καταπλασσόμενα τραύματα νεότρωτα κολλᾷ, ὥσπερ ἐγὼ [25]
 κατ' ἀγρὸν ἐπειράθην. οἱ δὲ τῆς δρυὸς βάλανοι ἐσθιόμενοι τροφήν μὲν
 δαμιλῆ παρέχουσι τῷ σώματι. ἐστὶ δὲ βραδύπορος ἢ ἀπ' αὐτῶν τροφή
 καὶ παχύχυμος καὶ δύσπεπτος. ἄρισται δὲ τῶν βαλάνων πασῶν εἰσιν 10
 αἱ καστανεαὶ καὶ αἱ λόπιμοι ὀνομαζόμεναι. αὗται γὰρ μόναι τῶν [p53]
 ἀγρίων καρπῶν ἀξιόλογον τροφήν διδούσιν τῷ σώματι. εἰσὶ δὲ καὶ
 αὗται κεφαλαλαγεῖς, πολὺ δὲ μᾶλλον αἱ πρῶται ῥηθεῖσαι.

[Galen 11.865.14-867.3]

95) All the parts of the oak (*Quercus* L. spp.) share an astringent quality, even more so the membranaceous material found under the bark of the trunk, and that under the acorn-case, around the flesh of the fruit. Hence it is believed to be useful for female flow, haemoptysis, dysenteries and chronic bowel discharges, and they use it especially after boiling it down. Valonia oak (*Q. aegilops* L.) and holm-oak (*Q. ilex* L.) have an even more powerfully astringent effect. When applied topically, the leaves of every oak cause fresh wounds to unite, as I have experienced for myself in the field. When eaten, oak acorns provide abundant nourishment for the body.

The nourishment from them is slow-passing, viscous and difficult to digest. The best of all the acorns are the ones called chestnuts and sweet chestnuts. For these alone of the wild fruit provide nourishment for the body worthy of mention. But they also cause headaches, much more so the first mentioned.

95) Aëtius quotes the first third of Galen’s entry almost verbatim, paraphrases and condenses the next part substantially, and then replaces the latter half, in which Galen describes at length the theory and practice of treating wounds, but, unlike Aëtius, mentions nothing regarding the supposed nutritional value of acorns.

95.1 [52.19] **στυφούσης... ποιότητος** Oaks are an important source of tannins, which have an astringent effect (Bruneton, 1995: 333).

95.4 [52.22] **ῥοῦν γυναικεῖον** (v. 16.2n)

95.7 [52.25] **ἐγὼ** Galen also uses the first person in his description of this use (11.866.8).

95.11 [53.1] **αἱ καστανέαι καὶ αἱ λόπιμοι** Olivieri has emended *καστανικαί*, which appears in five manuscripts, to *καστανέαι*; as, according to LSJ, the latter means “chestnut-trees” and the former means “pertaining to a chestnut-tree *or* chestnuts”, and the word for the fruit of the tree is given variously as *τὰ κάστανα/οἶ* or *αἱ καστανίαι/τα καστανάια/τὰ καστανεία*, his emendation may be unsound. *λόπιμοι* presents a problem, in that, its root meaning being “easily stripped *or* lacking a nutshell”, it is translated as “sweet chestnuts”; Aëtius, however, distinguishes between *καστανέαι* and *λόπιμοι* in his final sentence when talks of *αἱ πρῶται ῥηθεῖσαι* (95.13 [53.3]).

There is possible evidence that constituents of *Quercus* species may have a beneficial effect in dysentery (Chung et al., 2011: 1415-9), and in wound healing (Moore & Perkins, 2010: 544-51; Davis & Mertz, 2008: 16-8, 20, 22-5).

[53.4-11]

(ρς´) Ἐβίσκος ἢ ἀλθαία. Ἐστὶ δὲ μαλάχη ἀγρία διαφορητικὴ χαλα-
στικὴ ἀφλέγμαντος πραῦντικὴ πεπτικὴ φυμάτων δυσπέπτων, καὶ ἡ [5]
ρίζα δὲ αὐτῆς καὶ τὸ σπέρμα τὰ μὲν ἄλλα ὁμοίως ἐνεργεῖ τῇ πόα
χλωρᾷ, λεπτομερεστέραν δὲ καὶ ξηραντικωτέραν ἐκείνης καὶ ἔτι ῥυπτι-
κωτέραν ἐπιδείκνυνται δύναμιν, ὥστε καὶ τὸ σπέρμα τοὺς ἐν νεφροῖς 5
λίθους διαιρεῖν. τὸ δὲ τῆς ῥίζης ἀφέψημα καὶ πρὸς δυσεντερίαν καὶ

διάρροϊαν καὶ αἵματος ἀναγωγὴν ὠφέλιμόν ἐστιν, ὡς ἐχούσης τινὰ δύναμιν στυπτικὴν. [10]

[Galen 11.867.4-13]

96) Marsh mallow (*Althaea officinalis* L.). The wild mallow is dispersive, loosening, non-inflammatory, soothing, and able to digest hard-to-digest swellings; and while its root and seed have the other effects similar to the green plant, they display a finer-grained and more drying capacity than it, and even more cleansing, so that the seed even removes stones in kidneys. The boiled-down root is helpful for dysentery, diarrhoea and bringing up blood, as it has a certain astringent effect.

96) This entry appears slightly out of alphabetical order, ahead of Ἔβερος. Aëtius quotes Galen almost verbatim, but omits its use for the treatment of pale skin lesions (ἀλφούς 11.867.10).

96.1 [53.4] Ἐβίσκος ἢ ἀλθαία These appear to be synonyms translatable only as “marsh mallow”.

Marsh mallow roots and leaves contain material with demulcent properties (Evans, 2009: 214), but otherwise there is no apparent substantiation of the above claims in modern scientific literature.

53.12-15

(ρζ') Ἔβερος ῥυπτικῆς καὶ λεπτομεροῦς ἐστὶ δυνάμεως, ὅθεν καὶ τὰ ταῖς κόραις ἐπισκοτοῦντα πεπίστευται ῥύπτειν. ταῖς τε ἄλλαις ὀφθαλμικαῖς μίγνυται δυνάμεσιν, ὅσαι πρὸς ἔλκη παλαιὰ καὶ ῥεύματα καὶ φλυκταίνας ἀρμόττουσιν.

53.12 ξύλον ἐστὶ τῶν εἰς χυλὸν ἀναλυομένων omitted after Ἔβερος.

[Galen 11.867.14-868.2]

97) Ebony (*Diospyros ebenum* Koenig) has a cleansing and fine-grained capacity, for which reason it has been believed to cleanse the things casting a shadow over the pupils. This [sc. capacity] is in addition to the other capacities affecting the eyes, all that are suitable for treating old ulcers, discharges and blisters.

97) Aëtius omits Galen's information that the juice is produced by rubbing the wood with water (11.857.15), but otherwise quotes him almost verbatim.

97.2 5[3.13] **τὰ ταῖς κόραις ἐπισκοτοῦντα** It is unclear whether these are corneal opacities or cataracts, which would be visible to the physician as white areas, or a retinal problem or lesion affecting the optic pathways, which would be obvious only to the patient; even if the former were the case, nothing short of modern surgical techniques could be expected to help.

Naphthaquinones present in ebony have an antibacterial effect (Evans, 2009: 250), and could therefore possibly benefit cases of bacterial conjunctivitis.

[53.16]

(ρη´) Αἰθάλη· ἀναγέγραπται ἐν τῷ περὶ λιβάνου λόγῳ.

98) Soot. This is recorded in the entry about frankincense tree (*Boswellia carteri* Birdw.).

98) This entry, completely out of alphabetical order, does not appear in Galen. For further comments, see ch. 253, p.240.

[53.17-24]

(ρθ´) Ἐλαία. Ἐλαίας οἱ μὲν θαλλοὶ τοσοῦτῳ μετέχουσι ψύξεως, ὅσον καὶ στύψεως. ὁ δὲ καρπὸς ὁ μὲν ἀκριβῶς πέπειρος θερμὸς συμμέτρως ἐστίν, ὁ δὲ ἄωρος στυπτικώτερός τε ἐστὶ καὶ ψυχρότερος. καὶ αἱ μὲν δρυπεπεῖς ἐλαῖαι τὸν λιπαρὸν ἔχουσαι χυμὸν, τροφὴν ὀλίγην μεταδι-
δόασιν τῷ σώματι· αἱ δὲ κολυμβάδες καὶ ἀλμάδες ὀνομαζόμεναι τὸν
στύφοντα χυμὸν ἔχουσαι, ῥωννύουσι τὸν στόμαχον, ἐπεγείρουσί τε τὴν
ὄρεξιν. ἐπιτηδειόταται δὲ εἰς τοῦτ' εἰσὶν αἱ μετ' ὄξους ἀποτιθέμεναι·
ἄμεινον γὰρ εἰς τὴν πέψιν ἐστὶ τὸ ἥδιον.

[20]
5

[Galen 11.868.3-6]

99) The young shoots of the olive (*Olea europaea* L.) have a share in coldness to the same extent as they also share astringency. The fruit when exactly ripe is moderately warm, but the unripe fruit is both more astringent and colder. And the olives ripened on the tree, which have the greasy juice, impart little nourishment to the body; whereas, the ones called swimming [in brine] and salted, which have an astringent humour, strengthen the stomach and awaken the appetite. Most suitable for this purpose are the

ones preserved with vinegar; for the more pleasant thing is better for digestion.

99) Aëtius quotes Galen's short *SMT* entry verbatim in the first two sentences, and then adds further information, drawn in part from *Alim.Fac.* 6.608.15-609.11.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[54.1-23]

(ρ') Ἐλαιον τὸ ἐκ τοῦ καρποῦ τῆς ἐλαίας ἐκθλιβόμενον, ὅπερ καὶ κυριώτατα ἔλαιον καλοῦμεν, ὑγραντικόν ἐστι καὶ συμμετρῶς θερμόν· τοιοῦτον δὲ ἐστὶ τὸ γλυκύτατον ἐκ δρυπεποῦς μάλιστα καρποῦ γιγνόμενον, οἷόν ἐστι τὸ σαβῖνον· θερμόν δὲ συμμετρῶς ἐστὶ τῆς μέσης κράσεως καὶ διαφορητικώτερον τοῦ ὠμοτριβοῦς. τὸ δὲ ὠμοτριβὲς ἢ ὀμφάκινον ὀνομαζόμενον εἰς ὅσον στύψεως μετεῖληφεν, εἰς τοσοῦτον καὶ ψύξεως. τὸ δὲ παλαιὸν ἔλαιον τὸ μὲν ἐκ τοῦ γλυκέος καλουμένου γιγνόμενον, θερμότερόν τε καὶ διαφορητικώτερόν ἐστι. τὸ δὲ ἐξ ὠμοτριβοῦς, ἄχρι μὲν ἂν ἀποσώζη τι τῆς στύψεως, μικτῆς ὑπάρχει δυνάμεως, ἐπειδὴν δὲ ἀποβάλλῃ τελέως αὐτήν, ὁμοιοῦται τῷ ἄλλῳ. τὸ δὲ λυχνιαῖον ἀπὸ τοῦ μέσου καὶ εὐκράτου, τοῦ γλυκέος λέγω, τοσοῦτον ἐπὶ τὸ θερμότερον νεύει, ὅσον τὸ ὀμφάκινον ἐπὶ τὸ ψυχρότερον. χρῆσώμεθα δὲ τῷ μὲν ὀμφακίνῳ, θερμότερα γιγνομένη τῇ κεφαλῇ, τῷ δὲ γλυκεῖ, ξηροτέρα γιγνομένη καὶ περιτεταμένη· τῷ δὲ λυχνιαίῳ χρῆσώμεθα, ἐψυγμένη τῇ κεφαλῇ. εὐδῆλον δὲ ὡς τὸ μὲν ὀμφάκινον καὶ ψυχρὸν ἐνίοτε προσφέρειν δεῖ, τὰ δὲ ἄλλα πάντως θερμά. τῇ μὲν οὖν κεφαλῇ οὕτως, τῷ δὲ παντὶ σώματι ξηρῷ παρὰ τὸ κατὰ φύσιν γιγνόμενον, τῷ γλυκεῖ προσαλείφειν ἐπιτήδειον, καὶ πυκνωθέντι δὲ ἐκ ψύξεως ἢ στύψεως ἢ δῆξεως ἢ δριμέων φαρμάκων ἢ χυμοῦ κνησμῶν τε γενομένων πάντων ἐπιτηδειότατον, καὶ μάλιστα σὺν γυμνασίῳ ἢ μετὰ τὰ γυμνάσια. στομάχῳ δὲ καὶ ἥπατι φλεγμαίνουσι μάλιστα τὸ ὀμφάκινον ἀρμόδιον διὰ τὴν στύψιν καταινουόμενον, τοῖς δὲ ἄλλοις μορίοις τὸ γλυκύ.

[Galen 11.868.7-869.1]

100) Oil, that pressed out from the fruit of the olive tree, which we call most properly olive oil, is moistening and to the same extent warm; the one which is the sweetest comes from the most tree-ripened fruit, such as the Sabine variety. It is moderately warm, of the middle rank, and more dispersive than that pressed from unripe olives. The more the one called raw-pressed or pressed from unripe fruit shares astringency, to that extent it also has a share of coldness. But old oil, the one coming from what is called sweet, is both warmer and more dispersive. As long as it retains something

of its astringency, the oil from the unripe-fruit pressing has a mixed capacity, but whenever it finally casts away this astringency, it becomes like the other. The oil suitable for lamps, from the mild and middle range – I am talking about one from the sweet – inclines towards being warmer as much as that from unripe fruit inclines towards being colder. Let us use the unripe sort for the head when it becomes hotter, but the sweet for when it becomes drier and has been tight-stretched; let us use the lamp-grade oil for the head when it has been chilled. And it is quite clear that it is necessary to apply the unripe and cold sort sometimes, but in every other circumstance the warm sort. Whereas, therefore, this is the case for the head, when it comes to the whole body's becoming dry contrary to what is natural, it is suitable to anoint with the sweet sort, and also what has been condensed from cold, astringent or biting, or from sharp drugs, or juice, and is most suitable when all kinds of itchings occur, especially with exercising or after exercising. They are nourishing for the stomach and liver; because of its astringency the unripe sort is especially suitable when poured over them, but the sweet sort is suitable for other parts.

100) Aëtius quotes Galen's first five sentences (11.868.7-869.1) – those which are specific to olive oil – fairly closely, and then adds more information, especially about usage.

100.4 [54.4] **σαβίνον** Although LSJ suggests “from over-ripe olives” as a translation for this word, Galen uses it in a section where he cites place-names and discusses variation according to provenance (11.869.14). It seems more appropriate, therefore, to translate it as “Sabine”, referring to a district north-east of Rome.

The emollient properties of olive oil are well known (Evans, 2009: 50).

Aëtius' Oils

Aëtius now digresses from his stated intention to provide a synopsis of Galen's *SMT*, by listing a further thirty-four oils or ointments, derived from various plant materials. Twenty-two of these have a single ingredient

prepared in solution or suspension with olive oil; the remainder have often a multiplicity of ingredients, and therefore cannot be considered simples. Galen (11.869.1-872.18) mentions nine of these single-ingredient oils following his entry about olive oil, but does not elaborate about their preparation or use, postponing discussion to his books on compound drugs (*Comp. med. gen.*) and their uses according to anatomical sites (*Comp. med. loc.*); the highly complex recipes included in these later works are sufficiently different from Aëtius' recipes for it to be said that the latter has not attempted here to quote his predecessor. Galen does, however, make brief mention of six sources of oil not listed by Aëtius, namely mustard (*Sinopsis alba*), black cummin (*Nigella sativa* L.), turpentine from terebinth tree (*Pistacia terebinthus* L.), henbane (*Hyoscyamus niger* L.), Syrian cedar (*Juniperus excelsa* L.), and pine wood (*Pinus* L. spp.). He also discusses the significance of taste, and the variations in olive oil according to geographical provenance. Dioscorides (1.29-79 (K 25.43.14-83.31)) lists fifty-one oils, twenty-eight of which appear in Aëtius. Although there are similarities in their compositions, Aëtius' and Dioscorides' oils are far from identical. In short, I believe Aëtius has seen fit to introduce a list of medicaments, both simple and compound, dependent largely on his original ideas, or possibly influenced by sources unknown to us. His probable expertise in this area is suggested by his referral to the elaborate techniques involved in their preparation, including the use of a double-chambered vessel (chh.113, 122), "exchanging" (chh.113, 116, 120), "pre-boiling" (ch.131), the production of "second oil" (ch.131), and an attempt at some crude form of percolation or distillation (ch.135). The odours of the oils are important to him, for he repeatedly refers to them.

[54.24-55.2]

(ρα') Ἐλαιον κίκινον. Τὸ δὲ κίκινον κατ' Αἴγυπτον γίγνεται, τοῦ σπέρματος τῆς κίκεως, ὃ καλεῖται κρότῳνες, κοπτομένου ἢ θλιβομένου ἢ δι' ὕδατος θερμοῦ ἀναλεγόμενου. ἐστὶ δὲ λεπτομερὲς καὶ διαφορητικὸν ὡς τὸ παλαιὸν ἔλαιον. σμήχει δὲ ἀλφουὺς ἐφήλεις φακοὺς συνεχῶς χριόμενον. παραπλήσιον δὲ τῷ ῥαφανίνῳ ἐστὶ, διὸ χρηστέον αὐτῷ, μὴ παρόντος κικίνου, ἢ τῷ παλαιῷ. 5 [p55]

101) Castor oil. Castor oil is produced in Egypt, when the seed of the castor-oil tree (*Ricinus communis* L.), which is called κρότωνες, is pounded, ground or extracted with warm water. It is fine-grained and dispersive, like old oil. It washes off pale skin lesions, keratoses and freckles, when rubbed on continuously. And it is similar to radish oil, so that, if no castor oil is available, radish oil or old oil may be used.

101) 101.2 [54.25] **κρότωνες** Perhaps used because castor-oil seeds resemble ticks, an alternative meaning for this word.

The powerful laxative effect of castor oil (Katzung, 2007: 1022), when taken orally, has apparently gone unnoticed by Aëtius and Galen; nor is there any reference to this in Dioscorides or Pliny the Elder.

[55.3-5]

(ρβ') Λινοσπέρμινον. Καὶ ἐκ τοῦ λινοσπέρμου δὲ σκευάζεται ἐλαιον, ὡς προείρηται καὶ χρῶνται αὐτῷ νῦν ἀντὶ τοῦ κικίνου· τὸ γὰρ κίκινον οὐκέτι κομίζεται ἀλλὰ τοῦτο ἀντ' αὐτοῦ κομίζουσιν.

102) Linseed oil. Oil is also prepared from linseed (*Linum usitatissimum* L.), as previously mentioned, and they use it now instead of castor oil. For castor oil is no longer obtained, but they provide this instead of it.

102) There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[55.6-7]

(ργ') Ῥαφάνινον. Τὸ δὲ Ῥαφάνινον ὅμοιον τῷ κικίνῳ κατὰ τὰ ἄλλα ἐστὶ, θερμότερον δέ.

103) Radish oil. Radish (*Raphanus sativus* L.) oil is similar to castor oil in other respects, but warmer.

103) There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[55.8-13]

(ρδ´) Αιγείρινον. Τὸ δὲ αιγείρινον σκευάζεται ἐν τῷ ἔαρι, ὅτε πολλὴ περὶ τὸ σπερμάτιόν ἐστι ῥητίνη. λαβόντες γὰρ τοὺς κόκκους ἐνθλῶσιν ἐπ' ὀλίγον καὶ στήσαντες οὐγγίας δ' ἐμβάλλουσιν εἰς ἐλαίου γλυκέος [10] ξέστην ἰταλικὸν καὶ ἡλιοῦσιν ἡμέρας μ' καὶ οὕτως σειρώσαντες ἀποτίθενται. ἐστὶ δὲ καὶ αὐτὸ θερμαντικόν, λεπτομερές, μαλακτικὸν μετ' εὐωδίας. 5

104) Black poplar oil. Black poplar (*Populus nigra* L.) oil is prepared in the spring, when there is a lot of resin around the seedlets. In fact, they take the berries and squeeze them slightly, and they weigh out 4 *unciae* and add them to an Italian *xestes* of sweet oil, expose it to the sun for forty days, and so, once they have filtered it, they store it away. It is warming even on its own, fine-grained, softening and has a sweet smell.

104) There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[55.14-19]

(ρε´) Ἀμυγδάλινον. Τὸ δὲ ἀμυγδάλινον ἐκ τοῦ καρποῦ τῶν πικρῶν ἀμυγδάλων γίνεται. λεπτομερές δὲ ἐστὶ τοῦτο καὶ θερμότερον τοῦ γλυκέος μίαν μοῖραν. μάλιστα δὲ ὥσιν ἀρμόζει τοῖς ἐμφραγεῖσιν ὑπὸ παχέος πνεύματος καὶ δυσηκοίας καὶ ἤχοις τοῖς ἀπὸ ψύξεως καὶ σκώληκας ἐν ὧσιν ἀναιρεῖ. ἢ γὰρ πείρα τοῖς ὧσι μᾶλλον ἀρμόζειν αὐτὸ καταμεμάθηκεν ἢ περὶ τοῖς ἄλλοις μέρεσι. [15] 5

105) Almond oil. Almond oil comes from the fruit of bitter almonds. This is fine-grained and warmer than the sweet by one part. And it is especially suitable for ears which are blocked by thick wind, and hearing-losses, cases of tinnitus caused by cold, and it removes maggots in ears. Indeed, experience has learned that it is more suitable for the ears than for other body-parts.

105) 105.3-4 [55.16-7] ὑπὸ παχέος πνεύματος Perhaps this is a reference to Eustachian catarrh, which can cause various hearing disturbances, sometimes relieved by blowing the nose.

105.4-5 [55.17-8] σκώληκας ἐν ὧσιν An extreme rarity nowadays (v. Intro. lxiv).

For comments about bitter almonds, v. ch. 31, p.70. Almond oil is still listed as a prescribable treatment for the removal of ear-wax (*BNF*, 2007: 577).

[55.20-24]

(ρζ´) Καρύινον. Ὅμοίως τῶ ἀμυγδαλίῳ καὶ τοῦτο σκευάζεται ἢ κοπτο-
μένῳ καὶ πιεζομένῳ ἢ εἰς ζέον ὕδωρ ἐμβαλλομένῳ μετὰ τὸ κοπῆναι
καὶ ἀρμόζει δὲ τοῖς αὐτοῖς· περιττὸν δὲ ἔχει τὸ χρησιμεύειν τοῖς
χρυσούσιν ἢ ἐγκαίουσι· ζηραίνει τε γὰρ καὶ συνέχει πολὺν χρόνον
τὰς χρυσώσεις καὶ ἐγκαύσεις.

5 [24]

106) Walnut oil (*Juglans regia* L.). This too is prepared similarly to almond oil, either by being pounded and pressed, or by being added to boiling water after being chopped up, and it is suitable for the same things. And it is exceptionally useful for those engaged in gilding and encaustic work; for it both dries and holds together the gildings and encaustics for a long time.

106) κάρυον can also be used as a generic term for nuts. The presence of juglone, a staining agent, in walnut oil (Bruneton, 1995: 348) may fit in with Aëtius' stated uses, and make "walnut" the preferred translation here.

106.5 [55.24] **χρυσώσεις καὶ ἐγκαύσεις** This is a rare excursion by Aëtius into non-medical territory. Very little is known about the technology involved, and this appears to be the only mention of walnut oil. Pliny says that the "burning in" of colours was long established before his time, that there were three methods, and wax was applied (*HN* 35.122, 149).

[55.25-56.2]

(ρζ´) Μυροβαλάνινον δύναμιν ἔχει καθαρτικὴν σπύλων φακῶν ἰόνθων πάσης
μελανίας καὶ τὰ κατὰ κοιλίαν καθαίρει. ἀρμόζει δὲ καὶ πρὸς ὠταλγίαν
καὶ πρὸς ἦχους μετὰ στέατος χηνεῖου ἐγγεόμενον. σκευάζεται δὲ ὁμοίως [p.56]
τῶ ἀμυγδαλίῳ, ἀληθομένης τῆς μυροβαλάνου.

107) Desert-date oil (*Balanites aegyptica* Delile) has a capacity which purges spots, freckles, acne and every pigmented lesion, and it purges the contents of the abdomen. It is suitable for earache and for tinnitus when poured in with goose-fat. It is prepared similarly to almond oil, the desert date being ground down.

107) 107.1 [55.25] **ἰόνθων** Galen describes these as small, firm swellings of the lower face, different from sycosis barbae (*Comp. med. loc. 5.3* (K 12.822-3)); the lesions produce a thick discharge. Elsewhere, Aëtius says some call them ἀκνάς (8.14.1), and acne vulgaris would fit the diagnosis, although I should have expected many more references to what is, at least nowadays, such a common disease (cf. Intro Iv).

As desert-date oil has some activity against certain Gram-positive bacteria (Al Ashaal et al., 2010: 495-501), it may be effective in the treatment of skin eruptions where sepsis is involved.

[56.3-17]

(ρη´) Δάφνινον ἐκ τοῦ καρποῦ τῆς δάφνης σκευάζεται, ὡς προεῖρηται. τὸ δὲ σύμμικτον σκευάζεται οὕτως· πρὸς ε´ ξέστας τῶν πεπεμμένων ἐλαίων ἐμβαλλομένου ἐνὸς ξέστου τοῦ καρποῦ τῶν δαφνίδων λιπαροῦ καὶ προσφάτου καὶ οὕτως τριβομένων ἅμα καὶ ἐκθλιβομένων [5]
ὥσπερ καὶ τὸ ἔλαιον. θερμὸν δὲ ἄγαν ἐστὶ καὶ μαλακτικὸν τὸ ἀμιγές, 5
ὥστε τοῖς σφοδρῶς ἐψυγμένοις μέρος τι τοῦ σώματος χρησιμεύει καὶ ξηραίνει δὲ ἱκανῶς, ὥστε τοῖς ψωριῶσι ξηροδέρμοις καὶ λειχήνας ἔχουσι τραχεῖς χριόμενον ἐν βαλανείοις ἀποθεραπεύει. φευκτέον δὲ [10]
αὐτὸ ἐπὶ τῶν φλεγμαινόντων λειχήνων ἢ ψωρῶν καὶ ἐπὶ τῶν θερμῶν κράσεων καὶ χολωδῶν. τοῖς γὰρ ὑγροῖς καὶ φλεγματικοῖς ἀρμόττει καὶ 10
πᾶσι τοῖς ὑπὸ ψύξεως ἐνοχλουμένοις τὰ ἄρθρα καὶ ἰσχιαδικοῖς κατάλληλον· ἀναιρεῖ καὶ σκώληκας καὶ φθειρας ἀγρίου καὶ ἡμέρους καὶ κονίδας καὶ πίτυρα κεφαλῆς καὶ ὀφιάσεις καὶ ἀλωπεκίας· ἢ χρῆσις δὲ [15]
ἐν λουτρῶ νήσται, εἴτα ἀποσμήγειν ὡς καὶ μέλιτι καὶ τήλεως ἀλεύροις, παραφυλάττων τὸ θερμῆ κεφαλῆ μὴ προσάγειν αὐτό. 15

[56.6] πάντων omitted after τριβομένων.

108) Bay tree oil is prepared from the fruit of the bay tree (*Laurus nobilis* L.), as has been aforementioned. And the compound is prepared as follows: to five *xestes* of olives which have been ripened, add one *xestes* of bay-tree fruit, oily and fresh, and so they are crushed and at the same time squeezed out, as is also done for olive oil. The undiluted form is very warm and softening, so that it is very useful for those who have become seriously chilled in some part of the body, and it also dries adequately, so that when rubbed in baths on those who have scaly dry skin and those who have impetigo, it effects a cure. But it must be avoided in those cases of inflamed impetigo or itchy scabby lesions, and in those with warm and bilious constitutions. For it is suitable for moist and phlegmatic individuals, and all those afflicted in their joints because of cooling, and it is appropriate for

sufferers from hip problems. It even removes maggots, and ticks and lice, nits, dandruff, serpiginous areas of hair loss and bald patches. And there is a use in bathing when fasted, then wiped off with egg and honey and finally with meal, taking care not to apply it to a warm head.

108) 108.7 [56.9] **λειχήνας** For discussion of translation here and in subsequent entries, see Intro. lvii.

108.12 [56.14] **φοεῖρας ἀγρίους καὶ ἡμέρους** Literally, “wild and domesticated lice”; presumably the creatures encountered outdoors come from animals such as sheep or deer, i.e. “ticks”, whereas the indoor variety are passed on from humans, i.e. “lice”.

108.14 [56.16] **ἐν λουτρῷ νήσται** (cf. 54.4n)

There is no apparent substantiation of the above claims in modern scientific literature.

[56.18-25]

(ρθ´) Σησάμινον. Σκευάζεται τοῦτο ἐκ τοῦ σησάμου τριβομένου καὶ ἐμβαλλομένου ὕδατι. τὴν δὲ δύναμιν οὐ μακρὰν ἐστὶ τοῦ γλυκέος ἐλαίου. τῆς τε γὰρ θερμασίας μέσως ἔχει καὶ ἄστυφόν ἐστὶ παντελῶς γευομένων, καὶ εἰς τὸ ἐσθίειν ἐπιτήδειον, ἠδὺ τε ὑπάρχον τῇ γεύσει καὶ πεπτόμενον ῥαδίως καὶ ὑπαγωγὸν τῆς γαστρὸς. ἔξωθεν δὲ χριόμενον διὰ τὸ πάχος ἐμπλαστικόν ἐστίν. εἰς μέντοι κατασκευὴν τῶν πρὸς εὐωδία συντιθεμένων ἐλαίων ἐπιτηδειότερόν ἐστι τοῦ κοινοῦ ἐλαίου διὰ τὸ μόνιμον εἶναι καὶ μὴ ῥαδίως σήπεσθαι. [20] 5 [25]

109) Sesame oil. This is prepared from sesame seed (*Sesamum indicum* L.), crushed and added to water. It is in its capacity not far from sweet oil. For it has a medium warmth and is completely non-astringent to taste, and it is suitable for eating, since it is both pleasant to taste and easily digested, and has a purgative effect on the bowel. When rubbed on externally, it is adhesive because of its thickness. It is, however, more suitable for oils being compounded for fragrance than the common oil, through being stable and not being prone to putrefaction.

109) Sesame oil is known to have a mild laxative effect (Bruneton, 1995: 131).

(ρι') Σχίνινον. Σκευάζεται καὶ τοῦτο ἐκ τοῦ καρποῦ τῆς σχίνου, ὡς εἴρηται ἐπὶ τῶν ἄλλων, σκευάζεται δὲ πάλιν ἄλλως ὥσπερ ἐπὶ τοῦ δαφνίνου προεῖρηται, μιγνυμένου τοῦ καρποῦ τῆς σχίνου ταῖς ἐλαίαις. χρήσιμον δὲ τὸ ἀμιγῆς καὶ καθαρὸν στόματι ρευματιζομένῳ καὶ οὖλοις φλεγμαίνουσι θερμὸν ἐν τῷ στόματι διακατεχόμενον καὶ ἐν βαλανείῳ καὶ χωρὶς βαλανείου· ἀποκρουστικὸν γάρ ἐστι καὶ τονωτικὸν μετὰ τοῦ μὴ τραχύνειν. τὸ δὲ μικτὸν μᾶλλον παρηγορεῖ σὺν τῷ φυλάττειν τὸν τόνον, ὅθεν χρησίμως παραλαμβάνεται ἐπὶ ἥπατος καὶ στομάχου κατ-αιονήσει. [p.57] 5 [5]

110) Mastic oil (1). This is also prepared from the fruit of the mastic tree (*Pistacia lentiscus* L.), as has been said about the others, but, on the other hand, it is prepared differently, as has been previously stated about bay tree oil, since the fruit of the mastic is mixed with olives. And the unmixed oil is useful, being both cleansing for a mouth affected by discharge, and warming for suppurating gums, when retained in the mouth, both in a pledget and without a pledget. For it has a dispelling and bracing effect, without causing roughness. And the mixed oil is more comforting, while preserving its strength, for which reason it is advantageously administered as a fomentation over the liver and stomach.

- 110) 56.26 [110.1] **σχίνου** According to LSJ and Carnoy, this can mean either “mastich” or “squill” (*Scilla maritima* L.). Aëtius has another, separate entry for mastic oil (μαστίχινον, ch. 122 p.139), as well as one for squill (σκίλλα, ch.366 p.314). Dioscorides also has separate entries for σχινέλαιον (1.50 (K 25.54)) and μαστιχέλαιον (1.51 (K 25.54)); those are translated into Latin in the Kuhn edition as “*lentiscinum*” and “*mastichinum*”, which, according to *OLD*, have the same meaning, “mastic”. Galen uses the terms σχίνινον and μαστίχινον in the same sentence (11.870.5,6). It seems, then, that there are two distinct plant oils for which our only available English translation is “mastic”. I have therefore labelled them (1) and (2).

There is *in vitro* evidence of possible benefit from mastic in one form of gum disease (Sterer, 2006: 290-2).

(ρια') Οἰνάνθινον τὰ αὐτὰ δρᾶ τῷ μηλίῳ καὶ τῷ ῥοδίῳ, ἐκτὸς τοῦ τὴν κοιλίαν μαλάσσειν. συντίθεται δὲ τὸν τρόπον τοῦτον· οἰνάνθην ἀμπέλου τὴν εὐώδη λαβὼν καὶ ἐάσας μαρανθῆναι, βάλλε εἰς καινὸν

ἀγγεῖον σὺν ἐλαίῳ ὀμφακίνῳ καὶ κίνει καθ' ἐκάστην ἐπὶ ἡμέρας μ' [10]
καὶ διηθήσας χρῶ. ἔστω δὲ τῆς μὲν οἰνάνθης Γ α', τοῦ δὲ ἐλαίου x α'. 5

[57.11] α replaces β after οἰνάνθης Γ.

111) Wild vine-flower (*Vitis silvestris* Gmel.) oil does the same things as quince oil and rose oil, in softening the exterior of the abdomen. And it is put together in the following manner: having taken the sweet-smelling flower of the vine and allowed it to become withered, put it into a new vessel with unripe-olive oil and agitate each day for 40 days, and, having filtered it, use it. And let there be 1 *uncia* of the vine-flower and 1 *khou*s of oil.

111) Carnoy adds *Spiraea filipendula* L. and *Clematis flammula* L. as possible translations for οἰνάνθινον.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[57.12-30]

(ριβ') Μήλινον σκευάζεται ἀπὸ τῶν κυδωνίων μήλων, γίγνεται δὲ καὶ ἐκ τῶν ἄλλων μήλων τῶν στρυφνότερον ἔχόντων τὸ δέρμα καὶ εὐωδέστερον. περιελόντες δὲ τὸ πρὸς τὴν ἔκφυσιν καὶ πρὸς τῷ πυθμὲνί κάρφος καὶ τὴν ἐντεριώνην σὺν τοῖς ἔνδον κόκκοις, εἶτα τέμνοντες [15]
προσκεκλιμένον τοῦ δέρματος—ἐν αὐτῷ γὰρ ἡ εὐωδία καὶ ἡ στύψις 5
ὑπάρχει—καὶ ποιήσαντες μικρὰ τεμάχια, ἐμβαλοῦμεν τῷ ζέστη τοῦ ὀμφακίνου ἐλαίου Γ γ' τῶν μήλων, καὶ ἠλιώσαντες ἡμέρας μ' ἀποτιθέμεθα. δύναμις δὲ τοῦ μηλίνου μᾶλλον ἐπὶ τὸ ψυχρότερον νεύει, οὐ μὴν ἄγαν διὰ τὸ οἰνωδες τοῦ μήλου. στύφει μέντοι γε ἰκανῶς καθάπερ τὸ σχίνινον καὶ μᾶλλον ὑπερέχει στομάχῳ, διὰ τὸ ἐκ τροφίμων ὑλῶν ἀμφοτέρων γίνεσθαι τοῦ τε ἐλαίου καὶ τοῦ μήλου, ὥστε ἀκολούθως ἀρμόττει στομάχῳ φλεγμαίνοντι καὶ ἀτονοῦντι ἐμβρεχόμενον καὶ τοῖς ἐπιθέμασιν ἐμβαλλόμενον καὶ πινόμενον. χρησιμώτερον δὲ ἐστὶ τοῦ ῥοδίνου διὰ τὸ οἰκειότερον τοῦ μήλου· ἐντίθησι γὰρ τόνον τῷ στομάχῳ καὶ σφοδρότερον διωθεῖ τοὺς ἐγκειμένους ἐν τῇ γαστρὶ δριμεῖς χυμούς· ἐνίεται δὲ δι' ἔδρας καὶ τοῖς ὑπὸ δριμείας χολῆς δακνωμένοις τὸν κῶλον καὶ τὰ παχέα τῶν ἐντέρων. παραφυλακτέον δὲ καὶ τὴν αὐτοῦ προσαγωγὴν ἐπὶ τῶν ἀπὸ ψύξεως βλαβέντων, ἐπὶ γὰρ τούτων μᾶλλον ἀρμόζει τὸ ἔχον ἀψίνθιον συνεψόμενον. [30]

[57.17] τεμάχια replaces τεμάχη.

112) Quince oil is prepared from quince fruit (*Pyrus cydonia* L.), and it also comes from the other fruit which have a more astringent and sweeter-

smelling skin. Once we have pared away the stalk towards the outgrowth and near the base, and the pith with the seeds inside, and then cut it up, while the skin remains attached – for the fragrance and astringency reside in it [the skin] – and we have made small slices, we shall throw 3 *unciae* of the fruit into a *xestes* of unripe-olive oil, and, having exposed it to the sun for 40 days, we lay it aside. The capacity of quince oil is more inclined towards being colder, but not actually too much so, on account of the wine-like quality of quince. It does, however, have an adequately astringent effect, just as mastic oil, and it is friendlier towards the stomach, owing to its being produced from ingredients which are both nourishing, oil and quince, so that, in consequence, it is suitable for an inflamed and atonic stomach, when applied as a lotion, added to applications, and drunk. It is more useful than rose oil, because of the greater suitability of the quince; for it imparts tone to the stomach, and pushes through more powerfully the sharp humours lying in the bowel. It is also administered rectally for those stung by sharp bile in the colon and the thick parts of the intestine. But its administration should be avoided in those harmed by cold, for in those patients what has had wormwood boiled in with it is more suitable.

112) There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[58.1-59.9]

(ριγ') Ἐλαιον ῥόδιον σκευάζεται οὕτως·
 ῥόδων ἐρυθρῶν ἐξωνυχισμένων καὶ ἐφυγμένων ἡμέραν καὶ νύκτα Γ γ',
 ἐλαίου ὀμφακίνου ξέστης ἰταλικὸς εἶς, ἐμβάλλοντα δὲ τὰ ῥόδα περι-
 σφίγγειν χρῆ τὸ στόμα τοῦ βίκου ἔσωθεν μὲν ὀθονίῳ, ἔξωθεν δὲ δέρ-
 ματι διὰ τοὺς γιγνομένους ὄμβρους αἰφνίδιον καὶ ἡλιοῦν ἡμέρας κ' 5 [5]
 καὶ οὕτως σειρώσαντα ἀποτίθεσθαι τοὺς βίκους ἐπὶ σανίδων ἐν οἴκοις
 εὐκράτοις. τινὲς δὲ ἕτερα τινὰ προσεμβάλλουσι τοῖς ῥόδοις. ἀρίστη δὲ
 ἐστὶν ἢ διὰ τῶν ῥόδων μόνων καὶ ἐλαίου σκευασία. τινὲς δὲ οὐχ
 ἡλιοῦσιν, ἀλλ' ἀποκρημοῦσι τὸν βίκον εἰς φρέαρ ὕδατος ψυχροῦ ἡμέ-
 ρας μ'. ἀρμόζει δὲ κεφαλῇ θερμανθεῖση καὶ ξηρανθεῖση ἢ ἐξ ἡλιώσεως 10 [10]
 ἢ ἐκ πυρετῶν ἢ τινος ἄλλης τοιαύτης προφάσεως. ὑγραίνει γὰρ καὶ
 παρηγορεῖ καὶ ὕπνον ἐπάγει. καὶ ἐπὶ σπλάγχχνων δὲ ἐν πυρετοῖς ἐκ-
 θερμαινομένων ἀρμόδια ἢ κηρωτὴ δι' αὐτοῦ σκευαζομένη καὶ πλυνο-
 μένη δι' ὕδατος ψυχροῦ, καὶ πλειστάκις ἀλασσομένου τοῦ ὕδατος ἐν
 θέρει καὶ ἐπιρριπτομένης τῆς κηρωτῆς τοῖς σπλάγχχνοις. σκευάζε δὲ 15 [15]
 οὕτως τὴν κηρωτὴν· κηροῦ Γ ζ' ῥοδίνου Γ δ'. τῆκε τὸν κηρὸν μετ'
 ὀλίγου ῥοδίνου ἐπὶ διπλώματος καὶ ἐπίχεε εἰς ὕδωρ ψυχροῦν καὶ

ψυγέντα ἄρας τῆκε πάλιν καὶ ἐπίχρεε καὶ μάλασσε ταῖς χερσὶν ἀποπλύ- νων τὸν κηρὸν τῷ ὕδατι καὶ πάλιν τὸ τρίτον τῆκε καὶ ἐπιχέας πλῦνε, εἶτα ἐπιβάλλον τὸ λοιπὸν τοῦ ρόδινου τῆκε καὶ ἄρας κινῶν ψύχε	20 [20]
καὶ ἐπίχρεε ἐν θυία καὶ λείου ἐπιστάζων ὕδωρ ὅσον ἐπιδέχεται καὶ ἀνελόμενος ἀπόθου εἰς ψυχρὸν ὕδωρ ἀλλάσσω. εἰ δὲ ἀντὶ τοῦ ὕδα- τος ὄξος μίξις τῆ κηρωτῆ ἐπιρραίνων ἐν τῷ λειοῦσθαι αὐτὸ ἐν τῇ θυία, ἀγαθὸν φάρμακον ἐργάση πρὸς ἐρυσσιπέλατα καὶ ἔρπητας καὶ ἄνθρακας. κεῖται καλῶς ἡ κηρωτῆ ἐν τῷ ρ' α' κεφαλαίῳ τοῦ ε' λόγου.	25 [25]
[πλυνομένη δι' ὕδατος ψυχροῦ πλειστάκις ἀλλασσομένου τοῦ ὕδατος ἐν θέρει καὶ ἐπιρριπτομένης τῆς κηρωτῆς τοῖς σπλάγγχοις] καὶ πινό- μενον δὲ τὸ κάλλιστον ρόδιον σὺν ὕδατι ψυχρῷ ἢ θερμῷ ἐπὶ τῶν δακνομένων τὸν στόμαχον ἐκ χολῆς δριμείας ἢ ἐλμίνθων ἢ ἀσκαρίδων μεγάλας παρέχει ὠφελείας. ἐπὶ δὲ ἐλμίνθων καὶ μάλιστα ἐπὶ παίδων κρεῖττον ποιεῖ μίγνυμενον ἐψημάτι τῷ ἀπ' οἴνου τριτουμένου σκευα- ζομένῳ καὶ πινόμενον· ἐκτινάσσει γὰρ αὐτὰς τάχιστα. ἐνίεται δὲ καὶ κώλῳ δακνομένῳ διὰ τὰς εἰρημένας προφάσεις, παραφυλακτέον δὲ τὴν χρῆσιν αὐτοῦ ἐφ' ὧν μὴ πολλή ἐστὶν ἡ θερμασία καὶ περιττὸν τὸ σῶμα.	[p59] 30 [5] 35

[58.1] κηρωτῆ ἢ ψύχουσα. Ῥόδιον omitted after Ἐλαιον ρόδιον.

[58.15] ἐπιρριπτομένης replaces ἐπιρραπτομένης.

113) Rose oil is prepared as follows: 3 *unciae* of red roses, their calyces stripped off, and chilled day and night, one Italian *xestes* of unripe-olive oil, and, when the roses are put in, it is necessary to constrict the mouth of the jar on the inside with lint, and on the outside with hide in case of the sudden arrival of showers, and to place it in the sun for 20 days, and so having filtered it, to lay aside the jars on shelves in houses with an even temperature. Some people add certain other ingredients in addition to the roses. But preparation using only roses and oil is best. Some do not place it in the sun, but plunge the jar into a tank of cold water for 40 days. And it is suitable for a head which has become hot and dry, either from exposure to the sun, or fevers, or some such other cause. For it cools, calms and brings on sleep. And the salve prepared from it and washed with cold water is suitable for innards overheated in fevers, with the water also being changed very often in summer, and the salve being applied to the innards. Prepare the salve as follows: 6 *unciae* of wax; 4 *unciae* of rose oil. Dissolve the wax in a little rose oil in a double pot, decant it into cooling water, and, having started its cooling, dissolve it again, decant it, soften it by hand while washing away the wax with water, and again dissolve it for a third time, and, after decanting it, wash it; then, adding the remainder of the rose oil,

dissolve it, and, having begun stirring, cool and decant in a mortar, and render it smooth while dripping on as much water as it absorbs, and collect it and lay it aside, leaving it in cold water. But if instead of water you mix vinegar with the salve, sprinkling it in while it is being ground down in the mortar, you will produce a good drug for cases of cellulitis, herpes and carbuncles. The salve fits well in the 91st chapter of the 5th book. [Washed with cold water, the water being changed very often in summer and the salve being scattered over the innards] And when the finest rose oil is drunk with warm or cold water, it provides great benefits for conditions biting the stomach as a result of sharp bile, or worms, or threadworms. In the case of one type of worm, especially also in children, it does more when mixed with a bouillon prepared from third-strength wine, and drunk. For it expels them most quickly. And it is also injected as an enema into the bowel when it is being stung for the reasons which have been mentioned. But its use is to be avoided in those patients where there is not much warmth and their body tends to excess.

113) 113.12 [58.12] **παρηγορεῖ** There is evidence, from a double-blind trial, that transdermally absorbed rose oil has a calming effect (Hongratanaworkit, 2009: 291-6).

113.16 [58.16] **τῆκε** It is unclear whether the wax is rendered liquid by being dissolved, as may be expected from the effect of a hydrophobic solvent such as an oil, or by melting under the influence of (unstated) heat, and then being returned to solid state when cooled in water.

113.25 [58.25] **ἄνθρακας** Rose oil has been shown to inhibit *Staphylococcus aureus*, the likely causative organism (Ulusoy et al., 2009: 554-8).

113.25 [58.25] **ἐν τῷ ρ' α' κεφαλαίῳ τοῦ ε' λόγου** In this chapter (Περὶ συντήξεως) Aëtius describes a condition in which there is diarrhoea, weight loss and fever, and requires treatment with cooling agents, although rose oil is not specified.

113.28-9 [59.2-3] **ἐπὶ τῶν δακνομένων τὸν στόμαχον** *Helicobacter pylori*, the causative organism in peptic ulceration, is inhibited by rose oil, which also has a spasmolytic effect on the stomach (Boyanova et al., 1999: 705-6).

113.34-5 [59.8-9] **περιττὸν τὸ σῶμα** It is unclear what excess is meant.

There is no apparent modern scientific evidence to support Aëtius' other therapeutic claims.

[59.10-20]

(ριδ') Χαμαιμήλινον σκευάζεται οὕτως· ἐλαίου γλυκέος ἰταλικοῦ ξέστης εἷς, τῶν δὲ ἀνθῶν καθαρῶν τῆς χαμαιμήλου γ β' προεψυγμένων ἡμέρα μιᾶ· ὀθόνη δὲ ἀραιᾶ χρηὶ σκεπάζειν τὸ στόμα τοῦ βίκου, ἵνα διαπνέηται τὸ ἐλαιον καὶ ἠλιοῦν ἡμέρας μ'· ἀηδῆ γάρ τινα ὀσμὴν, εὐοικυῖαν γάρφω, προσλαμβάνει τὸ χαμαιμήλινον εἰ μὴ διαπνέοιτο. φυλάττειν δὲ αὐτὸ χρηὶ μετὰ τὴν ἠλίωσιν ἀποσειρώσαντα ἐν οἴκοις εὐκράτοις ἐπὶ σανάδι τιθέντα τὸν βίκον· χρηῖσθαι δὲ αὐτῷ ἐπὶ κεφαλῆς μετρίως πυκνωθείσης καὶ ὀδυνωμένης ἐκ πυρετῶν οὐκ ἄγαν διακαῶν. ἀραιοὶ γάρ τοὺς πόρους καὶ διαφορεῖ τοὺς ἀτμοὺς καὶ κατακρινᾶ τὰς δριμύτητας, καὶ τὸ ὅλον παρηγορικώτερον ἐστὶ τοῦτο τοῦ ῥοδίνου ἐπὶ τῶν μὴ ἄγαν θερμῶν πυρετῶν.

114) Camomile oil is prepared as follows: one Italian *xestes* of sweet oil, and 2 *unciae* pure camomile flowers (*Metricaria camomilla* L.), previously cooled for one day. And it is necessary to cover the mouth of the jar with linen cloth, so that the oil may be allowed to breathe, and place it in the sun for 40 days; for the camomile oil acquires in addition a certain unpleasant smell, resembling fish sauce, if it is not allowed to breathe. And it is necessary to keep it, having filtered it, after the exposure to sunshine, in buildings at an even temperature, placing the jar on a shelf. It should be used on a head moderately thickened and suffering pain from fevers that are not too burning. For it makes the channels porous and brings the vapours through, and weakens the pangs, and this oil is altogether more calming than rose oil in fevers that are not too hot.

114) There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[59.21-30]

(ριε') Ἀνήθινον γίνεται ἐκ τῆς κόμης τοῦ ἀνήθου χλωρᾶς ἔτι οὖσης, πρὶν ἢ τὸ σπερμάτιον στερεὸν γένηται καὶ δριμύ, ἀσύμφορον γάρ γίνεται εἰς τὴν χρηῖσιν διὰ τὴν ἀποβολὴν τοῦ ἀνθους. ἀποτέμοντα δὲ μόνους τοὺς καλαθίσκους τῶν βλαστῶν καὶ στήσαντα γ α', ἐμβάλλειν χρηὶ τῷ ἰταλικῷ ξέστη τοῦ γλυκέος ἐλαίου, περισφίγγειν δὲ ἀκριβῶς τὸ στόμα τοῦ σκεύους καὶ ἠλιοῦν ἡμέρας μ'. θερμότερον δὲ ἐστὶ τοῦτο τοῦ χαμαιμήλινου· προσαγέσθω τοίνυν τοῖς κεκοπωμένοις ἐν χειμῶνι

μαλάσσει γὰρ καὶ ὑγραίνει. χρηστέον δὲ κατὰ τῶν ἀπὸ φλέγματος
πυρεσσόντων βληχρῶς, καὶ ὅλως τοῖς ὑπὸ ψυχρῶν αἰτιῶν κάμνουσιν
ἀρμόδιον καὶ μάλιστα τένοντας ἢ μύας.

10 [30]

115) Dill oil comes from the foliage of dill (*Anethum graveolens* L.) while it is still fresh, before the seedlet becomes firm and sharp, for it becomes inconvenient to use because of the flower's shedding of petals. It is necessary, after cutting away only the basket-like parts of the shoots and weighing out 1 *uncia*, to put it into an Italian *xestes* of sweet oil, to bind round the mouth of the vessel carefully, and to expose it to sunlight for 40 days. This oil is warmer than camomile; let it be administered, therefore, to those who have become exhausted in winter, for it softens and moistens. It must be used sparingly on those running a fever from inflammation, and it is completely suitable for those who are ill from cold causes, and especially with regard to their sinews and muscles.

115) There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[60.1-18]

(ρις') Κρίνινον ἢ σούσινον ἢ ἴρινον γίνεταί τῶν λευκῶν τοῦ κρίνου
πετάλων ἐξωνυχισμένων καὶ μόνων ἐμβαλλομένων χωρὶς τοῦ ἐν
αὐτοῖς κροκώδους εἰς τὸν ἰταλικὸν ξέστην τοῦ καλλίστου γλυκυτάτου
ἐλαίου γ β'. ψύχειν δὲ δεῖ καὶ ταῦτα ἡμέραν καὶ νύκτα ἐν σκιᾷ, εἶτα
ἐμβάλλοντα τῷ βίκῳ καὶ σφίγγοντα ἀκριβῶς ἡλιοῦν ἡμέρας γ καὶ
ἀποσειρώσαντα ἐμβάλλειν ἄλλας β' γ τῶν φύλλων
καὶ πάλιν ἡλιώσαντα ἡμέρας γ' καὶ πάλιν
ἀποσειρώσαντα ἐμβάλλειν ἐκ τρίτου ἑτέρας β' γ τῶν κρίνων καὶ ἡλιοῦν
τὰς τρεῖς ἡμέρας καὶ οὕτως ἐμβάλλοντα ἕτερα ὀλίγα φύλλα ἀκριβῶς
ξηρανθέντα ἐν σκιᾷ ἀποτίθεσθαι. εἰ δὲ τις ἐξ ἀρχῆς τὰς ζ' γ ἐμβάλλοι
τῷ ἐλαίῳ [σαπέντα] δυσῶδες ἀποτελεῖ τὸ ἔλαιον. χρήσιμον δὲ ἐστὶν
ἐπὶ τῶν γυναικείων παθῶν, λύει γὰρ τὰς σκληρίας καὶ ἀμβλύνει τὰς
ἐκ τῆς δριμύτητος δῆξεις καὶ τόνον ἐντίθησι ταῖς μήτραις. οἱ δὲ ἐν
Σούσοις μαρτυροῦσι τούτῳ <χρῆσθαι> εἰς τὸ εὐτοκίαν παρέχειν ταῖς
κυούσαις. καὶ χριόμενον δὲ ἐπὶ τῶν ἄλλων ἐστὶν ἄκοπον τοῖς κεκμη-
κόσι καὶ τοῖς μαλάττουσι φαρμάκοις ἐμβαλλόμενον· ἔστι δὲ μαλακτικόν.
καὶ καθόλου χλιαρόν ἐστι παρηγορικὸν μαλακτικὸν εὐῶδες εὐτόκιον.

5 [5]

8 [8]

10 [10]

15 [15]

[60.1] ἴρινον replaces λίρινον.

[60.6-8] —δηλονότι τῶν

ἐκβληθέντων πρῶτον ἐκβαλλομένων ὡς ἀχρείων· ἀμείβεσθαι γὰρ θέ-

λουσιν ἐν τρισὶν ἐκβολαῖς— omitted between φύλλων and καὶ.

116) Lily oil comes from the white petals of the lily (*Lilium candidum* L.), with the calyces removed and 2 *unciae* added on their own, without the stigma found in them, to an Italian *xestes* of the finest, sweetest oil. And it is necessary also to cool these day and night in the shade, then, putting them into a jar and sealing it carefully, to expose them to sunlight for 3 days, and, after filtering, to add a further 2 *unciae* of the leaves, and again having exposed to sunlight for 3 days, and again filtered, [it is necessary] to add in the third place another 2 *unciae* of lilies, and expose to sunlight for the three days; so adding a further few carefully dried leaves, [it is necessary] to lay it aside in the shade. But if at the beginning one should add the 6 *unciae* to the oil, it results in the oil being foul-smelling. It is useful in gynaecological disorders, for it dissolves fibroids, dulls the stinging of itching, and imparts tone to uteruses. Those in Susa attest that they use this oil to obtain an easy delivery in pregnant women. And when anointed on others, it brings relief to those who are ill, also when added to softening drugs; for it is softening. In fact, it is entirely warming, calming, softening and good for deliveries.

116) It seems that the extraction of lily-petal content is facilitated by repeatedly exposing fresh lots of petals to the same measured amount of solvent for the same time, thus increasing the concentration of the active ingredient. The same technique is used for narcissus oil (ch. 118 p.136), violet oil (ch.119 p.137), and jasmine oil (ch. 120 p.138).

116.1 [60.1] **Κρίνινον ἢ σούσινον ἢ ἴρινον** These apparently are synonyms, translatable as “pertaining to lily” (LSJ); the first of these is derived from Coptic, and the second has a Semitic origin, according to Carnoy.

116.13 [60.1] **σκληρίας** In context, “fibroids” (cf. Intro. lxiii).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[60.19-27]

(ριζ΄) Τήλινον δύναμιν ἔχει μαλακτικὴν, χρῆσιμον δέ ἐστι πρὸς πίτυρα
καὶ ἀχώρας καὶ ἐφήλεις ἀποκαθαίρει καὶ τὸ πρόσωπον λευκαίνει καὶ
ἀποσμήχει καὶ πρόσφατον ποιεῖ καὶ πρὸς τὰς ἐν μήτρᾳ σκληρίας καὶ
ἀποστήματα καὶ δυστοκούσας βοηθεῖ, ποιεῖ δὲ καὶ πρὸς τὰς ἐν δακτυλίῳ
καὶ ἐντέροις φλεγμονάς· ἐνιέμενον δὲ λύει καὶ τεινεσμούς, ποιεῖ καὶ
πρὸς χεῖμεθλα. σκευάζεται δὲ τὸν τρόπον τοῦτον· τήλεως λίτραι ε΄

[20]

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ἐλαίου ζε' η' κυπέρου λίτραι β' καλάμου λίτρα α'· ἀπόβρεχε ταῦτα τῶ [25]
ἐλαίῳ ἐπὶ ἡμέρας ζ' κινῶν τρεῖς τῆς ἡμέρας, ἔπειτα ἐκθλίψας καὶ διη-
θήσας ἀποτίθεσο.

117) Fenugreek (*Trigonella foenum-graecum* L.) oil has a softening capacity, it is useful for scurf, and it cleanses away ringworm of the scalp and keratoses; it whitens the face, wipes it clean and makes it fresh. It also helps in respect of fibroids and abscesses, and it helps those having difficult labours. It also works for acute inflammations in the anus and intestines. Administered as an enema, it also relieves tenesmus, and it works for chilblains. It is prepared in the following way: 5 *litrae* of fenugreek, 8 *xestes* of oil, 2 *litrae* of galingale (*Cyperus longus* L.), 1 *litra* of sweet flag (*Acorus calamus* L.); steep these ingredients in the oil for 7 days, stirring three times a day, then squeeze out, strain and lay aside.

117) In the formula for preparation, Aëtius closely quotes Dioscorides (1.57 (K 25.59.17-60.3)), the important difference being in the quantities of ingredients used.

117.2 [60.20] **τὸ πρόσωπον λευκαίνει** This may be substantiated by modern research (Waqas et al., 2010: 173-8).

117.3 [60.21] **τὰς ἐν μήτρα σκληρίας** Fibroids (cf. Intro lxiii).

[61.1-11]

(ρη') Ναρκίσσινον ἐκ τῶν λευκῶν ἀνθῶν γίνεται τῆς ναρκίσσου προ-
εψηγμένων νύκτα καὶ ἡμέραν καὶ ἐμβαλλομένων τῶ ἰταλικῶ ξέστη τοῦ
γλυκυτάτου ἐλαίου γ β' καὶ περισφιγγομένου ἀκριβῶς τοῦ βίκου καὶ
ἡλιουμένου ἡμέρας δ'. δεῖ δὲ καὶ ταύτας ἀμείβειν ὡς ἐπὶ τοῦ
κρινίνου προεῖρηται καὶ μᾶλλον γίνετα εὐῶδες τὸ ἔλαιον, μάλιστα 5 [5]
εἰ συμμετρῶς ἡλιωθῆ. εἰ γὰρ ἐπὶ πλέον ἡλιωθῆ τὸ κρίνινον ἢ τὸ
ναρκίσσινον ἢ τὸ ἰάτον ἢ ἄλλο τι τῶν μὴ ἰσχυρὰν καὶ μόνιμον ἐχόν-
των τὴν εὐωδίαν, ἄοσμον ἀποτελεῖται. δύναμιν δὲ ἔχει τὸ ναρκίσσι-
νον θερμότεραν τοῦ ἀνηθίνου, ὥστε καὶ τοῖς αὐτοῖς χρησιμεύειν ἐπὶ
τοῦ ἄλλου σώματος χωρὶς κεφαλῆς, δριμεῖα γάρ ἐστιν ἢ ἀπὸ τοῦ 10 [10]
ναρκισσίνου εὐωδία.

[61.4] ἡμέρας δ replaces ἐπὶ ἡμέρας λ.

[61.8] ἄοσμον replaces ἄνοσμον.

118) Narcissus oil comes from the white flowers of narcissus previously cooled for a night and a day, 2 *unciae* being added to an Italian *xestes* of the

sweetest oil, and the jar being carefully covered and exposed to the sun for 4 days. It is necessary also to change these flowers, as was previously said about the lily oil, and the oil becomes more sweet-scented, especially if it has been exposed to sunlight in moderation. For if lily oil or narcissus oil or violet oil, or any other of the ones which do not have a strong and stable fragrance, has been exposed longer to sunlight, it will end up odourless. Narcissus oil has a warmer effect than dill oil, so as to be useful for them on the rest of the body apart from the head, for the fragrance from narcissus oil is sharp.

118) Narcissus essential oil is known to cause contact dermatitis in susceptible individuals (Frosch et al., 2002: 279-87).

[61.12-20]

(ριθ') Ἰάτον. Σκευάζεται καὶ τοῦτο ἐκ τῶν πορφυρῶν ἀνθῶν τοῦ ἴου καὶ ἐκ τῶν λευκῶν τριῶν ὀγκιῶν ἐμβαλλομένων τῷ ἰταλικῷ ξέστη τοῦ γλυκυτάτου ἐλαίου καὶ ἀμειβομένων τρίτον, ὥσπερ ἐπὶ τοῦ κρινίου προεῖρηται. ἐστὶ δὲ ἡ δύναμις αὐτοῦ θερμότερα τοῦ ῥοδίνου ἐπ' ὀλίγον, ὥστε εἴ τις ἐν θέρει κοπωθεὶς καὶ ἡλιωθεὶς ἀποροίη, τοῦτο [15]
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χρήσιμον καὶ μάλιστα τὸ ἐκ τῶν πορφυρῶν ἀνθῶν σκευαζόμενον ἐν βαλανείῳ χρισμένῳ· πρὸς γὰρ τῷ τὸν κόπον ἀποθεραπεύειν μεταβάλλει τῇ εὐωδίᾳ τὸ ἀύχμηρὸν τῆς ψυχῆς εἰς ἡμερότητα καὶ ἡδονὴν καὶ ἀτάραχον τὸν ὕπνον ἐργάζεται. [20]

119) Violet oil. This too is prepared from the purple flowers of the violet (*Viola odorata* L.) and from the white (*Matthiola incana* L.), three *unciae* being added to an Italian *xestes* of the sweetest oil and exchanged three times as was previously said about lily oil. And its effect is a little warmer than rose oil, so that if someone is distressed, because stricken and exposed to the sun in summer, this is useful, and especially the one prepared from the purple flowers, by application in the bath. For, besides relieving the physical suffering, it changes, by means of its fragrance, the miserable state of the mind into gentleness and pleasure, and it renders sleep undisturbed.

119) There is no apparent substantiation of the above claims in modern scientific literature.

[61.21-27]

(ρκ´) Ἴασμή. Ἡ δὲ καλουμένη ἰασμή παρὰ Πέρσαις σκευάζεται ἐκ τῶν ἀνθῶν τῶν λευκῶν τοῦ ἴου καὶ ἐλαίου σησαμίνου γ β´ ἐμβαλλομένων τῷ ἰταλικῷ ξέστη [τοῦ σησαμίνου ἐλαίου] καὶ ἀμειβομένων ὡς ἐπὶ τοῦ κρινίνου εἴρηται. ἢ δὲ τούτου χρῆσις παρὰ τὰς ἐστιάσεις εὐωδίας ἕνεκα παρὰ Πέρσαις λαμβάνεται. ἀρμόζει δὲ καὶ ὄλω τῷ σώματι κατὰ τὰ λουτρὰ ἐπὶ τῶν θερμασίας καὶ χαλάσεως δεομένων σωμάτων. βαρυτέραν δὲ ἔχει τὴν εὐωδίαν, ὡς πολλοὺς αὐτῆς μηδὲ ἠδέως ἀντέχεσθαι. 5 [25]

[61.27] ἀντέχεσθαι replaces ἀντιλαμβάνεσθαι.

120) Jasmine (*Jasminum officinale* L.). What is called jasmine by the Persians is prepared from the white flowers of the violet, and sesame oil, 2 *unciae* being added per Italian *xestes*, and being exchanged as has been said about lily oil. The use of this oil is adopted by the Persians for feasts for the sake of its sweet smell. And it is suitable even for the whole of the body in bathing, in cases of bodies lacking in warmth and relaxation. But it has a fragrance which is heavier, so that many will not gladly endure it.

120.5 [61.25] **παρὰ Πέρσαις** Consistent with the Persians' reputation for elaborate preparation for their feasts (cf. Horace, *Odes* 1.38).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[61.28-62.12]

(ρκα´) Μυρσινάτον. Γίγνεται καὶ τοῦτο τῶν φύλλων τῆς μυρσίνης χλω-
 ρῶν ἐμβαλλομένων ἐλαίῳ ὀμφακίνῳ εἰς ξέστην α´ ἰταλικὸν γ β´ καὶ
 ἴνου εὐώδους στύφοντος ἰταλικοῦ τὸ τέταρτον, εἴθ' ἔψειν ἐπὶ λεπ- [30]
 τῆς ἀνθρακιάς μέχρις ὅτου τὰ φύλλα ξηρανθῆ καὶ θραύηται καὶ ὁ [p.62]
 οἶνος ἀναλωθῆ· εἶτα διηθήσαντα καθαρὸν τὸ ἔλαιον ἐμβάλλειν εἰς
 ὑελοῦν ἀγγεῖον καὶ ἐπεμβάλλοντα φύλλων χλωρῶν τῆς μυρσίνης
 διεψυγμένων νύκτα καὶ ἡμέραν γ α´ καὶ οὕτως ἀποτίθεσθαι. στύφει
 δὲ καὶ ψύχει τὸ ἔλαιον τοῦτο πλέον τοῦ σχινίνου καὶ τοῦ μηλίνου [5]
 καὶ διὰ τοῦτο διαβροχαῖς μὲν στομάχου καὶ ἥπατος ἀνοίκειόν ἐστιν,
 ἀλλ' οὐδὲ τοῖς ἄλλοις σπλάγχνοις ἐστὶ προσηγές. εὖρεν οὖν αὐτοῦ 10
 τὴν χρῆσιν ἢ πολλὴ πείρα τὴν ἐν κηρωταῖς καὶ ἐμπλάστοις φαρμάκοις,
 δι' ὧν πυκνοῦν τῇ στύψει καὶ ἀποκρουόμενον ἔσται χρήσιμον εἰς τὰ
 ἐπιφερόμενα ρεύματα καὶ ὑγραιομένους ἔλκεσιν οὐλήν ἐργάσασθαι καὶ [10]
 κεφαλαῖς γυναικῶν ὥστε συνέχειν τὴν τρίχα ἐπιτήδειον καὶ εὐῶδες.

[62.3] ὑελοῦν replaces ὑάλινον.

[62.8] ἐμπλάστοις replaces ἐμπλάστοις.

[62.10] ὑγραινομένοις replaces ἡραιωμένοις.

[62.12] ἐστιν omitted after εὐωδέες.

121) Myrtle oil. This also comes from the fresh leaves of the myrtle (*Myrtus communis* L.), 2 *unciae* being added to 1 Italian *xestes* of unripe-olive oil, as well as a quarter Italian *xestes* of astringent wine with a fine bouquet, then boil gently over charcoal until its leaves are dried and are breaking down, and the wine has been consumed. Then, after filtering it pure, put the oil into a glass container, and, adding 1 *uncia* of fresh myrtle leaves which have been cooled night and day, so lay it aside. This oil has an astringent effect, and cools more than mastic oil (1) and quince oil, and, because of this, it is unsuitable for excesses of moisture of the stomach and liver, but neither is it gentle on the other internal organs. Considerable experience, therefore, has determined its use in salves and externally administered drugs, by means of which it will be useful, condensing by astringency and driving away, for accumulations of discharges, and cicatrisation in weeping ulcers, and for women's heads, as it is suitable for holding together the hair, and is sweet-scented.

121) There is some modern evidence that myrtle may contain antibacterial substances (Alem et al., 2008: 63-9).

[62.13-18]

(ρκβ') Μαστίχινον. Γίγνεται τοῦτο μαστίχης γ' α' ἐν ἐλαίῳ πάνυ ὀμφακίζοντι ξέστῳ ἐνὶ ἐμβαλλομένῃς, ἔψεται δὲ ἐν διπλώματι. θερμὸν δὲ ἐστὶ μετρίως καὶ ἠδύχρουν. σκευάζεται μὲν παραπλησίως τῷ ἀμαρακίνῳ, εὐωδέστερον δὲ ἐστὶ μᾶλλον, ποιεῖ δὲ πρὸς τὰς αὐτὰς διαθέσεις. πικνωτικὸν καὶ ἐμπλαστικόν· προσάγομεν οὖν αὐτὸ τοῖς δεομένοις τονοῦσθαι μορίοις καὶ σφίγγεσθαι καὶ θερμαίνεσθαι μετρίως. [15] 5

122) Mastic oil (2). This is produced when 1 *uncia* of mastic is added to one *xestes* of complete unripe-olive oil, and boiled in a double vessel. And it is moderately warm and fragrant. It is prepared similarly to marjoram oil, and it has a more pleasant smell, and it works for the same conditions. It closes the pores and is adhesive; we administer it, therefore, to those parts needing to be toned up, tightened and moderately warmed.

122) (Cf. comments on mastic oil (1), ch. 110, p. 128.)

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[62.19-23]

(ρκγ') Στυράκινον σκευάζεται οὕτως· γλυκέος ἐλαίου καλλίστου ζε' εἷς, στύρακος λιπαροῦ γ β'. ἐψηθέντα δὲ ἐν διπλώματι ἐναποτίθεται τῷ ἐλαίῳ τὴν τοῦ στύρακος δύναμιν. θερμότερον δὲ ἐστὶν ἐπ' ὀλίγον τοῦτο τοῦ ἀνηθίνου, μαλακτικὸν δὲ ἐστὶ σφόδρα καὶ διὰ τοῦτο ἀπαλύνει τὰ ἐσκληρυσμένα τῶν σωμάτων γενναίως. [20] 5

123) Storax oil is prepared as follows: one *xestes* of finest sweet oil, 2 *unciae* of oily storax (gum from *Liquidambar orientalis* Mill.). Once these have been boiled in a double-chambered vessel, they enclose in the oil the capacity of the storax. This is a little warmer than dill oil, but it is very emollient, and, because of this, it softens in an excellent manner the hardened parts of the body.

123) LSJ translates στύραξ as storax gum, or the tree producing it, which it names as *Styrax officinalis* L.. Bruneton, however, makes the distinction between balsams produced by *Styrax* spp., which grow in Malaysia and Indonesia, and storax, from *Liquidambar orientalis* L., which grows in Asia Minor (Bruneton, 1995: 227).

Any emollient effect is likely to be due to the olive oil, there being no modern substantiation of any contribution by storax.

[62.24-63.2]

(ρκδ') Σικυώνιον σκευάζεται οὕτως, ὡς ὁ κόμης Ἀνδρέας· ἐλαίου γλυκέος ζε' ι' τήλεως ζε' α' λιβανώτιδος γ δ' πολίου γ δ' σαμψύχου γ δ' δαδίων γ δ' ἀριστολοχίας μακρᾶς γ ιβ' μελιλώτου γ ζ' σικύου ἀγρίου ρίζης λίτραι β' ὕδατος τὸ ἀρκοῦν, ἔψε ὡς χρῆ καὶ διηθήσας χρῶ. ὁ δὲ Ἀρχιγένης φησί· σκευάζεται ἐν Σικυῶνι ἀπὸ τήλεως καὶ ὑπερικοῦ. [p63] 5

[62.24] κόμης Ἀνδρέας replaces Καμεσανδρέας.

[62.25] δ replaces γ in three instances. [62.25] δαδίων replaces δάδων.

[63.2] καὶ added after τήλεως.

124) Sicyonian oil is prepared as follows, according to Andreas the Courtier: 10 *xestes* of sweet oil, 1 *xestes* of fenugreek, 4 *unciae* of rosemary,

4 *unciae* of hulwort (*Teucrium polium* L.), 4 *unciae* of marjoram, 4 *unciae* of pine wood, 12 *unciae* of birthwort, 6 *unciae* of melilot (*Melilotus officinalis* Lam.), 2 *litrae* of wild cucumber root, and a sufficiency of water; boil as required, and use after filtering. But Archigenes says: “It is prepared in Sicyon from fenugreek and St John’s wort”.

- 124) 124.2 [62.25] **σαμψύχου** Σάμψυχον is, according to Dioscorides (3.41 (47) (K 25.387.8)), one of twelve synonyms or foreign translations for what is now known as marjoram; these include ἀμάρακον, a term also used elsewhere by Aëtius (v. ch. 24, p. 66).

There is no modern scientific evidence to suggest that external use of this oil would be either harmful or beneficial.

[63.3-9]

(ριε΄) Μετώπιον ἐν Αἰγύπτῳ σκευάζεται, καλεῖται δὲ μετώπιον διὰ τὸ τῆς χαλβάνης ξύλον. σκευάζεται δὲ δι' ἐλαίου ὀμφακίνου καὶ ἀμυγδάλων πικρῶν καὶ καρδαμώμου καὶ σκίνου καὶ καλάμου καὶ μέλιτος καὶ οἴνου καὶ καρποβαλσάμου καὶ χαλβάνης καὶ ῥητίνης. ἐστὶ δὲ θερμαντικόν, ἀναστομοῖ δέ, ἐπισπᾶται, καθαίρει, ποιεῖ πρὸς μῦς καὶ νεῦρα διακοπέντα, ποιεῖ πρὸς ὑδροκίλας καὶ καθόλου δύναμιν ἔχει μαλακτικὴν.

[5]
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125) Metopion is prepared in Egypt, and is called metopion because of the wood of all-heal (*Ferula galbaniflua* Boiss.). And it is prepared using unripe-olive oil, bitter almonds, cardamom (*Elettaria cardamomum* Maton), mastic (1), sweet flag, honey, wine, balsam-fruit, resin of all-heal, and pine resin. It is warming, but has an opening effect, it is absorbent, cleanses, works for transected muscle and sinews, it works for hydrocoeles, and, in general, it has a softening effect.

125) Dioscorides is more explicit, pointing out that μετώπιον is Egyptian for χαλβάνη (1.71 (K 25.74.12)). André says it is a tree from Libya and the Hammon oasis, producing ammoniacum gum, and also a name for *F. galbaniflua* Boiss..

125.5 [63.7] **καθαίρει** The reported antimicrobial effects of cardamom (Evans, 2009: 294) and sweet flag (Kim, 2011: 1278-81) may contribute to topical cleansing.

[63.10-13]

(ρκζ´) Μενδήσιον μαλακτικώτατόν ἐστι καὶ χαλαστικὸν σωμάτων καὶ πυοποιόν· συντίθεται δὲ ἐκ μυροβαλανίνου ἐλαίου καὶ σμύρνης καὶ κασίας καὶ ῥητίνης. ἔνιοι δὲ μετὰ τὸ ἀποστύψαι καὶ κιννάμωμον ἐμπάσσουσι.

126) Mendesian oil is very softening and relaxing for bodies, and productive of pus. It is compounded from oil of desert dates, myrrh (from *Commiphora myrrha* Engl.), cassia (*Cinnamomum iners* Wight) and pine resin. After concentration, several people also sprinkle on cinnamon.

126) 126.1 [63.10] **Μενδήσιον** is an Egyptian place-name, mentioned by, among others, Herodotus (2.17.24) and Thucydides (*Hist.* 1.110.4), and refers to a distributary of the Nile. Galen mentions an Egyptian salve, which is called Mendesian by some, Megaleion by others (*Comp.Med.Loc.* 12.570.2-7).

126.3 [63.12] **μετὰ τὸ ἀποστύψαι** There appears to be a stage in the preparation of some oils, referred to as στῦψις by Dioscorides (e.g., 1.65; 1.66 (K25.68; 70)), in which some form of concentration, condensation or thickening takes place.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[63.14-17]

(ρκζ´) Μεγάλειον. Τὸ δὲ μέγαλειον καλούμενον πάλαι μὲν ἐσκευάζετο, ἐκλέλοιπε δὲ νῦν. ἐστὶ δὲ αὐτοῦ ἡ σκευασία ὁμοία τῷ ἀμαρακίνῳ, πλεονάζει δὲ τῷ προσλαμβάνειν ῥητίνην καὶ ποιεῖ πρὸς τὰς αὐτὰς διαθέσεις. [15]

[63.14] ἐσκευάζετο replaces ἐσπουδάζετο.

127) Magnificent oil. The one called “Magnificent” used to be prepared in the past, but now it has suffered abandonment. Its preparation is the same as marjoram oil, but it exceeds it by the addition of pine resin, and it works for the same conditions.

127) The preparation of this oil had already been abandoned some five centuries before Aëtius' time, according to Dioscorides, who included it in his work for the sake of historical completeness (1.69 (K 25.73.17-74.8)).

127.1 [63.14] **Μεγάλειον** Rather than “Magnificent”, possibly an Egyptian toponym, according to Galen (*Comp.Med.Loc.* 12.570.2-7).

[63.18-64.4]

(ρκη΄) Ἀμαράκινον σκευάζεται οὕτως· βράθυος, ξυλοβαλσάμου, καλάμου, σχοίνου ἄνθους, νάρδου κελτικῆς, κόστου ἀνά λίτραι ε΄, ἀμώμου, κασίας, καρποβαλσάμου ἀνά λίτραι γ΄, ζιγγιβέρεως λίτρα α, ἀμαράκου σπέρματος λίτρα α΄, ἐλαίου ὀμφακίζοντος ζε λ΄, οἴνου εὐωδεστέρου ζε ε΄, ἔψε τῷ τρόπῳ τῆς νάρδου. ἡ δύναμις δὲ τοῦ ἐλαίου τούτου θερμαντικὴ μὲν ὡς ἡ νάρδος, οὐχ ὁμοίως δὲ τονωτικὴ. λεπτομερέστερον γὰρ τοῦτο τῆς νάρδου καὶ παρηγορικώτερον καὶ προσηγὲς διὰ τὸ μὴ ἔχειν ὀποβάλαμον. γυναιξὶ δὲ ἐγκολπιζόμενον καὶ ἔμμηνα κινεῖ. Κρείττων δὲ φησὶν· ἐστὶ δὲ τὸ ἀμαράκινον θερμαντικὸν μαλακτικὸν ἀναστομωτικόν, εὐθετεῖ πρὸς σύριγγας καὶ ὑδροκήλας μετὰ τὴν χειρουργίαν· ποιεῖ καὶ πρὸς τὰ τεθριωμένα ἔλκη καὶ ἐσχάρας, ποιεῖ πρὸς δυσουρίας περιχριόμενον τῷ δακτύλῳ· ποιεῖ καὶ πρὸς τὰς ἐν μήτρᾳ φλεγμονὰς καὶ σκληρίας, ἔμμηνα κινεῖ, αἰμορροΐδας ἀναστομοῖ.

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[63.21] εὐωδεστέρου replaces εὐώδους στερεοῦ.

128) Marjoram oil is prepared as follows: 5 *litrae* each of savin (*Juniperus sabina* L.), of balsam wood, of lemon grass (*Cymbopogon schoenanthus* Spreng.), of Celtic nard (*Valeriana celtica* L.), and of spice root (*Saussurea lappa* Decne); 3 *litrae* each of greater cardamom, of cassia, and of balsam fruit; 1 *litra* of ginger, 1 *litra* of marjoram seed, 30 *xestes* of unripe-olive oil, 5 *xestes* of wine with a rather good bouquet; boil in the manner of spikenard oil. While the capacity of this oil is as warming as spikenard oil, it is not similarly bracing. For this is finer-grained than spikenard, more calming and mild, through not having the juice of the balsam tree (*Balsamodendron opobalsamum* LSJ). And when used for women, intravaginally, it is also emmenagogic. And Crito says: “Marjoram oil is warming, softening and opening, and it is convenient for deep sinuses and hydrocoeles after surgery. It even works for ulcers which have become malignant, and eschars; it works for cases of dysuria when rubbed round with the finger; it also works for acute inflammations and fibroids, it is emmenagogic, and it opens up piles”.

128) The antiseptic properties of the thymol content of marjoram (Evans, 2009: 272) may have conferred some benefit in the treatment of sinuses and eschars. There is no apparent substantiation of Aëtius' other claims in modern scientific literature.

[64.5-20]

(ρκθ') Κύπρινον· ἐλαίου ζε' κε', κυπέρου ἐλενίου ἴρεως ἀνά λίτραν α', [5]
 σαμψύχου ὑσσώπου ἀνά Γ γ', λύγου σπέρματος Γ γ', ἐλελισφάκου Γ γ'
 κύπρου ἄνθους λίτραν α'. ἔψεται δὲ καὶ τοῦτο δυσὶν ἐψησεσι. τὰ μὲν
 γὰρ ἄλλα πάντα εἶδη οἴνω ρανθέντα εὐώδει πρὸ μιᾶς ἡμέρας εἶτα
 ἐμβληθέντα τῷ ἐλαίῳ ἔψεται ὥρας ζ', τῇ δὲ ἐξῆς σειρωθέντος τοῦ 5
 ἐλαίου καὶ λαβόντος ἕτερον ὕδωρ καθαρὸν, ὡς τὸ τρίτον εἶναι τοῦ [10]
 χαλκείου, ἐμβάλλεται τὸ ἄνθος τῆς κύπρου. ἐμβλητέον δὲ αὐτὸ μετὰ
 τῶν ἀπαλῶν κλωναρίων ἄκοπον. εἰ δὲ ξηρὸν εἴη προκόπτειν καὶ
 οὕτως ἔψεται ὥραν μίαν. θερμαίνει δὲ τὸ κύπρινον οὐκ ἀγεννῶς. ἐστὶ
 δὲ καὶ λεπτομερὲς καὶ ὑστέραις ἄγαν χρήσιμον, ταῖς κατεψυγμέναις 10
 μᾶλλον, καὶ γὰρ λεπτύνει τοὺς ἐν ταύταις παχεῖς χυμούς· ὅταν δὲ [15]
 εὐπορῶμεν τῶν βοτανῶν χλωρῶν, οὕτως σκευάζομεν τὸ κύπρινον·
 ἐλαίου ζε' ιε', κυπέρων ἐλενίου ἴρεως ἀνά Γ ζ' σαμψύχου ὑσσώπου
 ἐλελισφάκου ἀνά Γ β' ἄγνου χλωρῶν φύλλων Γ β' κίτροφύλλων χλω-
 ρῶν Γ ζ' χαμαιλιβάνου χλωροῦ Γ δ' δάφνης φύλλων χλωρῶν Γ ε' 15
 κύπρου ἄνθους Γ ι' βαλσάμου ὀποῦ Γ ζ'. [20]

[64.20] ι replaces β.

129) Henna-flower oil (*Lawsonia inermis* L.): 25 *xestes* of oil; 1 *litra* each of galingale (*Cyperus longus* L.), calamint (*Calamintha incana* Boiss.), and iris; 3 *unciae* each of marjoram and hyssop (*Origanum hirtum* Link); 3 *unciae* of withy seed; 3 *unciae* of sage (*Salvia triloba* L.); 1 *litra* of henna flower. And all this is boiled twice over. For, all the other kinds [of ingredients] are marinated one day beforehand in wine with a good bouquet, and then, having been added to the oil, they are boiled for 6 hours; on the following day, the oil is sifted, and, taking further pure water so as to amount to one third of a potful, the henna flower is added. But it must be added unbruised among the tender twiglets. But if it is dry, pound it beforehand, and so it is boiled for one hour. Henna-flower oil warms very much. It is both fine-grained and very useful for uteruses, more for the ones which have been chilled, for it also thins the thick humours in them. But whenever we come into possession of fresh plants, we prepare henna-flower oil as follows: 15 *xestes* of oil; 6 *unciae* each of galingale, calamint and iris;

2 *unciae* each of marjoram, hyssop and sage; 2 *unciae* of fresh withy leaves; 7 *unciae* of fresh citron leaves; 4 *unciae* of fresh earth-frankincense; 5 *unciae* of fresh bay leaves; 10 *unciae* of henna flower; 6 *unciae* of balsam juice.

129) Of possible relevance is a recent report of benefit in dysmenorrhoea from an aromatherapy preparation containing marjoram and a species of sage (Ou et al., 2012: 817-22). Exposure to sage has also been linked to convulsions in early childhood (Halicioglu et al., 2011: 259-60).

[64.21-65.3]

(ρλ´) Ἴρινον σκευασία· ἴρεως ἀσπαλάθου κυπέρου ἐλενίου ἀνά λίτρας ε´ ὀποάνακος γ ζ´, τινὲς δὲ γ γ´, ἀγγούσης γ β´ ἐλαίου ξέστας λ´ ὕδατος ξέστας ε´. κόπτε πάντα ἀδρομερῶς καὶ βρέχε ἡμέρας β´ ἔπειτα ἔψε ὥρας ζ´ καὶ οὕτως ἐπίβαλλε τὸν ὀποάνακα προβραχέντα οἶνω καὶ λειωθέντα, ἐνίστε δὲ καὶ προστίθεμεν τοῖς προειρημένοις σχοίνου ἄνθους γ ζ´ κασίας γ γ´ ξυλοβαλσάμου γ ζ´ νάρδου κελτικῆς γ ζ´. ἡ δὲ τούτου δύναμις θερμαντικὴ ἀλλ´ οὐ δριμυεῖα, διόπερ τοῖς ἐψυγμένοις μορίοις χρήσιμον. ἔχει τι καὶ τονωτικὸν καὶ μαλακτικόν. 5 [25] [p65]

130) Preparation of iris oil: 5 *litrae* each of iris (*Iris* spp., *germanica* L. or *pallida* Lam.), camel's thorn, galingale, calamint; 6 *unciae* of gum of Hercules' woundwort (*Opopanax hispidus* Grisb.) (but some [would use] 3 *unciae*); 30 *xestes* of oil; 5 *xestes* of water. Chop up everything coarsely and soak for 2 days, then boil for 6 hours, and so add the Hercules' woundwort gum, previously soaked in wine and emulsified, and sometimes we add to the aforementioned 6 *unciae* of lemon-grass flowers, 3 *unciae* of cassia, 6 *unciae* of balsam wood, 6 *unciae* of Celtic nard. The capacity of this oil is warming but not sharp, whereby it is useful for parts which have been chilled. It has something both bracing and softening.

130) There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[65.4-66.34]

(ρλα´) Νάρδου Κυζικηνῆς σκευασία. Ἐσκεύασα ταύτην ἐν Ἀλεξανδρείᾳ πλειστάκις καὶ ἐστὶ πάνυ καλή· ἐλαίου ὀμφακίζοντος ζεῖ β´ ἰταλικοί, ἀσπαλάθου κυπέρων ἴρεως ἰλλυρικῆς καρδαμώμου σπέρμα ἀριστολογίας 5 [5]

μακρᾶς ξυλοκασίας ἀνά Γ ιβ´ ἐλενίου ξυλοβαλσάμου σχοίνου ἄνθους κασίας κόστου ἀνά Γ ζ´ ἀμώνου φύλλου ναρδοστάχυος ἀρναβῶ	5
στύρακος καρποβαλσάμου ἀνά Γ γ´ ὀποβαλσάμου Γ γ´ βράθυος Γ α´. σκευάζεται δὲ οὕτως· ἀσπάλαθον κύπερον ἐλένιον ξυλοβάλσαμον ἴριν	[10]
ἀριστολογία ἀποφλοιώσας κόψας ἀδρομερῶς βρέχε ἡμέρας γ´ ὕδατι θερμῶ, ἔπειτα ἐπιβάλλον τὸ ἔλαιον ἔψε κινῶν συνεχῶς ἐπιβάλλον	10
ὔδωρ κατὰ βραχὺ πρὸς ὃ τὸ πρῶτον ἀναλίσκεται, εἶτα ἐψησας ἐπὶ ῥας γ´ ἢ καὶ πλέον σκεπάσας ἕα διανυκτερεῦσαι· τῇ δὲ ἐξῆς ἀνα- σπάσας τὰ ἥδη ἐψηθέντα καὶ ἀποχωρίσας τοῦ ἐλαίου τὸ ὕδωρ, εἴτ’	[15]
ἐπιβάλων ἕτερον ὕδωρ καὶ οἴνου βραχὺ ἔψε. ὅταν δὲ ἀναζέση, ἐπί- βαλλε πρῶτον καρδάμωνον εἶτα σχοῖνον ξυλοκασίαν κεκομμένα καὶ	15
ἔψε ἐπὶ ῥας β´ καὶ πάλιν ἕα διανυκτερεῦσαι. τῇ δὲ τρίτῃ ἀνασπάσας ὁμοίως καὶ ὕδωρ καθαρὸν ἐπιβάλων ἔψε καὶ ὅταν ἀναζέση ἐπίπασσε	[20]
λεῖα κατὰ μέρος κασίαν κόστον καὶ τὰ λοιπά, ἕκαστον κατ’ ἰδίαν κοπέν. περὶ τὰ τελευταῖα δὲ νάρδου στάχυ καὶ φύλλον καὶ τὸν στύ- ρακα εἰς λεπτὰ μόρια διαμερισθέντα, καὶ τακέντος αὐτοῦ ἄρον εὐθέως	20
ἀπὸ τοῦ πυρὸς καὶ ἐπίβαλλε τὸ ὀποβάλσαμον καὶ ἀνακινήσας ἱκανῶς καὶ πωμάσας καὶ σκεπάσας καλῶς ἕα ἡμέρας β´ καὶ οὕτως μυακίῳ ἀναλάμβανε.	[25]

[65.8] ἀρναβῶ replaces ἀνά Γ β´

131) 1-22. Preparation of Cyzicene spikenard. I have prepared this very often in Alexandria and it is really very good: 12 Italian *xestes* of unripe-olive oil; 12 *unciae* each of camel’s thorn, galingales, Illyrian iris, seed of cardamom, birthwort, and woody cassia; 6 *unciae* each of calamint, balsam wood, lemon-grass flower, cassia and spice root; 3 *unciae* each of greater cardamom, leaf of spikenard (*Nardostachys jatamansi* DC.), zedoary (*Curcuma* L. sp.), storax (gum of *Styrax officinalis* L.) and balsam fruit; 3 *unciae* of balsam juice; 1 *uncia* of savin. And the preparation is as follows: peel and chop up coarsely the camel’s thorn, galingale, calamint, balsam wood, iris and birthwort, and soak in warm water for 3 days; then, adding the oil, boil while stirring continuously, adding water little by little to replace what is being used up; then, having boiled it for 3 hours or even more, cover it and allow it to stand overnight. And on the following day draw out, one after another, the materials which now have been boiled, and remove the water from the oil; then, having added fresh water and a wine, briefly boil it, and when it comes to the boil, first sprinkle cardamom on, then rush and woody cassia which have been chopped up, and boil for 2 hours, and again leave it to stand overnight. On the third day, once you have drawn out the materials in the same way and added pure water, boil,

and, when it comes to the boil, sprinkle on smooth materials in succession – cassia, spice root and the remainder, each chopped up separately. As finishing touches, [add] the spikenard, shoot and leaf, and the storax, after they have been divided in short pieces, and, once it has melted, lift from the fire and add the balsam juice, and, after you have stirred it up sufficiently, put on a lid and cover it well, leave it for 2 days, and so remove it with a spoon.

τὸ δὲ δεύτερον σκευάζεται οὕτως· τοῖς καταλειφθεῖσιν [25]
 ἐκ τῆς τρίτης ἐψησεως ἐπίβαλλε ἐλαίου ἕξ' καὶ ἀναζέσας ἔψε ὥρας β',
 εἶτα ἐπίπασσε κασίας λειοτάτης γ β' νάρδου κελτικῆς γ β βράθυος
 < δ' στύρακος γ α' ὀποβαλσάμου γ β'. ἐστὶ δὲ ἡ νάρδος δυνάμεως 25
 θερμαντικῆς τονωτικῆς παρηγορικῆς, στομάχῳ τοίνυν ἐνυγμένῳ καὶ [p66]
 ἀτόνῳ καὶ γαστρὶ καὶ ἥπατι τὰ αὐτὰ πεπονθόσιν ἐπιτηδειοτάτη. ἐνίε-
 ται καὶ ἐπὶ τῶν ψυγέντων τὰ ἔντερα καὶ ἐπὶ γυναικῶν τῇ μήτρᾳ χρῶ
 ὡς πάνυ δοκίμῳ.

[65.25] δεύτερον replaces δευτέριον.

22-29. And the second form is prepared as follows: to the materials left behind from the third boiling add 6 *xestes* of oil, and, having brought it to the boil, simmer for 2 hours, then sprinkle on 2 *unciae* of cassia paste, 2 *unciae* of Celtic nard, 2 *unciae* of savin, 4 drachmas of storax, 2 *unciae* of balsam juice. And spikenard has a warming, bracing and calming effect, and is indeed most suitable for those who have been suffering from a chilled and flaccid stomach, and the same problems in the bowel and liver. It even infuses the intestines of those who have been chilled, and, in the case of women, I use it for the uterus, as completely reliable.

{The following text, p66 5-29, appears in Olivieri, but is considered to be an insertion to Aëtius:

Προέψησις τῆς νάρδου. Οἴνου παλαιοῦ λι ι' δένδρολιβάνου φύλ- 30 [5]
 λων λι α' ράσδου λι γ' καλαμοκρίνου λι γ' βρουλλοκυπέρου λι δ', ταῦτα
 πάντα βάλλε ἐν τῇ προεψησει. ὁ δὲ βρασμὸς αὐτοῦ ὥρας ιβ' ἵνα
 κενωθῇ εἰς καθαρὸν ἀγγεῖον καὶ σπογγισθῇ τὸ κακάβιν καὶ πάλιν βάλ-
 λης οἴνου λι ιε' καὶ ἐκεῖνο τὸ ἔλαιον ἐπάνω.

30-34. Pre-boiling of spikenard. 10 *litrae* of old wine, 1 *litra* of rosemary leaves, 3 *litrae* of *rasdon* (*Calamintha incana* L. or *Inula helenium* L.), 3 *litrae* of sweet flag, 4 *litrae* of *broullocyperus*; throw all these things into the pre-boiling. And its boiling [lasts] 12 hours so that it is emptied into a

clean vessel, and the little three-legged pot is wiped with a sponge; and again add 15 *litrae* of wine, and that oil on top.

Νάρδου σκευασία. Νάρδος σκευαζομένη ἐν τῇ ἐκκλησίᾳ. στάχους 35 [10]
 λι κινναμώμου λι καρυοφύλλων λι ἀμώμου λι σχινάνθων λι καλάμου
 ἀρωματικοῦ λι ξυλαλόης λι καρύων μυριστικῶν λι καχρύου λι ξανθο-
 καρύων λι μάκερ λι γαλαγγὰ λι βαλσάμου λι καρποβαλσάμου λι ξυλο-
 βαλσάμου λι μυροβαλάνου λι φύλλου ἰνδικοῦ λι κασίας λι ξηροκαρυο-
 φύλλου λι πεπέρεως μακροῦ λι πεπέρεως λευκοῦ λι πεπέρεως κοινοῦ 40 [15]
 λι ἄσαρ χαλδαϊκοῦ λι κελτικοῦ λι θυμιάματος λι σμύρνης τραγλίτιδος
 λι κόστου λι μόσχου λι ἄμπαρ λι γομφίτου λαδάνου λι τερεβίνθης λι
 οἴνου εὐώδους τὸ ἄρκοῦν.

35-43. Preparation of spikenard. Spikenard prepared in the church. a *litra* of spikenard, a *litra* of cassia, a *litra* of clove-tree buds (*Eugenia caryophyllata* Thunb.), a *litra* of greater cardamom, a *litra* of mastic flowers, a *litra* of sweet flag, a *litra* of eagle wood (*Aquilaria malaccensis* Benth), a *litra* of fragrant nut, a *litra* of frankincense, a *litra* of cloves, a *litra* of muttee-pal (resin of *Ailanthus malabaricus* LSJ). a *litra* of galingale, a *litra* of Mecca balsam, a *litra* of balsam fruit, a *litra* of balsam wood, a *litra* of desert dates, a *litra* of indigo leaf (*Indigofera tinctoria* L.), a *litra* of cassia, a *litra* of dry clove leaf, a *litra* of long pepper (*Piper officinarum* C.DC.), a *litra* of white pepper, a *litra* of common pepper, a *litra* of Chaldean hazelwort, a *litra* of Celtic [nard], a *litra* of incense, a *litra* of troglodyte myrrh, a *litra* of spice root, a *litra* of musk, a *litra* of ambergris, a *litra* of gum-ladanon (from *Cistus cyprius* Lam.), a *litra* of terebinth (*Pistacia terebinthus* L.), and a sufficiency of wine with a fine bouquet.

Ἐτέρα σκευασία νάρδου. Ἐν τῇ προεψησει οἴνου παλαιοῦ λι ιε´ 45 [20]
 δενδρολιβάνου φύλλων λι α´ μυρσίνης φύλλων λι α´ ράσδου λι γ´ καλα-
 μοκρίνου λι β´ βρουλλοκυπέρου λι δ´ ταῦτα πάντα βάλλε ἐν τῇ προ-
 εψησει ἵνα βράσωσιν ὥρας ιβ´ και κενωθῆ εἰς καθαρὸν ἀγγεῖον και
 σπογγισθῆ τὸ κακάβιν και πάλιν βάλλης οἴνου λι ιε´ και ἐκεῖνο τὸ
 ἔλαιον ἐπάνω. τὸ δὲ τριψίδιον ἔστω κινναμώμου ἀληθινοῦ λι γ´ γαλαγ-
 γὰν γ ζ´ καρυοφύλλων γ δ´ στάχους γ γ´ ξανθοκαρύων γ γ´ λάδανον 50 [25]
 καθαρὸν γ γ´ τερεβίνθης γ η´ ξυλαλόης γ β´ κόστου γ δ´ ἄσαρου βου-
 κελλαρίου λι δ´ θυμιάματος βασιλικοῦ γ γ´. ταῦτα κόψας και σεΐσας και
 ἐνώσας μετὰ τοῦ ἐλαίου τῆς προεψησεως, ἔψησον κατὰ πεῖραν, ἵνα
 μήτε καῦσις γένηται, μήτε πάλιν ἐνδεεστέρα ἢ ἔψησις.

44-54. Another preparation of spikenard. In the pre-boiling, 15 *litrae* of old wine, 1 *litra* of rosemary leaves, 1 *litra* of myrtle leaves (*Myrtus communis* L.), 3 *litrae* of *rasdon*, 2 *litrae* of sweet flag, 4 *litrae* of *broullocyperus*: throw all these things in the pre-boiling so that they simmer for 12 hours,

and it has been emptied into a clean vessel, and the little three-legged pot has been wiped with a sponge; and again add 15 *litrae* of wine, and that oil on top. Let the *tripsidion* be 3 *litrae* of true cassia, 6 *unciae* of galingale, 4 *unciae* of clove-tree buds, 3 *unciae* of spikenard, 3 *unciae* of cloves, 3 *unciae* of pure gum-ladanon, 18 *unciae* of terebinth, 2 *unciae* of eagle wood, 4 *unciae* of spice root, 4 *litrae* of small-loaf shaped hazelwort, 3 *unciae* of royal incense. Once you have chopped up these things, give them a shaking and combine them with the oil of the pre-boiling, and boil carefully so that burning does not occur and the boiling does not become too insufficient. }

Ναρδίνου σκευασία Ἰωάννου μυρεψοῦ. Ἐλαίου ζε ζ´ ἀσπαλάθου 55 [30]
λίτραι δ´ ξυλοβαλσάμου λίτραι β´ κόστου γ γ´ ξυλοκασίας γ δ´ καρπο-
βαλσάμου γ ζ´ ἀμώμου γ γ´ στύρακος καλαμίτου γ β´ ὀποβαλσά-
μου γ β´.

[66.32] Γ ζ´ replaces Γ γ´ after καρποβαλσάμου.

55-58. John the Unguent-maker's preparation of spikenard oil. 6 *xestes* of oil, 4 *litrae* of camel's thorn, 2 *litrae* of balsam wood, 3 *unciae* of spice root, 4 *unciae* of woody cassia, 6 *unciae* of balsam fruit, 3 *unciae* of greater cardamom, 2 *unciae* of reed storax, 2 *unciae* of balsam juice.

131) Many of the ingredients in this highly complex preparation have various pharmacological activities, but, since Aëtius makes very few therapeutic claims for it, their relevance cannot be determined.

131.49 [66.24] **τριψίδιον** Meaning unclear.

[67.1-20]

(ρλβ´) Ἐλαίου σαλκᾶ σκευασία. Ἐσκεύασα ταύτην ἐν Ἀλεξανδρείᾳ καὶ
ἐστὶ πάνυ καλλίστη· ἀσπαλάθου γ ζ´ ξυλοβαλσάμου γ θ´ κυπέρων
γ δ´ ἐλενίου γ ζ´ ἴρεως γ ζ´ καλάμου γ ρ ιη´ σχοῖνου ἄνθους γ β´ c
στύρακος λιπαροῦ γ β´ κάρνα ἰνδικὰ β´ φύλλου γ ρ ιη´ ναρδοστάχου
γ α´ καρνοφύλλου γ α´ c ἀρνάβω γ α´ c ἀμώμου γ γ´ κασίας γ β´ 5 [5]
κόστου γ α´ σμύρνης γ α´ ὕπνου γ γ´ ξυλοκασίας γ γ´ ἐλαίου ζε ι´.
ἔψεται δὲ τῷ προειρημένῳ τρόπῳ ἐπὶ τῆς νάρδου· ἐν τῇ πρώτῃ
ἐψήσει ἐμβαλλομένων ξυλοβαλσάμου ἴρεως κυπέρου ἐλενίου ξυλοκασίας
ἀποφλοισθέντων καὶ ἀδρομερῶς κοπέντων καὶ προβραχέντων ὕδατι
ἐπὶ ἡμέρας β´ ἢ γ´, ἐν δὲ τῇ δευτέρᾳ ἐψήσει ἐμβάλλεται κάλαμος σχοῖνος 10 [10]
ὑπνον προνοτισθέντα οἴνῳ παλαιῷ εὐώδει, ἐν δὲ τῇ τρίτῃ τὰ λοιπά. γίγνε-
ται δὲ καὶ δευτέρου οὕτως· τοῖς καταλειφθεῖσιν ἀπὸ τῆς τρίτης ἐψήσεως
ἐπιβάλλονται ἐλαίου ξέσται ζ´ καὶ ἔψεται ἐφ´ ἰκανόν· εἶτα ἐπιβάλλονται

στακτηῆς καλῆς λευκῆς Γ γ' σειρώματος τουτέστι τὸ ὕδωρ τοῦ ὀποβαλσά-
μου Γ ζ' μαστίχης Γ ζ' στύρακος καλαμίτου Γ α'. χρῶνται δὲ τῷ σαλκᾶ αἱ γυναῖ- 15
κες τὰς κεφαλὰς ἀλείφουσαι. ἐστὶ δὲ ἡ εἰρημένη σκευασία πάνυ καλλίστη.

Ἐλαίου σαλκᾶ σκευασία Ἰωάννου μυρεψοῦ. Κόστου Γ ιβ' φύλλου
Γ δ' κασίας Γ ζ' σμύρνης Γ ζ' ξυλοκαρνοφύλλου Γ ζ' καρποβαλ-
σάμου Γ ζ' νάρδου στάχους Γ δ' καλάμου Γ α' ἴρεως Γ ιβ' στύρακος
λιπαροῦ Γ θ' κρόκου < δ' ἐλαίου ζε ζ'.

20 [20]

[67.15] καλαμίτου replaces καλοῦ.

[67.18] σμύρνης replaces ζιγγιβέρεως.

132) Preparation of oil of salka. I have prepared this in Alexandria and it is really very good. 6 *unciae* of camel's thorn, 9 *unciae* of balsam wood, 4 *unciae* of galingale, 6 *unciae* of calamint, 6 *unciae* of iris, 18 'grams' of sweet flag, 2.5 *unciae* of lemon-grass flower, 2 *unciae* of oily storax, 2 Indian nuts, 18 'grams' of leaf, 1 *uncia* of spikenard, 1.5 *unciae* of cloves, 1.5 *unciae* of zedoary, 3 *unciae* of greater cardamom, 2 *unciae* of cassia, 1 *uncia* of spice root, 1 *uncia* of myrrh, 3 *unciae* of a lichen, 3 *unciae* of woody cassia, 10 *xestes* of oil. And they are boiled in the manner previously stated about spikenard: in the first boiling, there are added balsam wood, iris, galingale, calamint and woody cassia, which have been peeled, coarsely chopped and previously soaked in water for 2 or 3 days; in the second boiling, there are added sweet flag, rush and lichen, which have been previously moistened in old wine with a fine bouquet; in the third boiling, the remaining ingredients are added. And the second oil is also produced as follows: 6 *xestes* of oil are added to the residues from the third boiling, and it is boiled sufficiently; then 3 *unciae* of fine white oil of myrrh, that is to say, the water of the filtrate of 6 *unciae* of balsam juice, 6 *unciae* of mastic (2) and 1 *uncia* of reed-like storax. The women use salka when they are anointing their heads. And that is the preparation which I had said was really fine.

John the Unguent-maker's preparation of oil of salka. 12 *unciae* of spice root, 4 *unciae* of dog mercury, 6 *unciae* of cassia, 6 *unciae* of myrrh, 6 *unciae* of clove, 6 *unciae* of balsam fruit, 4 *unciae* of spikenard, 1 *uncia* of sweet flag, 12 *unciae* of iris, 9 *unciae* of oily storax, 4 drachmas of saffron (*Crocus sativus* L.), 6 *xestes* of oil.

132) This appears only to be a cosmetic preparation. The word σαλκᾶ, used several times by Aëtius as a name for this preparation, appears nowhere else in Ancient Greek literature (*TLG*).

[67.21-68.3]

(ρλγ') Φυλλίνου ἤτοι μαλαβαθρίνου σκευασία καλλίστη. Ἀσπάλαθου λίτρα α'c ξυλοβαλσάμου λίτραι β' κυπέρων λίτρα α'c ἑλενίου λίτρα α'c φύλλου γ' δ' ἀμώμου γ' ζ'. ξυλοκασίας γ' δ' ζιγγιβέρεως γ' γ' κόστου γ' θ' στύρακος πρωτείου λίτρα α' κασάμου ἤτοι καρποβαλσάμου γ' ζ' καλάμου λίτρα α'c νάρδου στάχυος γ' β' καρυοφύλλου γ' δ' σειρώματος ὃ ἐστι κάθισμα 5 [p68] ὕδατῶδες ὀποβαλσάμου γ' ζ' ἀρνάβω γ' ζ' καρδαμώμου γ' ζ' ἴρεως λίτρα α' ἐλαίου ζε κ' οἴνου εὐώδους τὸ ἀρκοῦν ἔψε ὡς τὴν νάρδον.

[67.23] ζιγγιβέρεως replaces σμύρνης.

133) The preparation of leaf oil, or oil of *Cinnamomum tamala* Buch.-Ham. or *albiflorum* Nees is very fine. 1½ *litrae* of camel's thorn, 2 *litrae* of balsam wood, 1½ *litrae* of galingale, 1½ *litrae* of calamint, 4 *unciae* of [*C. tamala*] leaf, 6 *unciae* of greater cardamom, 4 *unciae* of woody cassia, 3 *unciae* of ginger, 9 *unciae* of spice root, 1 *litra* of first-quality storax, 6 *unciae* of *Cyclamen graecum* Link or balsam fruit, 1½ *litrae* of sweet flag, 2 *unciae* of spikenard, 4 *unciae* of cloves, 6 *unciae* of filtrate which is the aqueous sediment of balsam juice, 6 *unciae* of zedoary, 1 *litra* of iris, 20 *xestes* of oil, and a sufficiency of wine with a fine bouquet. Boil as for spikenard.

133) No uses are suggested for this complex recipe.

[68.4-14]

(ρλδ') Τίσιν ἀρμόδια τὰ εὐώδη μύρα. Τὰ δὲ εὐώδη τῶν μύρων ταῖς ψυχροτέραις τῶν κεφαλῶν μᾶλλον ἀρμόδια ἢ ταῖς μέσως θερμαῖς ἐν χειμῶνι, ταῖς γὰρ θερμότεραις οὐκ ἐπιτήδεια. εἰ δὲ τις διὰ τὸ εὐῶδες βούληται χρῆσθαι τοῖς τοιοῦτοις, προσμιγνύτω ῥόδιον ἴσον ἴσῳ· οὕτως γὰρ κερασθὲν οὐκέτι βλαβερὸν γίγνεται. ἐπεὶ δὲ πολλὰ τῶν γυναικῶν τοιαύτας θερμὰς ἔχουσι τὰς κεφαλὰς, ὥστε μηδενὸς ἀνέχεσθαι τῶν θερμαινόντων ἐλαίων, ὀμφακίνῳ μόνῳ χράσθωσαν, ἔσθ' ὅτε δὲ καὶ ῥόδιον. τινὲς γὰρ ἐξ αὐτῶν οὐδόλως χρῶνται ἐλαίῳ, διὰ τὸ ταχέως ὑγραίνεσθαι τὰς κεφαλὰς καὶ κατάρρῳ περιπίπτειν, ἃς οὐ χρὴ καταναγκάζειν ἀλείφεσθαι. δέονται γὰρ τοῦ ξηραίνειν τὰς κεφαλὰς τοῖς ἐπικαίροις ἐμπάσμασι ξηροῖς, οὐ τοῦ ὑγραίνειν τῷ ἐλαίῳ. 5 [10] 10

134) For whom the sweet-smelling unguents are fitting. The sweet-smelling sorts of the unguents are more fitting for the women who are colder with regard to their heads or those who are moderately warm in winter, for they are not suitable for those who are warmer still. But if someone should want to use the sorts classed as fragrant, let that person mix in addition rose oil in equal amounts; for in this way, what has been mixed no longer becomes harmful. Since many among women have heads of such a hot sort so as to tolerate none of the warming oils, let them use only unripe oil, and occasionally rose oil. For some of them, whom it is not necessary to coerce into anointing, do not use oil at all on account of rapidly moisturising their heads, and running the risk of catarrh. For they ought to render their heads dry with appropriate dry dusting-powders, not to moisturise with oil.

134) This passage emphasises the differences between modern and ancient conceptualisation of pathogenesis. In the latter, the importance of the influence of the elements is all-important; nowadays, causal factors are recognised to include infection, toxins, nutrition, and genetics, although a substantial section of the general public has yet to be convinced that there is no need to worry about catching a chill or getting their feet wet.

134.8 [68.11] οὐδὲ ὅλως This word does not appear in LSJ, and, according to *TLG* results, is rare before the second century AD; Galen, however, uses it eleven times, and Aëtius twenty-four times. Considering it a contraction of οὐδ' ὅλως (cf. μηδὲ ὅλως), I have translated it as “not at all”.

[68.15-69.12]

(ρλε') Καπνιστὸν ἔλαιον. Τὸ δὲ λεγόμενον καπνιστὸν ἔλαιον σκευάζεται οὕτως· ὀνύχων ἀρωματικῶν μεγάλων Γ ε' λιβάνου ἄρρενος στύρακος πρωτείου Γ ε' βδέλλιου καθαροῦ Γ ε' κόστου Γ ε' ἐλαίου γλυκέος καλοῦ ζε ε' ὕπνου τὸ ἀρκοῦν· τὸν <δὲ> κόστον εἰς ἀδρομερῆ μόρια διαμερίσας, καὶ τὸν στύρακα ὁμοίως καὶ τὸ βδέλλιον, εἴτ' ἀναμίξας, ἅμα ἔμβαλε ἐν ζεστίῳ 5
καὶνῶ ὀστρακίνῳ μὴ ἔχοντι ὠτίον· εἶτα σκεπάσας ποσῶ τὸ στόμιον 20]
ὑπνῶ καὶ ἔξωθεν τοῦ ὕπνου ξυλάρια ἀσπαλάθου ἢ τινος τῶν εὐωδῶν περιφράξας, ὥστε μὴ ἐκπεσεῖν τὰ ἐν τῷ ζεστίῳ, εἶτα ἕτερον ὀστρά-
κινον ἀγγεῖον ἄωτον λαβὼν μακροτράχηλον στόμιον ἔχον ἀρμόδιον τῷ 5
στομίῳ τῷ περιέχοντι τὰ εἰρημένα εἶδη, καὶ ἐμβάλων ἐν αὐτῷ ἐλαίου 10
γλυκέος ξέστας ε' καὶ ὀρύξας τὴν γῆν, χῶσον μέχρι τοῦ τραχήλου τὸ 25]
ἔχον τὸ ἔλαιον ἵνα μὴ πυρωθῆ, εἶτα ἐπικέφαλα λαβὼν τὸ ζεστίον καὶ ἀρμόσας αὐτὸ τῷ στομίῳ τοῦ ἔχοντος τὸ ἔλαιον, χρίε ἔξωθεν τὸ

ξεστίον πηλῶ ὄλον κύκλω καὶ τὰ στόματα ἀμφοτέρων τὰ ἀλλήλοις
 ἤρμοσμένα καὶ ἐάσας ξηρανθῆναι, τῇ ἐξῆς κάρβωνας πολλοὺς ἐπιθεῖς 15 [p69]
 καὶ σκεπάσας αὐτοῖς πάντοθεν τὸ ξεστίον, ἄναψον πῦρ καὶ ρίπιζε.
 ἀναφθέντος δὲ τοῦ πυρός, ἕα αὐτὸ μαραίνεσθαι, ἵνα κατὰ βραχὺ πυ-
 ρούμενα διὰ τοῦ στόματος τοῦ ξεστίου τὰ εἶδη καπνίση τὸ ὑποκεί-
 μενον αὐτοῖς ἔλαιον· τούτου γὰρ χάριν καπνιστὸν ὀνομάζεται· εἶτα τῇ [5]
 ἐξῆς ἀνοίξας ἀνελοῦ τὸ ἔλαιον καὶ φύλαττε ἐν ὑελίνῳ ἀγγεῖῳ καὶ 20
 χρῶ. τούτῳ χρῶνται αἱ γυναῖκες ἐφ' ὧν ἐπίσχηται τὰ καταμήνια,
 χρίουσαι αὐτῷ τὸ ἥτρον καὶ τὴν ὄσφυν. ἀρμόδιον δὲ ἐστὶ κάπι τῶν
 μὴ κατὰ λόγον ἐν τοῖς τοκετοῖς καθαιρομένων ὁμοίως χριόμενον. χρή-
 σιμον δὲ καὶ τοῖς τὸν θώρακα ἐψυγμένοις καὶ τεινεσμῶν ἐνοχλοῦντων [10]
 ὠφέλιμον θερμὸν πτύγματι ἐρίου ἀναλαμβανόμενον καὶ ἐπιτιθέμενον 25
 ἥτρον καὶ ὄσφυν.

[68.16] λιβάνου ἄρρενος added before στύρακος.

[68.24] τῷ περιέχοντι replaces τοῦ περιέχοντος.

[69.6] ὑελίνῳ replaces ὑαλίνῳ.

135) Smoked oil. The oil said to be “smoked” is prepared as follows: 5 *unciae* of large aromatic *onychias* [unknown aromatic substance]; 5 *unciae* of first quality storax of the male frankincense-tree; 5 *unciae* of pure bdellium (gum from *Commiphora africanum* Engl. or *mukul* Engl.); 5 *unciae* of spice root; 5 *xestes* of fine sweet oil; and a sufficiency of lichen. Having divided the spice root in large pieces, likewise the storax and bdellium, and then having mixed them together, add them at the same time in a new earthenware pitcher, one which does not have a little handle. Then, cover its mouth with a quantity of lichen, and arrange twigs, camel’s thorn or one of the fragrant substances as a covering outside the lichen, so that the contents of the pitcher cannot fall out. Next, take another earthenware vessel, without lugs, which has a long-necked opening, suitable for arranging the aforementioned substances around the mouth, and add to it 5 *xestes* of sweet oil. And, having dug the ground, earth up as far as its neck the vessel holding the oil, so that it is not overheated; then, holding the pitcher mouth downwards and having fitted it to the mouth of the one holding the oil, daub the pitcher with clay on the outside, all the way round, also the mouths of both, joined one to another. Having allowed drying to take place, on the following day place lots of charcoal on top, light a fire and fan it. And when the fire has been lit up, let it die away gradually, so that in a short time, burning through the mouth of the pitcher, the ingredients smoke the oil lying beneath them; for it is on account of this that it is called “smoked”. Then,

on the following day, open it up, remove the oil, keep it in a glass container, and use it.

Women whose periods have been checked use it, rubbing it on their lower abdomen and loins. And it is also suitable, when applied in the same way, for those not appropriately cleansed in parturition. It is also useful for those who have been chilled in the chest and helpful for those troubled by tenesmus, when it is absorbed warm in a woollen swab and applied to the lower abdomen and loins.

135) Aëtius omits to warn those preparing the oil to stand well back; there is, I fear, a high probability that his apparatus would explode, projecting showers of blazing oil on the incautious. This may represent, however, an early description of a crude attempt to extract volatile aromatic compounds from plant material, filter them and dissolve them in oil to form a medicament.

There is no apparent substantiation of the above therapeutic claims in modern scientific literature.

[69.13-19]

(ρλζ') Περὶ τῶν ἄλλων συγχρισμάτων. Ἐκ τούτων δὲ ἔνεστί σοι καὶ περὶ τῶν ἄλλων ἐλαίων γινώσκειν ἤδη, ὅποσα τοῖς μύροις ὁμωνύμως λέγεται. κατὰ γὰρ τὴν ἐκάστου φύσιν τῶν ἐμβληθέντων ἀλλοιωθήσεται τὸ ἔλαιον, ὧν ἐκάστου εἶδους τὴν δύναμιν ἐν τῷδε τῷ λόγῳ μαθήσῃ. περὶ δὲ τῶν λοιπῶν ἀνετικῶν τε καὶ χαλαστικῶν συγχρισμάτων ἐν τῷ περὶ συνθέσεως φαρμάκων μετὰ τὰ ἀρθρτικὰ βοηθήματα λεχθήσεται, γλευκίνου ἐλαίου λέγω καὶ τῶν παραπλησίων. [15] 5

136) Concerning the other salves. From these considerations it is possible now for you to know about the other oils, all that are called by the same name as the salves. For the oil is altered according to the nature of each of the ingredients, and you will learn in this treatise the capacity of each kind of them. Mention will be made of the remaining ointments, both relaxing and loosening, in the part concerning the combination of drugs with a view to remedies for joint diseases – I am talking of sweet new oil and similar substances.

136) 136.5-6 [69.17-8] **περὶ...λεχθήσεται** Mention is made, e.g. in book 12, chh. 54, 63.

[Galen next lists Cankerwort (*Linaria spuria* Mill.), omitted by Aëtius, which is supposedly moderately cold and astringent (11.873.1-2 Περὶ ἐλατίνης).]

[69.20-23]

(ρλζ´) Ἐλαφόβοσκον θερμῆς καὶ λεπτομεροῦς ἐστὶ δυνάμεως καὶ διὰ τοῦτο καὶ ξηραντικῆς κατὰ τὴν δευτέραν που μάλιστα τῶν ἀποστάσεων. ἀρμόζει δὲ ἐπὶ τῶν ὑπὸ τινος ἰοβόλου πληγέντων πινόμενον τε καὶ ἐσθιόμενον. [20]

[Galen 11.873.3-5]

137) Parsnip (*Pastinaca sativa* L.) has a warm and fine-grained capacity, and accordingly it is also drying, certainly somewhere at the second of the levels. Both when eaten and drunk, it is suitable for those stricken by any venomous creature.

137) Aëtius quotes Galen verbatim, apart from the plant's being called ἐλαφόβοσκος by the latter, and then adds the last sentence about use against poisonous bites.

There is no apparent substantiation of the above claims in modern scientific literature; parsnips, however, can cause photodermatitis on contact. (Bruneton, 1995: 239).

[69.24-27]

(ρλη´.) Ἐλενίου ἡ ρίζα μάλιστα ἐστὶ χρησίμη. λεκτέον δὲ αὐτὴν οὐ θερμὴν καὶ ξηρὰν ἀκριβῶς, ὡς τὸ πέπερι, ἀλλὰ σὺν ὑγρότητι περιττωματικῇ, καὶ διὰ τοῦτο καὶ τοῖς ἐλλίγμασι τοῖς εἰς ἀναγωγὰς τῶν γλίσχρων καὶ παχέων ἐν θώρακι καὶ πνεύμονι ἐπιτηδείως μίγνυται. [25]

[Galen 11.873.6-15]

138) The root of calamint (*Calamintha incana* L., or *Inula helenium* L.) is especially useful. It should be said that it is not exactly warm and dry, like pepper (*Piper nigrum* L.), but with a residual moistness, and because of this

it is also a suitable component in linctuses for bringing up sticky and thick material in the chest and lung.

138) Aëtius quotes much of Galen’s entry, but omits the latter third concerning its use in hip problems, ἡμικρανία (possibly migraine or trigeminal neuralgia) and joint problems.

138.3 [69.26] **ἐλλίγμασι** According to *TLG*, ἔλλιγμα, which does not appear in *LSJ*, is used only by Aëtius (v. also 1.147.3,4; also 8.74.40); it is obviously a corruption or modification of Galen’s ἐκλείγμασι [linctuses] (11.873.10).

There is no apparent substantiation of the above claims in modern scientific literature.

[69.28-70.13]

(ρλθ΄.) Ἐλελίσφακος θερμαντικῆς ἐναργῶς ἐστὶ κράσεως, ὑποστυφούσης ἀτρέμα. ἰστοροῦσι δὲ τινες ὅτι ἐπ’ ἀνθράκων ὑποθυμιωμένη ταῖς γυναιξὶ στέλλει καταμήνια ἀμέτρως φερόμενα καὶ γυναικεῖον ῥοῦν. Ἀγρίππας δὲ φησὶν “ἐλελίσφακον τὴν ἱερὰν βοτάνην λέαιναι κηῖσασαι τρώγουσιν. ἐστὶ γὰρ κρατητικὴ συλλήψεως ζωογονικῆς. ἐπὰν οὖν τὸν χυλὸν ταύτης ὅσον **Κ α΄** μεθ’ ἄλλος ὀλίγου πῆν γυνὴ τεταρταῖα οὔσα ἐξ ἀφέδρου καὶ ἀνδροκοιτήση συλλήγεται ἀπαραβάτως”. φασὶ δὲ ὅτι λοιμοῦ κατασχόντος ἐν Κοπτῶ τῆς Αἰγύπτου τοὺς ἐν τῇ χώρᾳ περιλειπομένους ἀναγκάσαι τὰς γυναῖκας καὶ ταύτην χρῆσασθαι τῇ δυνάμει καὶ ἐπὶ γονὴν πλείστην γενέσθαι. Ὀρφεὺς δὲ φησὶ “δίδου τοῖς αἱμοπτοικοῖς τοῦ χυλοῦ τῆς ἐλελίσφακου κυάθους δύο μετὰ μέλιτος **Γ α΄** νήστεις πιεῖν καὶ εὐθέως σταθήσεται. τοῖς δὲ φθισικοῖς”, φησὶ, “σκεύαζε καταπότια οὕτως· ναρδοστάχους **Γ β΄** ζιγγιβέρεως **Γ β΄** σπέρματος ἐλελίσφακου πεφρυγμένου κεκομμένου καὶ σεσεισμένου **Γ ιδ΄** πεπέρεως μακροῦ **Γ ιβ΄** ἀναλάμβανε τῷ χυλῷ καὶ ποιεῖ καταπότια καὶ δίδου **Γ α΄** πρῶν νήσται καὶ εἰς κοίτην ὁμοίως καὶ ἐπιρροφεῖτω ὕδατος καθαροῦ.”

[Galen 11.873.16-17]

139) *Salvia* (*Salvia triloba* L.) has a distinctly warming composition, gently astringent to a mild extent. Some people report that, when burnt over coals for fumigation, in women it regulates menorrhagia and female flow. Agrippa says: “Pregnant lionesses eat salvia, the sacred herb. For it promotes the retention of the products of conception. When, therefore, a woman who is four days past the end of menstruation drinks 1 cyathus of the juice of this plant with a little salt and lies with a man, she will conceive without fail.” And they say that when plague gripped the people of Koptos

in Egypt, the survivors in the area obliged the women to make use also of this capacity and to be engaged in producing the greatest number of offspring. Orpheus says: “Give those coughing up blood 2 cyathi of the juice of salvia with 1 *uncia* of honey to drink when fasted, and immediately it [the problem] will be stopped. For consumptives, he says, prepare pills as follows: add to the juice 2 *unciae* of spikenard, 2 *unciae* of ginger, 14 *unciae* of roasted, chopped and sifted salvia seed, 12 *unciae* of long pepper (*Piper officinarum* C.DC.), and make pills, and give 1 *uncia* in the morning to the fasted patient, and likewise at bed-time, and let him wash it down with pure water.”

139) Aëtius quotes Galen’s brief entry verbatim in his first sentence, the remainder being a lengthy addition by Aëtius.

139.8-9 [70.4-5] **λοιμοῦ ... ἐν Κοπτῶ** No other reference to plague in this city is apparent, and so its nature remains unknown.

There is no apparent substantiation of the above claims in modern scientific literature, but essential oil from *Salvia* spp. has been shown to be neurotoxic and to cause convulsions (Bruneton, 1995: 439).

70.14-22

(ρμ´) Ἐλλέβορος ἐκάτερος, ὃ τε λευκὸς καὶ ὁ μέλας ῥυπτικῆς τε ἅμα
καὶ θερμῆς εἰσι δυνάμεως. διὸ καὶ πρὸς ἀλφουὺς καὶ λειχῆνας καὶ ψώ- [15]
ρας καὶ λέπρας ἀρμόττουσι. καὶ μὲν δὴ καὶ εἰς σύριγγα τετυλωμένην
ῥάβδος τοῦ μέλανος καθιεμένη ἐν δύο που ἢ τρισὶν ἡμέραις ἀφίστησι
τὸν τύλον. κείσθωσαν δὲ ἐν τῇ τρίτῃ τάξει τῶν θερμαινόντων τε καὶ 5
ξηραίνοντων. καθαίρει δὲ ὁ μὲν μέλας τὸν μελαγχολικὸν χυμὸν, μᾶλ-
λον διὰ τῆς κάτω γαστροῦ, ὁ δὲ λευκὸς τὴν ἄνω γαστέρα μᾶλλον [20]
κενοῖ δι’ ἐμέτων, τοὺς παχεῖς καὶ γλίσχρους χυμοὺς ἐκκαθαίρων, κινεῖ
δὲ καὶ τὴν κάτω.

[Galen 11.874.1-9]

140) Each hellebore, both the white (*Veratrum album* L.) and the black (*Helleborus orientalis* Lam. or *niger* L.), has a cleansing and warm capacity. Hence, they are suitable for various skin lesions – pale, impetiginous, itchy and scabby, and scaly. What is more, if a rod of black hellebore is inserted into a deep sinus which is crusted, somewhere within two or three days it removes the crust. Let them be placed in the third rank of both the warming

and drying substances. The black purges the black-bile humour, more through the lower gastro-intestinal tract, whereas the white empties the upper gastro-intestinal tract, more by means of vomiting, clearing out thick and sticky humours, but it also moves the lower tract.

140) Aëtius quotes most of Galen's entry, but omits details regarding the treatment of toothache and the varieties' tastes, while adding more precise details of how to treat a sinus, and of the purgative effect.

White hellebore is potentially highly toxic and its emetic effect is well documented, along with its ability to cause neurological symptoms, hypotension and fatal syncope (e.g., Gaillard Y., Pepin G., 2001; Gilotta I., Brvar M., 2010); modern use of veratrum alkaloids as an antihypertensive has been completely abandoned because of toxicity (Bruneton, 1995: 873). Black hellebore contains potentially harmful cardiac glycosides, but poisoning in humans is rare (Bruneton, 1995: 596).

[70.23-71.10]

(ρμα΄) Ἐλξίνη. Ταύτην τινὲς παρθένιον, οἱ δὲ περδίκιον
καλοῦσι. δύναμις δὲ αὐτῆς ῥύπτικὴ τε καὶ ἀτρέμα στυπτικὴ μεθ' ὑγρό-
τητος ὑποψύχρου, ὅθεν καὶ ἰᾶται τὰς φλεγμονὰς ἀπάσας ἐν ἀρχῇ τε [p71]
καὶ ἀναβάσει μέχρι τῆς ἀκμῆς καὶ μάλιστα τὰς θερμάς. καὶ μὲν δὴ καὶ
ἀρχομένοις φυγέθλοισι ἐπιπλάττεται. καὶ ὁ χυλὸς δὲ αὐτῆς μετὰ ῥο- 5
δίνου πρὸς ὧτων ἀλγήματα μετρίως φλεγμονώδη ἀρμόζει. ἀνακογχυ-
λίζονται δὲ τινες τὸν χυλὸν καὶ πρὸς παρίσθμια φλεγμαίνοντα, τινὲς [5]
δὲ τῶν ἰατρῶν τοῖς χρονίως βήττουσιν ἔδωκαν αὐτὴν διὰ τὸ ῥύπτειν
ἐναργῶς. ποιεῖ δὲ καὶ πρὸς ἀλωπεκίαν καὶ λειχήνας αὐτὴ καθ' ἑαυτὴν
παρατριβομένη τῷ τόπῳ συνεχῶς, ἀναστομοῖ δὲ ὡσαύτως καὶ τὰς ἐν 10
ἔδρᾳ αἰμορροΐδας, θεραπεύει καὶ σύριγγας καὶ κόλπους παρατίθησι λεῖα
μεθ' ἄλλων ὀλίγων καταπλασσομένη. [10]

70.23 ἢ περδίκιον omitted after Ἐλξίνη.

[Galen 11.874.10-875.2]

141) Bindweed (*Convolvulus arvensis* L.). Some call this *parthenion*, others *perdikion* (*Polygonum maritimum* L.). Its capacity is both cleansing and gently astringent, with a fairly cool moistness, and that is why it actually heals all the inflammatory swellings, both in the early stages and during progression until crisis, and especially the hot ones. In particular, it is applied topically to furuncles in the initial stages. Also, its juice, used

with rose oil, is suitable for otalgia associated with moderate inflammation. Some gargle with the juice also for tonsillitis, while other doctors have given it to those with a chronic cough, on account of its clearly cleansing effect. It also works for patchy hair loss and impetigo when rubbed in on its own to the area at frequent intervals. In like manner, it also opens up haemorrhoids, it also treats deep sinuses, and, when ground down with a little salt and used as a plaster, it lays open superficial sinuses.

141) Aëtius quotes Galen largely verbatim, but omits two synonyms (σιδηρίτις and Ἡράκλεια (11.874.11,12)) for the plant, and adds, in his last two sentences, further uses.

141.1 [70.23] Ἐλξίνη LSJ translates as “pellitory (*Parietaria officinalis* L.) or bindweed (*Convolvulus arvensis* L.)”; Carnoy suggests bindweed, honeysuckle or pellitory. Dioscorides, however, describes it as having leaves like ivy, but smaller, with a tendency to entwine adjacent objects (4.39 (K25.534.11-17)), which is perhaps closest to bindweed.

There is no apparent substantiation of the above claims in modern scientific literature for *Parietaria officinalis* L., whose pollen is highly allergenic (Lewis, 1977: 70), or *Convolvulus arvensis* L.. *Polygonum maritimum* L. has a high phenol content, which gives it some ability to kill the germs causing boils and some cases of otitis media (El-Haci et al., 2013).

[Galen next lists black pellitory, omitted by Aëtius, which is supposedly dispersive (Περὶ ἐλξίνης μελαίνης 11.875.3-4).]

[71.11-14]

(ρμβ´) Ἐλυμος καλεῖται καὶ μελίμη· Ἔστι δὲ ἐκ τῶν ὀσπρίων ὅμοιον κέγχρω τὴν τε ἰδέαν καὶ τὴν δύναμιν, ὀλιγότροφόν τε καὶ ξηραντικόν. ἴσθησί γέ τοι τὰ κατὰ γαστέρα ρεύματα, καθάπερ καὶ ὁ κέγχρος. εἰ δὲ ἔξωθεν ἐπιπλασθεῖη, ξηραίνει καὶ ψύχει.

[Galen 11.875.5-9]

142) *Elumos* is also called Italian millet (*Setaria italica* P.Beauv.). It is one of the pulses, and is like millet (*Panicum miliaceum* L.) in appearance and capacity, of little nutritional value, and drying. That is to say, it checks

discharges affecting the bowel, just as millet also does. If it is applied externally, it dries and cools.

142) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[71.15-18]

(ρμγ') Ἐμπετρον ἢ ἐπίπετρον εἰς τὰς καθάρσεις μόνας δοκεῖ χρήσιμον ὑπάρχειν, ἄγον φλέγμα καὶ χολήν. ἐστὶ δὲ ἄλυκόν τὴν γεῦσιν, ὥστε καὶ εἰς ἄλλα χρήσαιτ' ἂν τις αὐτῷ εἰς ἅπερ καὶ τὴν ἄλυκὴν <οὐσίαν ἐδείκνυμεν δυναμένην>· ὀνομάζεται δὲ καὶ πρασοειδές.

[Galen 11.875.10-14]

143) *Empetron* (sea-heath, *Franklinia pulverulenta* L.) or *epipetron* (*Sedum* L. sp.) is thought to be useful for purges alone, removing phlegm and bile. It is also salty to taste, so that one would use it for other things for which <we showed> the salty <essence to be effective>; it is called also “leek-green”.

143) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[71.19-22]

(ρμδ') Ἐπίθυμον κατὰ πάντα ἰσχυρότερόν ἐστι τῆς θύμου δυνάμεως, ξηραῖνον καὶ θερμαῖνον κατὰ τὴν τρίτην ἀπόστασιν. καθαίρει δὲ τὸν μελαγχολικὸν χυμόν.

[Galen 11.875.15-17]

[71.21-2] ἐκλέγου δὲ τοῦ θύμου τοῦ ἔχοντος ἄνθος εὐπόρφυρον, ἔχον τι καὶ λευκὸν ἔμπλεον. omitted after χυμόν.

144) *Cuscuta epithimum* L. is in every respect stronger than thyme in capacity, drying and warming at the level of the third degree. And it purges the black-bile humour.

144) Aëtius quotes Galen's single sentence fairly closely, and then adds the final sentence.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists two plants omitted by Aëtius: *epimedion* (an unidentified plant), moderately cooling and moist, which allegedly stops breasts sagging when rubbed on, and is a contraceptive when drunk (Περὶ ἐπιμήδιου 11.876.1-5); and a variety of medlar (*Mespilus germanica* L.) found in Southern Italy, which is supposedly astringent, bad for the stomach and causes headaches (Περὶ ἐπιμήλιδος 11.876.6-11).]

[71.23-72.5]

(ρμε´) Ἐρέβινθος ὄσπριόν ἐστι φυσῶδες τρόφιμον εὐκοίλιον οὐρητικόν, γάλακτος καὶ σπέρματος καὶ καταμηνίων ἀγωγόν. τὸ δὲ ἀφέψημα αὐτοῦ καὶ λίθους τοὺς ἐν νεφροῖς θρύπτει καὶ μάλιστα τὸ ἀπὸ τῶν μελανῶν. τὸ δὲ ἕτερον γένος τῶν ἐρεβίνθων καλούμενον ὀρόβια δυνά- [25] μεῶς εἰσὶν ἐπισπαστικῆς διαφορητικῆς τμητικῆς ῥυπτικῆς· διὸ καὶ σπλῆνα [p72] 5 καὶ ἥπαρ καὶ νεφροὺς ἐκκαθαίρουσι καὶ ψώρας καὶ λειχῆνας ἀπορρύπτουσι, καὶ παρωτίδας καὶ ὄρχεις σκιρρομένους διαφοροῦσι καὶ τὰ κακοήθη τῶν ἐλκῶν ἰῶνται μετὰ μέλιτος. [5]

[Galen 11.876.12-877.5]

145) Chick pea (*Cicer arietinum* L.) is a pulse, flatus-producing, nutritious, good for the abdomen, urine-promoting, and able to bring on milk, semen and menstruation. Its boiled-down residue also crumbles stones in the kidneys, especially the residue from the dark [chick-peas]. The other kind of chick-peas, called "little bitter vetch" (*Vicia ervilia* Willd.), have a capacity which is constricting, dispersive, cutting and cleansing; hence they clean out the spleen, liver and kidneys, and wash away itchy scabby and impetiginous skin lesions, and they disperse hardened parotid swellings and indurated testicles, and, with honey, they heal the malignant sorts of ulcers.

145) Aëtius copies most of Galen's text.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists two plants omitted by Aëtius: wild chick-pea, stronger in every respect than the cultivated variety (Περὶ ἐρεβίνθου ἀγρίου 11.877.6-9); and heath (*Erica arborea* L.), supposedly dispersive (Περὶ ἐρείκης 11.877.10-11).]

[72.6-19]

(ρμς´) Ἐρπυλλος θερμαντικῆς εἰς τοσοῦτόν ἐστι δυνάμεως, ὡς καταμήνια τε καὶ οὖρα κινεῖν. ἐστὶ δὲ καὶ πρὸς τὴν γεῦσιν ἰκανῶς δριμύς· διττὸν δὲ αὐτοῦ τὸ εἶδος· ὁ μὲν γάρ τις ἐστὶ κηπευτός, σαμψυχίζων τῇ ὀσμῇ, ὁ δὲ τις ἄγριος, ὃς καὶ ζυγίς καλεῖται, οὐχ ἔρπων, ἀλλ´ ὀρθός, κλωνία λεπτὰ φρυγανώδη ἔχων, φύλλα περίπλεον ὅμοια πηγάνω, ὑπόστενα καὶ ἐπιμηκέστερα καὶ σκληρότερα, ἄνθη γευομένω δριμέα, ὀσμὴ ἡδέια, ῥίζα ἄχρηστος. φύεται ἐν πέτραις, ἐνεργέστερος καὶ θερμαντικώτερος τοῦ κηπευτοῦ ὑπάρχων καὶ ἐστὶν ἐν ἰατρικῇ χρήσει ἐπιτηδειότερος. ὠφελεῖ δὲ καὶ πρὸς στρόφους σπάσματα ῥήγματα ἥπατος φλεγμονᾶς καὶ πρὸς ἔρπητα πινόμενός τε καὶ καταπλασσομένου· κεφαλῆς τε ὀδύνην παραμυθεῖται ἐφεψηθεὶς σὺν ὄξει καὶ καταβραχεὶς μιγέντος αὐτῷ ῥοδίνου· μάλιστα δὲ ἐπὶ ληθαργικῶν καὶ φρενιτικῶν τῶν χρονιζόντων ἀρμόζει. παύει δὲ καὶ αἵματος ἀναγωγὰς < α´ μετ´ ὄξους ποθείς.

5 [10]

10 [15]

[Galen 11.877.12-14]

146) Tufted thyme (*Thymus sibthorpii* Benth.) has a warming capacity such that it is emmenagogic and promotes urine. It is also considerably sharp to taste. It has a double form: for, while one is some sort of cultivated variety, resembling marjoram in smell, the other variety, which is also called *zugis* [yoked], grows wild, is not creeping but upright, it has slender twiglets like an undershrub, its leaves are largely similar to rue, somewhat narrow, and longer and harder, its flowers are sharp to taste, its smell is pleasant, and its root is of no use. It grows among rocks, and as it is more potent and more warming than the cultivated variety, it is more suitable in medical practice. It is also helpful in cases of griping, sprains and soft-tissue injuries, inflammations of the liver, and for herpes, both when drunk and applied as a poultice. It relieves headache when boiled down with vinegar and steeped after rose-oil is mixed with it. And it is especially suitable in cases of lethargic fever and “phrenitis” of the chronic sorts. 1 drachma drunk with vinegar also puts a stop to the bringing up of blood.

146) Aëtius quotes Galen's two sentences verbatim, and then adds an extensive commentary about the nature of the plant and its therapeutic uses.

Thyme species are known to have spasmolytic ingredients, which may relieve colic, as well as fungicidal and bactericidal phenols (Bruneton, 1995: 287-8).

[72.20-27]

(ρμζ´) Ἐρυσίμου τὸ σπέρμα καθάπερ τῆ γεύσει παραπλήσιον φαίνεται [20]
καρδάμῳ, οὕτω καὶ τῆ δυνάμει πυρῶδες καὶ θερμαντικὸν ὑπάρχει.
ἐπειδὴν δὲ εἰς ἔλλιγμα δέη χρῆσθαι, βέλτιόν ἐστὶν ὕδατι βρέξαντας
φῶξαι. χρήσιμον δὲ ἐστὶ μετὰ τῶν ἐλλιγμάτων πρὸς τὰς κατὰ θώρακα
καὶ πνεύμονα παχέων καὶ γλίσχρων χυμῶν ἀναπτύσεις. ἀλλὰ καὶ 5
παρωτίδας σκιρρουμένας καὶ σκληρίας παλαιὰς ἐν τιθοῖς καὶ ὄρχεσιν [25]
ὠφελεῖ. φησὶ δὲ ὁ Διοσκουρίδης ὡς καταπλαττόμενον μεθ' ὕδατος ἢ
μέλιτος ὀνίνησι τοὺς κρυπτοὺς καρκίνους.

[Galen 11.877.15-878.6]

147) The seed of hedge-mustard (*Sisymbrium polyceratium* L.) seems almost just like nose-smart (*Lepidium sativum* L.) in taste, and thus it is fiery and warming in capacity. And whenever it needs to be used in a linctus, it is better to roast it after steeping it in water. It is useful among linctuses for the expectoration of thick and sticky fluids in the chest and lungs. But it also helps indurated parotid swellings and old indurations in breasts and testicles. And Dioscorides says that, when applied as a plaster with water or honey, it benefits hidden cancers.

147) Aëtius quotes most of Galen's entry.

147.3 [72.23] **ἔλλιγμα** (cf. 138.3n.)

147.8 [72.27] **κρυπτοὺς καρκίνους** In book 16, Aëtius describes these as non-ulcerative, and also arising in intestine or uterus.

Hedge-mustard has a myorelaxant effect on the trachea (Di Sotto et al., 2010), which may bring some relief to coughs, and possibly some antibacterial capacity (Blazevic et al., 2010).

[73.1-6]

(ρμη´) Ἐρυθρόδανον. Ταύτης ἢ ρίζα ἐρυθρά, ἣ χρῶνται οἱ βαφεῖς, στρυφνὴ καὶ ὑπόπικρος τὴν γεῦσιν ἐστίν, ὅθεν καὶ ἦπαρ καὶ σπλῆνα διακαθαίρει καὶ οὖρα παχέα καὶ πολλὰ καὶ ποτε καὶ αἱματώδη κενοῖ. καὶ κατα-

μήνια κινεῖ καὶ ἀπορρύπτει συμμέτρως ὅσα δεῖται ῥύψεως. ἀλφούς
γοῦν λευκοὺς ὠφελεῖ μετὰ ὄξους χριομένη. διδόασι δὲ αὐτὴν τινες 5 [5]
καὶ τοῖς ἰσχιαδικοῖς καὶ τοῖς παραλελυμένοις πίνειν μετὰ μελικράτου.
[Galen 11.878.7-17]

148) Madder (*Rubia tinctorum* L.). This plant's root, which dyers use, is red, astringent and fairly bitter to taste, for which reason it thoroughly purges both liver and spleen, and it empties out urines that are thick and abundant, and on occasions also bloody. It is also emmenagogic, and cleanses to an appropriate degree as many conditions as need to be cleansed. When rubbed on with vinegar, it at least helps pale white skin lesions. Some give it to drink with honey-water to those suffering from hip problems and paralysis.

148) Aëtius quotes most of Galen's entry, with the omission of a reference to an earlier citation (11.878.9-11).

There is no apparent substantiation of the above claims in modern scientific literature.

[73.7-10]

(ρμθ') Εὔζωμον. Θερμαίνει σαφῶς τοῦτο τὸ λάχανον ἀλλὰ καὶ σπέρμα
γεννᾶν πεπίστευται καὶ τὰς πρὸς συνουσίαν ὀρμὰς ἐπεγείρειν. κεφα-
λαλγῆς δὲ ἐστὶ καὶ μᾶλλον εἴ τις αὐτὸ μόνον ἐσθίει. τούτου οὖν χάριν
μετὰ θριδακίνης φύλλων ἐσθίειν αὐτὸ χρή.

149) Rocket (*Eruca sativa* Mill.). This herb clearly warms, but the seed has also been believed to engender and arouse impulses for sexual intercourse. But it also causes headaches, more so if one eats it on its own. For this reason, therefore, it is necessary to eat it with lettuce leaves.

149) This entry is apparently an addition by Aëtius.

There is no apparent substantiation of the above claims in modern scientific literature.

[73.11-14]

(ρν') Εὐπατόριον λεπτομεροῦς ἐστὶ καὶ ῥυπτικῆς καὶ τμητικῆς δυνά-
μεως, ἄνευ θερμότητος ἐπιφανοῦς· ὅθεν καὶ τὰς καθ' ἥπαρ ἐμφράξεις

ἐκκαθαίρει. μετέχει δὲ καὶ στύψεως βραχείας, δι' ἣν τόνον ἐντίθησι τῷ ἥπατι.

[Galen 11.879.1-5]

150) Agrimony (*Agrimonia eupatoria* L.) has a fine-grained, cleansing and cutting effect, without conspicuous warmth; hence, it even clears out blockages on the liver. It also has some slight astringency, through which it imparts strength to the liver.

150) Aëtius quotes Galen largely verbatim.

150.1 [73.11] **Εὐπατόριον** *Eupatorium cannabinum* L., according to Carnoy.

There is a very tenuous link to Aëtius' claims, in that there is evidence that agrimony may protect the livers of rats exposed to alcohol (Yoon et al., 2012).

[73.15]

(ρνα΄) Εὐφόρβιον λεπτομεροῦς ἐστὶ δυνάμεως ὁμοίως τοῖς ἄλλοις ὀποῖς.

[Galen 11.879.6-7]

151) Spurge (*Euphorbia resinifera* Berg) has a fine-grained capacity, similar to the other juices.

151) Aëtius quotes Galen almost verbatim, omitting the latter's assertion that the plant has a burning effect.

Spurge can cause skin irritation, drastic purgation, and, if ingested by children, can lead to convulsions and delirium (Bruneton, 1995: 524-5).

[Galen next lists two plants omitted by Aëtius: *Colchicum autumnale* L., also known as "poison" or "wild iris", which is claimed to be exfoliative and dispersive, and is used for toothache and growing, pointing lumps (Περὶ ἐφημέρου 11.879.8-880.2); and wild fig tree, supposedly astringent and used for ocular discharges and ears (Περὶ ἐχίνου 11.880.3-6).]

[73.16-17]

(ρνβ') Ζεῖα μεταξὺ πῶς ἐστι πυρῶν τε καὶ κριθῶν, ὥστε ἐξ ἐκείνων γινωσκέσθω.

[Galen 11.880.6-8]

152) Emmer (*Triticum dicoccum* Schübl.) is somewhat between wheat and barley, so knowledge can be gained from a consideration of those plants.

152) Aëtius quotes Galen almost verbatim.

There is nothing relevant apparent in modern scientific literature.

[73.18-21]

(ρνγ') Ζιγγίβερι. Ζιγγιβέρεως ἡ ρίζα θερμαίνει μὲν ἰσχυρῶς ἀλλ' οὐ κατὰ τὴν πρώτην προσβολὴν, ὡς τὸ πέπερι, διὰ τὸ μετέχειν παχυμερεστερας οὐσίας ὑδατώδους περιττωματικῆς· διὰ τοῦτο καὶ τιτράται ῥαδίως. [20]

[Galen 11.880.9-882.4]

153) Ginger (*Zingiber officinale* Roscoe). The root of ginger warms strongly but not at the first encounter, as pepper does, because it shares a residual, moist, thicker-grained essential quality. For this reason, it is also easily pierced.

153) Aëtius quotes only small fragments of Galen's extensive entry, which includes a lengthy consideration of ginger's elemental qualities in comparison with various other plants.

153.3 [73.20] **τιτράται** Or, if in middle voice, "it pierces"; either way, the sense is unclear.

Ginger is useful pharmacologically, having cholagogic, hepatoprotective and anti-ulcer properties (Bruneton, 1995: 259), and it is an effective anti-emetic (Mowray & Clayson, 1982).

[73.22-23]

(ρνδ') Ζύθος δριμύτερός ἐστι τῶν κριθῶν οὐ σμικρῶς καὶ κακόχυμος, ὡς ἂν ἐκ σηπεδόνοσ γεννώμενος, ἐστὶ δὲ καὶ φυσώδης.

[Galen 11.882.5-8]

154) Beer is sharper than barley by no small amount, and has unwholesome juices, because it originates from putrefaction, and it is also flatus-inducing.

154) Aëtius quotes Galen almost verbatim, but omits comments about its elemental composition.

There is no apparent substantiation of the above claims in modern scientific literature.

[73.24-27]

(ρνε') Ζύμη λεπτομερής ἐστι καὶ μετρίως θερμή· διὰ τοῦτο τοίνυν ἀλύ-
πως τε καὶ ἀδήκτως ἐπισπᾶται τε ἅμα τὰ ἐκ τοῦ βάθους καὶ δια- [25]
φορεῖ. μέμικται δὲ ἐξ ἐναντίων δυνάμεων ὀξύτητος ψυχρᾶς καὶ σηπε-
δονώδους θερμότητος καὶ τῶν ἀλῶν καὶ τοῦ ἀλεύρου.

[Galen 11.882.9-15]

155) Beer-yeast (*Saccharomyces* spp.) is fine-grained and moderately warm. Because of this, therefore, it absorbs material from deep down both painlessly and non-erosively, and disperses it at the same time. It is compounded from opposite potential properties – cold sourness, warmth that is inclined to putrefy, and salty and floury constituents.

155) Aëtius quotes most of Galen's entry verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[74.1-9]

(ρνς') Ἡδύοσμος. Ἐνιοὶ δὲ μίνθην εὐώδη προσαγορεύουσιν· θερμὴ τὴν
δύναμιν ἐστίν, ὡς ἐγγύς εἶναι τῆς τρίτης τάξεως· μετέχει δὲ ὑγρό-
τητος περιττωματικῆς ἐκ τοῦ κηπεύεσθαι, διὸ καὶ πρὸς ἀφροδίσια παρ-
ορμᾷ μετρίως. διὰ δὲ τὴν κρᾶσιν ταύτην καὶ καταπλάσσεται μετὰ ἀλ-
φίτων ἐπὶ ἀποστημάτων. ἀναιρεῖ δὲ διὰ τὸ ἐν αὐτῇ πικρὸν τὰς ἔλμιν- 5 [5]
θας καὶ ἐπὶ κωλικῶ πινόμενον τὸ ἀφέψημα αὐτῆς ἐφεξῆς ἡμέρας γ'
πάνυ ὠφελεῖ. τῶ δὲ ἐν αὐτῇ στρυφνῶ τὰς προσφάτους τοῦ αἵματος
ἀναγωγὰς ἐπέχει μετ' ὀξυκράτου πινομένη. λεπτομερής δὲ ἐστὶ τὴν
οὐσίαν, εἴπερ τις καὶ ἄλλη πόα.

[Galen 11.882.16-883.15]

156) Green mint (*Mentha viridis* L.). Some people call this sweet-smelling mint. It is warm in capacity, so as to lie near the third rank; it has a share in

a residual moistness from being cultivated, and hence it is a moderate sexual stimulant. Because of this composition, it is used on abscesses as a poultice with barley-groats. And because of its inherent bitterness, it destroys worms, and its boiled-down residue is completely helpful for colic sufferers, when it is drunk for 3 successive days. And by its inherent astringency, it checks recent episodes of bringing up blood, when it is drunk with vinegar water. It is fine-grained in essence, as much as any other herb.

156) Omitting more than half of Galen's comments, particularly those concerning a comparison of its properties with other similar plants, Aëtius quotes the remainder fairly accurately.

Mentha spp. have been shown to be spasmolytic (Bruneton, 1995: 434), and may therefore relieve colic; there is no apparent substantiation of Aëtius' other claims.

[74.10-14]

(ρνζ') Ἡδύσαρον ἢ πελεκῖνος. Πυρρὸν μὲν ἢ ὠχρὸν εὐρίσκεται τὴν χροῖαν τὸ σπέρμα, ἀμφίστομον δὲ καθάπερ οἱ πελέκεις τῷ εἶδει πικρὸν δὲ καὶ ὑπόστρυφνον φαίνεται, ὅθεν εὐστόμαχόν τέ ἐστι πινόμενον· ἐκκαθαίρει δὲ τὰς ἐν τοῖς σπλάγχνοις ἐμφράξεις. οὕτω δὲ καὶ οἱ κλω-
νες ὅλου τοῦ θάμνου δρῶσιν. 5

[Galen 11.883.16-884.3]

157) Axe-weed (*Bonaveria securidaca* Desv.). The seed is found in red and yellow varieties, as regards superficial colour, and it is double-edged like battle-axes are in appearance. It is clearly also bitter and fairly astringent, and hence, when drunk, it is good for the stomach; and it clears out blockages in the innards. The twigs of the whole shrub act also in this way.

157) Aëtius quotes most of Galen's entry verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[74.15-18]

(ρνη´) Ἡμεροκαλλές. Τούτου ἡ ρίζα παραπλησία τῇ τοῦ κρίνου κατά τε [15]
τὴν ιδέαν καὶ κατὰ τὴν δύναμιν, ὅθεν ὠφελεῖ παραπλησίως ἐκείνη τὰ
πυρίκαυτα· καὶ γὰρ διαφορητικῆς ἀτρέμα δυνάμεώς ἐστι μετὰ τοῦ
καὶ ἀποκρυστικὸν ἔχειν τι.

[74.17] πυρίκαυτα replaces πυρίκαυστα.

[Galen 11.884.4-8]

158) Martagon lily (*Lilium martagon* L.). The root of this is similar to that of white lily (*L. candidum* L.) in appearance and capacity, and hence it helps burns in a similar way to that species; for it has also a gently dispersive capacity, with a certain dispelling quality too.

158) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists mule-fern (*Scolopendrium hemionitis* Lag.), which, he says, is astringent and bitter, and used for splenic disorders (Περὶ ἡμιονίτιδος 11.884.9-11).]

[74.19-22]

(ρνη´) Ἡριγέρων δύναμιν ἐπίμικτον ἔχει ψυκτικὴν τε ἅμα καὶ μετρίως [20]
διαφορητικὴν· διὸ καὶ τοῖς ἐδρικοῖς ἐπωφελῶς μίγνυται. ἐπέχει δὲ καὶ
αἵματος ἀναγωγὰς ὁ χυλὸς πινόμενος καὶ ἔλμινθας ἀναιρεῖ καὶ ἥπα-
τικοὺς ὀνίνησι· καταπλάσσεται δὲ καὶ πρὸς τὰς φλεγμονὰς ἐναργῶς.

[Galen 11.884.12-13]

159) Groundsel (*Senecio vulgaris* L.) has a mixed capacity, both cooling and at the same time moderately dispersive; hence, it also usefully included in compounds in anal conditions. When drunk, the juice suppresses cases in which blood is brought up, destroys worms and helps those suffering from liver disorders; it also has a distinct use as a plaster for acute inflammations.

159) Aëtius quotes Galen's brief entry verbatim, and then expands on the plant's uses (διὸ...ἐναργῶς 159.2-4 [74.20-22]).

While there is no apparent substantiation of the above claims in modern scientific literature, *Senecio* products can be dangerous and are no longer supplied in the United Kingdom because of potentially fatal hepatotoxicity (Evans, 2009: 530).

[74.23-75.3]

(ρξ΄) Ἡρύγγιον. Θερμότητι μὲν ἢ βραχὺ τῶν συμμέτρων ἢ οὐδὲν ὑπερέχει, ξηρότητος δὲ λεπτομεροῦς οὐκ ὀλίγης μετέχει. ὕδατι δὲ ζεννουμένη ἢ ῥίζα καὶ πινομένου τοῦ ὕδατος κωλικούς παύει, μετὰ δὲ μελικράτου ζεννουμένη λιθιῶντας στραγγουριῶντας δυσουριῶντας νεφριτικούς ἀπαλάττει· πινέτωσαν δὲ ἐπὶ ἡμέρας ἰς΄ νήστεις καὶ εἰς κοίτην, ἐὰν δὲ καὶ σῆτον σὺν αὐτῇ ζέσας δόξης πιεῖν κάλλιον ποιεῖ. διεβεβαιοῦτο δὲ τις ὅτι συνεχῶς χρησάμενος αὐτῇ λίθους οὐκέτι οὔρησε, πυκνότατα πρόσθεν ἐνοχλούμενος ὑπὸ τοῦ πάθους. [25] 5 [p75]

[74.27] ἰς΄ replaces ἰς΄.

[Galen 11.884.14-16]

160) *Eryngium campestre* L. While it is either a little or not at all above equivalent drugs in warmth, the root has no small share in fine-grained dryness. When boiled in water, and the water is drunk, it brings respite in cases of colic, but when boiled with honey-water, it relieves those suffering from stones, retention of urine, dysuria and kidney diseases; let them drink it for 16 days on an empty stomach and at bed-time, and if you also boil bread with it and give it to drink, it does better. One person asserted that, when he had used it continuously, he never passed stones in the urine, although previously troubled most persistently by this disease.

160) Aëtius quotes Galen verbatim, and then expands on how the plant should be used therapeutically.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists meadow rue (*Thalictrum minus* L.), and gives a brief description of the plant, its drying effect and ability to cicatrise ulcers (Περὶ θαλίηκτροῦ 11.884.17-885.2).]

[75.4-7]

(ρξα´) Θαψία δριμείας ἐστὶ καὶ ἰσχυρῶς θερμαντικῆς δυνάμεως σὺν ὑγρό-
τητι· ἔλκει τοιγαροῦν ἐκ βάθους βιαίως καὶ αὐτὴ διαφορεῖ τὸ ἐλχθέν· [5]
χρόνῳ δὲ ἐργάζεται πλείονι ταῦτα, διὰ τὸ περιττῆς ὑγρότητος ἐμπλη-
σθῆναι δαυιλοῦς, δι´ ἣν καὶ ταχέως διαφθείρεται.

[Galen 11.]885.3-7]

161) Deadly carrot (*Thapsia garganica* L.) has a sharp and strongly warming capacity, with moistness. Assuredly, therefore, it draws violently from deep down, and on its own disperses what has been drawn out; and it brings about those results in rather a long time because it is full of excessive moistness, through which it is also quickly destroyed.

161) After omitting comments about the plant’s elemental composition, Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[75.8-27]

(ρξβ´) Θέρμος ἡμερος ἀπογλυκανθεὶς διὰ τῆς ἐψήσεως καὶ ἐσθιόμενος
δύσπεπτός ἐστι καὶ τροφὴν παρέχει τῷ σώματι παχύχυμον καὶ ὠμοῦς
χυμοῦς γεννᾷ· κοιλίαν δὲ οὐδὲ προτρέπεται, οὐδὲ μὴν ἐπέχει. ὡς [10]
φάρμακον δέ, ὁ μὲν ἀπογλυκανθεὶς καὶ ἐσθιόμενος ἐκ τῶν ἐμπλαστι-
κῶν ἐστίν, ὁ δὲ τὴν σύμφυτον ἔχων πικρότητα ῥυπτικός τε καὶ δια- 5
φορητικός ὑπάρχει· ἀναιρεῖ δὲ καὶ ἔλμινθας σὺν μέλιτι ἐκλειχόμενος
ἢ σὺν ὄξυκράτῳ πινόμενος, οὐ μὴν ἀλλὰ καὶ τὸ ἀφέψημα αὐτοῦ τὰς
ἔλμινθας ἐκβάλλειν πέφυκε πινόμενον καὶ ἐνιέμενον καὶ τὸ ἄλευρον [15]
δὲ αὐτοῦ ἔξωθεν μετὰ χολῆς ταυρείας τῷ ὀμφαλῷ ἐπιτιθέμενον ἐκτι-
νάσσει αὐτάς, καὶ μὲν δὴ καὶ καταντλούμενον ἔξωθεν ὀνίνησιν ἀλφούς 10
ἀχῶρας ἐξανθήματα ψώρας γαγγραΐνας ἔλκη κακοήθη τῷ ξηραίνειν
ἀδήκτως. ἐκκαθαίρει δὲ καὶ σπλήνα καὶ ἥπαρ μετὰ πηγάνου καὶ πεπέ-
ρεως ἠδονῆς ἔνεκα συνεμβαλλόμενα. ἐπισπᾶται δὲ καὶ καταμήνια καὶ [20]
ἔμβρυα σὺν σμύρνη καὶ μέλιτι προστιθέμενος. ἐστὶ δὲ καὶ τὸ ἄλευρον
τῶν θέρμων διαφορητικόν· οὐ γὰρ τὰ πελιδνὰ μόνον, ἀλλὰ καὶ χοι- 15
ράδας καὶ φύματα σκληρὰ θεραπεύει. ἐν ὄξει δὲ αὐτὸ ἐψεῖν χρή τήν-
καῦτα ἢ ὄξυμέλιτι ἢ ὄξυκράτῳ, κατὰ τὰς κράσεις τῶν καμνόντων δη-
λονότι καὶ τοῦ πάθους τὴν διαφορὰν ἐφευρίσκοντα τὸ δέον. διαφορεῖ [25]
δὲ καὶ τὰ πελιδνὰ τὸ ἄλευρον καὶ τὰ ἄλλα ὅσα πρόσθεν εἴρηται ἐπὶ
τοῦ ἀφεψήματος. καταπλάσσουσι δὲ ἔνιοι καὶ τοὺς ἰσχιαδικοὺς αὐτῷ. 20

[Galen 11.885.8-886.13]

162) When cultivated lupin (*Lupinus albus* L.) is sweetened by boiling, it is, when eaten, hard to digest and provides a thick-juiced form of nourishment

for the body, and generates raw juices; it neither stimulates nor restrains the abdomen. But while, as a drug, the form which is sweetened and eaten belongs to the adherent types, the form which retains its natural bitterness is both cleansing and dispersive. It also removes worms when taken as a linctus with honey, or drunk with vinegar-water; furthermore, it is certain that, when its decoction is drunk and used as an enema, it results in the expulsion of worms, and when a flour prepared from it with bull's bile is used externally by insertion into the navel, it expels them [worms]. What is more, when it is poured over externally, it is of benefit in cases of pale skin lesions, ringworm of the scalp, rashes, itchy scabby skin lesions, gangrene and malignant ulcers, by drying non-erosively. It thoroughly cleanses both spleen and liver when compounded with rue and pepper to render it pleasant. It induces periods and aborts foetuses when inserted as a pessary with myrrh and honey. Moreover, lupin flour is dispersive; for not only does it treat livid lesions, but also diseased lymph nodes and hard swellings. It then has to be boiled in vinegar, or in vinegar and honey or in vinegar-water, finding out clearly what is necessary according to the constitutions of the patients and the variety of the disease. Also, the flour dissipates bruises and all the other lesions previously mentioned in the passage on the decoction. Some people even plaster those suffering from hip problems with it.

162) Aëtius quotes most of Galen's entry verbatim; the prescription, however, of lupin meal mixed with bull bile for navel insertion seems to be entirely Aëtius'.

There is no apparent substantiation of the above claims in modern scientific literature; lupin is toxic to livestock (Lewis, 1977: 44), and possibly also to humans (Bruneton, 1995: 690).

[75.28-29]

(ρξγ') Θέρμος ἄγριος πικρότερός τε καὶ ἰσχυρότερος εἰς ἅπαντα τοῦ ἡμέρου ἐστὶ, τῆς αὐτῆς ὑπάρχων κατὰ γένος δυνάμεως.

[Galen 11.886.14-16]

163) Wild lupin is both more bitter and stronger than the cultivated variety in every respect, while having generally the same capacity.

163) Aëtius quotes Galen verbatim.

(v. previous entry regarding pharmacology.)

[76.1-5]

(ρξδ') Θλάσπι. Σπέρμα καὶ τοῦτό ἐστι δριμύ τὴν δύναμιν, ὥστε καὶ τὰ ἐντὸς ἀποστήματα ῥήσσει ποτιζόμενον καὶ καταμήνια κινεῖ καὶ ἔμβρυα φθείρει καὶ δι' ἔδρας ἐνιέμενον ἰσχιάδας ὀνίνησιν, αἱματώδη κενοῦν. ἐστὶ δὲ τὸ θλάσπι καὶ ἄλλως καθαρτικὸν ἄνω τε καὶ κάτω χολωδῶν ὑγρῶν ὀξυβάφου πλῆθος πινόμενον.

5 [5]

[Galen 11.886.17-887.4]

164) Shepherd's purse (*Capsella bursa-pastoris* L.). This also is a seed sharp in capacity, so that when drunk it disrupts internal abscesses, brings on periods, destroys fetuses, and, when administered as an enema, benefits hip problems, emptying bloody [lesions]. Shepherd's purse is also otherwise purgative, both upwards and downwards, of bilious fluids, when it is drunk in the volume of an *oxybaphon*.

164) Aëtius quotes Galen largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[76.6-16]

(ρξε') Θρίδαξ ὑγρὸν καὶ ψυχρὸν λάχανον, οὐ μὴν ἐσχάτως γε ἀλλὰ κατὰ τὴν τῶν κρηναίων ὑδάτων, ὡς ἂν εἴποι τις, μάλιστα ψυχρότητα. διὰ τοῦτο πρὸς τὰς φλεγμονὰς ἀρμόττει καὶ πρὸς τὰ μικρὰ καὶ κοῦφα τῶν ἐρυσσιπελάτων. ἔστι δὲ καὶ ἄδιψον ἔδεσμα καὶ εἰς ὕπνον προτροπόμενον μάλιστα, ἀπεξεσμένον καὶ μετ' ὄξυκράτου ὑδαροῦς μόνου ἐσθιόμενον, ἀλλ' οὐδ' ἀπεπτεῖται τοῖς ἄλλοις λαχάνοις ὁμοίως, οὐδὲ ἐπέχει τὴν διαχώρησιν ὥσπερ οὐδὲ προτρέπει, καὶ διὰ ταῦτα οὐδὲ κακόχυμον αἶμα γεννᾷ, οὐ μὴν εὐχυμὸν γε τελέως. τὸ δὲ σπέρμα πινόμενον ἐπέχει γοννοροΐας, ὅθεν καὶ τοῖς ὄνειρώττουσι δίδεται. ὁ δὲ ὀπὸς τῆς ἀγρίας θρίδακος μετὰ γυναικείου γάλακτος ἐπαλειφόμενος ἀργεμά τε καὶ ἀχλῦς ἀποκαθαίρει καὶ ἐπικαύματα.

[10] 5

[15] 10

[Galen 11.887.5-15]

165) Lettuce (*Lactuca sativa* L.) is a moist and cold garden herb, not really extremely so, but, as one might say, certainly at the level of coldness of spring water. For this reason, it is suitable for inflammatory swellings, and trivial and mild cases of cellulitis. It is also a thirst-quenching food and

very sleep-inducing, when boiled and eaten with dilute vinegar-water alone. But it does not remain undigested like the other garden herbs, it neither checks excretion, just as it does not promote it, and, for these reasons, neither does it produce unwholesome blood nor, on the other hand, completely wholesome blood. And when it is drunk, the seed holds back the flow of semen; hence it is also given to those prone to wet dreams. The juice of wild lettuce, applied topically with woman's milk, cleanses out white lesions on the iris, corneal opacification and ulcers.

165) Aëtius quotes Galen largely verbatim, but inserts the passage regarding lettuce's preparation and use as a hypnotic, and its effects on the gut and blood (καὶ εἰς...τελέως 165.4-8 [76.9-14]), which is in accordance with Galen's ideas in *Alim.Fac.* (6.624.12-628.7).

165.1 **Θρίδαξ** Or possibly wild lettuce (*L. scariola* L.) (Carnoy).

There is no apparent substantiation of the above claims in modern scientific literature.

[76.17-77.11]

(ρξζ') Θύμος τέμνει καὶ θερμαίνει σαφῶς, ὡς εἶναι τῆς τρίτης τάξεως τῶν θερμαινόντων καὶ διὰ τοῦτο καὶ οὖρα καὶ καταμήνια κινεῖ καὶ ἔμβρυα κατασπᾶ καὶ τὰ σπλάγχνα διακαθαίρει πινόμενος· ταῖς τε ἐκ θώρακος καὶ πνεύμονος ἀναπτύσεσιν συναίρεται. καὶ ταῦτα μὲν ὁ Γαληνός. τὰ δὲ διὰ πείρας ταῦτα· τοῖς ἀρθριτικοῖς δίδου τοῦ θύμου ξηροῦ λειοτάτου < δ' μετ' ὄξυμέλιτος Κ < νήσται. καθαίρει γὰρ τὴν χολὴν καὶ τοὺς δριμεῖς ἰχῶρας καὶ τὰ περὶ τὴν κύστιν. ἐπὶ δὲ ἐπηρμένων κοιλιῶν, ὅταν ἄρξωνται οἰδαίνειν, δίδου < α' μετὰ μελικράτου Κ α' νήσται, πρὸς ὀσφύος καὶ ἰσχίων πόνον πλευρᾶς τε καὶ θώρακος καὶ ὑποχονδρίων μετεωρισμοὺς καὶ ἐμπνευματώσεις δίδου < γ' μετ' ὄξυμέλιτος κεκραμμένου πλῆθος κοτύλης α' νήσται. δίδου δὲ ὁμοίως καὶ τοῖς μελαγχολικοῖς καὶ τὴν διάνοιαν τεταραγμένους καὶ φόβῳ ἀλόγῳ συνεχομένοις < γ' μετὰ Κ α' τοῦ ὄξυμέλιτος κεκραμμένου. ἐπὶ ὀφθαλμίωντων καὶ σφόδρα ὀδυνωμένων δίδου ὁμοίως νήσται καὶ πρὸ δειπνου καὶ ἐπὶ ποδαγρικῶν ὀδυνωμένων ὡς μὴ δύνασθαι κινεῖσθαι δίδου μετ' οἴνου ἀκράτου ὁμοίως· ἐπὶ δὲ διδύμων ἐπηρμένων δίδου ὁμοίως < γ' μετὰ Κ α' οἴνου νήσται, πλὴν μέντοι τῷ μέλανι θύμῳ μηδὲ ὡς κέχρησο· φθαρτικὸς γὰρ ἐστὶ καὶ χολῆς γεννητικὸς, ἀλλὰ τῷ ἔχοντι ἄνθος ἐμπόρφυρον μὲν φύσει, λευκὸν δὲ τι ἔχον ἐμπλεων.

[20]
5
[25]
10 [p77]
[5]
15
[10]
20

[76.20] ἀναπτύσεσιν replaces ἀναγωγαῖς.

[77.6] ὡς replaces καὶ after ὀδυνωμένων.

166) Cretan thyme (*Thymbra capitata* L., or other *Thymus* spp.) has a cutting and distinctly warming effect, so as to be in the third rank of the warming substances, and, for this reason, when it is drunk it provokes both urine and periods, aborts foetuses and thoroughly purges the innards. It assists coughing up from the chest and lungs. Galen has provided the information so far. The following information, however, is provided by practical experience: give arthritis sufferers, when fasted, 4 drachmas of dry finest-ground thyme in [a] cyathus of vinegar and honey when fasted. For it purifies the bile and the sharp serous fluids, and the tissues surrounding the bladder. In the case of upset abdomens, whenever they begin to swell, give 1 drachma with 1 cyathus of honey-water when fasted; for low back and hip pain, and distension and wind in the chest, side and hypochondrial regions, give 3 drachmas, mixed with vinegar and honey to a volume of 1 cotyle, when fasted. Likewise, give also to those who are melancholy, those disturbed in mind, and those gripped by a phobia, 3 drachmas mixed with 1 cyathus of vinegar and honey. In the case of those suffering from conjunctivitis and really in a lot of pain, give it likewise fasted and before meals, and for those in pain suffering from gout so that they cannot move, give it in the same way with undiluted wine. For swollen testicles, give likewise 3 drachmas with 1 cyathus of wine when fasted, except, however, do not use by any means the black thyme, for it is harmful and productive of bile – but [use] the sort which has a flower which, while naturally purplish, has something white filling it.

166) Aëtius quotes Galen's first sentence almost verbatim, omits his second one concerning elemental composition, and then adds his own lengthy suggestions for use.

166.6 [76.22] κ< The drachma symbol makes no sense here, and is presumably a misrepresentation of a number.

There is no apparent substantiation of the above claims in modern scientific literature.

[77.12-13]

(ρξζ') Θύμβρα. Καὶ τὰ θύμβρα δὲ μάλιστα τὰ κηπευόμενα παραπλησίας μὲν εἰσι δυνάμεως τῷ θύμῳ, ἀσθενεστέρας δὲ πολλῶ.

167) Savory (*Satureia thymbra* L.). While garden-grown savory certainly has a capacity similar to thyme, it is much weaker.

167) This entry does not appear in Galen.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[77.14-16]

(ρξη') Ἴντυβοὶ παραπλησίαν τοῖς θριδάξιν ἔχουσι τὴν δύναμιν, ἀπολεί-
πόμενοι καὶ καθ' ἡδονὴν αὐτῶν καὶ κατ' ἄλλα πάντα τὰ πρόσθεν [15]
περὶ θριδάκων εἰρημένα.

168) Endives (*Cichorium endivia* L.) have a capacity similar to lettuces, falling short as regards their sweetness and all the other aspects previously mentioned concerning lettuces.

168) This entry does not appear in Galen.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists Root of Ida [modern equivalent unidentified], omitted by Aëtius, which, he says, is very astringent and is used for haemorrhages, dysenteries and female flow (Περὶ ἰδαίας ῥίζης 11.888.5-10).]

[77.17-22]

(ρξθ') Ἰξός. Ἐκ πλείστης μὲν ἀερῶδους τε καὶ ὕδατῶδους οὐσίας θερ-
μῆς, ἐλαχίστης δὲ γεώδους σύγκειται· τὸ οὖν δριμὺ πλέον ἐστὶν ἐν
αὐτῷ· ἔλκει τοιγαροῦν ἐκ τοῦ βάθους ἰσχυρῶς ὑγρότητας, οὐ τὰς
λεπτὰς μόνον, ἀλλὰ καὶ τὰς παχυτέρας καὶ ταύτας διαχεῖ τε καὶ δια- [20]
φορεῖ. ἐστὶ δὲ τῶν οὐκ εὐθὺς θερμαινόντων φαρμάκων μετὰ τὴν πρῶ- 5
την ἐπίθεσιν, ἀλλὰ χρόνου δεομένων, ὡς ἡ θαψία.

[Galen 11.888.11-889.2]

169) Oak mistletoe (*Hozanthus europaeus* LSJ). It is composed mostly of an airy, watery and hot essence, but least of all of the earthy sort; there is therefore more sharpness in it. For that very reason, it powerfully draws fluids from a deep-seated area, not only the thin ones but the thicker ones, and diffuses and disperses them. It belongs to the drugs which do not warm immediately on first application, but to those which require time, such as deadly carrot.

169) Aëtius quotes Galen almost verbatim, omitting comments regarding taste and previously mentioned elemental relationships.

169.1 [77.17] Ἰξός Or, mistletoe (*Viscum album* L.) (Carnoy).

There is no apparent substantiation of the above claims in modern scientific literature.

[77.23-26]

(ρο´) Ἴου τὰ φύλλα τὴν ὑδατώδη καὶ ὑπόψυχρον οὐσίαν ἐπικρατοῦσαν κέκτηται καὶ διὰ τοῦτο καὶ καθ' ἑαυτὰ καὶ μετὰ ἀλφίτων ἐπιπλαττόμενα τὰς θερμὰς φλεγμονὰς παρηγορεῖ. ἐπιτίθεται δὲ καὶ κατὰ τὸ στόμα τῆς κοιλίας ἐγκαιόμενον καὶ ἐπὶ ὀφθαλμῶν. [25]

[77.24] ἐπιπλαττόμενα replaces ἐπιπαττόμενα.

[Galen 11.889.3-7]

170) The leaves of violet (*Viola odorata* L.) possess a dominant moist and fairly cold essence, and because of this they relieve hot inflammatory swellings, both when used as a poultice by themselves and with barleygroats. They are also applied to the gullet when inflamed, and in the eyes.

170) Aëtius quotes Galen almost verbatim.

Although violets contain proven antibacterial agents, their spectrum has not been shown to include the causative organisms of boils and conjunctivitis (Pränting et al., 2010).

[78.1-11]

(ροα´) Ἴππουρις στυπτικὴν μετὰ πικρότητος ἔχει ποιότητα καὶ διὰ τοῦτο ξηραντικὴν ἰσχυρῶς τε ἅμα καὶ ἀδῆκτως. τραύματα οὖν τὰ μέγιστα καταπλαττομένη κολλᾶ, κἂν νεῦρα ἐπιτεμνόμενα τύχη, καὶ τὰς [p78]

καλουμένας έντεροκήλας όνίνησιν· άλλα και πρòς τὰς άναγωγὰς τοῦ
αίματος και ροῦν γυναικειόν και μάλιστα τόν έρυθρόν, έτι δέ δυσεν- 5 [5]
τερίας και τὰ άλλα τὰ κατὰ τήν γαστέρα ρεύματα, γενναϊόν φάρμα-
κον ή πóa πινομένη μεθ' ύδατος ή οίνου. γράφουσι δέ περι αὐτῆς
τινες ώς και κύστεως ίάσατό ποτε και τῶν λεπτῶν έντέρων τραύματα·
ό δέ χυλòς αὐτῆς αίμορραγίας τε τὰς έκ ρίνων ώφελεί και τὰ κατὰ
τήν γαστέρα ροώδη πάθη σύν τινι τῶν αὐστηρῶν οίνων πινόμενος ή 10 [10]
μεθ' ύδατος έπι τῶν πυρεττόντων.

[Galen 11.889.8-890.2]

171) Horse-tail (*Equisetum silvaticum* L. or *E. maximum* Link) has an astringent quality with bitterness, and for this reason it has a drying effect which is strong but, at the same time, non-erosive. When applied as a poultice, therefore, it brings about adhesion of the most serious wounds, even if there happens to be gashed sinews, and it is of benefit to the so-called bowel hernias. Indeed, when drunk with water or wine, the herb is an excellent drug for cases of bringing up blood, for female discharges, and especially the red sort, and even for cases of dysentery and other fluxions affecting the bowel. Some people write of it that it has even on occasion healed wounds of the bladder and small intestine, and its juice helps cases of epistaxis, and diseases involving fluxion affecting the bowel, when it is drunk with one of the harsh wines, or, in febrile cases, with water.

171) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature, although *E. silvaticum* L. may have some *in vitro* antimicrobial effect (Milanovic et al., 2007).

[Galen next lists horse-fennel (*Prangos ferulacea* Lindl.), omitted by Aëtius, which would be discussed later along with fennel (*Foeniculum vulgare* Mill.) (Περὶ ίππομαράθρου 11.890.3-4).]

[78.12-21]

(ροβ´) Ίσάτις. Ή μὲν ήμεροϋς, ή οι βαφεϊς χρῶνται, ξηραντικῆς ίσχυροϋς
έστι δυνάμεωϋς, οὐδέπω δακνούσης. πικρά τε άμα και στυπτική. ταῦτά
τοι και τὰ μεγάλα τραύματα τῶν σκληρῶν σωμάτων κολλᾶ, κᾶν έν
ταϊς τῶν μυῶν ή κεφαλαϊς, και κατὰ τῶν αίμορραγούντων ώφελίμωϋς 15
έπιπλάττεται, και τούϋσ οίδηματώδειϋς όγκουϋς θαυμαστώϋς διαφορεϊ τε 5

ἄμα καὶ προσστέλλει καὶ πρὸς πάντα τὰ κακοήθη ἔλκη δραστικῶς ἀνθίσταται, κἂν σήπηται κἂν ἀναβιβρώσκηται. εἰ δέ ποτε τῆς τοῦ κάμνοντος δυνάμεως ἰσχυρότερα φαίνοιτο, μινύναι χρὴ τοῖς φύλλοις αὐτῆς λειωθεῖσιν ἢ ἄρτον ἢ κρίθινον ἄλευρον ἢ πύρινον ἢ ἄλφιτα κατὰ τὴν ἐπικρατοῦσαν ἐν ἐκάστῳ διάθεσιν. [20] 10

[Galen 11.890.5-16]

172) Woad (*Isatis tinctoria* L.). The cultivated variety, which the dyers use, has a strongly drying, but not yet erosive, capacity. It is bitter and at the same time astringent. These properties, in fact, cause the closure of even the serious wounds of hard bodies, even if they are in the head of muscles, and it is beneficially applied in cases of bleeding. And it disperses wonderfully, and at the same time shrinks, swollen lumps, and it effectively resists all the malignant ulcers, even if there is suppuration or erosion. And if ever it [the simple] should appear too strong for the capability of the patient, it is necessary to mix bread or barley meal, or wheat meal or groats, with its leaves when ground down, in response to the prevalent condition in each person.

172) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[78.22-28]

(ρογ') Ἰσάτις ἀγρία ἔχει τι δριμύ σαφές ἤδη κατὰ τὴν γεῦσιν καὶ τὴν ἐνέργειαν, καὶ διὰ τοῦτο τῆς ἡμέρου ξηραντικωτέρα γενομένη πρὸς μὲν τὰς ὑγρὰς σηπεδόνας ἰσχυρότερον ἀνθίσταται, τὰ δ' ἄλλα τὰ προειρημένα χείρων ἐστίν· ἀμετρότερον γὰρ ἤδη καὶ μετὰ τοῦ δάκνειν ξηραίνει ταῦτα· ἐρεθίζει τε καὶ φλεγμονὰς ἐπεγείρει· διὰ δὲ τὸ ἰσχυρὸν τῆς δυνάμεως καὶ τοῖς σπληνικοῖς ὑπάρχει χρῆσιμος, οὕτω τῆς ἡμέρου ὠφελούσης. [25] 5

[Galen 11.890.16-891.6]

173) Wild woad (*Isatis agrestis* L.) has a certain sharp quality, clear immediately on tasting and in action, and for this reason it has a more drying effect than the cultivated variety, and it more strongly resists the moist forms of sepsis, but it is worse for the other aforementioned conditions. For it dries them rather immoderately, now also with an erosive

effect; and it irritates and stirs up inflammatory swellings. Because of the strength of its capacity, it is useful also for those suffering from disorders of the spleen, whereas the cultivated variety does not yet help.

173) Aëtius quotes Galen almost verbatim; Galen has a single entry for both cultivated and wild woad.

“Wild woad” cannot be found as a separate entity in modern scientific literature.

[Galen next lists fumitory (*Fumaria capreolata* L.) or calavance (*Coriandrum sativum* L.), omitted by Aëtius, which has a bitter, fairly astringent seed, used to cleanse, cut through thick fluids, constrict the body, purify the liver, and as an anti-expectorant, especially for haemoptysis (Περὶ ἰσοπύρου 11.891.7-13).]

	[79.1-15]
(ροδ´) Ἰτέα. Ἰτέας χρήσαιτο μὲν <ἄν> τις καὶ τοῖς φύλλοις εἰς τραυμάτων ἐναίμων κόλλησιν, οὐ μὴν ἀλλὰ καὶ τῷ ἄνθει αὐτῆς, ᾧ μάλιστα ἅπαντες σχεδὸν οἱ ἰατροὶ χρῶνται πρὸς ἐμπλάστρου ξηραίνοντος σκευασίαν. ἐστὶ γὰρ ἡ δύναμις αὐτῶν ἀδήκτως ξηραντικὴ, ἔχει δὲ τινα καὶ στύψιν. ἔνιοι δὲ καὶ χυλὸν ἐξ αὐτῶν ποιοῦντες ἄδηκτόν τε καὶ ξηραῖνον ἴσχουσι φάρμακον εἰς πολλὰ χρήσιμον καὶ ὁ φλοιὸς δὲ τοῦ δένδρου παραπλήσιος ὑπάρχει τῇ τε τῶν ἀνθῶν καὶ τῶν φύλλων δυνάμει, πλὴν ὅτι ξηρότερός ἐστι τὴν κρᾶσιν, ὥσπερ ἀμέλει πάντες οἱ φλοιοί. ἀλλὰ τοῦτόν γε καίουσιν ἔνιοι καὶ χρῶνται τῇ τέφρᾳ πρὸς ὅσαπερ ἂν ἰσχυρῶς δέωνται ξηρᾶναι. τοὺς γοῦν καλουμένους ἥλους καὶ τύλους ἔτι τε μυρμηκίας ἐξαίρουσιν αὐτῷ δεύοντες ὄξει δριμεῖ. ἔνιοι δὲ κατὰ τὸν καιρὸν τῆς ἀνθήσεως ἐντέμνοντες τὸν φλοιὸν ὀπὸν τινα ἀθροίζουσι καὶ χρῶνται πρὸς τὰ ταῖς κόραις ἐπισκοτοῦντα, ῥυπτικωτέρῳ τε ἅμα καὶ λεπτομερεῖ φαρμάκῳ· χρήσαιτο δ´ ἂν τις καὶ εἰς ἄλλα πολλὰ τοιούτῳ γε ὄντι αὐτῷ.	[p79]
	5 [5]
	10 [10]
	15 [15]

[Galen 11.891.14-892.15]

174) Willow. One could use the leaves of willow (*Salix* L. spp.) for closing bleeding wounds, but however, one could also use its flower, which certainly almost all doctors use in the preparation of a drying plaster. For the capacity of the leaves is drying without erosion, and it is also to some extent astringent. And some doctors also obtain juice from them, and keep it as a non-erosive drying drug, useful for many conditions; and the inner

bark of the tree comes close in effect to that of the flower and leaves, except that it is drier in composition, just like all barks are, of course. But some burn it and use the ash for all conditions that need to be dried powerfully. At any rate, they remove what are called plantar warts and calluses and, moreover, sessile warts, by using it [the bark] soaked in sharp vinegar. Some cut into the bark during the blossom period, and collect some juice, and use it, a more cleansing and, at the same time, more fine-grained drug, for opacities affecting the eyes; one would use it also for many other conditions, inasmuch as it is of such a nature.

174) Aëtius quotes Galen almost verbatim, but omits his second sentence, a pharmacological generalisation.

Salicylic acid, a powerful keratolytic and anti-inflammatory agent, can be prepared from willow bark (Bruneton, 1995: 222-3); assuming αὐτῷ (79.11 [174.11]) refers to the bark, then an extraction in vinegar might have been effective against warts and calluses.

[79.16-80.15]

(ροε΄) Καλαμίνθη λεπτομερής ἐστι τὴν οὐσίαν καὶ θερμὴ καὶ ξηρὰ τὴν κρᾶσιν, ἐκ τῆς τρίτης που τάξεως καθ' ἑκατέρας τὰς ποιότητας. πινομένη δὲ αὐτὴ καθ' ἑαυτὴν ξηρὰ διὰ μελικράτου θερμαίνει τε σαφῶς καὶ ἰδρῶτας κινεῖ καὶ διαφορεῖ καὶ ξηραίνει τὸ σύμπαν σῶμα. διὰ τοῦτο γοῦν αὐτῇ τινες ἐχρήσαντο καὶ πρὸς τὰ κατὰ περίοδον ῥίγη, 5 [20] ἔξωθεν <μὲν> ἀφεψήσαντες ἐλαίῳ καὶ συναλείφοντες ὅλον τὸ σῶμα μετὰ τρίψεως γενναίας, ἔσωθεν δὲ λαμβάνοντες, ὡς εἴρηται. καὶ μὲν γε καὶ κατὰ τῶν ἰσχυίων καταπλάττουσιν τινες αὐτὴν ἐπὶ τῶν ἰσχιαδικῶν ὡς γενναῖον βοήθημα· καὶ γὰρ ἔλκει τὰ ἐκ τοῦ βάρους εἰς τὴν ἐπιφάνειαν καὶ θερμαίνει σύμπαν τὸ ἄρθρον, ἐπικαίει τε σαφῶς τὸ 10 [25] δέρμα καὶ τὰ καταμήνια πινομένη τε καὶ προστιθεμένη προκαλεῖται δραστηρίως. ἀγαθὸν δὲ κάπι τῶν ἐλεφαντιῶντων τὸ φάρμακον, οὐ μόνον τῷ γενναίως διαφορεῖν τοὺς λεπτοὺς χυμούς, ἀλλὰ καὶ τῷ λεπτύνειν καὶ τέμνειν ἰσχυρῶς τοὺς παχεῖς, οἷοί περ εἰσιν οἱ καὶ τοῦτο τὸ νόσημα γεννῶντες· οὕτω δὲ καὶ οὐλὰς μελαίνας λαμπρύνει καὶ ὑπόπια διαφορεῖ. κάλλιον δὲ ἐπὶ τῶν τοιούτων ἔψοντας ἐν οἴνῳ καταπλάττειν αὐτὴν, καὶ χλωρὰν μᾶλλον ἢ ξηρὰν· ἰσχυροτέρα γὰρ ξηρανθεῖσα γίνεται καὶ καίειν ἐτοιμοτέρα. καταπλάσσεται δὲ καὶ κατὰ τῶν 15 [p80] δηγμάτων τῶν ἰοβόλων, διὰ δὲ τὴν συνοῦσαν πικρότητα καὶ ἀσκαρίδας καὶ ἔλμινθας ἐνιέμενός τε καὶ πινόμενος ὁ χυλὸς αὐτῆς ἀναίρειν πέφυκε καὶ τοὺς ἐν ὧσιν δὲ καὶ ἔλκεσι σκώληκας. ὀνίνησι δὲ καὶ τοὺς ἀσθματικούς καὶ τοὺς ἰκτερικούς τῷ ῥύπτειν τε καὶ διακαθαίρειν τὰς καθ' ἧπαρ ἐμφράξεις. ἐστὶ δὲ εἰς ἅπαντα τὰ εἰρημένα πρακτικωτέρα ἢ ὄρειος. Ὅρφεὺς δὲ φησὶν ὅτι ὁ χυλὸς αὐτῆς σὺν ἴσῳ ῥοδίνῳ μετὰ 20 [10] ψιμυθίου λειωθεῖς, ὡς γλοιοῦ ἔχειν πάχος, καὶ ἐπιχριόμενος τὰ πυρί-

καυτα θεραπεύει. τὸ δὲ παράδοξον, ὅτι οὐδὲ οὐλή φαίνεται καὶ τριχο-
φυεῖ ὁ τόπος. σὺν κιμωλία δὲ καὶ ἀλόη ἴσως λειώσας τὸν χυλὸν καὶ
ἐπιχρίσας μέτωπον καὶ κροτάφους παύσεις παραχρήμα κεφαλῆς
ὀδύνας.

[15]

[Galen 12.4.3-6.14]

175) Mint (*Mentha* L. or *Calamintha* L. spp.) is fine-grained in essence and warm and dry in composition, somewhere in the third rank according to each of its qualities. When drunk by itself, added dry to honey-water, it both warms and certainly brings on sweats, has a dispersing effect, and dries the whole body. At any rate, for this reason some use it also for intermittent rigors, using it externally by boiling it down in oil and thoroughly rubbing the whole body with it, with intensive massage, and taking it internally, as has been said. Moreover, some apply it over the limbs in the case of those subject to hip problems, as a genuine remedy; for it really draws material from the depths up to the surface, and warms the entire joint, and clearly scorches the skin, and, both when drunk and used as a pessary, it is effective in inducing menstruation. It is also an excellent drug for those suffering from elephantiasis, not only by the intense dissipation of thin humours but also by thinning and powerfully cutting the thick ones, such as can, in fact, produce this disease. Thus it lightens dark scars and disperses black eyes. It is better to boil it in oil and to apply it in such cases, and fresh rather than dry; for it becomes more powerful when dried and readier to burn. And it is also applied to the stings/bites of venomous animals, and, because of the inherent bitterness, its juice, both when inserted as an enema and drunk, can remove threadworms and [other] worms, and maggots in the ears and in sores. It also benefits those with breathing difficulties, and jaundiced patients by cleansing and purging blockages on the liver. It is more effective for all the aforementioned than mare's tail/mountain variety. Orpheus says that its juice with an equal amount of rose-water, emulsified with white lead, so as to have the thickness of gum, and smeared on, treats burns. Contrary to expectation, no scar appears at all, and the area grows hair. When you have emulsified the juice with Cimolian earth and bitter aloes in equal amounts, and smeared it on the forehead and temples you will immediately put a stop to headaches.

175) Aëtius quotes much of Galen's text almost verbatim, but omits sections on taste and elemental theory (12.4.6-12; 5.14-6.20, and also on its supposed abortifacient properties (6.6-7). What Orpheus says (80.10-15 [24-29]) has been added by Aëtius.

There is some evidence of an anthelmintic potential (Maggiore et al., 2012), but no obvious support for Aëtius' other claims.

[80.16-23]

(ροζ΄) Κάλαμος ἀρωματικὸς στύψεως βραχείας καὶ δριμύτητος ἐλαχίστης μετέχει. τὸ δὲ πλεῖστον αὐτοῦ γεώδους οὐσίας ἐστὶ καὶ ἀερώδους, εὐκράτων κατὰ θερμότητα καὶ ψυχρότητα, ὅθεν οὐρητικὸς τε μετρίως ἐστὶ καὶ ταῖς πρὸς ἥπαρ καὶ στόμαχον ἐπιτιθεμέναις μίγνυται δυνάμεσιν, εἷς τε τὰς τῆς ὑστέρας πυρίας χρησίμως μίγνυται, ὅσαι φλεγμοναῖς προσφέρονται, <ἢ> ἐρεθισμῶν ἔνεκα τῶν καταμηνίων παραλαμβάνονται. κείσθω τοίνυν τῆς δευτέρας τάξεως τῶν θερμαινόντων καὶ ξηραινόντων μᾶλλον ἢ θερμαινόντων.

5 [20]

[Galen 12.6.15-7.9]

176) Sweet flag (*Acorus calamus* L.) shares a little astringency and the slightest sharpness. The greatest part of it is of an earthy and airy substance, well tempered with respect to warmth and coldness; hence it is moderately diuretic and it is mixed in compounds with added capacities for the liver and stomach, and it is usefully mixed in a compound for hot fomentations for the uterus, for all patients when they are attacked by acute inflammations, <or> are receiving drugs stimulating periods. Accordingly, let it be placed among the second rank of the warming and drying substances, rather than the warming ones.

176) Aëtius quotes Galen almost verbatim, but omits the latter's comments about the plant's fine-grained nature (12.7.6-9).

Sweet flag has proven spasmolytic and sedative effects, but is carcinogenic and has been banned in the U.S.A. (Bruneton, 1995: 463).

[80.24-29]

(ροζ΄) Κάλαμος φραγμαίτης. Καλάμου φραγαίτου ἡ ρίζα ρυπτικῆς μετέχει

δυνάμεως οὐκ ὀλίγη, ἥκιστα δὲ δριμείας. τὰ μέντοι χλωρὰ φύλλα [25]
μετρίως ἐμψύχει, μετέχοντα τῆς ῥυπτικῆς καὶ ταῦτα δυνάμεως. ὁ δὲ
φλοιὸς αὐτοῦ καθεὶς λεπτομεροῦς ἱκανῶς καὶ διαφορητικῆς γίνεται
δυνάμεως, ἔχων τι καὶ ῥυπτικόν, ὡς καὶ θερμαίνειν καὶ ξηραίνειν 5
κατὰ τὴν τρίτην που τάξιν καὶ πλεόν γε ξηραίνειν ἢ θερμαίνειν.
[Galen 12.7.10-8.5]

177) Hedge reed. The root of hedge reed shares a very large cleansing capacity, and a minimally sharp one. The fresh leaves, however, cool moderately, these too sharing the cleansing capacity. Its bark, when burnt, develops a sufficiently fine-grained and dispersive capacity, having also some cleansing effect, so as to warm and dry somewhere in the level of the third rank, and actually more drying than warming.

177) Aëtius quotes approximately half of Galen's entry almost verbatim, but omits a section in which Galen cites, but cannot verify, other authors' claims that the plant's root and bulbs can draw splinters and thorns (12.7.11-14), and he also omits Galen's warning against getting the flowertufts stuck in the ears (12.8.2-5).

No reference to this plant has been found in modern scientific literature.

[Galen next lists *Mercurialis tomentosa* L./sleepy nightshade (*Withania somnifera* L.), whose root is non-erosive and moderately drying, and, when soaked in wine and used as a linctus, or chewed, relieves roughened windpipes (Περὶ καγκάνου 12.8.6-12).]

[81.1-5]
(ροη΄) Καννάβεως ὁ καρπὸς δύσπεπτός τέ ἐστι καὶ κεφαλαλγῆς καὶ κα- [p81]
κόχυμος· εἰ δὲ καὶ φρυχθείη καὶ οὕτως ἄπτεται τῆς κεφαλῆς τῷ θερ-
μαίνειν ἱκανῶς, ἀτμὸν ἀναπέμπων ἐπ' αὐτὴν θερμόν τε ἅμα καὶ φαρ-
μακώδη· τῷ δὲ ξηρὰν ἔχειν τὴν κρᾶσιν καὶ ἄφυσον εἶναι ξηραίνει
τὴν γονήν. 5[5]

[Galen 12.8.13-17]

178) The fruit of hemp (*Cannabis sativa* L.) causes indigestion and headaches, and is unwholesome. If it is roasted, it affects the head by warming it sufficiently in this way, by sending up to it a warm and pharmacologically active vapour. By having a dry composition and by suppressing flatulence, it dries the genitals.

178) Aëtius paraphrases Galen's account of its effects on flatulence and the genitals, adds information about headaches and indigestion, and omits Galen's mention of its use for otalgia (12.8.15-17).

Its vapour – at least that from the leaves – is certainly pharmacologically active, and its mood-altering and hallucinogenic effects are well documented (e.g. Bruneton, 1995: 371-9). The other effects claimed above have not been substantiated.

[81.6-12]

(ροθ') Κάπνιος ἢ καπνὸς δριμείας ἅμα καὶ πικρᾶς μετέχει ποιότητος, οὐκ ἀπήλλακται δὲ παντάπασιν οὐδὲ τῆς στρυφνῆς, ὅθεν οὐρά τε χολώδη προτρέπει πολλὰ καὶ τὰς καθ' ἥπαρ ἐμφράξεις τε καὶ ἀτονίας ἰᾶται, καὶ ὁ χυλὸς δὲ αὐτῆς ὀξυδερκῆς ἐστὶν ἐπισπώμενος δάκρυον, ξηρὰ δὲ λεῖα ἐπιπαττομένη μελικράτῳ καὶ πινομένη λαπάττει γαστέρα, οἶνω δὲ ὁμοίως ἐπιπαττομένη κεκραμμένῳ ῥωννύει στόμαχον. δίδου δὲ θαρρῶν τὸ ἀφέψημα αὐτῆς καὶ τοῖς ὀπωσοῦν πυρέττουσιν.

[10]5

[Galen 12.8.18-9.9]

179) Fumitory (*Fumaria officinalis* L.) [*Kapnios* or *Kapnos*] has some sharp and at the same time bitter quality, but is not completely free from astringency, whence it brings forth lots of bilious urine, and heals the blockages and debilities affecting the liver, and its juice promotes sharp-sightedness by inducing tears; when dry fumitory is ground down and sprinkled in honey-water and drunk, it evacuates the bowel, and when likewise sprinkled in diluted wine, it strengthens the stomach. Give a decoction of it with confidence as well to those suffering any sort of fever.

179) Aëtius quotes Galen largely verbatim, but shortens his account of preparation for treating the stomach and gut, and omits Galen's explanation

of the plant's name, derived from its ability to induce tears. Its antipyretic use has been added by Aëtius (81.12 [179.7]).

As it may have a spasmolytic effect on the sphincter of Oddi [the outlet for the passage of bile from liver to gut], there could be a link to Aëtius' claim in this respect (Bruneton, 1995: 743), although there is no support for his other claims.

[81.13-82.13]

(ρπ´) Καππάρεως. Ὁ μὲν φλοιὸς τῆς ῥίζης ἐπικρατοῦσαν ἔχει τὴν πικρὰν ποιότητα, δευτέραν δὲ τὴν δριμεῖαν, ἐφεξῆς δὲ ταύτη τὴν στρυφνὴν, ᾧ δῆλον ὡς ἐκ διαφερόντων καὶ μαχομένων σύγκειται δυνάμεων. ῥύπτει μὲν γὰρ δύναται καὶ διακαθαίρειν καὶ τέμνειν τῇ πικρότητι, θερμαίνειν δὲ καὶ διαφορεῖν καὶ λεπτύνειν τῇ δριμύτητι, συνάγειν δὲ καὶ πιλεῖν καὶ σφίγγειν τῇ στρυφνότητι· καὶ διὰ τοῦτο σπλῆνας σκιρρῶδεις, εἴπερ τι καὶ ἄλλο, τοῦτο τὸ φάρμακον ὀνίνησιν, ἔξωθεν τε τοῖς ἐπιτηδείοις καταπλάσμασι μιγνύμενον, εἴσω τε τοῦ σώματος λαμβανόμενον, ἤτοι γε ἀφεψόμενον ἐν ὄξει τε καὶ ὄξυμέλιτι καὶ τοῖς τοιοῦτοις, ἢ ξηρὸν λειὸν ἀναμιγνύμενον αὐτοῖς. κενοῖ γὰρ φανερώς τοὺς γλίσχρους καὶ παχεῖς χυμοὺς οὕτω ληφθέν οὐ δι' οὖρων μόνον, ἀλλὰ καὶ διὰ γαστρός. πολλάκις δὲ καὶ αἱματώδη διαχωροῦσιν, ἐφ' οἷς οἱ τε σπλῆνες ὀνίναται καὶ αἱ κατ' ἰσχίον ὀδύναι. καὶ μὲν δὴ καὶ καταμήνια κινεῖ καὶ ἀποφλεγματίζει καὶ καταπαττόμενος δὲ τοῖς κακοήθεσιν ἔλκεσιν ὁ τῆς ῥίζης φλοιὸς λειὸς ἀγαθὸν φάρμακον, ὡς ἂν ἀπορρῦπτειν τε δυνάμενος αὐτὰ καὶ ξηραίνειν ἰσχυρῶς. καὶ τοὺς ὀδόντων δὲ πόνους ὠφελεῖ σὺν οἴνω ἐψόμενος ἢ ὄξει. καὶ χοιράδας δὲ καὶ ὄγκους σκληροὺς διαφορεῖ, τοῖς ἐπιτηδείοις πρὸς ταῦτα φαρμάκοις μιγνύμενος. καὶ μὲν δὴ καὶ τὰ φύλλα καὶ ὁ καυλὸς καὶ ὁ καρπὸς παραπλησίας ἐστὶ τῷ φλοιῷ δυνάμεως, πλὴν ὅσον ἀσθενέστερα, καὶ ἔγωγέ ποτε τοῖς φύλλοις μόνοις οἶδα διαφορήσας ἐν ὀλιγίσταις ἡμέραις χοιράδων σκληρότητα. μίγνυται δὲ αὐτοῖς δηλονότι τῶν ἀμβλυνότων τι τὸ σφοδρὸν τῆς δυνάμεως. οὐδὲν δὲ θαυμαστὸν εἰ καὶ τοὺς ἐν ὠσὶ σκώληκας ὁ χυλὸς ἀναιρεῖ διὰ τὴν πικρότητα· ὁ δὲ ἐν τῇ ἄλμῃ τιθέμενος καρπὸς ἀποπλυθεὶς καὶ διαβραχεὶς ἄχρι τοῦ τελέως ἀποτίθεται τὴν ἐκ τῶν ἄλῶν δύναμιν, φάρμακον ἐπιτηδεῖον γίνεταί ἐπεγείρειν πεπτωκυῖαν ὄρεξιν, ἀπορρῦψαι τε καὶ ὑπαγαγεῖν τὸ κατὰ τὴν γαστέρα φλέγμα καὶ τὰς κατὰ σπλῆνά τε καὶ ἥπαρ ἐμφράξεις ἐκκαθαίρειν· χρῆσθαι δὲ εἰς ταῦτα προσήκεν αὐτῷ δι' ὄξυμέλιτος ἢ δι' ὄξελαίου πρὸ τῶν ἄλλων ἀπάντων σιτίων.

[81.15] διαφερόντων replaces διαφόρων τε

[Galen 12.9.10-11.17]

180) About caper plant (*Capparis spinosa* L.). The rind of the root has predominantly a bitter quality, and secondly a sharp one, and next to this an astringent one, from which it is clear that it is composed of differing and conflicting capacities. For while it can cleanse, purify and cut by virtue of the bitterness, it can warm, disperse and thin by virtue of the sharpness, and

it can draw together, condense and constrict by virtue of its astringency. And for this reason this drug, as much as anything else can, helps indurated spleens, both when used externally mixed in suitable poultices, and when taken internally, either, that is, boiled down in vinegar, and vinegar and honey, and such like, or as a ground-down dry form, mixed together with the same materials. For, when taken in this way, it clearly empties out thick and sticky fluids, not only through urine, but also through the bowel. Often, too, bloody materials are excreted, in which circumstances, affections of the spleen and hip pains are helped. Moreover, it brings on menstruation, and removes phlegm, and, when sprinkled on malignant ulcers, the ground-down bark of the root is a good drug, as it is able to cleanse them thoroughly and dry them powerfully. When boiled down in wine or vinegar, it helps toothache. It also disperses diseased lymph nodes and hard lumps, when mixed with drugs suitable for these things. Moreover, the leaves, stalk and fruit have a capacity similar to the bark, except insofar as they are weaker. And I for my part know that once, using the leaves alone, I dispersed in a very few days the hardness of diseased lymph nodes. Obviously, one mixes with them something to take the edge off the excess of capacity. And it is no wonder if the juice also removes maggots in ears, through its bitterness; when the fruit is put into brine, washed well and soaked until it eventually lays aside the capacity of the salt, it becomes a suitable drug for stimulating a lost appetite, for cleansing and drawing down bowel phlegm and for purging out splenic and hepatic blockages. It is suitable for use for these conditions, in vinegar and honey or in vinegar and oil, in preference to all the other food-stuffs.

180) Aëtius quotes two thirds of Galen's entry fairly closely, while omitting indicated use for sprains and fractures (12.10.7-8), and theoretical justification for its nature and effects (12.10.16-11.5; 11.14-17). The information in the last six lines of Aëtius' entry is additional to Galen's *SMT* text, and is taken from *Alim.Fac.* 6.616.4-10.

180.21 [82.4] ἔγωγέ Quoted from Galen (12.11.10).

There is no apparent substantiation of the above claims in modern scientific literature.

[82.14-20]

(ρπα´) Καρδάμου τὸ σπέρμα μετέχει καυστικῆς δυνάμεως, ὡσπερ τὸ
νάπυ, καὶ διὰ τοῦτο καὶ ἰσχιάδα καὶ κεφαλαλγίαν καὶ ὀτιοῦν ἄλλο [15]
τῶν δεομένων φοινίξεως ἐκθερμαίνουσιν αὐτῶ, καθάπερ τῶ νάπυ.
μίγνυται δὲ ὠφελίμως καὶ τοῖς ἀσθματικοῖς βοηθήμασιν, ὡς ἂν δηλο-
νότι τέμνειν τοὺς παχεῖς χυμοὺς δυνάμενον. καὶ ἡ πόα δὲ παραπλη- 5
σίας ἐστὶ δυνάμεως τῶ σπέρματι, ἀσθενεστέρα δέ· ὅθεν ἐσθιομένη θερ- [20]
μαίνει σφοδρῶς· ἐστὶ δὲ κεφαλαλγῆς.

[Galen 12.11.18-12.11]

181) The seed of nose-smart (*Lepidium sativum* L.) has a burning capacity, as does mustard, and for this reason, using it just like mustard, people warm thoroughly cases of hip problems and headache, and whatever else requires a rubefacient. It is usefully mixed into remedies also for those suffering from breathing disorders, as it is clearly capable of cutting thick fluids. And the herb is of a similar capacity to the seed, but weaker; hence it warms strongly when it is eaten. But it causes headaches.

181) Aëtius quotes Galen largely verbatim, while omitting a comment about eating it with bread, and adding that it causes headaches.

It is claimed that biochemical pathways exist for nose-smart's bronchodilatory effect in a study which is of doubtful value, since it presupposes that the plant has such an effect (Rehman et al., 2012); there is nothing else of relevance.

[82.21-24]

(ρββ´) Καρδάμων ἐστὶ μὲν καὶ τοῦτο θερμῆς ἰκανῶς δυνάμεως, ὡς
ἐλκοῦν καταπλαττόμενον, ἥττον μέντοι τοῦ καρδάμου. ἔχει δὲ τι καὶ
πικρότητος ἐν ἑαυτῶ, δι' ἣν καὶ τὰς ἔλμινθας ἀναιρεῖ καὶ ψώρας
ἰσχυρῶς ἀπορρύπτει σὺν ὄξει.

[Galen 12.12.12-19]

182) Cardamon (*Elettaria cardamomum* Maton) – this too has a sufficiently warm capacity, so as to ulcerate when applied, but less, however, than nose-smart. But it has in itself also some sort of bitterness, through which it

removes worms, and, when used with vinegar, it powerfully washes away itchy scabby skin lesions.

182) Aëtius omits roughly half of Galen's entry, in which the latter expands on a comparison with nose-smart, but he quotes the remainder largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[82.25-83.2]

(ρπγ') Καρώου τὸ σπέρμα ξηραίνει καὶ θερμαίνει κατὰ τὴν τρίτην πού τάξιν καὶ δριμεῖαν δὲ μετρίως ἔχει τὴν ποιότητα. ταῦτά τοι καὶ ἄφυσόν ἐστι καὶ οὐρητικὸν οὐ τὸ σπέρμα μόνον, ἀλλὰ καὶ τὸ φυ- [p83]
τὸν ὅλον.

[Galen 12.13.1-4]

183) Caraway seed (*Carum carvi* L.) dries and warms somewhere at the level of the third rank, and it also has a moderately sharp quality. In actual fact, not only the seed but also the whole plant is flatus-suppressing and diuretic.

183) Aëtius quotes Galen almost verbatim.

183.1 [82.25] **Καρώου τὸ σπέρμα** Translation is in doubt; Carnoy has “cumin” (*Cuminum cyminum* L.).

A trial of short duration has demonstrated a diuretic effect in rats (Lahlou et al., 2007).

[83.3-9]

(ρπδ') Κασία θερμαίνει καὶ ξηραίνει κατὰ τὴν τρίτην τάξιν. ἐστὶ δὲ καὶ λεπτομερῆς ἱκανῶς, ἐν δὲ τῇ γεύσει πλεῖστον μὲν τὸ δριμὺ ἔχει, βραχὺ δὲ τι καὶ στῦφον, ὥστε διὰ ταῦτα πάντα τέμνει τε ἅμα καὶ διαφορεῖ τὰ κατὰ τὸ σῶμα περιττὰ καὶ πρὸς τούτοις ἔτι ῥώμην ἐν- 5
τίθησι τοῖς ὀργανοῖς. ἐπιτήδειος δὲ καὶ πρὸς τὰς τῶν καταμηνίων ἐπισχέσεις ἐστίν, ὅταν ὑπὸ πλήθους τε ἅμα καὶ πάχους τῶν περιττω-
μάτων αὐτάρκως κενοῦσθαι κωλύηται.

[Galen 12.13.5-13]

184) Cassia (*Cinnamomum cassia* Siebold, *iners* Wight or similar spp.) warms and dries at the level of the third rank. It is also fully fine-grained, and, as far as taste is concerned, it has sharpness most of all but also a small amount of astringency, so that for these reasons it cuts and at the same time dissipates everything excessive throughout the body, and, in addition to these features, it imparts strength to the organs. It is also useful for blockages to menstruation, whenever that is prevented from being spontaneously voided both by the quantity and thickness of the excess materials.

184) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[83.10-84.3]

(ρπε') Καρύα τὸ δένδρον ἔχει μὲν τι κὰν τοῖς βλαστοῖς καὶ τοῖς φύλλοις στυπτικόν, ἐναργὲς δὲ καὶ πλεῖστον ἐν τῷ τοῦ καρύου λέμματι προσφάτω τε καὶ ξηρῷ. χρῶνται οὖν αὐτῷ διὰ τοῦτο καὶ οἱ βαφεῖς. ἡμεῖς δὲ ἐκθλίβοντες αὐτὰ καὶ τὸν χυλὸν ὁμοίως τῷ τῶν μόρων καὶ τῶν βάτων, ἔψοντες σὺν μέλιτι στοματικῷ τε χρώμεθα φαρμάκῳ καὶ πρὸς τὰ ἄλλα πάντα πρὸς ὅσαπερ ἀρμόζουσιν οἱ προειρημένοι χυλοί. τοῦ καρύου δὲ αὐτοῦ τὸ μὲν ἐδώδιμον ἐλαιῶδες τέ ἐστι καὶ λεπτομερές, μετέχει δὲ καὶ τῆς στυφούσης ποιότητος ἐπ' ὀλίγον, ἥτις ἐν τῷ χρόνῳ προιόντι μαραίνεται, μεταπιπτούσης ὅλης αὐτοῦ τῆς οὐσίας εἰς τὸν λιπαρὸν χυμὸν, ὡς παραπλήσιον φαίνεσθαι ἐλαίῳ παλαιῷ καὶ διὰ τοῦτο τελέως γίνεσθαι ἄβρωτον. τὸ δὲ χλωρὸν ἔτι καὶ ὑγρὸν οὔτε τῆς στυφούσης σαφῶς μετέχει ποιότητος οὔτε τῆς ἐλαιώδους, ὅθεν πρὸς διαχώρησιν μὲν ἐπιτηδειότερόν ἐστι τοῦ ξηροῦ καὶ μάλιστα εἰ, ὡς τινες ποιοῦσι, μετὰ γάρου προσφέρεται. ἀλλὰ καὶ τῶν ξηρῶν προβρεχομένων ἐν ὕδατι, καθάπερ ἔνιοι ποιοῦσιν, ἡ δύναμις παραπλησία γίνεται τοῖς χλωροῖς. πέττεται γε μὴν μᾶλλον τὸ κάρυον καὶ εὐστομαχώτερον γίγνεται, ὅταν σὺν ἰσχάσιν ἐσθίηται. φασὶ δὲ τὸν ἐσθίοντα ἰσχάδας μετὰ καρύων καὶ πηγάνου πρὸ τῶν σιτίων μηδὲν ὑπὸ τῶν θανασίμων φαρμάκων μέγα βλάπτεσθαι. παλαιουμένου δὲ αὐτοῦ ἔλαιον ἐκθλίψαι ἐξ αὐτοῦ δυνατόν ἐστι καὶ διαφορητικὸν ἱκανῶς τηνικαῦτα γίγνεται, ὡς τινες καὶ γαγγραῖνας αὐτῷ καὶ ἄνθρακας καὶ αἰγίλωπας ἰῶνται. τὸ μέντοι λέπος αὐτοῦ τὸ ξηρὸν καυθὲν λεπτομερές τε γίνε-
ται καὶ ξηραντικὸν καὶ ἄδηκτον φάρμακον.

[83.14] στοματικῷ replaces στομαχικῷ.

[Galen 12.13.14-15.3]

185) The walnut tree (*Juglans regia* L.) has something astringent in its shoots and leaves, but also most distinctly in its nutshells, both fresh and dry. Because of this, therefore, dyers also use it. But we squeeze them out and, similarly to that of mulberries and brambles, we use the juice, boiling it with honey, as a drug for the mouth and for all the other conditions that the aforementioned juices treat. The edible part of the actual nut is both oily and fine-grained, but also shares an astringent quality for a short period, which dies away in the course of time, while its entire essence undergoes a change towards the greasy fluid, so as to appear similar to old oil and hence finally to become inedible. That which is still fresh and moist shares neither a distinctly astringent nor oily quality, whence it is more useful for laxative purposes than the dry sort, and certainly so, if, as some do, it is administered with fish-sauce. But also, when the dry ones are pre-soaked in water, just as several people do, the capacity becomes almost equal to that of the fresh ones. Anyway, the walnut is better digested and becomes better for the stomach whenever it is eaten with dried figs. They say a person eating dried figs with walnuts and rue before meals is not greatly harmed by lethal poisons. When it is left to age, it is possible to squeeze out oil from it, and it becomes suitably dispersive in this case so that some heal gangrenes, carbuncles and dacryocystitis with it. Moreover, when dry roasted, its shell becomes a fine-grained, drying and non-stinging drug.

185) Aëtius quotes much of Galen's entry verbatim, but condenses his description of the physical nature and the effect of ripening on the fruit, and omits a comment that it can be used for tendon wounds (12.14.9-10). Galen includes thin-shelled nuts (hazelnuts) in the same entry as walnuts (12.14.15-15.3).

185.1 [83.10] **Καρύα τὸ δένδρον** Dioscorides refers in his entry specifically to *κάρυα βασιλικά* (walnut), and, considering the close similarity of ll. 17-19 above (*φασὶ...βλάπτεσθαι*) to Diosc. 1.178.4-6 (K25.1.156.13-15), it is clear that Aëtius is writing about the same plant.

Juglone, found in various parts of the plant, has antibacterial and antifungal properties (Bruneton, 1995: 348).

[84.4-6]

(ρπς´) Λεπτοκάρυα. Τὰ δὲ λεπτοκάρυα, ἃ δὴ καὶ ποντικά προσαγορεύονται, ψυχρότερα ἔστι καὶ αὐστηρότερα ὡς γεωδέστερα· τὰ δὲ ἄλλα παραπλήσια ἔστι τῷ βασιλικῷ καρῷ. ἔστι δὲ κεφαλαλγὲς ἐσθιομένον. [5]

[84.6] κεφαλαλγὲς ἐσθιομένον replaces κεφαλαλγῆ ἐσθιόμενα.

186) Hazelnuts (*Corylus avellana* L.). The thin-shelled nuts which, in fact, are also named Pontic are cooler and harsher, as they are earthier; but the others are similar to walnuts. When eaten, they cause headaches.

186) Aëtius paraphrases the last seven lines of Galen's entry entitled Κάρυα, and adds the comment these nuts cause headaches.

Hazelnuts have been shown to provoke migraine (Guariso et al., 1993).

[Galen next lists two plants omitted by Aëtius: *Tordylium apulum* L., which he says is similar in taste to *Athamanta cretensis* L. (Περὶ κωκαλίδος 12.15.4-8); and *Valeriana dioscoridis* Sm., supposedly effective for bowel and urinary problems, and kidney stones (Περὶ καρπησίου 12.15.9-16.2).]

[84.7]

(ρπζ´) Καστάνια. Περὶ καστανίων ἐν τῷ περὶ δρυὸς λόγῳ προέγραπται.

187) Chestnuts. A previous entry has been made concerning chestnuts in the section about oak.

187) This entry is absent in Galen. Aëtius refers here to his ch. 95, p.115.

[84.8-13]

(ρπη´) Κέγχρος ψύχει μὲν κατὰ τὴν πρώτην τάξιν, ξηραίνει δὲ ἦτοι κατὰ τὴν τρίτην ἐκλελυμένην ἢ τὴν δευτέραν ἐπιτεταμένην. ἔστι δὲ πῶς λεπτομερῆς ἐπ' ὀλίγον, ὅθεν ἐσθιομένη μὲν ὡς ἔδεσμα παντελῶς ὀλιγοτροφώτατόν ἐστιν ἀπάντων σχεδόν τι τῶν σιτηρῶν ἐδεσμάτων. ἀτὰρ οὖν καὶ κοιλίαν ξηραίνει, ἔξωθεν δὲ ἐπιτιθεμένη διὰ μαρσίπων ἐπιτήδειός ἐστι πυρία τοῖς ἀδήκτως ξηρανθῆναι δεομένοις. [10] 5

[Galen 12.16.3-13]

188) Millet (*Panicum miliaceum* L.) cools at the level of the first rank, but dries either at the bottom end of the third or the top part of the second. It is somewhat fine-grained to a small degree, hence, when eaten as food, it is in every respect the least nutritious, more or less, of all the cereal foods. But, therefore, it also dries the abdomen, and, when applied externally by means of poultices, it is suitable as a form of heat for those requiring to be dried without stinging.

188) Aëtius quotes Galen largely verbatim, but omits his last three lines about the tendency of millet poultices to crumble (12.16.11-13).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[84.14-85.10]

(ρθ') Κέδρος. Ἐστὶ μὲν διττὴ κατ' εἶδος. κράσεως δὲ εἰσὶν ἀμφοτέραι
 τῆς τρίτης τάξεως ἐν τῷ θερμαίνειν καὶ ξηραίνειν. ἢ μέντοι κεδρία, [15]
 ἢ ἐξ αὐτῶν γιγνομένη, καὶ τῆς τετάρτης ἂν ἤδη ἄπτηται τάξεως.
 ἐστὶ δὲ τῆς πρώτης τάξεως τῶν σηπτικῶν καλουμένων, ἰκανῶς θερμῆ
 τε καὶ λεπτομερῆς ὑπάρχουσα. τὰς μέντοι ἀπαλὰς σάρκας ἐτοιμῶς τε 5
 ἅμα καὶ ἀνωδύνως σήπει· ἐκ τῆς <γάρ> ἐν τοῖς σώμασι θερμότητος
 αὐξομένη ἢ ἐν αὐτῇ θερμασία. ἐπὶ δὲ τῶν σκληρῶν σωμάτων ἐν [20]
 χρόνῳ τε πλέονι καὶ μόγις ἐνεργεῖ, ὅθεν ἐπὶ τῶν τεθνεώτων ἄσηπτα
 φυλάττει τὰ σώματα, τὰς μὲν ὑγρότητας αὐτῶν ἐκβοσκομένη τὰς πε-
 ριττάς, τῶν στερεῶν δὲ σωμάτων οὐχ ἀπτομένη, διὰ τὸ μὴ τοσαύτην 10 [p85]
 ἔχειν ἰσχυρὰν δύναμιν, ὥσπερ τὰ ἄλλα σηπτικὰ λεγόμενα. θαυμαστὸν
 δὲ οὐδέν, εἰ τοιαύτη τὴν δύναμιν οὔσα καὶ φθειρας καὶ κονίδας καὶ
 τοὺς ἐν ὧσι σκόληκας καὶ ἀσκαρίδας ἐν ἀπευθυσμένῳ ἀναιρεῖν πέφυκε·
 ἔμβρυα δὲ προστιθεμένη τὰ μὲν ζῶντα κτείνει, τὰ δὲ νεκρὰ ἐκβάλλει, [5]
 περιλειφομένη τῷ αἰδοίῳ κατὰ τὰς συνουσίας. καὶ διὰ τοῦτο ἀπόκιόν 15
 ἐστὶ φάρμακον οὕτω χρωμένους οὐδενὸς δεύτερον. καὶ τοῖς δὲ τρήμασι
 τῶν ὀδόντων ἐνσταχθεῖσα τὰ μὲν ἀλγήματα πρᾶννει, θραύει δὲ αὐτούς.
 λεπτύνει δὲ καὶ τὰς ἐν ὀφθαλμοῖς οὐλὰς καὶ τὰς διὰ πάχος ὑγρῶν
 ἀμβλωπίας ἰᾶται. [10]

[84.15] κεδρία replaces κεδρέα.

[Galen 12.16.14-19.8]

189) Cedar tree (*Juniperus* L. spp.). It is two-fold according to appearance. Both have a composition belonging to the third rank in warming and drying. However, the oil of Syrian cedar (*Juniperus excelsa*) which comes from them, would even reach as far as the fourth rank. And it belongs to the first rank of substances called putrefactive, being both sufficiently warm and

fine-grained. Yet it readily, and at the same time painlessly, putrefies soft tissues. <For> the heat in itself is augmented from the warmth in the bodies. It acts upon hard bodies in more time and with difficulty, whence, in the case of those who have died, it keeps the bodies uncorrupted, absorbing their superfluous moisture, not touching the solid bodies, because of not having such a strong capacity as the other putrefying agents are said to have. And it is no wonder, if its capacity is of such a sort, that can remove lice and nits, maggots in the ears and threadworms in the rectum; it kills living foetuses when administered as a pessary, and aborts dead ones, when smeared all over the genitals in relation to acts of sexual intercourse. And for this reason, it is a contraceptive drug second to none, for those using it in this way. Also, when it is instilled into dental cavities, it soothes the pains, and it shatters the teeth. It thins down corneal opacities as well, and heals instances of visual impairment caused by thickness of liquids.

189) Aëtius condenses Galen's entry mainly by omitting a comparison with other putrefactive drugs (12.17.5-11), but quotes much of the remainder fairly closely. Galen includes cedar oil (12.18.9-19.4) and juniper berries (12.19.4-8) in the same entry as cedar tree.

189.15 [85.6] **περιαλειομένη... συνουσίας** In Galen (12.18.1-3), this phrase forms part of a separate sentence, and then he refers to contraception, which makes better sense.

Of possible relevance is the demonstration of the abortifacient effect in cows of isocupressic acid present in *Juniperus communis* L. (Gardner et al., 1998).

[85.11-16]

(ρϕ´) Κεδρέλαιον. Τὸ δὲ λιπαρώτατον ἐξ αὐτῆς καὶ ἀκριβῶς ἐλαιῶδες, ὃ διὰ τῶν ὑπεραιωρουμένων ἐρίων ἐψομένης ἀθροίζεται, λεπτομερές-στερον μὲν γίγνεται τῆς ὅλης κεδρίας, ἤττον δὲ δριμύ καὶ δηκτικόν, καίτοι οὐχ ἤττον ἀλλὰ καὶ μᾶλλον ἐνεργεῖ τῆς κεδρίας· ὅθεν τούτῳ χρῶνται οἱ ἰδιῶται ἐπὶ τῶν γιγνομένων τραυμάτων τοῖς κειρομένοις

5 [15]

προβάτοις ὑπὸ τῶν ψαλίδων καὶ πρὸς τὰς ψώρας καὶ τοὺς κρότωνα.

[85.13, 14] κεδρίας replaces κεδρέας.

190) Cedar oil. The very greasy and distinctly oily substance from it [the cedar tree], which is collected by suspending wool over the cedar while it is being boiled, becomes finer-grained than whole Syrian cedar oil, but less sharp and stinging; however, it is not less, but even more, efficacious than Syrian juniper oil. Hence, lay people use this in cases of wounds caused by the shears during sheep-shearing, and for itchy scabby lesions and ticks.

190) Aëtius quotes the first and last parts of Galen's entry, but omits his more detailed account of the nature of the oil and its fractions (12.18.12-18); Galen also points out that lay people have learned to use it by experience, but for scabby lesions of sheep (12.18.18).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[85.17-20]

(ρρα´) Κεδρίδες. Οὕτω δὲ ὀνομάζουσι τὸν καρπὸν τῆς κέδρου, μετριωτέραν δὲ ἔχουσι τὴν δύναμιν, ὥστε καὶ ἐσθίεσθαι δύνασθαι. πλείους μέντοι καὶ τούτων, εἴ τις προσενέγκοιτο, τὴν τε κεφαλὴν ἀλγεῖ καὶ θερμαίνεται καὶ δάκνεται τὸ στόμα τῆς γαστροῦς. 20

191) Juniper berries. This is the name they give to the fruit of the cedar tree, and it has a more moderate capacity, so that it can even be eaten. If, however, one uses too many of them, it hurts the head, and warms, and stings the gullet.

191) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[85.21-86.5]

(ρρβ´) Κενταυρίου τοῦ μεγάλου ἡ ῥίζα ἐξ ἐναντίων σύγκειται δυνάμεων· κατὰ μὲν οὖν τὴν γεῦσιν δριμεῖά τε ἅμα καὶ στύφουσα φαίνεται μετὰ τινος βραχείας γλυκύτητος, κατὰ δὲ τὰς ἐνεργείας ἡ μὲν δριμύτης τὰ τῆς θερμότητος ἔργα διαδείκνυται, προτρέπουσα καταμήνια καὶ ἔμβρυα νεκρὰ κατασπῶσα καὶ ζῶντα διαφθείρουσά τε ἅμα καὶ ἐκβάλλουσα· ἡ δὲ στύψις ἐνδείκνυται τὰ τῆς παχυμεροῦς καὶ γεώδους ψυχρότητος 5 [25]

ἔργα ἔν τε τῷ κολλᾶν τραύματα καὶ τοὺς αἵμα πτύοντας ὠφελεῖν.
 διδόναι δὲ δεῖ αὐτοῖς < β', πυρέσσουσι μὲν μεθ' ὕδατος, ἀπυρέτοις δὲ
 μετ' οἴνου. κατὰ δὲ τὴν ἐξ ἀπασῶν τῶν ποιότητων ἐνέργειαν καὶ
 ῥήγμασι καὶ σπάσμασι καὶ δυσπνοίαις καὶ ταῖς πεπαλαιωμέναις ἀρμότ- 10 [p86]
 τει βηξίν. οὐ γὰρ ἐκκενῶσαι χρή μόνον ἐπὶ τούτων τὸ παρὰ φύσιν,
 ἀλλὰ καὶ ῥῶσαι καὶ τονῶσαι τὰ ἐκκαθαρθέντα. τὰ δ' αὐτὰ τῇ ῥίζῃ καὶ
 ὁ χυλὸς αὐτῆς ἐργάζεται καὶ τινες ἀντὶ λυκίου χρῶνται αὐτῷ, ἐκεί-
 νου μὴ παρόντος.

[Galen 12.19.9-20.13]

192) The root of centaury [great centaury] (*Centaurea salonitana* L.) is composed of opposing capacities; for, according to its taste, it appears both sharp and astringent with a brief sweetness, but in action the sharpness shows plainly the effects of warmth, bringing on periods, aborting dead foetuses, destroying living ones and expelling them. On the other hand, the astringency demonstrates the actions of coarse-grained and earthy coldness in causing the closure of wounds and in helping those coughing up blood. It is necessary to give them 2 drachmas, with water if they are feverish, but with wine if afebrile. In accordance with the action arising from all its qualities, it treats soft-tissue injuries and sprains, cases of dyspnoea and chronic coughs. For it is not only necessary to empty out what is unnatural in these cases, but also to strengthen and brace the parts being cleansed. Its juice also does the same things as the root, and several use it instead of dyer's buckthorn (*Rhamnus petiolaris* Boiss.), if that is not available.

192) Aëtius quotes about two thirds of Galen's entry verbatim, but whereas Galen says that in usage centaury root's effects bear out the opposing qualities apparent in its taste (12.19.10-11), Aëtius simply says it is composed of opposing capacities; he also omits Galen's discussion of the effects of the admixture of other flavours to sharpness (12.20.6-11).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[86.6-87.7]

(ρργ') Κενταυρίου τοῦ μικροῦ μὲν ἡ ῥίζα παντάπασιν ἄπρακτος, οἱ δὲ
 κλώνες καὶ μᾶλλον γε τὰ φύλλα καὶ τὰ ἐπ' αὐτοῖς ἄνθη χρησιμώ-
 τατα. ἐπικρατεῖ δὲ ἐν αὐτοῖς ἡ πικρὰ ποιότης ὀλίγον τι καὶ στύψεως
 μετέχουσα καὶ διὰ τοῦτο ἰσχυρῶς ξηραντικόν ἐστὶ τὸ φάρμακον καὶ
 ἄνευ δήξεως· τὰ τε οὖν μεγάλα καὶ πρόσφατα τραύματα κολλᾷ ἡ 5 [10]

πόα χλωρὰ καταπλαττομένη καὶ τὰ παλαιὰ δὲ καὶ δυσκατούλωτα τῶν
 ἑλκῶν κατουλοῖ ὁμοίως προσαγομένη καὶ ξηρανθεῖσα δὲ ταῖς κολλη-
 τικαῖς καὶ ξηραντικαῖς μίγνυται δυνάμεσιν, ὅσαι κόλπους καὶ σύριγγας
 ἰᾶσθαι πεφύκασι καὶ τὰς παλαιὰς σκληρότητας μαλάττειν πεπίστευεται καὶ τὰ κα-
 κοήθη τῶν ἑλκῶν ἰᾶσθαι καὶ τοῖς τὰς ρευματικὰς διαθέ- 10 [15]
 σεις ἰωμένοις. τὸ δὲ ἀφένημα τῆς πόας ἐνιᾶσί τινες ἰσχιαδικοῖς, ὡς
 ἄγον χολώδη καὶ παχέα. καὶ γὰρ καὶ καθαίρει, καὶ μὲν δὴ καὶ ὅταν
 ἐνεργήσῃ σφοδρῶς αἱματώδη κενοῖ καὶ μᾶλλον ὠφελεῖ. ὁ δὲ χυλὸς
 αὐτῆς παραπλησίας ὑπάρχων δυνάμεως, τουτέστι τῆς ξηραντικῆς τε
 καὶ ῥυπτικῆς, τὰ τε ἄλλα τὰ προειρημένα καλῶς ἐργάζεσθαι πέφυκε 15 [20]
 καὶ μετὰ μέλιτος ὑπαλείφεται τοῖς ὀφθαλμοῖς, ἔμμηνά τε προστιθέ-
 μενος ἄγει καὶ ἔμβρυα. διδόασι δὲ αὐτὸν πίνειν ἔνιοι καὶ τοῖς τὰ
 νεῦρα πεπονθόσιν, ὡς ἐκκενοῦντός τε καὶ ξηραίνοντος ἀλύπως τὰ
 ἐμπεπλασμένα. καὶ γὰρ οὖν καὶ τῶν καθ' ἥπαρ ἐμφράξεων ἄριστον
 φάρμακον, ἀγαθὸν δὲ καὶ σπληνὶ ἐσκιρρωμένῳ καὶ ἔξωθεν μὲν ἐπι- 20 [25]
 τιθέμενον, οὐδὲν δὲ ἦττον εἰ καὶ πίνειν τις θέλοι. δεῖ δὲ τὴν πόαν
 χυλίζειν ὅταν ἀκμαιοτάτη ἐστὶ καὶ ἐγκύμων τοῦ ἄνθους. δίδεται δὲ
 τοῦ χυλοῦ σὺν Κ α' ὕδατος θερμοῦ καὶ ἁλῶν ὀλίγων καὶ βραχέος
 ὄξους καὶ καθαίρει γενναίως τὸν μελαγχολικὸν χυμὸν. τῆς δὲ κόμης [p87]
 κοπτομένης καὶ σὺν ἐφθῶ μέλιτι εἰς κολλύρια ἀνα- 25
 πλαττομένης καὶ καθιεμένων αὐτῶν σύριγγας τε περιχαράσσει καὶ
 τύλους ἐξαίρει. ἐπὶ δὲ ἰσχιαδικῶν τοὺς κορύμβους κόψας σείσας δίδου
 νήσται κοχλιάριον σὺν ὕδατι θερμοῦ ἐπὶ ἡμέρας γ ἢ καὶ πλείους. ἐθαυ- [5]
 μάσθη γὰρ ὡς πᾶν ἐνεργές· καὶ πρὸς πώλυπας δὲ ἐν μυκτῆρσι ξη-
 ρὸν ἐπίπασσε. 30

[86.11] καταπλαττομένη replaces καταπαττομένη.

[86.14] πεπίστευεται added after μαλάττειν.

[86.15] μίγνυται δὲ omitted after ἰᾶσθαι.

[87.2] ἢ καὶ ἐνήματα omitted after μέλιτι.

[Galen 12.20.14-22.7]

193) The root of feverfew [little centaury] (*Erythraea centaurium*) is
 useless for everything, but the twigs, and more so the leaves and the flowers
 on them, are very useful. Predominant in them is the bitter quality, also
 sharing some small amount of astringency, and for this reason the drug has a
 powerful drying effect but without erosion. When applied as a poultice,
 therefore, the fresh herb causes closure of large and recent wounds, and it
 cicatrises both old and hard-to-scar ulcers when likewise applied, and when
 dried it combines all the adherent and drying capacities which naturally heal
 superficial and deep sinuses, and it is believed to soften long-standing hard
 lesions, and heal malignant kinds of ulcers, also [it is used] by those treating
 conditions involving discharges. Some give a decoction of the herb as an
 enema to those suffering from hip problems, as it can shift bilious and thick

material. Moreover, it purges, and, what is more, when it works, it powerfully empties bloody lesions to a greater extent, and is of benefit. Since its juice has a similar capacity – that is, both drying and cleansing – it carries out the other, aforementioned functions, and it is spread with honey in the eyes, and, when inserted vaginally, it expels menses and foetuses. Several also give it to drink to those suffering from disorders of the sinews, as it painlessly empties out and dries what is clogging them. Moreover, it is the best drug for blockages affecting the liver, and it is also good for an indurated spleen, both when applied externally, and no less effective if one wants to drink it as well. It is necessary to extract the juice from the herb whenever it is at the peak of blooming and heavy with flowers. An amount of juice is given with 1 cyathus of warm water, a little salt and a small quantity of vinegar, and it purges thoroughly the melancholy humour. When the foliage is cut and is made up with boiled honey into salves, and they are instilled, it demarcates deep sinuses and removes hard crusts. In cases of hip problems, once you have cut and shaken the clusters, give to the fasted patient a spoonful with warm water for 3 days or even more. For it was admired how very effective it is; also, sprinkle it dry over polyps in the nostrils.

193) Aëtius quotes Galen largely verbatim, omitting short passages containing generalisations (12.21.1-4, 11-13). He also adds information about preparation and use (193.21-30 [86.26-87.7]).

193.26 [87.3] **περιχάρασσει** It is unclear why this word [“demarcates”], which appears nowhere else in Aëtius, nor anywhere in Galen, is used in this context. For discussion of translation of σύριγγάς, v. Intro lxv-lxvi.

There is confusion about exactly which plant is meant. According to LSJ, feverfew is *Erythraea centaurium* Borkh., the name given by Carnoy, which, according to Bruneton, is the same as *Centaurea erythraea*, known as European centaury (Bruneton, 1995: 491), whereas feverfew is *Tanacetum parthenium* Sch.Bip. (Bruneton, 1995: 505), the name also ascribed to it by Evans (Evans, 2009: 339), along with the alternative *Chrysanthemum parthenium* Pers., the name which appears in *RHS*. As *E*.

centaurium has anti-inflammatory, antipyretic, antibacterial properties (Bruneton, 1995: 491), it may be that Aëtius' assertions at least regarding its use for infected skin lesions are true.

[87.8-12]

(ρρδ´) Κέρασος τὸ δένδρον καρπὸν φέρει μετρίως στύφοντα μετὰ γλυκύτητος. ὁ μὲν οὖν πέπειρος καρπὸς καὶ γλυκὺς μᾶλλον ὑπέρχεται κατ' ἔντερον, ἦττον δὲ ἐστὶν εὐστόμαχος, ὁ δὲ ἄωρος καὶ αὐστηρότερος τοῦ μπαλιν. τὸ δὲ κόμμι τοῦ δένδρου, γράφουσί τινες, ὡς μετ' οἴνου πινόμενον ὀνίνησι λιθιῶντας. [10] 5

[Galen 12.22.8-23.8]

194) The bird-cherry tree (*Prunus avium* L.) bears fruit moderately astringent with some sweetness. Whereas, therefore, the ripe and sweet fruit goes faster through the gut but is less digestible, the unripe is, on the contrary, even harsher. When the tree's gum is drunk with wine, so some people write, it helps those suffering from stones.

194) Aëtius omits four fifths of Galen's entry, which contains generalisations about flavour and comparisons with other plants. The fact that Aëtius has a small quotation from the beginning of Galen's entry (12.22.8-9), a paraphrase from a small part in the middle (12.22.15-18), and an accurate but small quotation from near the end (12.23.6-7) suggests to me that his omissions are deliberate, rather than the result of his having a defective Galenic text.

Apart from noting the poisonous potential of all species of wild cherry (Lewis, 1977: 40), there is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[87.13-17]

(ρρε´) Κερατωνία ξηραντικῆς ἐστὶ καὶ στυπτικῆς δυνάμεως, ὥσπερ καὶ ὁ καρπὸς αὐτῆς τὰ καλούμενα κεράτια, μετέχων δηλονότι καὶ γλυκότητός τινος· πέπονθε δὲ τι καὶ ταῦτα τοῖς κερασίοις παραπλήσιον· ὑγρὰ μὲν γὰρ ὄντα τὰ κεράτια ὑπάγει μᾶλλον τὴν γαστέρα, ξηρὰ δὲ ἴσθησι μᾶλλον. [15] 5

[Galen 12.23.9-15]

195) Carob tree (*Ceratonia siliqua* L.) has a drying and astringent capacity, as does its fruit, the so-called *keration*, distinctly sharing a certain sweetness as well. They are liable even to have somewhat similar capacities to cherries; for, when the carob fruit are moist, they have a more laxative effect on the bowel, but, when dry, a more costive one.

195) Aëtius quotes Galen almost verbatim, omitting a final comment giving an elemental explanation (12.23.13-15).

Dried, ground carob mesocarpal pulp has been shown to have an antidiarrhoeal effect (Bruneton, 1995: 92).

[87.18-24]

(ρρς´) Κέστρον τὸ ψυχότροφον λεγόμενον, ῥωμαιστὶ δὲ βεττονίκη κα-
λεῖται, δύναμιν ἔχει τμητικὴν, ὡς ἡ γεῦσις δηλοῖ, πικρὰ καὶ δριμεῖα
ὑπάρχουσα ἢ πόα, <ὡς δηλοῖ> καὶ ἡ κατὰ μέρος ἐνέργεια. καὶ γὰρ [20]
καὶ τοὺς ἐν νεφροῖς λίθους διαίρει καὶ πνεύμονα καὶ θώρακα καὶ
ἦπαρ ἐκκαθαίρει τε καὶ ῥύπτει καὶ καταμήνια κινεῖ καὶ ἐπιληπτικοὺς 5
ὠφελεῖ καὶ ῥήγματα καὶ σπάσματα θεραπεύει καὶ ὀξυρεγμιῶντας δὲ
καὶ ἰσχιαδικοὺς ὀνίνησι πινομένη.

[87.18] ψυχότροφον replaces ψυχρότροφον.

[Galen 12.23.16-24.6]

196) *Kestron*, the so-called “life-supporter”, but called in Latin “*betonica*” [Paul’s betony] (*Sideritis purpurea* Talbot), has a cutting capacity, as the taste shows, the herb being bitter and sharp, <as it shows>, and its action is in keeping. Moreover, it splits kidney stones, it purifies and cleanses lungs, chests and liver, brings on periods, helps epileptics, treats soft-tissue injuries and sprains, and helps heartburn and hip problem sufferers when it is drunk.

196) Aëtius quotes Galen almost verbatim, omitting a use in treating animal bites (12.24.4-5).

196.1 [87.18] τὸ ψυχρότροφον This word, which does not appear in LSJ, makes little sense. Galen has Κέστρον ἢ ψυχότροφον (12.23.16), and so, assuming a scribal error, I have translated it as “life-supporter”.

Carnoy offers *Stachys alopecurus* as an alternative for *Sideritis purpurea* Talbot.

Apart from some anti-inflammatory, analgesic activity demonstrated in allied species, there is no apparent substantiation of the above claims in modern scientific literature.

[87.25-88.11]

(ρρζ΄) Κηκίς ἢ μὲν ὀμφακίτις στρυφνὸν ἰκανῶς ἐστὶ φάρμακον, οὐσία γεώδους ψυχρᾶς τὸ πλεῖστον μετέχουσα, δι' ἣν καὶ ξηραίνει καὶ ἀποκρούεται ῥεύματα καὶ συνάγει καὶ σφίγγει τὰ χαλαρὰ καὶ ἄρρωστα μόρια καὶ πᾶσι τοῖς ῥοώδεσι πάθεσι γενναίως ἀνθίσταται. καὶ κείσθω τῆς τρίτης μὲν ἐν τῷ ξηραίνειν, τῆς δευτέρας δὲ ἐν τῷ ψύχειν τάξεως. ἢ δὲ ἑτέρα κηκίς ἢ ξανθὴ καὶ χαύνη καὶ μεγάλη ξηραίνει μὲν καὶ αὐτὴ, ἀλλ' εἰς τοσοῦτον ἦττον, εἰς ὅσον καὶ τῆς στρυφνῆς ποιότητος ἦττον μετείληφεν. ἐψομένη τοιγαροῦν αὐτὴ καθ' ἑαυτήν, εἶτα λειουμένη, κατάπλασμα τῶν ἐν ἔδρα φλεγμονῶν ἐστὶ καὶ προπτώσεων οὐκ ἀγεννές. ἔψειν δὲ χρῆ μετρίας μὲν τῆς στυψέως δεόμενον ἐν ὕδατι, σφοδρᾶς δὲ ἐν οἴνῳ καὶ μάλιστα αὐστηρῶ. καυθεῖσαι δὲ κηκίδες ἰσχαίμου δυνάμεως γίνονται καὶ δηλονότι θερμότητος καὶ δριμύτητος ἐκ τῆς καύσεως μεταλαμβάνουσι καὶ λεπτομερέστεραι τῶν ἀκαύστων γίνονται καὶ ξηραντικώτεραι. χρῆ δὲ διαπύρους ἐπ' ἀνθράκων ἐργασάμενον ὄξει ἢ οἴνῳ σβεννύναι. [25] 5 [p88] [5] 10 [10] 15

[Galen 12.24.7-25.9]

197) Unripe oak-gall is a sufficiently astringent drug, sharing a mostly cold, earthy nature, through which it both dries and dispels discharges, and brings together and constricts the slack and sickly parts and has an outstanding effect against all diseases involving fluxions. And let it be placed among drying agents of the third rank, and cooling ones of the second rank. The other oak-gall, which is yellow, spongy and big dries by itself, but less so, to the extent that it has a lesser share in the astringent quality. Assuredly, when it is boiled on its own, then ground down, it is a thoroughly excellent poultice for perianal inflammatory swellings and for prolapses/hernias. It is necessary to boil it in water if there is need of moderate astringency, but in very harsh wine if there is need of much astringency. Roasted oak-galls develop a styptic capacity, and obviously take a share of warmth and sharpness from the roasting, and become finer-grained and more drying than the unroasted. Once you have made them red-hot on the coals, it is necessary to quench them using vinegar or wine.

197) Aëtius quotes Galen largely verbatim.

Oak gall is rich in tannins, and has an astringent, styptic effect
(Evans, 2009: 229).

[88.12-18]

(ρρη´) Κηρὸς ἐν τῷ μέσῳ πῶς ἐστὶ τῶν θερμαινόντων τε καὶ ψυχόν-
των ὑγραίνοντων τε καὶ ξηραίνοντων· ἔχει δὲ τι καὶ παχυμερὲς καὶ
ἐμπλαστικόν, διὰ οὐ μόνον οὐ ξηραίνει ἀλλὰ καὶ κατὰ συμβεβηκὸς
ὑγραίνειν <ἀν> δόξειε κωλύων τὰς διαπνοάς, ὅθεν καὶ ὕλη τῶν ἄλλων [15]
ἐστὶ φαρμάκων. αὐτὸς δὲ καθ' ἑαυτὸν ἐκ τῶν πεπτικῶν ἀν εἶη τῶν 5
ἀσθενῶν τῶν ἔξωθεν ἐπιτιθεμένων. ἔχει γάρ τι βραχὺ διαφορητικῆς
δυνάμεως, ἧς πλείστης τὸ μέλι μετείληφε.

[Galen 12.25.10-26.2]

198) Beeswax is somewhat in the middle of the warming, cooling, moistening and drying substances; it also has a certain coarse-grained and adherent quality, because not only does it not dry, but also it would seem coincidentally to moisten by preventing transpiration, whence it is also a component material of other drugs. Used by itself it would be one of the weak digestive drugs which are applied externally. For it has some small dispersive capacity, which honey shares most.

198) Aëtius quotes Galen largely verbatim.

Beeswax is still used as an excipient in plasters and ointments
(Evans, 2009: 193).

[88.19-21]

(ρρθ´) Κιβώριον. Τὸν χλωρὸν καρπὸν τῶν αἰγυπτίων κυάμων καλοῦσι
κιβώριον, ὅθεν ἐκ τοῦ περὶ κυάμων λόγου καὶ περὶ τούτου δεῖ σκο- [20]
πεῖσθαι.

199) Seed-vessel of a kind of nymphaea. They call the fresh fruit of Egyptian beans (*Nelumbium speciosum* Willd.) *kiborion*, and hence information on this has to be looked up on the section on beans.

199) This material is absent in Galen.

There is nothing relevant in modern literature.

(σ´) Κινάρα κακόχυμὸν ἐστὶν ἔδεσμα καὶ μάλισθ' ὅταν σκληροτέρα
 ἑαυτῆς γένηται· καὶ γὰρ καὶ τὸν χολώδη χυμὸν ἐν ἑαυτῇ τηρικαῦτα
 πλείονα ἐπικτᾶται καὶ τὴν ὅλην οὐσίαν ἔχει ξυλωδεστέραν, ὥστε ἐκ
 μὲν ταύτης μελαγχολικὸν γεννᾶσθαι χυμὸν, ἐκ δὲ τοῦ κατ' αὐτὴν
 χυλοῦ λεπτὸν καὶ πικρόχολον. ἄμεινον οὖν προαφεψήσαντας αὐτὴν
 ἐσθίειν. [25] 5

200) Artichoke (*Cynara scolymus* L.) is unwholesome food and especially whenever it becomes harder than it ought. In this case, moreover, it gains more bilious humour, and it has a whole nature which is harder than wood, so that melancholy humour is created from this, and from the juice on its own it creates a thin and bitterly bilious humour. Therefore it is better for people to eat it once they have boiled it down.

200) This plant is absent in Galen's *SMT*, but Aëtius' entire text is closely copied from *Alim.Fac.* 6.636.10-637.1.

Although this plant's constituents may have a choleric effect in rats (Bruneton, 1995: 219), it is unclear if this has any bearing on Aëtius' comments.

(σα´) Κίκεως ὁ καρπός, ὃν τινες κρότωνα καλοῦσιν, ὅσπερ καὶ καθαίρει,
 ῥυπτικὴν τε καὶ διαφορητικὴν ἔχει δύναμιν· τὰ δὲ φύλλα ἀσθενέστερα.
 τὸ δὲ ἐκ τοῦ καρποῦ ἔλαιον θερμότερον καὶ λεπτομερέστερόν ἐστι τοῦ
 κοινοῦ καὶ διὰ τοῦτο καὶ διαφορητικόν.

201) The fruit of the castor-oil tree (*Ricinus communis* L.), which some call *croton*, which also purges, has a capacity both cleansing and dispersive; but the leaves are weaker. The oil from the fruit is warmer and finer-grained than the ordinary, and for this reason it is also dispersive.

201) Aëtius quotes Galen largely verbatim.

The powerful purgative effects of castor seeds and oil are well documented (Lange, 2007: 1022; Evans, 2009: 191).

[Galen next lists two plants omitted by Aëtius: cinnamon (*Cinnamomum tamala* Nees), very fine-grained and hot, together with an inferior form,

pseudocinnamon (Περὶ κινναμώμου 12.26.8-13); and black swallow-wort (*Vincetoxicum nigrum* Moench), which, according to Dioscorides, can be used for cleansing the uterus and as a galactagogue (Περὶ κικκίας 12.26.14-17).]

[89.5-10]

(σβ´) Κίσθος ἢ κίσθαρος. Στυπτικὸς ὁ θάμνος ἐστὶν εἰς τοσοῦτον ὡς τὰ φύλλα αὐτοῦ καταπλασσομένα κολλᾶν τραύματα· τὰ δὲ ἄνθη δραστικώτερα, ὡς μετ’ οἴνου πινόμενα δυσεντερίας καὶ γαστρὸς ἀτονίας καὶ ῥεύματα καὶ ὑγρότητας ἰᾶσθαι. καταπλασσομένα δὲ τὰ σηπεδονώδη τῶν ἐλκῶν ὀνίνησι τῷ ξηραίνειν οὐκ ἀγεννῶς, σχεδὸν που κατὰ τὴν δευτέραν ἀπόστασιν. μετέχει δὲ ἡ τοῦ θάμνου ψῦξις καὶ χλιαρᾶς ποιότητος. [10]

[Galen 12.27.1-28.2]

202) Rock rose (1) (*Cistus* L. spp.). [*Kisthos* or *kistharos*.] The shrub is astringent to the extent that when its leaves are used as a plaster, it causes closure of wounds; the flowers are more effective, so as to cure cases of dysentery, slackness of the bowel, discharges and moistness, when they are drunk with wine. When applied as a plaster, they help those wounds that are putrescent by drying them very effectively, almost somewhere at the level of the second rank. The shrub’s cooling effect shares also a warm quality.

202) Aëtius quotes Galen, who calls the plant κίστος, largely verbatim, omitting some information about the small shoots (12.27.2-4). [v. also ch. 204n, p205.]

Cistus spp. have been shown to contain antibacterial agents (Tómas-Menor et al., 2013), particularly against *E. coli*, which can cause diarrhoeal illness, and *Staph. aureus*, which can infect wounds.

[89.11-17]

(σγ´) Ὑποκιστίς. Ἡ δὲ ὑποκιστίς ἢ ὑποκισθίς ὀνομαζομένη πολὺ δὴ τὶ τῶν φύλλων ἐστὶ στυπτικώτερα, δραστικὸν ἰκανῶς φάρμακον εἰς πάντα τὰ ῥοώδη πάθη, οἷον αἵματος ἀναγωγαῖς καὶ ῥῶ γυναικείῳ κοιλιακαῖς τε καὶ δυσεντερικαῖς διαθέσεσιν. ἀλλὰ καὶ ῥωννύναι τι μόνιον εἰ βουληθείημεν, ἔκλυτον ὑγρότητι πλέονι γεγεννημένον, ἐντίθησι τόνον αὐτῷ οὐκ ἀγεννῶς. <οὔτω> μιγνυμένη τοῖς ἐπιτηδεῖοις ἐπιθέμασιν ἢ ἀντιδότοις. 5 [15]

[89.16-17] τοὶ καὶ στομαχικοῖς καὶ ἥπατικοῖς ὀφέλιμος, ῥώννυσι καὶ τοιοῦτο omitted after <οὔτω>

203) Hypocist (*Cytinus hypocistis* L.). The plant called *hypokistis* or *hypokisthis* is in fact much more astringent than the leaves, a sufficiently effective drug for the diseases involving fluxions, such as bringing up blood, female flow, and abdominal and dysenteric conditions. But also, if we should want to strengthen a certain part which had become weak from too much moistness, it has a very considerably tonic effect on it, <so> mixed with suitable additives or remedies.

203) Aëtius quotes Galen, who includes hypocist as part of the previous entry, largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[89.18-90.8]

(σδ´) Κίσθος ἢ λήδων. Ἐν τοῖς θερμότεροις χωρίοις οὗτος ὁ κίσθος γεννώμενος, οὐχ ἕτερος ὢν τῷ γένει τῶν ἐν ἑτέροις χώραις, ἐξαίρετον ἐκτήσατο διὰ τὸ χωρίον ἰδίαν τινὰ καὶ διαφορητικὴν θερμότητα, ἀποθέμενος τὴν ψῆξιν. τὰ μὲν οὖν ἄλλα καὶ τούτου τοῦ κίσθου παραπλήσια τοῖς ἐπὶ τούτου προειρημένοις. Λάδανον. τὸ δὲ καλούμενον λάδανον ἐξ αὐτοῦ γίνεταί, φάρμακον θερμὸν μὲν κατὰ τὴν πρώτην ἀπόστασιν ἤδη που συμπληρουμένην, ὡς καὶ τῆς δευτέρας ἐφάπτεσθαι, μετέχει δὲ καὶ στύψεως τινὸς βραχείας. ἐστὶ δὲ καὶ λεπτομερὲς τὴν οὐσίαν, καὶ διὰ ταῦτα μαλακτικὸν τέ ἐστὶ μετρίως καὶ διαφορητικὸν ὡσαύτως καὶ δηλονότι συμπεπτικόν. οὐδὲν οὖν θαυμαστὸν τοῖς κατὰ μήτραν ἐξαιρέτως ἀρμόττειν αὐτό, διότι ἔχει τι καὶ στύφον· διὸ καὶ τὰς ῥεούσας τρίχας κρατύνει. ὅσα μὲν γὰρ μοχθηρὰ τῶν ὑγρῶν κατὰ τὰς ρίζας τῶν τριχῶν δαπανᾷ, συνάγει δὲ καὶ σφίγγει τῇ στύψει τοὺς πόρους, οἷς ἐμπεπήγασιν.

[20]

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[p90]

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[5]

[Galen 12.28.3-29.12]

204) Rock rose (2) (*Cistus cyprius* L.) [*Kisthos* or *ledon*]. This cistus which grows in warmer locations, not being a different type from the sorts of other locations, has definitely, because of the location, a certain distinct and dispersive warmth, having set aside coolness. The other features, therefore, of this cistus are also similar to what has been previously said about it.

Gum-ladanum. What is called *ladanon*, comes from it, a warm drug fully at the level of the first rank, so as even to reach the second, and shares also some short-lived astringency. It is also fine-grained in essence, and for

these reasons it is moderately softening, and in like manner dispersive and clearly promotes digestion. It is therefore not surprising that it is especially suitable for conditions affecting the uterus, because it also has a certain astringency; hence it even strengthens diffuse hair loss. For, while it destroys all the bad things caused by moisture at the roots of the hair, it gathers and constricts by its astringency the follicles in which they are fixed.

204) Galen calls this plant κίσθος ἢ λάδανον, as distinct from κίστος ἢ κίσθαρος in the previous entry, whereas in Aëtius, equivalent terms are κίσθος ἢ λήδων and κίσθος ἢ κίσθαρος respectively. Aëtius quotes just over half of Galen's entry fairly closely, and then omits eleven lines containing a discussion of the pharmacology of treating baldness (12.29.2-12).

There is no apparent substantiation of the above claims in modern scientific literature.

[90.9-22]

(σε´) Κισσὸς ἐξ ἐναντίων σύγκειται δυνάμεων· ἔχει μὲν γάρ τι στυπτικῆς οὐσίας, ἣν ψυχρὰν γεώδη λέγομεν· ἔχει δὲ καὶ δριμείας, ἣν θερμὴν εἶναι καὶ ἡ γεῦσις μαρτυρεῖ· καὶ ὑδατώδους οὐσίας μετέχει χλιαρᾶς ὅ γε χλωρός. τὰ οὖν χλωρὰ φύλλα ἐψηθέντα σὺν οἴνῳ καὶ τῶν μεγάλων τραυμάτων ἐστὶ κολλητικὰ καὶ τῶν κακοηθευομένων ἐλκῶν ἰατικά· ἐπουλοῖ δὲ καὶ τὰς ἐκ πυρὸς ἐλκώσεις. σὺν ὄξει δὲ ἐψηθέντα τὰ φύλλα σπληνικοὺς ὠφελεῖ. τὰ δὲ ἄνθη αὐτοῦ ἰσχυρὰ πῶς ἐστίν, ὡς μετὰ κηρωτῆς λειοῦμενα τοῖς πυρκαύστοις ἀρμόττειν. ὁ δὲ χυλός ἐστὶ μὲν καὶ ἔρρινον φάρμακον καὶ τὰ χρόνια τῶν ὠτων ἰᾶται ρεύματα καὶ τῶν ἐλκῶν τὰ παλαιὰ κατὰ τε ὦτα καὶ τὰς ῥίνας· ἐὰν δὲ δριμύτερος φαίνοιτο, μίγνυται ῥοδίνῳ ἢ ἐλαίῳ γλυκεῖ. τὸ δὲ δάκρυον αὐτοῦ φθειρας κτείνει καὶ τρίχας ψιλοῖ, εἰς τοσοῦτον ὑπάρχον θερμῆς δυνάμεως, ὡς καὶ καίειν ἀμυδρῶς.

[10]

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[15]

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[20]

[90.21-22] ὠφελεῖ δὲ καὶ τὸ δάκρυον αὐτοῦ καὶ λιθιῶντας πινόμενον. omitted after ἀμυδρῶς.

[Galen 12.29.13-30.15]

205) Ivy (*Hedera helix* L.) is composed of opposite capacities: for it has something of an astringent essence, which we call cold and earthy; but it also has some sharpness, which its taste also bears witness to being warm; and the fresh variety shares a watery warm nature. When boiled with wine, therefore, the fresh leaves have an adhesive effect even for large wounds and a healing effect on ulcers which have become malignant; and they

cicatrise even ulcerations due to fire. But when boiled with vinegar, the leaves help those suffering from conditions of the spleen. Its flowers are somewhat strong, so that when ground down with salve, they are suitable for those suffering from burns. The juice is also a sternutatory drug, and heals chronic aural discharges and long-standing forms of ulcers affecting ears and noses. Should it appear too sharp, it is mixed with rose-oil or sweet olive-oil. Its sap kills lice and strips off hairs, since it has a warm capacity to the extent even of burning feebly.

205) Aëtius quotes Galen largely verbatim, omitting a comment about the elemental effects of drying the plant (12.29.17-30.3).

While ivy contains antibacterial compounds, these are toxic in excess (Evans, 2009: 322), and the plant is a potent contact allergen.

[Galen next lists two plants, omitted by Aëtius: horse-thyme (*Calamintha clinopodium* Benth.), which, he says, has warming and drying properties (Περὶ κλινοδοδίου 12.30.16-31.2); and, out of alphabetical order, traveller's joy (*Clematis vitalba* L.), which, along with some discussion of which species is meant, and a contemptuous reference to Pamphilus, Galen says is useful for scaly skin lesions, diarrhoea and dysenteries, toothache and uterine pains (Περὶ κληματίδος 12.31.3-32.2).]

[90.23-25]

(σς´) Κνήκος. Κνήκου τῷ σπέρματι πρὸς τὰς καθάρσεις μόνον χρώμεθα, τῆς τρίτης δέ ἐστι τάξεως τῶν θερμαινόντων, εἴ τις ἐξῶθεν αὐτῷ χρῆσθαι βούλοιτο.

[25]

[Galen 12.32.3-5]

206) Safflower (*Carthamus tinctorius* L. [or *Cnicus benedictus* L., Carnoy]). We use the seed of safflower only for purgation, and it belongs to the third rank of the warming substances, if anyone should want to use it externally.

206) Aëtius quotes Galen verbatim, apart from the latter's spelling of the plant's name κνίκος.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[90.26-27]

(σζ´) Κόκκος Κνίδιος. Καθαίρει μὲν καὶ αὐτός· δριμείας δὲ ἐστὶ καὶ καυστικῆς δυνάμεως.

[Galen 12.32.6-7]

207) Cnidus berry (seed of *Daphne gnidium* L.). It purges on its own; and it has a sharp and burning capacity.

207) Aëtius quotes Galen almost verbatim.

The berries of *Daphne* spp. (including *gnidium*) are highly toxic, and cause, as well as diarrhoea, ulceration of the gastro-intestinal mucosa, vomiting and convulsions (Bruneton, 1995: 524).

[90.28-91.2]

(ση´) Κόκκος βαφικῆ. Στυπτικὴν μὲν ἔχει καὶ πικρὰν ἅμα τὴν ποιότητα, ξηραίνει δὲ ἀμφοτέραις ἀδήκτως καὶ διὰ τοῦτο πρὸς τε τὰ μεγάλα τῶν τραυμάτων ἀρμόττει καὶ πρὸς τὰς τῶν νεύρων τρώσεις, σὺν ὄξει ἢ ὄξυμέλιτι λειουμένη. [p91]

[Galen 12.32.8-13]

208) Dyeing berry [gall from kermes oak (*Quercus coccifera* L.)]. It has an astringent and at the same time bitter quality, and it dries non-erosively on account of both qualities, and for this reason it is suitable for large sorts of wounds and injuries of sinews, when ground down with vinegar or vinegar and honey.

208) Aëtius quotes Galen largely verbatim.

The tannins in oak gall have antiseptic and styptic properties (Evans, 2009: 325-6).

[91.3-12]

(σθ´) Κοκκυμηλέας ὁ καρπός. Ὑπάγει τὴν γαστέρα πρόσφατος μὲν ὑπάρχων μᾶλλον, ξηρανθεὶς δὲ ἥττον· ἐστὶ δὲ τὰ μὲν δαμασκηνὰ κοκκύμηλα στυπτικώτερα. τὰ δὲ ἐκ τῆς Ἰβηρίας γλυκύτερα, καὶ διὰ τοῦτο ὑπακτικώτερα, ἐν δὲ τοῖς φύλλοις ἐμφαίνεται τις στύψις σαφής, ὅθεν [5]

ἐνόμωνα διάκλυσμα γίνεται τῶν περὶ γαργαρεῶνα καὶ παρίσθημα φλεγμονῶν. 5

Προῦνον. Ὁ δὲ τῶν ἀγρίων κοκκυμήλων καρπὸς στυπτικός ἐστὶ καὶ σταλτικός γαστρός· ὀνομάζεται δὲ τὸ φυτὸν τοῦτο κατὰ τὴν Ἀσίαν προῦνον. τὸ δὲ κόμμι πάσης κοκκυμηλέας, ὡς τινὲς φασι, πινόμενον λίθους θρύπτει, σὺν ὄξει δὲ λειχῆνας ἰᾶσθαι παιδίων. [10] 10

[Galen 12.32.14-33.13]

209) The fruit of the plum tree (*Prunus domestica* L.). When it is fresh it has more of a laxative effect on the gut, but less when dried; the Damascus plums [damsons] are more astringent. The ones from Iberia are sweeter, and for this reason more aperient, and a certain definite astringency appears in the leaves; hence, when boiled, a mouth wash is produced for inflammations around the uvula and fauces.

Plum [*prounon*]. The fruit of the wild plum trees is astringent and capable of checking the bowel; throughout Asia this plant is called *prounon*. The gum of every plum tree, as several say, crumbles stones when it is drunk, and with vinegar it heals children's impetigo.

209) Aëtius quotes half of Galen's entry fairly closely, omitting a reference to Dioscorides and condensing a discussion of the plant's properties, and a comparison with Iberian fruit.

Apart from the well-known laxative properties of dried plums (Alstead & Macarthur, 1965: 442), there is no apparent substantiation of the above claims in modern scientific literature.

[91.13-15]

(σι') Κολοκάσιον. Παραπλησία ταύτης τῆς ρίζης ἐστὶν ἡ δύναμις ταῖς γογγυλίδαϊς καὶ κρομούϊς, γλίσχρον δὲ αὐτῆς τὸ σῶμά ἐστιν, ὅθεν καὶ ῥυπτικῆς μετέχει δυνάμεως καὶ εὐκοίλιόν ἐστιν. [15]

[91.13] ἡ μανζιζάνιον omitted after Κολοκάσιον.

210) The root of Egyptian bean (*Nelumbium speciosum* Willd.). The capacity of this root is similar to turnips and onions and its substance is sticky, hence it shares a cleansing capacity and is good for the gut.

210) This item is absent from *SMT*, and Aëtius has not quoted from Galen's mention of it in *Alim.Fac.* (6.532.3-10).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[91.16-18]

(σια΄) Κόλλα, ἥν εἰς τὰ βιβλία σκευάζουσιν, ἐκ σεμιδάλεως ἢ γύρεως ἐμπλαστικῆς τε καὶ πεπτικῆς ἐστὶ δυνάμεως περὶ δὲ τῆς ταυροκόλλης καὶ τῶν ὁμοίων ἐν τῷ περὶ ζώων λόγῳ ῥηθήσεται.

[Galen 12.33.14-16]

211) Glue, which they prepare for books from finest wheaten flour or finest meal, has both an adhesive and digestive capacity; mention will be made about bull's hide glue and similar substances in the section concerning animals.

211) Aëtius quotes Galen, and then adds the reference to his own section on animals.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[91.19-92.3]

(σιβ΄) Κολοκύνθη ὑγρᾶς καὶ ψυχρᾶς ἐστὶ κράσεως κατὰ τὴν δευτέραν κατ' ἄμφω τάξιν, ὅθεν καὶ τῶν ξυσμάτων αὐτῆς ὁ χυλὸς πρὸς ὅτα φλεγμαίνοντα καὶ ὀδυνώμενα ἀρμόττει σὺν ῥοδίῳ. οὕτω δὲ καὶ ὅλη καταπλαττομένη τὰς θερμὰς φλεγμονὰς ἐμψύχει μετρίως. ἐστὶ δὲ καὶ ἐσθιομένη πλαδῶδης καὶ ἄδιψος καὶ τροφὴν τῷ σώματι δίδωσιν ὑγρὰν καὶ ψυχρὰν καὶ διὰ τοῦτο βραχεῖαν. πέττεται δὲ οὐ κακῶς, ὅταν γε μὴ φθάσῃ διαφθαρήναι. πάσχει δὲ τοῦτο διὰ τὴν μοχθηρὰν σκευασίαν, κάπειδαν ἐν τῇ γαστρὶ πονηρός τις ἠθροισμένος ἢ χυμός, ἀλλὰ καὶ διὰ τὸ βραδύναι κατὰ τὴν γαστέρα, ὡσπερ καὶ τὰ λοιπὰ ὑγρὰ ἐδέσματα. χαίρει δὲ εἰκότως ὀριγάνῳ ἀρτυομένη διὰ τὴν ἐν αὐτῇ ὕδατῶδη ποιότητα. πάντα γὰρ ὅσα τοιαῦτα δριμέσιν ἢ ὀξέσιν ἢ αὐστηροῖς ἢ ἀλυκοῖς ἀναμίγνυσθαι δεῖται χυμοῖς, εἰ μέλλοι μὴτ' ἀηδῶς ληφθῆσθαι μὴτε ναυτιώδεις ἐργάσασθαι τοὺς λαβόντας.

[Galen 12.33.17-34.4]

212) Round gourd (*Cucurbita maxima* Lam.) has a moist and cool composition, at the level of the second rank for both, whence the juice of its gratings is suitable with rose-oil for inflamed and painful ears. Thus too the

whole gourd, applied as a poultice, cools hot inflammations moderately. When eaten it is moist and does not cause thirst, and it gives to the body nourishment which is moist and cold, and for this reason brief-acting. And it is not badly digested, at least when it is not spoiled beforehand. It undergoes this [spoiling] because of bad preparation, and whenever some painful humour is gathered in the bowel, but also because delay has occurred in the bowel, such as happens with all the other moist foodstuffs. But it is fine when prepared properly with oregano, because of the moist quality in the gourd. For everything of such a sort needs to be mixed with sharp, sour, harsh or salty flavours, if they are not intended to be unpleasant when taken or to cause nausea to those taking them.

212) Aëtius quotes Galen fairly accurately, and then adds more extensive comments on its digestibility and preparation (212.5-13 [91.23-92.2]), partially taken from *Alim.Fac.* (6.562.6-563.1).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists colocynth (*Citrullus colocynthis* Schrad.), omitted by Aëtius, which is supposedly purgative and helpful in hip problems (Περὶ κολοκυνθίδος 12.34.5-10).]

[92.4-6]

(σιγ') Κόμαρος. Τούτου ὁ καρπὸς μεμήκυλον καλεῖται καὶ ἐστὶ κακοστόμαχος οὗτος καὶ κεφαλαλγῆς, στρυφνὸν δὲ τῇ ποιότητι τὸ δένδρον ἅμα τῷ καρπῷ. [5]

[Galen 12.34.11-13]

213) Strawberry tree (*Arbutus unedo* L.). The fruit of this is called *memeulon*, and this is bad for the stomach and causes headaches, and the tree, along with the fruit, is astringent in quality.

213) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[92.7-8]

(σιδ') Κόμμι ξηραντικῆς ἐστὶ καὶ ἐμπλαστικῆς δυνάμεως· καὶ δηλονότι καὶ τραχυτήτων ἰατικῆς.

[Galen 12.34.14-35.2]

214) Gum [from *Acacia arabica* Willd.] has a drying and adherent capacity; and obviously it has a healing effect on rough conditions.

214) Omitting comments about the material's provenance, Aëtius quotes the remaining fifth of Galen's entry accurately.

This material is known to have demulcent properties (Evans, 2009: 213).

[92.9-12]

(σιε') Κονία. Τὸ οἶον περίπλυμα τῶν τεφρωθεισῶν ὑλῶν οὕτως ὀνομάζεται. ῥυπτικωτάτη δὲ ἐστὶ καὶ ξηραντικωτάτη πασῶν ἢτε ἐκ τῆς συκίνης τέφρας καὶ τῆς τῶν τιθυμάλλων καὶ σχεδὸν ἤδη τῆς καλουμένης σηπτικῆς δυνάμεως· τῷ λεπτομερεῖ δὲ τῆς οὐσίας ἀνωδύνως καίει.

[10]

[Galen 12.35.3-7]

215) Lye. Material such as the washings of wood reduced to ashes is so called. The most cleansing and most drying of all, which comes from the ash of the fig-tree and spurge (*Euphorbia peplus* L.), is almost near the capacity called putrefactive; but it burns painlessly because of the fine-grained aspect of its essence.

215) Aëtius quotes Galen almost verbatim, omitting the latter's reference to his fifth book, and adding his own comments about lye's being fine-grained and burning painlessly (215.4 [92.12]).

There is no apparent substantiation of the above claims in modern scientific literature.

[92.13-21]

(σις') Κόνυζα διττή. Κόνυζα καὶ ἡ μείζων καὶ ἡ μικροτέρα παραπλησίας εἰσὶ κράσεως τε καὶ δυνάμεως, ἐν μὲν τῇ γεύσει δριμεῖαί τε καὶ πικραὶ φαινόμεναι, θερμαίνουσαι δὲ πάνυ σαφῶς καὶ ξηραίνουσαι ὡς εἶναι κατ' ἄμφω τῆς τρίτης τάξεως. ἀφεσόμεναι γοῦν ἐν ἐλαίῳ τῶν κατὰ περίοδον ῥιγῶν ἀλεξητήριοι γίνονται. τὰ δὲ ἄνθη αὐτῶν σὺν τοῖς φύλλοις τρίψαντές τινες σὺν οἴνῳ ποτίζουσιν ὑπὲρ τοῦ καταμήνια

[15]

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κινῆσαι καὶ ἔμβρυα ἐκβαλεῖν. Ἄλλη. Ἔστι δὲ καὶ τρίτον εἶδος κονύζης ἐν ὑγροτέροις χωρίοις φυόμενον, τῶν εἰρημένων δυσωδέστερον καὶ ἀσθενέστερον. [20]

[Galen 12.35.8-36.3]

216) Fleabane (*Inula* L. spp.), two varieties. Both the greater (*I. viscosa* Aiton) and the smaller fleabane (*I. graveolens* Jacq.) are of similar constitution and capacity, appearing both sharp and bitter in taste, and very distinctly warming and drying, as to belong to the third rank in both respects. Certainly, when they are boiled down in oil, they become able to protect against recurrent rigors. Some grind down their flowers with the leaves and give them with wine as a drink to bring on periods and abort fetuses.

Another variety. There is also a third species of fleabane growing in moister locations, more malodorous and weaker than those already mentioned.

216) Aëtius quotes Galen fairly closely for the most part, while omitting some short comments about preparation and classification.

There is no apparent substantiation of the above claims in modern scientific literature.

[92.22-93.2]

(σιζ´) Κορίανον ἢ κόριον ἐξ ἐναντίων σύγκειται δυνάμεων, πολὺ μὲν ἔχουσα πικρᾶς οὐσίας, ἢ τις λεπτομερῆς ἐστι γεώδης, οὐκ ὀλίγον δὲ καὶ ὑδατώδους ὑγρότητος χλιαρᾶς κατὰ δύναμιν. ἔχει δὲ τι καὶ στυψέως ὀλίγον· ἐξ ὧν ἀπάντων ἐνεργεῖ ποικίλως ὅσαπερ ὁ Διοσκορίδης ἔγραψεν, οὐ μὴν τῷ ψύχειν γε μόνω. [p93] 5

[Galen 12.36.4-40.7]

217) Coriander (*Coriandrum sativum* L.) [*korianon* or *korion*] is composed of opposite capacities, having much of a bitter nature, which is also somewhat fine-grained and earthy, but also not a little of a watery moistness, lukewarm in capacity. But it also has some small amount of astringency; and as a result of all of these it acts in various ways, as many as Dioscorides has written, but not, in fact, only by cooling.

217) Aëtius quotes less than one tenth of Galen's entry, and omits a lengthy diatribe regarding the nature of cellulitis and its mistreatment with coriander by Dioscorides and other, unnamed practitioners (12.36.13-40.7).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[93.3-4]

(ση') Κορωνόδιον. Τούτου ἡ ρίζα πεπίστευται κοιλιακοὺς ὠφελεῖν ἐσθιομένη.

[Galen 40.8-9]

218) Hartshorn (*Plantago coronopus* L.). The root of this, when eaten, is believed to help those with abdominal disorders.

218) Aëtius quotes Galen verbatim, apart from the plant's name, which Galen calls κορωνόπους.

Plantago species are known to contain bulk laxatives in their seeds, rather than their roots (Bruneton, 1995: 97-8).

[93.5-16]

(σιθ') Κόστος βραχείας μὲν πάνυ πικρᾶς, πλείστης δὲ δριμείας καὶ θερμῆς μετέχει ποιότητός τε καὶ δυνάμεως, ὥστε καὶ ἤδη ἐλκοῦν· ὅθεν ἀνατρίβουσιν αὐτῷ μετ' ἐλαίου τὸ σῶμα πρὸ τῆς εἰσβολῆς ἐπὶ τῶν κατὰ περίοδον ῥιγούντων· οὕτω δὲ καπὶ τῶν παραλελυμένων τε καὶ ἰσχυαδικῶν, καὶ ὅλως ἐφ' ὧν ἦτοι θερμῆναι πρόκειται τι μόριον ἢ ἐκ βάθους εἰς τὴν ἐπιφάνειαν ἔλξαι τινὰ χυμόν, ἐπὶ τὴν αὐτοῦ χρῆσιν ἔρχονται. διὰ δὲ τὴν αὐτὴν αἰτίαν καὶ οὐρητικός ἐστὶ καὶ ἐμμήνων ἀγωγὸς καὶ ῥήγμασι καὶ σπᾶσμασι καὶ πόνοις πλευρῶν ἀρμόττει. διὰ δὲ τὴν συνοῦσαν πικρότητα καὶ πλατείας ἔλμινθας ἀναίρειν πέφυκε καὶ πρὸς τὰς ἐφήλεις αὐτῷ χρῶνται μεθ' ὕδατος ἢ μέλιτος· ἐνυπάρχει δὲ αὐτοῦ τῇ κράσει τις φυσώδης ὑγρότης, δι' ἣν καὶ πρὸς ἀφροδίσια παρορμᾷ μετ' οἶνομέλιτος πινόμενος. [5] [10] [15]

[93.7] εἰσβολῆς replaces καταβολῆς.

[Galen 12.40.10-41.6]

219) Spice root (*Saussurea lappa* Sch.Bip.) shares a quality and capacity, which are briefly very bitter, but mostly sharp and warm, so as to be drawing, in fact; hence some people massage the body using it with oil, before an attack in those suffering from recurrent rigors. And so also with those who have been paralysed and those suffering from hip problems; and

in general in those for whom some part is proposed to be warmed, or some humour is to be drawn from the depths to the surface, they turn to its use. And for this same reason, it is diuretic and emmenagogic, and suitable for soft-tissue injuries and sprains, and pains in the sides. Because of the attendant bitterness, it happens also to remove tapeworms, and they use it with water or honey for keratoses. A certain flatus-producing moistness is present in its composition, through which it even arouses one to sexual activity when it is drunk with honey-wine.

219) Aëtius quotes Galen largely verbatim.

219.11 [93.15] **ὕγρότης...ἀφροδίσια** (v. Intro. lxxiv-lxv.)

There is no apparent substantiation of the above claims in modern scientific literature.

[93.17-22]

(σκ´) Κοτυληδὼν μικτῆς ἐστὶ δυνάμεως ὑγρᾶς καὶ ὑποψύχρου καὶ τινοῦ ἀμυδρῶς ὑποστυφούσης καὶ βραχείας πικρᾶς, ὅθεν ἐμψύχει καὶ ἀποκρούεται καὶ ρύπτει καὶ διαφορεῖ· φλεγμονᾶς τε οὖν τὰς ἐρυσσιπελατώδεις καὶ ἐρυσσιπέλατα φλεγμονώδη θεραπεύει καὶ κατὰ στομάχου καυσουμένου χρήσιμον ἰκανῶς ἐστὶ κατάπλασμα. πεπίστευται δὲ τὰ φύλλα σὺν τῇ ῥίζῃ ἐσθιόμενα λίθους τε θρύπτειν καὶ οὔρα κινεῖν. [20] 5

[Galen 12.41.7-14]

220) Navelwort (*Umbilicus pendulinus* DC.) has a mixed capacity – moist, fairly cold, somewhat faintly astringent and a little bitter, whence it chills, repels, cleanses and disperses. It therefore treats erysipelas-like boils and cases of pustular erysipelas, and as a poultice it is sufficiently useful for an intensely inflamed gullet. When eaten with the root, the leaves are believed to crumble stones and bring about urination.

220) Aëtius quotes Galen almost verbatim.

220.3-4 [93.19-20] **φλεγμονᾶς...φλεγμονώδη** I have translated these terms as “erysipelas-like boils and cases of pustular erysipelas” in the full awareness that such conditions do not exist in modern medicine. The problem is that Galen considers ἐρυσίπελας and φλεγμονή as extremes of a disease spectrum, with the above-mentioned terms representing intermediate forms (v. Intro. lii-liii).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists cornelian cherry (*Cornus mas* L.), omitted by Aëtius, which supposedly ulcerates and checks the gut, and closes large wounds (Περὶ κρανίας 12.41.15-42.5).]

[93.23-94.19]

(σκα΄) Κράμβη ἢ ἐδώδιμος ξηραντικῆς ἐστὶ δυνάμεως, ἐσθιομένη τε καὶ ἔξωθεν ἐπιτιθεμένη, οὐ μὴν ἤδη γέ πως δριμείας ἐναργῶς, ἀλλ' ὡς τραύματα κολλᾶν καὶ τὰ κακοῆθη τῶν ἐλκῶν ἰᾶσθαι καὶ φλεγμονὰς τὰς ἤδη σκιρρουμένας τε καὶ δυσλύτους καὶ τῶν ἐρυσιπελάτων τὰ τοιαῦτα. καὶ ἐπινυκτίδας δὲ καὶ ἔρπητας ἰᾶται. ἔχει δὲ τι καὶ ῥυπτικὸν καθ' ὃ καὶ λέπρας θεραπεύει. ὁ μὲν οὖν χυλὸς αὐτῆς ἔχει τι καθαρτικόν. αὐτὸ δὲ τὸ σῶμα ἐπέχει μᾶλλον τὴν διαχώρησιν· τούτου χάριν καὶ ἐφ' ὧν ξηρᾶνα ὑγραιομένην γαστέρα βουλόμεθα, μετρίως ἔψοντες αὐτὴν καὶ τὸ πρότερον ὕδωρ ἀποχέοντες, ἐμβαλοῦμεν εὐθέως ἐτέρω θερμῷ ἠτοιμασμένῳ ἀναβράζοντι. οὐ χρὴ γὰρ ψαύειν οὔτ' ἀέρος οὔθ' ὕδατος ψυχροῦ τὸ δις ἐψόμενον· οὐκέτι γὰρ ἀκριβῶς γίγνεται τακερόν, οὐδ' ἦν ἐπὶ πλεῖστον ἐψηθεῖη. ἐμβαλόντες οὖν αὐτὴν τῷ ἐτέρω θερμῷ ὕδατι ἔψομεν ὡς τακερὰν γενέσθαι. ἐφ' ὧν γὰρ ὑπαγωγῆς ἕνεκα λαμβάνηται οὐ καθέψεται πάνυ. ξηραίνει μὲν οὖν ἢ κράμβη, ὥσπερ ἢ φακῆ, καὶ διὰ τοῦτο ὄψιν ἀμβλύνει. καὶ μελαγχολικὸν γεννᾷ χυμόν. ὁ δὲ τῆς κράμβης ἀσπάραγος ἦττον ξηραίνει καὶ διουρητικώτερός ἐστὶ. τὸ δὲ σπέρμα πινόμενον ἔλμινθας ἀναιρεῖ καὶ ἐφήλεις τε καὶ φακοὺς καὶ ὅσα τᾶλλα μετρίως δεῖται ῥύψεως ὀνίνησιν. οἱ δὲ καυλοὶ τῆς κράμβης καυθέντες ξηραίνουσιν ἰσχυρῶς ποιοῦσι τέφραν, ὡς ἤδη τι καὶ τῆς καυστικῆς μετέχειν δυνάμεως· κατὰ τοῦτο γοῦν αὐτῇ μιγνύντες στέαρ παλαιόν, εἷς τε τὰ τῶν πλευρῶν ἀλγήματα χρόνια, κἂν εἴ ποῦ τι τοιοῦτον ἕτερον εἶη, χρῶνται· διαφορητικὸν γὰρ ἰσχυρῶς ἀποτελεῖται τὸ φάρμακον.

[94.14] οὐ χρὴ γὰρ ψαύειν omitted after ὀνίνησιν.

[Galen 12.42.6-43.5]

221) Edible cabbage (*Brassica cretica* L.) has a drying capacity, both when eaten and applied externally, that is not really distinctly sharp, but so as to cause closure of wounds and heal malignant forms of ulcers, inflammatory swellings already indurated and refractory, and such forms of cellulitis. It also heals night-pustules and herpes. It has some other cleansing effect, in accordance with which it treats scaly skin lesions. Its juice, therefore, has some purgative effect. The body [of the plant] itself keeps a greater check on excretions. By virtue of this, for those in whom we want to dry a bowel

which has become watery, we boil it [cabbage] moderately and pour away the first liquid, and put it immediately into other hot water prepared by boiling. For what has been boiled twice must not touch air or cold water; for it becomes no longer exactly tender, not even if it were boiled for a very long time. Putting it, therefore, into the other hot water, we boil it so that it becomes tender. It is not completely boiled down, then, for those by whom it is taken for the sake of purgation. So, cabbage dries, just like lentil soup, and for this reason it dulls eyesight. It also creates melancholy humour. Asparagus has a lesser drying effect than cabbage and is more diuretic. When the seed [of cabbage] is drunk it removes worms, and it helps keratoses and freckles, and all the other conditions that require moderate cleansing. Roasted cabbage stalks make strongly drying ash, so they share to some extent the burning capacity. In view of this, in fact, they mix old animal fat with it, and use it for chronic pain of the sides, and if there should be any other such condition anywhere; for the drug powerfully achieves a dispersive effect.

221) Aëtius quotes Galen largely verbatim, omitting the latter's comments about Egyptian cabbage (12.42.14-16), but adding comments about its preparation and use as a purgative, its effect on eyesight, and comparison with asparagus (221.6-16 [94.2-12]). The information regarding double boiling is clearly influenced by Galen's *On the Properties of Foodstuffs*, with the sentence οὐ γὰρ ... ἐπὶ πλεῖστον ἐψηθεῖ (221.10-12) being quoted almost verbatim from K6.632.8-9.

There is no apparent substantiation of the above claims in modern scientific literature.

[94.20-23]

(σκβ') Κράμβη ἀγρία ξηροτέρα καὶ θερμοτέρα πολλῶ τῆς ἡμέρου τὴν κρᾶσιν ἐστίν, ὥσπερ καὶ τὰ ἄλλα σύμπαντα σχεδὸν τὰ ἀγρία τῶν ἡμερῶν ἰσχυρότερα, ὅθεν οὐδ' εἴσω τοῦ σώματος ἀλύπως λαμβάνεται. διαφορεῖ δὲ καὶ ῥύπτει τῆς ἡμέρου σφοδρότερον.

[Galen 12.6-14]

222) Wild cabbage is much drier and warmer in composition than the cultivated variety, just as almost all the other wild varieties are stronger than

the cultivated ones, for which reason it is not taken internally without pain. It disperses and cleanses more than the cultivated variety.

222) Aëtius quotes Galen fairly closely, but condenses his comparison with the cultivated variety.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[94.24-26]

(σκγ') Κράμβη θαλαττία πρὸς τῷ τὴν γαστέρα λαπάττειν, ὑφάλμυρός τε καὶ ὑπόπικρος οὖσα τὴν γεῦσιν, εἴη ἂν καὶ εἰς τὰς ἐξωθεν τοῦ σώματος χρείας, εἰς ὅσαπερ αἱ τοιαῦται ποιότητες ἀρμόζουσιν ἐπιτήδειος. [25]

[Galen 12.43.15-44.2]

223) In addition to emptying the bowel, sea-kale [or sea-cole] (*Convolvulus soldanella* L.), as it is both fairly salty and fairly bitter to taste, would also be appropriate for external uses, for all conditions in which such qualities are suitable.

223) Aëtius quotes Galen verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists willow-weed (*Polygonum persicaria* L.), omitted by Aëtius, whose seed is sharp-tasting and similar to millet (Περὶ κραταιογόνου 12.44.3-5).]

[95.1-3]

(σκδ') Κρήθμον ἄλμυρόν πὼς ἐστὶ γενομένοις ἅμα βραχεῖα πικρότητι, διὸ καὶ ἡ δύναμις αὐτοῦ ῥυπτική τε ἅμα καὶ ξηραντική· ἀσθενέστερον δέ ἐστι κατ' ἄμφω τῶν πικρῶν.

[Galen 12.44.6-9]

224) Samphire (*Crithmum maritimum* L.) is somewhat salty, along with a little bitterness, to those who taste it, whereby its capacity is also both

cleansing and drying; but it is weaker in both respects than the bitter substances.

224) Aëtius quotes Galen verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[95.4-17]

(σκε΄) Κριθαὶ τῆς πρώτης τάξεως εἰσὶν ἐν τῷ ξηραίνειν καὶ ψύχειν, ἔχουσι
δέ τι καὶ ῥυπτικὸν ὀλίγον. εἰσὶ δὲ βραχεῖ τινα ξηραντικώτεροι τοῦ τῶν
κύμων ἀλεύρου τοῦ χωρὶς τοῦ λέμματος· τὰ δ' ἄλλα πάντα παρα- [5]
πλήσια χρωμένοις ἐξῶθεν. ἐσθιόμενοι δὲ ταύτη πλεονεκτοῦσι κύμων,
ὅτι τὸ φυσῶδες ἐν τῇ ἐψηθεῖ ἀποτίθενται· κύμων δὲ ὅπως ἂν ἐψηθῆ 5
παραμένει τὸ φυσῶδες· παχυμερεστέρας γὰρ οὐσίας ἢ κατὰ κριθὴν ὁ
κύμῳ ἐστὶ καὶ διὰ τοῦτο καὶ τροφιμώτερος αὐτῆς. αἱ δὲ κριθαὶ λε- [10]
πτὸν καὶ ῥυπτικὸν ἔχοντά τι γεννῶσι χυμόν. οὐδὲ μὲν οὖν θερμαί-
νουσι τὸ σῶμα κατ' οὐδένα τρόπον σκευασίας, ὑγραίνουσι δὲ καὶ ξη-
ραίνουσι διαφόρως σκευασθεῖσαι· τὸ μὲν γὰρ ἄλφιτον ἐκ τῆς φρυγείσης 10
κριθῆς γιγνόμενον ἐναργῶς φαίνεται ξηραίνον. ἢ δὲ πτισάνη ὑγραίνει,
ὅταν γε ὡς προσήκει σκευασθῆ. οἱ δὲ ἐκ τῶν κριθῶν γιγνόμενοι ἄρτοι [15]
ἅπαντές εἰσιν ἀτροφώτεροι τῶν ἐκ τῶν πυρῶν καὶ μᾶλλον ἐκείνων
ὑπέρχονται τὴν γαστέρα.

[Galen 12.44.10.45.4]

225) Barley-grains (*Hordeum vulgare* L.) belong to the first rank in drying and cooling, and have also some small cleansing property. They are more drying by a little way than the meal from beans made without the pods; all of these others are similar to substances used externally. When [barley-grains] are eaten, they have the advantage over beans by the fact that in boiling they shed their ability to produce flatus; no matter how they are boiled, flatus-production remains a feature of beans. For beans are of a thicker-grained nature than is the case with barley and because of this they are more nutritious than it. But barley produces fluid which has some thin and cleansing property. Therefore it does not warm the body, no matter how it is prepared, but moistens and, when prepared differently, it even dries it. For the meal produced from roasted barley is obviously drying. Barley gruel moistens, whenever, that is, it has been prepared properly. All the breads produced from barley are less nutritious than those from wheat and are more laxative than those.

225) Aëtius quotes the first eight lines of Galen largely verbatim, but omits the next six lines, mainly concerning the usefulness of barley in compound drugs (12.44.18-45.4). Aëtius adds comments about barley meal, gruel and bread (225.7-14 [95.10-17]), taken mainly from *Alim.Fac.* 6.501.11-16.

There is no apparent substantiation of the above claims in modern scientific literature.

[95.18-21]

(σκζ´) Ἄλφιτα. Τὸ δὲ ἐκ τῶν κριθῶν γιγνόμενον ἄλφιτον, φρυγισῶν αὐτῶν, πολὺ καὶ τῶν κριθῶν αὐτῶν ἐστὶ ξηραντικώτερον καὶ ὀλίγη τροφήν δίδωσι τῷ σώματι, κἂν ὅπως οὖν ἐψηθῆι· δι’ οἴνου γε μὴν αὐστηροῦ ποθὲν τὸ ἄλφιτον ξηραίνει γαστέρα. [20]

226) Meals. Meal produced from barley, when it has been roasted, is much more drying than barley itself, and gives the body little nourishment, no matter how it has been boiled. Furthermore, when barley-meal is drunk in harsh wine, it dries up the bowel.

226) This entry is absent from Galen’s *SMT*, but Aëtius’ last comment – δι’ οἴνου ... γαστέρα – is an exact quotation of *Alim.Fac.* 6.507.7.

Although a constipant is present in barley rootlets (Evans, 2009: 59), it has not been demonstrated in meal.

[95.22-96.9]

(σκζ´) Περὶ κριθίνης μάζης. Μάζαν καλοῦσι τὸ ἐκ τῶν κριθῶν ἄλφιτον ὑγρῶ τινι φυρώμενον, οἷον σιραίῳ ἢ μέλιτι ἢ ἐτέρῳ τινὶ καὶ ἀνεφθον ἐσθιόμενον· ὅπως δ’ ἂν σκευασθῆι, ἤττον πέττεται τῶν κριθίνων ἄρτων ἢ μάζα καὶ φύσης μᾶλλον ἐμπίπλησι τὴν γαστέρα καί, ἣν ἐπὶ πλεόν [25] ἐν αὐτῇ μείνη, ταραχὴν ἐργάζεται. ἐχούσης φύσει τῆς κριθῆς τὸ πιτυ- 5 ρῶδες οὐκ ὀλίγον, ἢ φρυγεῖσα κριθὴ ξηρότερον μὲν καὶ αὐτὸ τὸ πιτυ- [p96] ρῶδες καὶ δυσφθαρτότερον ἴσχει, ξηρότερον δὲ καὶ τὸ ἐν αὐτῇ χρη- στόν, ἐξ οὗ τροφήν ἐλάμβανε τὸ σῶμα. ὅσον οὖν ἐν αὐτῇ πιτυρῶδες ἐστὶ καὶ σκληρόν, ὥσπερ καὶ ἐκτὸς φαίνεται μὴ λυόμενον ὕδατι, κατὰ τὸν αὐτὸν τρόπον οὐδ’ ἐν τῇ γαστρὶ διαλύεται βρεχόμενον, ἀλλὰ δια- 5 [10] μένει ἀκατέργαστον, ὅποῖον ἐλήφθη. τῷ οὖν μὴ πέττεσθαι μηδ’ ἀνα- δίδοσθαι εἰς τὰς φλέβας ὑποχωρεῖ κατὰ γαστέρα καὶ τῷ ἔχειν ῥυπτι- κὸν ἐκ τῆς κριθῆς. μᾶλλον δὲ διαχωρεῖ κάτω φυραθεῖσα καὶ τριφθεῖσα μέχρι πλεόνος· εἰ δὲ καὶ μέλι προσλάβοι, θᾶττον ὑπέρχεται.

227) Concerning barley-cake. They call meal from barley kneaded with some water “barley-cake”, such as is eaten uncooked with new wine boiled down, or honey, or something else. However it is prepared, barley-cake is digested less than barley loaves, and fills the bowel fuller of wind, and, if it remains too long in it, it causes an upset. Since barley is by nature very bran-like, roasted barley is drier, and it too is bran-like and not easily broken down, and the wholesomeness in it, from which the body begins to take nourishment, is also drier. So all that is bran-like and hard in it, just as it is clearly not dissolved by water outside [the body], and in the same way it is not broken down when wetted in the bowel, but remains undigested, of whatever sort has been taken. Therefore, by not being digested and not being released into the veins, it has a laxative effect on the bowel by having a cleansing effect from the barley. And it is more diuretic when it is kneaded and pounded to a greater extent; and if it is compounded with honey, it is more rapidly laxative.

227) This entry is absent from Galen’s *SMT*, but is a paraphrase of material from *Alim.Fac.* 6.508.3-510.14.

There is no apparent substantiation of the above claims in modern scientific literature.

[96.10-14]

(σκη´) Κρίμνος καὶ πόλτος. Τὸ παχυμερὲς οὕτως ὀνομάζεται τοῦ τε πυρίνου καὶ τοῦ τῶν ζειῶν ἀλεύρου. ἐστὶ δὲ τροφιμώτερον ἀλφίτου, δυσπεπτότερον δέ. καλεῖται δὲ τὸ ἐξ αὐτοῦ ρόφημα πόλτος, καὶ ἐστὶν ὁ ἀπὸ τῆς ζειᾶς σταλτικώτερος ἡρέμα τῆς κοιλίας καὶ μᾶλλον εἰ φρυχθείη.

5

[Galen 12.45.5-9]

228) Coarse meal and porridge. The thick-grained variety from wheat and emmer meal (*Triticum monococcum* L.) is named thus. It is more nourishing but less digestible than barley meal. Gruel from it is called porridge, and the meal from emmer checks the abdomen slightly more, and more so if roasted.

228) Aëtius includes porridge – πόλτος – in the heading, but otherwise quotes Galen largely verbatim, while changing the name from κρίνον to κρίμος.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[96.15-97.2]

(σκθ´) Κρίνου. Τὸ μὲν ἄνθος τῆ κράσει μικτόν ἐστιν ἐκ λεπτομεροῦς τέτινος οὐσίας γεώδους, ἐξ ἧς περ ἔχει καὶ τὴν ἐν τῆ γεύσει πικρότητα, καὶ τινος ὑδατώδους εὐκράτου, ὅθεν καὶ τὸ ἐξ αὐτοῦ ἔλαιον ἀδήκτου διαφορητικῆς ἐστὶ καὶ μαλακτικῆς δυνάμεως καὶ ταῖς τῆς ὑστέρας σκληρότησιν ἐπιτήδειον. καὶ ἡ ρίζα δὲ καὶ τὰ φύλλα καθ' ἑαυτὰ λειούμενα ξηραίνει 5 καὶ ῥύπτει καὶ διαφορεῖ μετρίως, ἐστὶ γὰρ ἡ ρίζα τῆς πρώτης τάξεως [20] τῶν ῥυπτικῶν· οὕτως γὰρ οὖν κάπῃ τῶν κατακαυμάτων ἀρμόττει. τὴν μὲν οὖν ρίζαν ὀπτήσαντες, εἶτα σὺν ῥοδίνῳ λειώσαντες, ἐπιτιθέασιν τοῖς κατακαύμασιν ἄχρι συνουλώσεως. ἐστὶ γὰρ καὶ ἄλλως ἀπάντων ἐλκῶν εἰς ἐπούλωσιν ἀγαθὸν φάρμακον. οὐ μὴν ἀλλὰ καὶ ὑστέρας μαλάττει 10 καὶ καταμήνια προκαλεῖται. τὰ δὲ φύλλα προαφεινήσαντες ἐπιτιθέασιν [25] καὶ αὐτὰ μέχρι κατουλώσεως, οὐ τοῖς κατακαύμασιν μόνον, ἀλλὰ καὶ τοῖς ἄλλοις ἔλκεσιν. ἀπεθέμεθα δὲ ποτε καὶ τὸν τῶν φύλλων χυλόν, ἐψησαντες σὺν ὄξει καὶ μέλιτι μέχρι συστάσεως μέλιτος ὑγροτέρου, βαλόντες τοῦ μὲν χυλοῦ μέρη ε, μέλιτος δὲ καὶ ὄξους ἀνὰ μέρος α´ 15 καὶ ἦν εὐδόκιμον τὸ φάρμακον εἰς πάντα τὰ ξηραίνεσθαι σφοδρῶς δεόμενα χωρὶς τοῦ δάκνεσθαι, καθάπερ ὅσα τε πλαδαρὰ καὶ χρόνια [p97] καὶ δυσκατούλωτα τῶν ἐλκῶν ἐστίν.

[Galen 12.45.10-47.12]

229) White lily (*Lilium candidum* L.). The flower is mixed in composition from some fine-grained and earthy nature, from which it also has bitterness in taste, and from some mild watery [nature], whence too the oil from it has a non-stinging dispersive and softening capacity, and is suitable for fibroids. Both the root and the leaves, ground down on their own, dry, cleanse and disperse moderately. For the root is of the first rank of cleansing substances; in this way, therefore, it is even suitable for burns. So they roast the root, then grind it down fine with rose-oil, and apply it to burns until they scar over completely. It is really a good drug in other circumstances as well, for the cicatrisation of all ulcers. But, however, it even softens uteruses and provokes periods. When they have first boiled down the leaves, they apply them until cicatrisation is achieved, not only for burns, but also for the other ulcers. We have also on occasion set aside the juice of the leaves, boiling it with vinegar and honey until it reaches the consistency of rather runny honey, having added 5 parts of the juice and 1 part each of honey and

vinegar, and the medicament had a good reputation for every condition that required to be dried powerfully without being eroded, just as all watery, chronic and hard to cicatrise types of ulcers are.

229) Aëtius quotes about two thirds of Galen's entry fairly closely, but omits information about the extent of the root's drying and cleansing capacity (12.46.9-11), the use of the plant for a list of skin disorders (12.46.12-15), and a statement about avoiding digression regarding compound drugs (12.47.7-12). Aëtius gives additional information about preparation and use (229.14-15 [96.28-29]).

There is no apparent substantiation of the above claims in modern scientific literature.

[97.3-8]

(σλ´) Κροκοδειλίου τὸ σπέρμα δριμὺ μὲν ἐστὶ καὶ ἀρωματίζον οὐρητικόν τε καὶ καταμηνίων ἀγωγόν, ὥστε καὶ θερμῆς ἂν εἴη δυνάμεως καὶ διαφορητικῆς καὶ ξηραντικῆς, ὁ δὲ χυλὸς τοῦ καυλοῦ καὶ τοῦ σπέρματος ὁμοίᾳς ὦν δυνάμεως ὠφελεῖ τοὺς νεφριτικούς. ἡ δὲ ῥίζα ταῖς ἐκ θώρακος ἀναπτύσσειν ἰσχυρῶς συνεργεῖ, δριμεῖα μὲν ἦττον οὔσα (5) τοῦ σπέρματος, πικρὰ δὲ οὐχ ἦττον. ἄγει δὲ καὶ διὰ ῥινῶν αἷμα.

[Galen 12.47.13-48.2]

230) The seed of sea-holly (*Eryngium maritimum* L.) is sharp and spicy, diuretic and emmenagogic, and so it would have a warm, dispersive and drying capacity. Having a similar capacity, the juice of the stem and the seed helps those with kidney disease. The root, which is less sharp than the seed but no less bitter, strongly restricts expectorations. It also causes nose-bleeds.

230) Aëtius quotes Galen almost verbatim.

230.1 [97.3] **Κροκοδειλίου** *Eryngium maritimum* L. in LSJ, or *Echinops ritro* L. in Carnoy, or *Carduus pycnocephalus* L. or *Echinops ritro* L. in André. Dioscorides says it is similar to black chameleon (3.10(12) (K25.1.354.13)).

There is no apparent substantiation of the above claims in modern scientific literature.

[97.9-13]

(σλα΄) Κρόκος ἔχει μὲν τι καὶ στῦφον ὀλίγον, ὅπερ ἐδείχθη γεῶδες ψυ-
χρόν. ἐπικρατεῖ δὲ ἐν αὐτῷ θερμαίνουσα ποιότης τε καὶ δύναμις, ὥστε [10]
τὴν ὅλην οὐσίαν αὐτοῦ τῆς δευτέρας μὲν εἶναι τῶν θερμαινόντων
τάξεως, τῆς πρώτης δὲ τῶν ξηραίνόντων, καὶ διὰ τοῦτο καὶ πεπτικὸν
ἔχει τι, συνεργούσης εἰς τοῦτο καὶ τῆς βραχείας στύψεως. 5

[Galen 12.48.3-12]

231) Saffron (*Crocus sativus* L.) has some small amount of astringency which has been shown as earthy and cold. But a warming quality and capacity are predominant in it, so that its complete nature belongs to the second rank of the warming substances and the first rank of the drying ones, and for this reason it also has a certain digestive effect, while its small amount of astringency assists towards this.

231) Aëtius quotes Galen almost verbatim, but omits a generalisation about elemental composition (12.48.9-12).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[97.14-20]

(σλβ΄) Κρόμμον ἐκ τῆς τετάρτης ἐστὶ τάξεως τῶν θερμαινόντων· ἡ δὲ
οὐσία αὐτοῦ παχυμερῆς μᾶλλον, ὅθεν καὶ τὰς αἰμορροΐδας ἀναστομοῖ [15]
προστιθέμενον καὶ σὺν ὄξει καταχριόμενον ἐν ἡλίῳ τοὺς ἀλφούς ἀπορ-
ρύπτει καὶ παρατριβόμενον ἀλωπεκίας θάπτον ἀλκυονίου παρορμᾶ τὰς
τρίχας. ἐσθιόμενον δὲ θερμαίνει μὲν τὸ σῶμα τῇ δριμύτητι καὶ λεπτύνει 5
τοὺς ἐν αὐτῷ παχεῖς καὶ γλίσχρους χυμούς· ἐμπνευματοῖ δὲ τὴν γασ-
τέρα διὰ τὸ παχυμερὲς τῆς οὐσίας. [20]

[Galen 12.48.13-49.6]

232) Onion (*Allium cepa* L.) belongs to the fourth rank of warming substances; and its essence is more thick-grained, whence it opens up haemorrhoids when suppositied, and when smeared on with vinegar in sunlight it clears away pale skin lesions, and when rubbed on bald patches it stimulates the hair faster than bastard-sponge does. When eaten, it warms the body by its sharpness and thins the thick and sticky humours in it; and it inflates the bowel because of the thick-grained aspect of its nature.

232) Aëtius quotes the first half of Galen's entry almost verbatim, but omits his comments regarding its preparation and use for cataracts and impaired vision (12.48.18-49.4).

Onion juice has been shown ($P < 0.0001$) to facilitate hair re-growth in alopecia areata (Sharquie & Al-Obaidi, 2002); Aëtius' other claims remain unvalidated.

[97.21-98.13]

(σλγ') Κύαμος ἢ φάβα κατὰ τὸ ψύχειν καὶ ξηραίνειν τῆς μέσης ἐστὶν ἐγγυτάτω κράσεως· μετέχει δὲ τινος ἐπ' ὀλίγον καὶ ῥυπτικῆς δυνάμεως ἢ σάρξ αὐτοῦ, καθάπερ τὸ λέπος τῆς στυπτικῆς, καὶ διὰ τοῦτο τῶν ἰατρῶν ἐνίοι τὸν κύαμον ὅλον μετὰ τοῦ λέμματος ἐψησαντες ἐν ὀξυκράτῳ τοῖς δυσεντερικοῖς καὶ τοῖς κοιλιακοῖς καὶ τοῖς ἐμοῦσιν ἔδοσαν. ἐστὶ δὲ ὡς ἔδεσμα μὲν εἶπερ τι καὶ ἄλλο δύσπεπτόν τε καὶ φυσῶδες, κὰν ἐπὶ πλεῖστον ἐψηθῆ, κὰν ὀπωσοῦν σκευασθῆ, ἀναπτύσσει μέντοι ταῖς ἐκ θώρακος καὶ πνεύμονος ἐπιτήδειον. καὶ ὁ μὲν χλωρὸς ἐσθιόμενος, μᾶλλον μὲν ὑπέρχεται τὴν γαστέρα, ἥττον δὲ τοῦ ξηροῦ ἐνεχθέντος τρέφει. φρυγέντες μέντοι τὸ φυσῶδες ἀποτίθενται, δυσπεπτότεροι δὲ καὶ βραδυπόροι γίνονται καὶ παχὺν χυμὸν γεννῶσιν. ὡς φάρμακον δὲ ἐξωθεν ἐπιτιθέμενος ἀλύπως ξηραίνει. ἐπὶ μὲν γε ποδαγρικῶν ἐχρησάμεθα πολλάκις αὐτῷ δι' ὕδατος ἐψησαντες, εἶτα μίξαντες στέαρ ὕειον. ἐπὶ δὲ τῶν κατὰ τὰ νεῦρα θλασμάτων τε καὶ ἐλκῶν δι' ὀξυμέλιτος ἢ τὸ ἄλευρον ἐπεθήκαμεν, ἐπὶ δὲ τῶν φλεγμαινόντων ἤδη ἐκ πληγῆς σὺν ἀλφίτοις, καὶ ὄρχεων δὲ ἐστὶ καὶ μαστῶν ἀγαθὸν κατάπλασμα· φιλοῦσι γὰρ ταῦτα τὰ μόρια μετρίως ψύχεσθαι φλεγμαίνοντα, καὶ μάλιστα ὅταν ἐκ γάλακτος ἐν αὐτοῖς τυρωθέντος οἱ μαστοὶ φλεγμαίνωσι. καὶ γὰρ καὶ τὸ γάλα σβέννυται πρὸς τοῦ καταπλάσματος, ὡσπερ καὶ τὸ τῶν παιδῶν ἐφήβαιον ἐπιπλαττόμενον ἀλεύρω κυαμίνῳ μέχρι πλέονος ἄνηβον διαμένει.

5 [25]

10 [p98]

[5]

15

[10]

20

[98.6] *after* τὸ... *om.*: οἰνομέλιτος καὶ ροδίνου, εἰ δὲ καὶ πυράκτωσις ἤ,

[98.8] ἀλφίτιος *replaced with* ἀλφίτοις [98. 8] *after* ἀγαθὸν...*om.* φάρμακον ἦτοι

[Galen 12.49.7-50.9]

233) The bean (*Vicia faba* L.) [*kuamos* or *faba*] is nearest to the mid-point in composition regarding cooling and drying; its flesh also shares to a small extent some cleansing capacity, just as the pod has a share of some astringent capacity, and for this reason some of the doctors boil the whole bean with the pod in vinegar-water, and give it to those suffering from dysentery, abdominal disorders and vomiting. As a food stuff it is, as much as anything else, both difficult to digest and productive of flatus, either if boiled to the fullest extent, or if it is prepared in any manner; nevertheless, it

is suitable for those coughing up from the chest and lungs. And when eaten fresh, it has a more laxative effect on the bowel, but it nourishes less than beans that are used when dry. When baked, however, they dispel their tendency to produce flatus, and they become harder to digest and slower in transit, and they produce a thick humour. When applied externally as medication, they dry painlessly. We have often used them in cases of gout, boiling them in water and then mixing in pork fat. In cases of bruising to the sinews and of ulcers, we have applied them in honey-vinegar or the flour, and, in cases of inflammation occasioned by a blow, with barley-meal. And it is a good poultice for testicles and breasts; for these inflamed parts like to be cooled moderately when inflamed, and especially when the breasts are inflamed from milk turning to cheese in them. Moreover, the milk is suppressed by the poultice, just as the pubic region of children persists in an impubert state for longer when plastered with bean-flour.

233) Aëtius quotes Galen largely verbatim, but adds his own comments on preparation, and its effects on digestion and the gut (233.8-11 [97.28-98.2]). The last sentence is quoted accurately from Galen, who seems to be the only authority who suggests a treatment to delay puberty; no such similar therapies appear in Aëtius' work.

233.1 [97.21] **Κύαμος ἢ φάβα** The broad bean (Grmek, 1989: 211).

There is no apparent substantiation of the above claims in modern scientific literature. Notable for its absence is any reference to the Pythagorean prohibition of the eating of broad beans, cited by many ancient authors (for full discussion, see Grmek, 1989: 210-44.).

[98.14-99.11]

(σλδ´) Κυκλάμινος ποικίλη τὴν δυνάμιν ἐστι· καὶ γὰρ ῥύπτει καὶ τέμνει
καὶ ἀναστομοῖ καὶ ἐπισπᾶται καὶ διαφορεῖ· ὁ μὲν γὰρ χυλὸς αὐτῆς [15]
αἰμορροΐδας ἀναστομοῖ καὶ ἐρεθίζει κοιλίαν βιαίως προστιθέμενος. οὕτως
δὲ καὶ κατὰ τὰ φύματα καὶ χοιράδας καὶ ἀπάσας τὰς ἄλλας σκληρίας δια-
φορούσαις δυνάμεσι μίγνυται καὶ τοῖς ὑπογεομένοις ἀρμόττει μετὰ μέ- 5
λιτος ὑπαλειφόμενος, καὶ πρὸς τούτοις ἔτι διὰ ῥινῶν καθαίρει. σφοδρὰ
δὲ οὕτως ἐστὶν ἡ δύναμις αὐτοῦ, ὡς καὶ κατὰ τοῦ ὑπογαστρίου ἐπι- [20]
χριόμενος κοιλίαν ὑπάγει καὶ ἔμβρυα διαφθείρει καὶ ἐν πεσσοῦ προστι-
θέμενος ὁμοίως φθόριον γίγνεται. ἡ δὲ ὅλη ῥίζα τοῦ μὲν χυλοῦ ἐστὶν

ἀσθενεστέρα, σφοδρὰ δὲ ἐστὶ καὶ αὐτὴ· καὶ γὰρ ἔμμηνα κινεῖ πινομένη 10
 τε καὶ προστιθεμένη καὶ ἰκτεριῶντας ὀνίνησιν, οὐ μόνον ἐκκαθαίρουσα
 τὸ σπλάγγνον, ἀλλὰ καὶ τὴν ἐν ὄλω τῷ σώματι χολὴν ἐκκρίνουσα δι’
 ἰδρώτων· ὅθεν ἐπὶ τῇ πόσει συνεργεῖν δεῖ παντὶ τρόπῳ τῇ τῶν ἰδρώ- [p99]
 των ἐκκρίσει σκέπη πλείονι καὶ θάλλει τοῦ σώματος. χρὴ δὲ εἶναι τὸ
 πινόμενον πλῆθος ἄχρι < γ’ ἢ τὸ πλεῖστον δ’ ἦτοι μετὰ γλυκέος ἢ 15
 μελικράτου. ῥύπτει δὲ καὶ τὸ δέρμα, κὰν τούτῳ τὰς ἐφηλίδας καὶ
 ἀλωπεκίας καὶ τὰ ὅμοια θεραπεύει. ὀνίησι δὲ καὶ τοὺς σκληροὺς [5]
 σπλήνας, ἐπιπλαττομένη πρόσφατός τε καὶ ξηρά. διδῶσι δὲ ἔνιοι τὴν
 ξηρὰν ρίζαν καὶ τοῖς ἀσθματικοῖς. κοπτομένη δὲ ξηρὰ καὶ σηθομένη
 λεπτοτάτῳ κοσκίνῳ μετὰ καρυοφύλλου, ὡς εἶναι τῆς μὲν 20
 ρίζης Γ α’, τοῦ καρυοφύλλου δὲ κόκκους κα’, καὶ ἐμφυσωμένη διὰ μυκτῆ-
 ρων καθαίρει ἀπὸ κεφαλῆς παχεῖς καὶ γλίσχρους χυμούς, ὅθεν ἰᾶται [10]
 τὰς χρονίας κεφαλαλγίας καὶ τοὺς ἐπιληπτικοὺς ὀνίησι μεγάλως.

[99.8] *after* καρυοφύλλου *omit* κόκκοι κα’

[Galen 12.50.10 52.3]

234) Cyclamen (*Cyclamen graecum* Link) is varied in its capacity: for it
 cleanses, cuts, opens up, draws in and disperses. Indeed, its juice opens up
 haemorrhoids and violently stimulates the bowel when supposited. So also
 in the case of tumours, diseased lymph nodes and all the other indurations, it
 is compounded with dispersing capacities, and it is suitable for suffusions
 when smeared on with honey, and in addition to these features it purges
 through the nose. Its capacity is strong in this respect so that it has a
 laxative effect on the bowel even when rubbed over the lower abdomen, and
 it destroys foetuses when inserted in a pessary, likewise it becomes
 abortifacient. The whole root is weaker than the juice, but it too – the root –
 is strong; for it is also emmenagogic both when drunk and inserted vaginally,
 and it helps jaundice sufferers, not only by thoroughly purging the internal
 organs, but also by secreting bile in the whole body through sweat. Hence it
 is necessary to supplement the effects of the potion in every way, with more
 cover and warming of the body, for the secretion of sweat. It is necessary
 for the amount [of cyclamen root] drunk to be as much as 3, or at most 4,
 drachmas, either with sweet wine or honey water. It also cleanses the skin,
 and in so doing it treats keratoses, patchy hair loss and such like. It also
 helps hard spleens when spread on fresh and dry. Several give the dry root
 as well to those with breathing problems. If chopped up and and sifted
 through a fine sieve with cloves, so that there is 1 *uncia* of the root and 21
 grains of cloves, when it is insufflated through the nostrils, it purges thick

and sticky humours from the head, whereby it heals chronic headaches and greatly helps epileptics.

234) Aëtius quotes the first three-quarters of Galen's entry largely verbatim, and then adds his own comments about its preparation and use for headaches and epilepsy (234.19-23 [99.7-11]). Galen also lists in this entry another form of cyclamen (κισσάνθεμος), omitted by Aëtius, which may be used for spleens, securing urine and bowel movements, expelling placentas, and helping those with breathing difficulties (12.51.14-52.3).

234.3 [98.16] **κοιλίαν** Context suggests that this be translated as bowel here; likewise at 234.8 [98.21].

234.21 [99.9] **κόκκους** Grains, as in small pieces, rather than the unit of weight.

There is no apparent substantiation of the above claims in modern scientific literature.

[99.12-14]

(σλε´) Κύμινον. Κυμίνου τῷ σπέρματι μάλιστα χρώμεθα. ἐστὶ δὲ θερματικῆς δυνάμεως οὐρητικῆς τε καὶ ἀφύσου κατὰ τὴν τρίτην τάξιν ὑπάρχον τῶν θερμαινόντων.

[Galen 12.52.4-8]

235) Cumin (*Cuminum cyminum* L.). We make very great use of the cumin seed. It has a warming capacity, both diuretic and flatus-suppressing, situated at the third rank of warming substances.

235) Aëtius omits Galen's comparison to other plants, but otherwise quotes him accurately.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists white rose (*Rosa sempervirens* L.), omitted by Aëtius, which, he says, has astringent parts, and, in the fruit, woolly material harmful to windpipes (Περὶ κυνοσβάτου 12.52.9-13).]

[99.15-100.2]

(σλζ´) Κυπαρίσσου τὰ φύλλα καὶ οἱ βλαστοὶ καὶ τὰ σφαιρία τὰ νέα καὶ

μαλακὰ μεγάλων τραυμάτων ἐν σκληροῖς σώμασιν ἐστι κολλητικά· ἐξ οὗ δῆλον ὡς ξηραντικῆς ἐστι δυνάμεως, οὐδὲν ἐπιφανῶς ἐχούσης δριμύ και θερμόν. πλείστον δὲ ἔχει τὸ πικρὸν και πολὺ πλέον ἐστὶ τὸ στρυφ- 5
 νὸν ἐν ὄλω τῷ φυτῷ. τοσοῦτον δὲ ἐστὶν ἐν αὐτῇ τὸ θερμόν, ὅσον ποδηγεῖν μὲν τῇ στρυφνότητι πρὸς τὸ βάθος, μηδεμίαν δὲ θερμότητα [20]
 ἢ δῆξιν ἐργάζεσθαι τοῖς σώμασι. διὰ τοῦτο τὰς κατὰ βάθος ὑγρότητας ἐν ταῖς πλαδαραῖς και σηπεδονώδεσι διαθέσεσιν ἀλύπως τε ἅμα και ἀσφαλῶς ἐκβόσκειται, ἐτέραν οὐκ ἐπιπωμένη ὑγρότητα. οὕτω δὲ και 10
 τοὺς ἐντεροκηλικοὺς ὠφελεῖ καταπλασσομένη· και γὰρ ξηραίνει και τόνον ἐντίθησι τοῖς δι' ὑγρότητα χαλαροῖς σώμασιν, ὡς ἂν τῆς στύ- [21]
 ψεως εἰς τὸ βάθος καταδυομένης, τῷ ποδηγεῖσθαι πρὸς τῆς μεμιγμένης αὐτῇ μετρίας θερμότητος· χρῶνται δὲ αὐτῇ τινες και ἐπ' ἀνθράκων [p100]
 και ἐρπήτων, ἀλφίτοις μινγύντες.

[Galen 12.14-53.18]

236) The leaves, shoots and fresh soft cones of cypress (*Cupressus sempervivens* L.) have an adhesive effect on large wounds in hard bodies; and from this it is clear that it has a drying capacity, obviously possessing nothing sharp and warm. It has bitterness most of all, and there is much more astringency in the whole plant. The warmth in it is such that it guides the astringency to the depths, but causes no heat or erosion in bodies. For this reason, it absorbs deep-seated moistures in flabby and putrescent conditions painlessly and at the same time securely, while not inducing further moisture. In this way, it also helps those suffering from intestinal hernias, when it is applied as a poultice; for it dries and tones up bodies slackened by moisture, by being guided by the moderate warmth mixed in it, because the astringency is submerged to the depths. Some use it also for carbuncles and herpes, mixing it with barley meal.

236) Aëtius quotes much of Galen's entry fairly accurately, omitting some comments about taste (12.52.18-19) and a reported usage for cellulitis (12.53.17-18). In one instance Aëtius differs from Galen in his explanation of the simple's mode of action, saying that it does not induce further moisture (236.9 [99.23]), whereas Galen says it induces further moistures by its sharpness and warmth, while in effect, as some sort of substitution, exhausting those present of a warming and drying capacity (12.53.7-9).

There is no apparent substantiation of the above claims in modern scientific literature.

[100.3-8]

(σλζ´) Κύπερον. Κυπέρου χρήσιμοι μάλιστα αἱ ρίζαι θερμαίνουσαι καὶ
ξηραίνουσαι χωρὶς δήξεως· ὅθεν καὶ τὰ δι' ὑγρότητα πολλὴν ἔλκη
δυσασπύλωτα θαυμαστῶς ὀνίνησιν. ἔχουσι γάρ τι καὶ στυπτικόν, καὶ 5
διὰ τοῦτο τοῖς ἐν στόμασιν ἔλκεσιν ἐπιτήδειοι καὶ μὲν δὴ καὶ τμητικὴν
τινα δύναμιν ἔχουσιν, ἧ καὶ λιθιῶσιν ἀρμόζουσι καὶ οὖρα καὶ κατα- [5]
μήνια κινουῦσι.

[Galen 12.54.1-7]

237) *Cyperus rotundus* L. or *longus* L.. The roots of *C. rotundus* are very useful, since they are warming and drying without being erosive; hence they also help wonderfully ulcers that are difficult to cicatrise because of a lot of moisture. For they also have some astringency, and for this reason they are suitable for ulcers in mouths, and moreover they have some cutting capacity through which they are suitable for those affected by stones, and they promote urination and menstruation.

237) Aëtius quotes Galen largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[100.9-25]

(σλη´) Κύπρος. Τούτου τοῦ δένδρου τὰ φύλλα καὶ οἱ ἀκρεμόνες καὶ τὰ
ἄνθη χρήσιμα, μικτῆς ὄντα δυνάμεώς τε καὶ κράσεως. ἔχει μὲν γάρ τι [10]
διαφορητικὸν ἐξ ὑδατώδους οὐσίας θερμῆς συμμετρως, ἔχει δέ τι καὶ
στυπτικὸν ἐκ τῆς γεώδους ψυχρᾶς, ὅθεν τὸ ἀφέψημα καταντλούμενον
ὀνίνησι πυρίκαυτα. χρῶνται δὲ καὶ κατὰ τῶν πυρωδῶν φλεγμονῶν καὶ 5
ἀνθράκων. ἐστὶ γὰρ ἀλύπως τε καὶ ἀδήκτως ξηραντικά. καὶ μὴν καὶ
τοῖς ἐν στόμασι γιγνομένοις ἔλκεσιν αὐτομάτοις καὶ μάλιστα τοῖς ἀφθώ- [15]
δεσιν ἀρμόττει διαμασώμενα. τὰ δὲ φύλλα τῆς κύπρου ξηραίνόμενα ἐν
σκιᾷ καὶ κοπτόμενα καὶ σηθόμενα εἶτα ἐνψόμενα σὺν ὕδατι ἐπὶ θερ-
μοσποδία ῥοῦ μαγειρικοῦ βραχέος ἐπιπαττομένου ἢ ὄξους ὀλίγου, ἀγα- 10
θὸν ποιεῖ κατάπλασμα ἐπὶ ποδαγρικῶν καὶ χειραγρικῶν ἐν αὐταῖς ταῖς
μεγίσταις φλεγμοναῖς ἐπιτιθέμενον. παύει γὰρ τὰς φλεγμονὰς καὶ ἀπο- [20]
κρούεται τὸν ρευματισμὸν καὶ διαφορεῖ τὸ ἦδη ἐν τοῖς τόποις περι-
εχόμενον διὰ τῶν ἀδήλων πόρων, ὥσπερ δι' ἰδρώτων. βλάπτει μέντοι
τὸν χρῶτα καὶ μάλιστα τοὺς ὄνυχας· διὸ δεῖ προυποχρίειν τοὺς τόπους 15
ῥοδίνῃ ὑγρᾷ κηρωτῇ. σκέπειν δὲ δεῖ τὸ κατάπλασμα, εἰ παρῆ, ἐν φύλ-
λοις κικέας ἢ καρπάσου.

[Galen 12.54.8-18]

238) Henna (*Lawsonia inermis* L.). The leaves, branches and flowers of this tree are useful, as they have a mixed capacity and composition. For it has something dispersive as a result of its watery and proportionately warm

nature, but it also has some astringency from its earthy and cold nature, whence its decoction helps burns when poured over them. They use it also for inflamed boils and carbuncles. For it has a drying effect, painless and non-erosive. Moreover, when chewed thoroughly, it is suitable for mouth ulcers which occur spontaneously, especially the sort caused by thrush. The henna leaves are dried in the shade, chopped up, sieved and then boiled with water over hot ashes; a small amount of butcher's sumac (*Rhus coriaria*) or a little vinegar is sprinkled over it, and it makes an excellent poultice for those affected by gout in the feet and the hands, when applied to the areas of greatest inflammation. For it puts a stop to acute inflammations and repels discharge, and disperses what then is contained in the affected areas through invisible pores, just as if by sweat. However, it harms the skin and the nails in particular; hence it is necessary to cover those areas in advance with rose-water wax-salve. It is necessary to cover the poultice, if possible, in castor-oil leaves or white hellebore leaves.

238) Aëtius quotes Galen fairly accurately, and then adds a large passage (238.8-17 [100.16.25]) concerning preparation, use in gout, and precautions.

Demonstration *in vitro* of anti-inflammatory (Liou et al., 2013) and anti-bacterial (Al-Rubaiy et al., 2008) of henna's constituents raises the possibility that it may help mouth ulcers and boils, respectively. This evidence, however, is insufficient to substantiate Aëtius' other claims.

[100.26-27]

(σλθ') Κυτίσου τὰ φύλλα διαφορητικῆς ἐστι δυνάμεως, ἐπιμεμιγμένης ὕδα-
τώδει χλιαρῶ, καθάπερ καὶ τὰ τῆς μαλάχης.

[Galen 12.55.1-3]

239) The leaves of tree-medick (*Medicago arborea* L. or *arborescens* C.Presl) have a dispersive capacity, mingled with a moist tepid one, just like those of the mallow (*Malva silvestris* LSJ).

239) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[100.28-29]

(σμ´) Κώνειον, ὅτι τῆς ἄκρας ἐστὶ ψυκτικῆς δυνάμεως, πάντες ἴσασι καὶ διὰ τοῦτο ἀναιρετικόν ἐστὶν ἐκ τῆς ἀναψύξεως.

[Galen 12.55.4-5]

240) Hemlock (*Conium maculatum* L.) – everyone knows it has the ultimate chilling capacity, and for this reason it can kill through chilling.

240) Aëtius quotes Galen almost verbatim, adding the comment in the second line.

5-8 gm of the leaves are lethal to an adult, and cause progressive paralysis, cooling of extremities, convulsions, coma and death from asphyxia (Bruneton, 1995: 699-700).

[101.1-8]

(σμα´) Κώνου καρπός, ὃν δὴ κόκκαλον ὀνομάζουσι καὶ στρόβιλον, ὅλος μὲν χλωρός ἔχει τι μεθ' ὑγρότητος πικρὸν καὶ δριμύ, καὶ διὰ τοῦτο καὶ τοῖς ἐμπυκκοῖς, ὅσοι τε ἄλλοι δέονται τὰ κατὰ θώρακα καὶ πνεύμονα ῥαδίως ἀναβήττειν τε καὶ ἀναπτύειν, ἐπιτήδειός ἐστιν. ὁ δ' ἐδώδιμος ἐξ αὐτοῦ καρπός ἐστὶ μὲν τροφή δύσπεπτός τε καὶ ἰσχυρὰ καὶ πολύχυμος διὰ τὸ ἐλαιῶδες· ἐστὶ δὲ καὶ ὡς φάρμακον ἐκλεαίνειν τραχύτητας ἐπιτήδειον, καὶ μάλισθ' ὅταν ἐν ὕδατι βραχεῖς ἀπόθηται κατ' αὐτὸ πᾶν ὅσον ἔχει δριμύ.

5[5]

[Galen 12.55.6-18]

241) The fruit of the pine tree, which, in fact, they call *kokkalon* and *strobilon*, – the entire fresh fruit has something bitter and sharp with moistness, and for this reason it is suitable for those affected by suppuration, and all others who need to cough up and spit up easily the stuff in their chests and lungs. The edible fruit from it is food that is hard to digest and tough, and has much juice because of its oily character; also, it is, as a drug, suitable for soothing roughnesses, and, especially when wetted in water it has set aside everything in it that is sharp.

241) Aëtius quotes Galen fairly accurately, but omits his last part concerning the elemental composition of the remainder of the plant (12.55.14-18).

Although essential oils from *Pinus* L. spp. have an antibacterial effect (Evans, 2009: 448), there is no available relevant information regarding pine cones.

[Galen next lists hare's foot trefoil (*Trifolium arvense* L.), which has a drying effect on the bowel (Περὶ λαγώποδος 12.56.1-3).]

<p>{ Καγκάνου ἡ ρίζα δυνάμεως ἐστὶν ἀδήκτου καὶ μετρίως ξηραντικῆς, οὐσίας δὲ παχυμεροῦς ἐμπλαστικῆς· ὅθεν οἶνω βρεχομένη, καθάπερ ἡ τραγάκανθα καὶ ἐκλειχόμενη, τὰς τῆς ἀρτηρίας ἰᾶται τραχύτητας· οὐδὲν δ' ἦττον, εἰ καὶ διαμασῆσαιτό τις αὐτήν, ὁ παριῶν χυλὸς ὀνίνησι τὴν ἀρτηρίαν ὁμοίως τῷ τῆς γλυκυρίζης. Καυκαλὶς, ὃ ἔνιοι καὶ δαῦκον ἄγριον καλοῦσιν. Ἔστι δ' ὅμοιον αὐτῷ κατὰ τὴν γεῦσιν καὶ κατὰ τὴν δύναμιν· θερμαίνει γὰρ ὡς ἐκεῖνος καὶ ξηραίνει καὶ διουρεῖται καὶ ταριχεύεται εἰς ἀπόθεσιν. Καρπήσιον. Καρπήσιον ὅμοιον μὲν ὑπάρχει τῷ καλουμένῳ φοῦ κατὰ τε τὴν γεῦσιν καὶ τὴν δύναμιν· ἐπιπλέον δὲ ἐστὶ λεπτομερές, διὸ καὶ μᾶλλον ἐκεῖνου ῥύπτει τε τὰς τῶν σπλάγγων ἐμφράξεις καὶ οὖρα κινεῖ καὶ νεφροὺς ἐκκαθαίρει λιθιῶντας, οὐ μὴν εἰς τοσοῦτον λεπτομερές ἐστίν, ὡς ἀντὶ κιναμώμου χρεῖσθαι (ἢ χρῆσθαι) μὴ παρόντος, ὡς ὁ Κόϊντος ἔπραττεν. ἄμεινον μὲν οὖν ἐστὶ τὸ γογυρικὸν τοῦ λαερτικοῦ· οὐ μὴν οὐδὲ τοῦτο τὸ καρπήσιον <πλησίον> κιναμώμῳ τὴν δύναμιν, ἀλλὰ τῆς ἀρίστης κασίας οὐκ ὀλίγον λιπόμενον. ὠνόμασται δ' ἐκάτερον ἀπὸ τινῶν ὀρέων τῆς Παμφυλίας, ἐν οἷς καὶ τὸ πλεῖστον γεννᾶται αὐτῶν.</p>	<p>[p101] [10] [15] [20] [25]</p>
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The root of *Mercurialis tomentosa* L. [or sleepy nightshade (*Withania somnifera* Dunal)] has a non-stinging and moderately drying capacity, and a thick-grained, adhesive nature. Hence, when soaked in wine just like tragacanth (*Astragalus* spp.), and licked up, it heals roughnesses of the windpipe. If one also chews it, nevertheless the juice present in it helps the windpipe, similarly to that of liquorice (*Glycyrrhiza glabra* L.).

Tordylium apulum L., which several also call wild carrot. It is similar to the above in taste and capacity; for it warms like it and dries, has a diuretic effect and pickles for storage.

Karpesion (*Valeriana dioscoridis* Sm.). *Karpesion* is similar to what is called “wild spikenard” [hazelwort (*Asarum europaeum* L.)] in taste and

capacity; it is quite fully fine-grained, whereby, even more than the latter, it cleanses blockages of the internal organs, facilitates urination, and cleans out kidneys affected by stones. But, however, it is fine-grained to the extent that it is used instead of cassia if that is not available, as Quintus used to do. So, the γογυρικόν is better than the λαερτικόν. This *karpesion* is certainly not closer to cassia in capacity, but not a little left behind the best cassia. Each has been named after some mountains of Pamphylia, in which most of them is grown. }

[101.26-102.2]

(σμβ΄) Λάθυροι. Παραπλήσιοι μὲν εἰσι τῆ οὐσία οἱ λάθυροι τοῖς ὄχροις τε καὶ φασήλοις καὶ χυλὸν ὅμοιον τούτοις ἔχουσι, παχύτερον δὲ τῆ συστάσει καὶ διὰ τοῦτο τροφιμώτεροί πως οὗτοι ἐκείνων εἰσίν. [p102]

242) Chicklings (*Lathyrus sativus* L.). Chicklings are similar in essence to birds' pease (*L. ochrus* DC.) and calavances (*Vigna sinensis* Endl.), and they have a juice like these, but thicker in composition, and for this reason chicklings are somewhat more nourishing than those others.

242) This simple is absent from Galen's *SMT*, but consists entirely of quotations selected from his *Alim.Fac.* 6.540.8-15.

L. sativus L. seeds contain 3-*N*-oxalyl-L-2,3-diaminopropionic acid, which, when ingested, causes human lathyrism, an irreversible paralysis due to spinal cord toxic damage (Evans, 2009: 159).

[102.3-4]

(σμγ΄) Λαθυρίς. Καὶ ταύτην τινὲς εἶδος εἶναι τιθυμάλλου φασί· τὸ δὲ σπέρμα αὐτῆς καθαρτικὴν ἔχει δύναμιν.

[Galen 12.56.4-9]

243) Caper spurge (*Euphorbia lathyris* L.). Some say this is a species of spurge; its seed has a purgative capacity.

243) Aëtius reduces Galen's entry by almost two thirds, by omitting the latter's more expansive comparison between the spurges.

There is evidence concerning the laxative effect of oil from its seed (Dey, 1967).

[102.5-6]

(σμδ´) Λαμψάνη. Ἐσθιομένη μὲν κακόχυμὸς ἐστὶ, καταπλαττομένη δὲ ῥυπτικὸν ἔχει τι καὶ διαφορητικόν.

[Galen 12.56.10-12]

244) Charlock (*Brassica arvensis* L.). When eaten it is unwholesome, but when plastered on it is somewhat cleansing and dispersive.

244) Aëtius quotes Galen almost verbatim.

244.1 [102.5] **Λαμψάνη** *Sinapis arvensis* L. in Carnoy, *Brassica* spp. in André.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[102.7-17]

(σμε´) Λάπαθον διαφορητικῆς μετρίως ἐστὶ δυνάμεως, καὶ δηλονότι θερμότητος μετέχει, ἧ καὶ τοὺς ἐν νεφροῖς λίθους ἢ ρίζα θρύπτει· καὶ ψώρας καὶ τραχύτητας τοῦ σώματος ἰᾶται μετ' ὄξους ἐψηθεῖσα καὶ χριομένη. τὸ δὲ ὄξυλάπαθον μικτὴν ἔχει τὴν δύναμιν· ἅμα γὰρ τῆ διαφορητικῆ καὶ ἀποκρουστικῆς μετέχει δυνάμεως. τὸ δὲ σπέρμα αὐτῶν ἔχει τι 5 σαφὲς στυπτικόν, ὃ καὶ δυσεντερίας καὶ διαρροίας ἰᾶται, καὶ μάλιστα τὸ τοῦ ὄξυλαπάθου. τὸ δὲ ἰπολάπαθον ἐν ἔλεσι μὲν γεννᾶται· ἐστὶ δὲ τῆς αὐτῆς δυνάμεως, ἀσθενεστεράς δέ. τοῦ δὲ ἀγρίου λαπάθου ἢ ρίζα, ἣν μύλην καλοῦσιν, ἐψομένη σὺν ὄξει ἢ οἴνῳ καὶ διακλυζομένου 15 τοῦ ἀφειψήματος θερμοῦ ὀδόντας κρατύνει καὶ τὰς ἀλγηδόνας αὐτῶν 10 παύει.

[102.11] after μετέχει add δυνάμεως

[Galen 12.56.13-19]

245) Monk's rhubarb (*Rumex patientia* L.) has a moderately dispersive capacity, and clearly shares warmth, by means of which the root even crumbles stones in kidneys. It heals itchy scabby skin lesions and rough patches of the body, when boiled with vinegar and smeared on. Curled dock (*R. crispus* L.) has mixed capacity: for, along with the dispersive one it also shares a repellent capacity. Their seed has some distinct astringent effect, by which it heals dysenteries and diarrhoeas, and especially the curled dock seed. Dock-sorrel (*R. aquatica* L.) grows in marshes; it has the same

capacity, but weaker. When the root of dock (*R. conglomeratus* L.), which they call “moly”, is boiled with vinegar or wine, and the warm concoction is used as a mouthwash, it strengthens teeth and stops their pain.

245) Aëtius quotes Galen largely verbatim.

245.8 [102.14] **ἀγρίου λαπάθου** dock (*R. conglomeratus* L.), according to LSJ.

245.9 [102.15] **μύλην** Although LSJ translates this as “moly”, it is unlikely to be the same as μῶλυ (v. ch.288 p. 264).

There is no apparent substantiation of the above claims in modern scientific literature, but ingestion of *R. crispus* L. has resulted in fatal poisoning of a man (Reig et al., 1990).

[102.18-20]

(σμζ´) Λειμώνιον ἢ κυνόγλωσσον. Τούτου τὸν καρπὸν αὐστηρὸν ὑπάρχοντα μετ’ οἴνου διδῶσι κοιλιακοῖς καὶ αἰμοπτυκοῖς καὶ δυσεντερικοῖς· ὀνίνησι δὲ καὶ ῥοῦν γυναικεῖον.

[Galen 12.57.1-4]

246) *Leimonion* or hound’s tongue (*Cynoglossum columnae* Biv.). Since the fruit of this is harsh, they give it with wine to those suffering from abdominal disorders, haemoptysis and dysentery; it also helps female flow.

246) Aëtius quotes Galen verbatim, apart from adding κυνόγλωσσον as a synonym, and omitting a short final sentence about dosage.

246.1 [102.18] **Λειμώνιον** *Statice limonium* L., according to Carnoy.

There is no apparent substantiation of the above claims in modern scientific literature.

102.21-22

(σμζ´) Λειχὴν ὁ ἐπὶ τῶν πετρῶν ῥυπτικῆς ἅμα καὶ μετρίως ψυχούσης ἐστὶ δυνάμεως καὶ ξηραντικῆς κατ’ ἄμφω. ἰᾶται δὲ λειχῆνας.

[Galen 12.57.5-14]

247) Lichen on rocks has a capacity which is cleansing and at the same time moderately cooling, and, in keeping with both, drying. It heals impetigo.

247) Aëtius omits three quarters of Galen's text, in which the latter claims it is a type of moss, attributes its name to its ability to treat cases of λειχήν (impetiginous skin lesions), explains its properties in elemental terms, and says that he cannot endorse Dioscorides' claim regarding its haemostatic effect.

Some lichens contain bacteriostatic and antifungal agents (Evans, 2009: 448), which could be of possible benefit in cases of λειχήν, if this is caused by infection.

[102.23-24]

(σμη´) Λεοντοπόδιον ἢ λεοντοπέταλον. Τούτου τῆ ρίζῃ μάλιστα χρώμεθα, διαφορητικῇ καὶ θερμαντικῇ κατὰ τὴν τρίτην τάξιν ὑπαρχούση.

[Galen 12.57.15-17]

248) *Leontice leontopetalum* L. [*leontopodium* or *leontopetalum*]. We use the root of this very much, and it is dispersive and warming at the level of the third rank.

248) Aëtius quotes Galen, adding λεοντοπόδιον as a synonym, but omitting its drying capacity.

Petaline chloride, present in this plant's root, has been shown to stimulate contraction of the aorta, trachea, ileum and heart (Abdalla et al., 1989).

[102.25]

(σμηθ´) Λεπίδιον ἐκ τῆς τετάρτης ἐστὶ τάξεως τῶν θερμαινόντων.

[Galen 12.58.1-4]

249) Pepperwort (*Lepidium latifolium* L.) belongs to the fourth rank of warming substances.

249) Aëtius quotes Galen's first comment, and then omits a comparison with nose-smart.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists two plants omitted by Aëtius: a species of dead-nettle (*Lamium* L.), of a sharp quality (Περὶ λευκάδος 12.58.5-7); and tuberous thistle (*Cnicus tuberosus* L.), whose root is bitter, cutting, drying and warming (Περὶ λευκακάνθου 12.58.8-11).]

[102.26-103.14]

(σν') Λευκίοιον. Τούτου καὶ σύμπας ὁ θάμνος ῥυπτικῆς ἐστὶ δυνάμεως καὶ λεπτομεροῦς, ἐπὶ μᾶλλον δὲ αὐτῆς μετέχει τὰ ἄνθη, καὶ τούτων τὰ ξηρότερα τῶν γλωρῶν μᾶλλον, ὥστε καὶ τὰς ἐν ὀφθαλμοῖς οὐλὰς παχείας λεπτύνει καὶ καταμήνια δὲ τὸ ἀφέψημα αὐτῶν προτρέπει καὶ χόρια καὶ ἔμβρυα τεθνεῶτα προκαλεῖται. ἐστὶ γὰρ φθόριον πινόμενον. καὶ εἴ τις αὐτοῦ τὸ σφοδρὸν τῆς δυνάμεως πολλοῦ ὕδατος μίξει πραύνειεν, ἢ τινι ἐτέρῳ τοιοῦτῳ ὑγρῷ, ἔξει καὶ πρὸς φλεγμονὰς ἀγαθὸν φάρμακον. οὕτω γοῦν καὶ τὸ ἀφέψημα αὐτῶν, εἰ μὴ ἄκρατον εἶη, τὰς ἐν μήτρᾳ φλεγμονὰς ἰᾶται προσαντλούμενον, καὶ μάλισθ' ὅσαι κεχρονίκασι σκιρρωδῶς. οὕτω δὲ καὶ μετὰ κηρωτῆς ἔλκη δυσασπούλωτα θεραπεύει. ὁ δὲ καρπὸς τῆς αὐτῆς ὦν δυνάμεως, ἐπιτηδειότατός ἐστι πινόμενος ὅσον δυοῖν < πλῆθος ἢ προστιθέμενος σὺν μέλιτι, καταμήνια κινεῖν καὶ ἔμβρυα ζῶντα μὲν διαφθείρειν, νεκρὰ δὲ ἐκβάλλειν. αἱ δὲ ρίζαι μετ' ὄξους καταπλαττόμεναι σπλῆνας ἐσκιρρωμένους ἰῶνται καὶ τὰς ἐν ἄρθροις φλεγμονὰς.

[Galen 12.58.12-59.15]

250) Gilliflower (*Matthiola incana* L.) [lit. "white violet"]. The entire shrub of this species has a cleansing and fine-grained capacity, but the flowers have a greater share of it, and of these the dried ones greater than the fresh ones, so as to thin even the thick scars in eyes, and their decoction promotes periods, and brings out placentas and dead foetuses. For it is abortifacient when drunk. And if anyone should moderate the strength of its capacity by dilution with a lot of water or with any other such liquid, he will have an excellent drug for acute inflammations as well. At any rate, their decoction, if it is undiluted, will also heal inflammations in the uterus, if used as a douche, and especially those which have become hard over time. Thus too it treats, in a wax salve, ulcers that are hard to cicatrise. Since its fruit has the same capacity, it is most suitable when drunk in a quantity of 2 drachmas, or inserted vaginally with honey, to bring on periods, destroy living foetuses, and abort dead ones. When the roots are applied as a poultice with vinegar, they heal indurated spleens and inflammations in joints.

250) Aëtius quotes Galen largely verbatim, omitting a use in cases of thrush (12.59.7-8), but adding a use for inflamed joints (250.15 [103.14]). Both Aëtius and Galen have listed this entry ahead of the next, out of alphabetical order.

250.10 [103.9] **κεχρονίκασι σκιρρωδῶς** Most likely fibroids.

There is no apparent substantiation of the above claims in modern scientific literature.

[103.15-17]

(σνα´) Λεύκη τὸ δένδρον μικτὸν πῶς ἐστὶ τὴν κρᾶσιν ἐξ ὑδατώδους τε χλιαρᾶς καὶ γεώδους λελεπτυσμένης οὐσίας, ὅθεν καὶ ῥυπτικῆς μετέχει δυνάμεως· ὑπόπικρον δέ ἐστὶ τῆ γεύσει.

[Galen 12.59.16-18]

251) The white poplar tree (*Populus alba* L.) is somewhat mixed in composition from a watery, tepid, earthy, rarified essence, whence it also shares a cleansing capacity. It is fairly bitter to taste.

251) Aëtius quotes Galen accurately, and then adds the final comment about taste.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

103.18-27

(σνβ´) Λιβανωτὸς θερμαντικὸς ἐστὶ κατὰ τὴν δευτέραν τάξιν, ξηραντικὸς δὲ κατὰ τὴν πρώτην. ἔχει δὲ τι καὶ ὑποστῦφον ὀλίγον· ἥκιστα δὲ σαφῆς ἢ στύψις ἐστὶν ἐν τῷ λευκῷ. ὁ δὲ φλοιὸς αὐτοῦ τὴν στυπτικὴν δύναμιν ἐναργῆ κέκτηται· διὸ καὶ ξηραίνει γενναίως, ὡς ἐν τῇ δευτέρᾳ τάξει συμπληρουμένη τῶν ξηραίνοντων ὑπάρχειν. ἐστὶ δὲ καὶ παχυμερῆς, ἥκιστα δὲ δριμύτητος μετέχων. διὰ ταύτας γοῦν τὰς ποιότητας καὶ δυνάμεις ἰκανῆ ἢ χρῆσις αὐτοῦ ἐστὶ παρὰ τοῖς ἰατροῖς, ἐπὶ τε αἰμοπτικῶν καὶ στομαχικῶν καὶ κοιλιακῶν καὶ δυσεντερικῶν οὐ τοῖς ἔξωθεν ἐπιτιθεμένοις μόνοις μὲν γινόμενος, ἀλλὰ καὶ τοῖς εἴσω τοῦ σώματος λαμβανομένοις.

[Galen 12.60.1-18]

252) Frankincense [secretion from *Boswellia carterii* Birdw.] is warming at the level of the second rank, and drying at the first level. It also has some slight astringency; but the astringency is least apparent in the white variety. Its bark has got a distinct astringent capacity; hence it dries intensely, so as

to be completely in the second rank of the drying substances. It is also thick-grained, sharing sharpness least. Because of this quality and capacity, then, ample use is made of it by the physicians, for those coughing up blood, and those with stomach and abdominal problems, and dysentery, not only mixed with materials applied externally, but also with those taken internally.

252) Aëtius quotes almost two thirds of Galen's entry fairly closely, and then omits his passage about the plant's shoots (12.60.13-18).

There is no apparent substantiation of the above claims in modern scientific literature.

[103.28-104.13]

(σγ') Αἰθάλη λιβάνου σκευάζεται τὸν τρόπον τοῦτον· λαβιδίῳ καθ' ἓνα χόνδρον τοῦ λιβάνου λαβὼν καὶ ἄπτων πρὸς λύχνον ἐπιτίθει εἰς κοῖλον λοπάδιον ὀστράκινον κενόν, εἶτα περικάλυψον χάλκωμα ἔγκοιλον, ἐσφυγμένον ἐπιμελῶς· ὑποτίθει δὲ κατ' ἀμφοτέρα χεῖλη τοῦ πώματος λιθάρια ὕψος τετραδακτυλιαῖον ἔχοντα, ἵνα χωρήσῃ ὑποτιθέναι ἕτερον χόνδρον ἀεὶ πρὸ τοῦ τὸν πρῶτον χόνδρον παντελῶς σβεσθῆναι, ἕως ἂν δόξης αὐτάρκη λιγνὺν συναγαγεῖν. συνεχῶς μέντοι σπόγγῳ ἐξ ὕδατος ψυχροῦ περίματτε τὸ ἐκτὸς μέρος τοῦ χαλκώματος· οὕτω γὰρ προσκαθίσει πᾶσα ἡ λιγνὺς μὴ ἄγαν αὐτοῦ πυρουμένου. ἀποψήσας οὖν τὴν πρώτην λιγνὺν πετρῶ ποιεῖ τὸ αὐτὸ ἐφ' ὅσον ἂν δοκῇ, ἀνελοῦ δὲ καὶ τὴν ἐκ τοῦ καέντος λιβάνου σποδὸν κατ' ἰδίαν. κρείττων δὲ ἡ λιγνὺς, δύναμιν δὲ ἔχει πραυντικὴν τῶν ἐν ὀφθαλμοῖς φλεγμονῶν, σταλτικὴν καρκινωμάτων. τὸν αὐτὸν δὲ τρόπον σκευάζεται λιγνὺς καὶ ἐκ τῆς σμύρνης καὶ ἐκ τοῦ στύρακος. ἀρμόζουσι δὲ πρὸς τὰ αὐτά. καὶ τῶν λοιπῶν δὲ δακρύων τὴν λιγνὺν ὁμοίως ἐκλάμβανε.

[104.13] λάμβανε *replaced with* ἐκλάμβανε

253) Soot of the frankincense tree (*Boswellia carterii* Birdw.) is prepared in this manner: taking with tweezers one granule at a time of the frankincense tree and kindling it with the lamp, put it into an empty earthenware hollow dish, and then cover it with a concave copper vessel, once it has been carefully pounded; place under both rims of the cover small stones four fingerbreadths in height, so that it makes room for the insertion of yet another granule before the first granule is completely extinguished, until you think sufficient soot has collected. Wipe continually round the outer part of the copper vessel, however, with a sponge [soaked] in cold water; for in this

way all the soot will settle without its being too much burnt. So after wiping away the first of the soot with a scraper, do the same for as much as is appropriate, and remove to one side the embers of the burnt frankincense tree. The soot is stronger, and it has a capacity which relieves acute inflammations in the eyes, and which can check malignant tumours. Soot is prepared in the same manner both from myrrh (*Commiphora myrrha* Engl.) and storax (gum from *Styrax officinalis* L.). They are suitable for the same things. Obtain soot in like manner from the rest of the resins.

253) This entry is absent in Galen.

There is no apparent substantiation of the above claims in modern scientific literature.

[104.14-17]

(σνδ´) Λιβανωτίδες τρεῖς εἰσιν ὁμοίας ἅπασαι δυνάμεως, μαλακτικῆς τε και διαφορητικῆς, ὁ δὲ χυλὸς ὃ τε τῆς ῥίζης και ὁ τῆς πόας μέλιτι μιγνύμενος ἀμβλυωπίας, ὅσαι διὰ πάχος ὑγρῶν γίνονται, θεραπεύει. μετέχουσι γὰρ αἱ λιβανωτίδες ῥυπτικῆς τε και τμητικῆς δυνάμεως.

[15]

[Galen 12.60.19-61.9]

254) The three rosemary-frankincense plants all have a similar capacity, softening and dispersive, and when the juice of the root and the herb is mixed with honey, it treats all cases of visual impairment caused by thickness of humours. For the rosemary-frankincenses share a capacity both cleansing and cutting.

254) Aëtius quotes five eighths of Galen's entry fairly accurately, omitting information about a variety called rosemary (ῥουσμαρῖνον) by the Romans, used to treat jaundice (12.61.4-6).

No information about these plants was found in modern literature.

[104.18-105.2]

(σνε´) Λιγνὺς ἅπασα. Ἔστι μὲν ξηραντικῆ, διὸ και γεώδης ὑπάρχει τὴν οὐσίαν, ἔχουσα και τοῦ καύσαντος τὴν ὕλην πυρὸς λείψανον, ἀλλὰ τοῦτο μὲν ὀλίγον. ἡ δὲ ὅλη φύσις αὐτῆς ξηραντικῆ γεώδης λεπτομερῆς. αἱ δὲ κατ' εἶδος διαφοραὶ παρὰ τὴν καυθεῖσαν ὕλην γίνονται, ἢ θερμότερας ἢ ψυχροτέρας ἢ ἀδηκτοτέρας. αὐτίκα γέ τοι λιβάνου λιγνύϊ χρωῶνται, μιγνύντες ὀφθαλμικαῖς δυνάμεσι, και μάλιστα

[20]

5

ταῖς ἐπὶ τῶν ἐλκῶν· καὶ γὰρ ἀνακαθαίρεται ταῦτα καὶ σαρκοῦται πρὸς αὐτῶν. καὶ ἡ τῆς τερεβινθίνης δὲ καὶ συμύρνης ἄλυπός ἐστι παραπλησίως τῇ τοῦ λιβάνου, ἢ δὲ τοῦ στύρακος ἰσχυροτέρα τούτων, ἔτι δὲ μᾶλλον ἢ τῆς ὑγρᾶς πίσεως καὶ ταύτης ἔτι μᾶλλον ἢ τῆς κεδρίας. χρῶνται δὲ ταῖς δριμυτέραις ἐπὶ τε τῶν πτίλων ὀνομαζομένων βλεφάρων καὶ τῶν περιβεβρωμένων κανθῶν καὶ ὑγρῶν ὀφθαλμῶν ἄνευ φλεγμονῆς. [25] 10 [p105]

[Galen 12.61.9-62.11]

255) Soot in general. It has a drying effect, for which reason it is also earthy in essence, having residual material from the fire which burnt the wood, but only slightly so. Its complete nature is drying, earthy and fine-grained. The differences in each species are in accordance with the wood which had been burnt, either warmer, cooler or less pungent. For one example, they use frankincense-tree soot, combining it with materials which have capacities for the eyes, and especially those for ulcers; in fact, these ulcers are cleaned and fleshed up by them. The soot from the terebinth tree (*Pistacia terebinthus* L.) and myrrh is painless, almost the same as that from the frankincense tree, whereas that from the storax tree is stronger than these, and that from raw pitch even more so, and that from Syrian cedar oil is even stronger than this. They use the sharper soots for those suffering from a condition called ptilosis of the eyelids [i.e., blepharitis], ulcerated corners of the eyes, and watery eyes without inflammation.

255) Aëtius follows Galen fairly closely, paraphrasing some of his comments on treating eyes.

225.11 [104.28] **πτίλων** In book 7, ch. 80, Aëtius describes ptilosis as a disease involving thickening and crusting of eyelids with loss of lashes, most likely blepharitis.

There is no apparent substantiation of the above claims in modern scientific literature.

[105.3-5]

(σνζ´) Λιγυστικοῦ καὶ ἡ ρίζα καὶ τὸ σπέρμα τῶν θερμαινόντων εἰς τοσοῦτόν ἐστιν, ὡς ἔμμηνά τε κινεῖν καὶ οὔρα προτρέπειν. ἐστὶ δὲ καὶ ἄφυσον. [5]

[Galen 12.62.12-14]

256) Both the root and seed of bastard lovage (*Laserpitium siler* L.) belong to the warming substances, to the extent that they are emmenagogic and promote urine. They also suppress flatulence.

256) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[105.6-10]

(σνζ´) Λινόσπερμον ἐσθιόμενον φυσῶδές ἐστι, κἂν ἢ πεφρυγμένον, οὕτως ἄρα περιττωματικῆς ὑγρότητος ὑπάρχει μεστόν. ἐστὶ δὲ καὶ θερμὸν ἐν τῇ πρώτῃ που τάξει, καὶ ὑγρότητος καὶ ξηρότητος ἐν τῷ μέσῳ πως τέτακται. ἐστὶ δὲ κακοστόμαχον καὶ δύσπεπτον· μετέχει γε μὴν τι καὶ τῆς οὐρητικῆς δυνάμεως. φρυχθὲν δὲ ἴσθησί πως τὴν γαστέρα. 5 [10]

[Galen 12.62.15-18]

257) When eaten, linseed causes flatulence even if it has been roasted; and so it is full of excessive moisture. It is also warm, somewhere in the first rank, and it has been ranked somewhat in the midpoint between moistness and dryness. It is bad for the stomach and difficult to digest; it has also some share in diuretic capacity. When roasted, it somehow settles the bowel.

257) Aëtius quotes Galen's *SMT* almost verbatim, and then adds comments regarding digestibility (257.4-5 [105.9-10]), taken from *Alim.Fac.* 6.549.5-9.

There is no apparent substantiation of the above claims in modern scientific literature.

[105.11]

(σνη´) Λόβια. Περὶ λοβίων προέγγραπται ἐν τῷ περὶ δολίχων τόπῳ.

258) Little pods. Note has already been made about little pods on the section concerning calavances.

258) This entry is absent in Galen.

[105.12-17]

(σθ´) Λινόζωστις. Ταύτη χρῶνται μὲν ἅπαντες εἰς τὰς τῆς γαστρὸς καθάρσεις· οὐ μὴν ἀλλὰ εἰ καὶ πειραθῆναι τις βούλοιο καταπλάττων <αὐτήν>, εὐρήσει διαφορητικὴν ἰκανῶς. [τὸ σπέρμα οὐπω ξηρανθὲν διδάσκει ἢ πείρα τὰ παρὰ τοῖς ἰδιώταις ὀνομαζόμενα ἐν τῷ σώματι κάρφια ἐξαφανίζει<ν>, ἐπειδὴν τις αὐτὰ τῷ σπέρματι ἐπιμελέστερον ἀνατρίβῃ.] [15] 5

[Galen 12.63.1-4]

259) Mercury plant (*Mercurialis annua* L.). Everyone uses this for purgations of the bowel. But, however, if one wanted to try using <it> as a poultice, he will find it sufficiently diuretic. [Experience teaches that the seed, not yet dried, destroys the things in the body called by laymen “twiglets”, when one rubs them rather carefully with the seed.]

259) This item appears out of alphabetical order, both in Aëtius and Galen. Aëtius quotes Galen almost verbatim, omitting μόνον (“only”) at the end of the first sentence.

259.5 [105.16] **κάρφια** The meaning is unclear. Elsewhere, Aëtius and Galen use this word only in a botanical rather than pathological sense.

There is evidence that this plant is toxic to humans (Bruneton, 1995: 525).

[105.18-21]

(σξ´) Λογχίτιδος. Τῆς μὲν τὸ σπέρμα τρίγωνον λόγχι εὐοικὸς ἐχούσης ἢ ῥίζα ἐστὶ διουρητικὴ, τῆς δὲ τῷ σκολοπενδρίῳ παραπλήσιας τὰ φύλλα χλωρὰ μὲν εἰς κόλλησιν τραυμάτων ἐπιτήδεια, ξηρὰ δὲ μετ’ ὄξους πινόμενα σπλῆνας ἰᾶται ἐσκιρρωμένους. [20]

[Galen 12.63.5-11]

260) About *Serapias lingua* L. [a type of orchid]. The root of the one which has the triangular seed like a spear-head is diuretic, whereas the leaves of the one similar to miltwaste (*Asplenium ceterach* L.) are suitable when fresh for closure of wounds, but when dry and drunk with vinegar they heal indurated spleens.

260) Aëtius quotes Galen fairly accurately, omitting a comparison with δαῦκος (wild carrot) (12.63.6-8).

There is no apparent substantiation of the above claims in modern scientific literature.

[105.22-106.7]

(σξά´) Λύκιον ἢ πυξάκανθον ἀκανθῶδές ἐστι φυτόν, ἐξ οὗ τὸ καλούμενον λύκιον γίγνεται, ὃ πρὸς ὑπόπια χρώμεθα καὶ τὰς ἐν ἔδρᾳ καὶ στόματι φλεγμονὰς καὶ ἐλκώσεις, ἔρπητάς τε καὶ σηπεδόνας καὶ τὰ κακοήθη τῶν ἐλκῶν καὶ παρατρίμματα καὶ παρωνυχίας. ἐστὶ γὰρ ξηραντικῆς δυνάμεως ἐξ ἑτερογενῶν οὐσιῶν συγκείμενον, τῆς μὲν ἐτέρας λεπτομεροῦς τε καὶ διαφορητικῆς καὶ θερμῆς κατὰ τὴν δευτέραν ἀπόστασιν, τῆς δὲ ἐτέρας γεώδους ψυχρᾶς, ἐξ ἧς καὶ τὴν στύψιν ἔχει μετρίαν. διὸ καὶ πρὸς διαφέροντα πάθη χρῶνται τῷ φαρμάκῳ, ὡς ῥυπτικῷ μὲν πρὸς τὰ ἐπισκοτοῦντα ταῖς κόραις παραλαμβάνοντες, ὡς συνακτικῷ δὲ κοιλιακοῖς καὶ δυσεντερικοῖς καὶ ῥῶ γυναικείῳ προσφέροντες. τὸ δὲ ἰνδικὸν εἰς ἅπαντα χρησιμώτερον.

[Galen 12.63.12-64-11]

261) Dyer's buckthorn (*Rhamnus petiolaris* Boiss.) or thorn like a box-tree [*pyxacanthon*] is a thorny plant, from which comes what is called *lukion*, which we use for black eyes, and acute inflammations and ulcerations in the anus and in the mouth, for cases of herpes and putrescent lesions, and malignant types of ulcers, intertrigos and whitlows. For it has a drying capacity, being composed of diverse natures, one fine-grained and dispersive, and warm at the second level, the other earthy and cold, from which it also has moderate astringency. For this reason, they also use the drug for different diseases, employing it as cleansing for lesions causing obscurities in the pupils, and applying it as constrictive for those suffering from abdominal disorders, dysenteries and female flow. The Indian variety is more useful for all conditions.

261) Aëtius reduces Galen's entry by a third, by omitting comments about its elemental composition (12.64.2-6), and information about its provenance from Lycia and Cappadocia (12.64.9-10).

261.1 [105.22] **πυξάκανθον ἀκανθῶδές** Or *Pyxacanthus chironis*, according to Carnoy.

There is no apparent substantiation of the above claims in modern scientific literature; on the contrary, its effect on the gut would be laxative, owing to the presence of anthraquinones (Evans, 2009: 243-4).

[106.8-12]

(σξβ´) Λυσιμάχιος ἐπικρατοῦσαν ἔχει τὴν στυπτικὴν ποιότητα, δι´ ἣν καὶ τραύματα κολλᾷ καὶ τὰς ἐκ μυκτῆρων αἰμορραγίας ἴστησιν ἐμπλασσομένη· καὶ τῶν ἄλλων δὲ αἰμορραγιῶν ἴσχυαιμὸν ἐστὶ φάρμακον αὐτῆ [10] τε καὶ ὁ χυλὸς αὐτῆς ἔτι καὶ μᾶλλον, ὥστε καὶ πινόμενος καὶ ἐνιέμενος δυσεντερίας τε καὶ αἵματος ἀναγωγὰς καὶ ῥοῦν γυναικεῖον ἰᾶται. 5

[Galen 12.64.12-18]

262) Loosestrife (*Lysimachia vulgaris* L.) has a predominant astringent quality, because of which it closes wounds and checks bleeding from the nostrils when stuffed in. And it is a drug which staunches other haemorrhages, both itself and its juice even more so, so that both when it is drunk and inserted as an enema or douche, it heals dysenteries, cases of bringing up blood, and female flow.

262) Aëtius quotes Galen almost verbatim, but adds that the drug may be used as an enema or douche (262.4-5 [106.11-12]).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists rose campion (*Lychnis coronaria* Desr.), omitted by Aëtius, whose seed, he says, is warm and dry (Περὶ λυχνίδος 12.65.1-4).]

[106.13-18]

(σξγ´) Λωτὸς ὁ ἡμερος, ὃν ἔνιοι τρίφυλλον ὀνομάζουσι, ῥυπτικῆς με- τρίας ἐστὶ δυνάμεως, οὕτω δὲ καὶ ξηραντικῆς, ἐν δὲ τῇ κατὰ θερμότητα καὶ ψῶξιν συζυγία εὐκρατος· ὁ δὲ ἄγριος λωτὸς ἐν Λιβύῃ μὲν [15] πλεῖστος γεννᾶται. τὸ σπέρμα δὲ αὐτοῦ τῆς δευτέρας ἐστὶ τάξεως τῶν θερμαινόντων. ἔχει δὲ τι καὶ ῥυπτικόν. τοῦ δὲ αἰγυπτίου τὸ σπέρμα καὶ ἀρτοποιοῦνται. 5

[Galen 12.65.5-11]

263) Cultivated *lotos* (cultivated clover, *Trifolium fragiferum* L.), which several people call “trefoil”, has a moderately cleansing capacity, and it is temperate from the combined influence of warmth and coldness. Wild *lotos*

(wild fenugreek, *Trigonella gladiata* L.) grows most in Libya. Its seed belongs to the second rank of warming substances. It also has some cleansing effect. They also make the seed of Egyptian *lotos* (*Nymphaea lotus* L.) into bread.

263) Aëtius quotes Galen almost verbatim, apparently substituting ῥυπτικῆς for πεπτικῆς (263.1 [106.13]/12.65.6).

263.6 [106.18] **ἀρτοποιοῦνται** Galen's (and Aëtius') comment about bread-making may serve to remind us that dietetics was, like pharmaceuticals, an important branch of therapeutics (cf. Nutton, 2013: 247).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[106.19-24]

(σξδ´) Λωτὸς τὸ δένδρον. Στυπτικῆς μὲν οὐ πολλῆς μετέχει ποιότητος· ἐστὶ δὲ καὶ λεπτομερὲς καὶ ξηραντικόν. τὸ γοῦν ῥίνισμα τῶν ξύλων αὐτοῦ πρὸς τε ῥοῦν γυναικεῖον ἀρμόττει καὶ δυσεντερίας καὶ κοιλιακάς διαθέσεις. ἐναφέπεται δὲ ποτε μὲν ὕδατι, ποτὲ δὲ οἴνω, ὡς ἂν καὶ ἡ χρεία κελεύῃ, καὶ οὐκ ἐνίεται μόνον, ἀλλὰ καὶ πίνεται. καὶ μὴν καὶ τὰς ρεούσας τρίχας ἐπέχει τῷ μετρίως στύφειν καὶ ξηραίνειν.

[20]

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[Galen 12.65.12-66.4]

264) Lotus tree. It has not much share of astringent quality but it is fine-grained and drying. At any rate, its wood shavings are suitable for female flow, dysenteries and abdominal conditions. Sometimes it is boiled down in water, sometimes in wine, as the need dictates, and not only is it used as an enema or douche, but it is also drunk. Moreover, it checks diffuse hair loss by its moderate astringency and drying effect.

264) Aëtius quotes Galen largely verbatim, but omits a final sentence containing a cross-reference to gum-ladanon.

264.1 [106.19] **Λωτὸς τὸ δένδρον** André suggests clove tree (*Eugenia caryophyllata* Thunb.) as a translation.

There is no apparent substantiation of the above claims in modern scientific literature.

(σξε΄) Μάκερ φλοιός ἐστὶν ἐκ τῆς Ἰνδικῆς κομιζόμενος· στύφει δὲ μετὰ βραχείας δριμύτητος. διὸ καὶ ξηραίνει. ἐστὶ δὲ καὶ λεπτομερῆς διὰ τὴν εὐωδίαν· καὶ διὰ τοῦτο κοιλιακαῖς τε καὶ δυσεντερικαῖς μίγνυται δυνάμεσι, ἐν μὲν τῇ τρίτῃ τάξει τῶν ξηραϊνόντων ὑπάρχων, ἐν δὲ τῇ κατὰ θερμότητα καὶ ψυχρότητα διαφορᾷ μηδέτερον ἐπιφανῶς ἐργαζόμενος. [5]

[Galen 12.66.5-14]

265) Muttee-pal bark (*Ailanthus malabrica* LSJ) is supplied from India. It is astringent with a brief sharpness. Accordingly, it also dries. It is fine-grained because of its sweet smell; and for this reason it has mixed capacities for those with intestinal disorders and dysentery, being in the third rank of drying substances, but exerting a clear effect in neither direction in the range between hot and cold.

265) Aëtius reduces Galen's entry by half by omitting generalisations about taste, smell and elemental properties (12.66.8-11), and quotes the remainder largely accurately.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[107.5]

(σξζ΄) Μαλαβάθρου φύλλον ναρδοστάχυϊ παραπλήσιόν ἐστὶ τὴν δύναμιν.

[Galen 12.66.15-16]

266) Malabathron leaf (*Cinnamomum tamala* Nees or *albiflorum* Nees) is very similar in effect to spikenard.

266) Aëtius quotes Galen almost verbatim.

266.1 [107.5] **Μαλαβάθρου φύλλον** Or possibly *Xanthochymus pictorius* Roxb. (Carnoy).

There is no relevant modern information about this material.

[107.6-14]

(σξζ΄) Μαλάχη. Ἡ μὲν ἀγρία διαφορητικῆς ἀτρέμα καὶ μαλακτικῆς ἐπὶ βραχὺ μετέχει δυνάμεως· ἡ δὲ κηπευομένη καθ' ὅσον ὕδατώδους ὑγρότητος μετέλιφε, κατὰ τοσοῦτον καὶ ἀσθενεστέρα τὴν δύναμιν ὑπάρχει.

ὑπέρχεται δὲ ῥαδίως τὴν γαστέρα οὐ διὰ τὴν ὑγρότητα μόνον, ἀλλὰ
καὶ διὰ τὴν γλισχρότητα, καὶ μάλισθ' ὅταν μετ' ἐλαίου τε καὶ γάρου 5 [10]
προσφέρηται, οἴνου βραχέος ἐπιρραϊνομένου ἐν τῷ τῆς ἐδωδῆς καιρῷ.
ὁ δὲ καρπὸς αὐτῶν εἰς τοσοῦτον ἰσχυρὸς ἐστὶν εἰς ὅσον καὶ ξηρότερος.
ἐστὶ δὲ καὶ ἡ δένδρομαλάχη καλουμένη τούτου τοῦ γένους, ἀλλὰ
διαφορητικωτέρα τῶν προειρημένων· ὀνομάζεται δὲ ἀλθαία.

[107.13] ἀναδένδρομαλάχη *replaced with* δένδρομαλάχη

[Galen 12.66.17-67.6]

267) Mallow. The wild variety (*Malva silvestris* LSJ) shares a gently dispersive and briefly softening capacity; but the garden variety (*Lavatera arborea* L.) is weaker in capacity by as much as it has a share of watery moistness. It readily has a laxative effect, not only because of its moistness but also because of its stickiness, and especially so whenever it is prescribed with olive-oil and fish-sauce, with a little wine sprinkled over it at the moment of the meal. Their fruit is as powerful as much as it is drier. There is also one of this species called “tree-mallow” (*Lavatera arborea* L.), but it is more dispersive than the aforementioned; and it is named “marshmallow” (*Althaea officinalis* L.).

267) Aëtius quotes Galen almost verbatim, but adds comments about its use as a laxative (267.4-6 [107.9-11]) drawn from *Alim.Fac.* 6.629.8-10.

The presence of mucilaginous material in mallow species endorses Aëtius' assertion that it is a moist, sticky laxative (Evans, 2009: 214).

[107.15-20]

(σξη´) Μανδραγόρας ἐπικρατοῦσαν μὲν ἔχει τὴν ψυκτικὴν δύναμιν, ὡς
τῆς τρίτης εἶναι τῶν ψυχόντων τάξεως· οὐ μὴν ἀλλὰ καὶ θερμότητος
ὀλίγης μετέχει καὶ κατὰ γε τὰ μῆλα καὶ ὑγρότητος, ὅθεν καὶ κωμα-
τώδη τὴν δύναμιν ἐστὶ ταῦτα. τῆς ρίζης δὲ ὁ φλοιὸς ἰσχυρότατος ὢν
οὐ ψύχει μόνον, ἀλλὰ καὶ ξηραίνει· τὸ δ' ἄλλο τὸ ἔνδον ἀσθενὲς 5
ὑπάρχει. [20]

[Galen 12.67.7-13]

268) Mandrake (*Mandragora officinalis* L.) has a predominantly cooling capacity, so as to belong to the third rank of the cooling substances; but it certainly also shares some small warmth and moistness, at least with respect to its fruit, and hence these are narcotic in capacity. As the bark of the root

is strongest, not only does it cool but it also dries; the other part that is inside is weak.

268) Aëtius quotes Galen almost verbatim.

Mandrake, a solanaceous plant, is a source of atropine and scopolamine (Lewis, 1977: 423), whose various dose-dependent central nervous system effects (Alstead & Macarthur, 1965: 160-7) can be depressant to the extent of what Aëtius describes as κωματώδη, if that signifies a substantial lowering of conscious level.

107.21-24

(σξθ´) Μάραθρον. Θερμαίνει μὲν ἰσχυρῶς, ὡς ἐκ τῆς τρίτης ἤδη δύνασθαι τάξεως εἶναι. ξηραίνει δὲ κατὰ τὴν πρώτην τάξιν καὶ διὰ τοῦτο γάλακτός ἐστι γεννητικόν, ὑποχεομένοις τε βοηθεῖ κατὰ τὸν αὐτὸν λόγον. ἐστὶ δὲ καὶ διουρητικὸν καὶ καταμηνίων ἀγωγόν.

[Galen 12.67.14-68.13]

269) Fennel (*Foeniculum vulgare* Gaertn.). It warms strongly, so as to belong to the third rank by capacity. But it dries at the level of the first rank, and for this reason it is productive of milk and, by the same rationale, it helps those who are under-lactating. It is also diuretic and emmenagogic.

269) Aëtius quotes the first third of Galen's entry fairly accurately, but omits the remainder (12.68.2-13) concerning a wild variety – horse-fennel (*Prangos ferulacea* Lindl.) – larger, more drying and able to check the gut, crumble stones and treat jaundice; a sub-variety of this with rounded seeds is weaker.

There is no apparent substantiation of the above claims in modern scientific literature.

[107.25-108.2]

(σο´) Μαστίχη. Ἡ μὲν λευκὴ καὶ Χία σύνθετός πῶς ἐστὶν ἐξ ἐναντίων δυνάμεων, στυπτικῆς καὶ μαλακτικῆς· διὸ καὶ στομάχου καὶ κοιλίας καὶ ἐντέρων καὶ ἥπατος φλεγμοναῖς ἀρμόττει, κατὰ τὴν δευτέραν ἀπόστασιν θερμαίνουσα. ἡ δὲ μέλαινα, ἡ Αἰγυπτία προσαγορευομένη, ξηραίνει τε μᾶλλον αὐτῆς καὶ ἦττον στύφει, ὅθεν ἐπιτηδειότερα πῶς ἐστὶ πρὸς τὰ διαφορήσεως ἰσχυροτέρας δεόμενα.

5 [p108]

[Galen 12.68.14-69.7]

270) Mastic. The white and the Chian are somehow composed of opposing capacities, astringent and softening; accordingly it is suitable for inflammations of the stomach, abdomen, intestines and liver, as it warms at the second level. The black variety, which is called “Egyptian”, dries more than the white and is less astringent, whence it is somewhat more suitable for conditions needing stronger dispersal.

270) Aëtius quotes Galen largely verbatim, but omits the last third of his entry (12.69.4-7), concerning use for boils, and preparation of oil.

Mastic, from *Pistacia lentiscus* L. (cf. mastic oil (2), ch. 122, p.139), may be effective against *Helicobacter pylori* (Evans, 2009: 301), the causative organism of peptic ulcers, and may therefore be said to be “suitable for inflammations of the stomach and abdomen”, but this contradicts earlier research (Loughlin et al., 2003: 367-71).

[108.3-12]

(σοα´) Μελάνθιον. Θερμαίνει μὲν καὶ ξηραίνει κατὰ τὴν τρίτην τάξιν, ἔοικε δὲ καὶ λεπτομερὲς ὑπάρχειν· οὕτω γοῦν καὶ τοὺς κατάρρους ἰᾶται θερμὸν ἐν ὀθονίῳ προσαγόμενον, ὡς ὀσμᾶσθαι συνεχῶς· καὶ μὲν [5] δὴ καὶ ἀφυσώτατόν ἐστι πινόμενον. ἀναιρεῖ δὲ καὶ ἔλμινθας, οὐ μόνον ἐσθιόμενον, ἀλλὰ καὶ κατὰ τῆς γαστρὸς ἐπιτιθέμενον ἔξωθεν διὰ 5 τὴν πικρότητα. λέπρας δὲ καὶ ἦλους καὶ μυρμηκίας ἐκβάλλει καὶ καταμήνια προτρέπεται διὰ πάχος καὶ γλισχρότητα χυμῶν ἐπεσχημένα. οὕτω δὲ καὶ ὀρθόπνοϊαν ὀνίνησι. καὶ ὅλως ἔνθα τε- 10 μὲν καὶ ῥύψαι καὶ ξηρᾶναι καὶ θερμᾶναι δεόμεθα χρησιμώτατόν ἐστιν.

[108.9] προτρέπει replaced with προτρέπεται

[108.9] after ἐπεσχημένα. om. [10-11] ὀνίνησι δὲ καὶ ἀλωπεκίας καιόμενον καὶ μετὰ ἐλαίου λειοτριβόμενον καὶ χριόμενον.

[Galen 12.69.8-70.8]

271) Black cumin (*Nigella sativa* L. or *damascena* L.). Whereas it warms and dries at the third rank, it is fitting that it is also fine-grained. So, then, it treats catarrhs, when applied warm in a linen cloth, so as to be smelled repeatedly. Furthermore, it is highly flatus-suppressing when it is drunk. Because of its bitterness it removes worms, not only when eaten, but also when applied externally below the abdomen. It gets rid of scaly skin lesions, plantar warts and sessile warts, and periods which have been held back by

thick and sticky humours are brought on by it. So too it is helpful in cases of orthopnoea. And in short, it is very useful when we need to cut, cleanse, dry and warm.

271) Aëtius reproduces two thirds of Galen's entry fairly closely, but omits his comments detailing the plant's nature based on humoral theory (12.69.12-17).

There is evidence of anthelmintic activity when black cumin preparations are ingested by rats (Abu el Ezz, 2005), and humans (Akhtar & Riffat, 1991), and also of antipsoriatic effects in animal and *in vitro* studies (Dwarampudi et al., 2012).

[108.13-15]

(σοβ') Μελίλωτον μικτῆς ἐστὶ δυνάμεως· ἔχει μὲν γάρ τι καὶ στυπτικόν, ἀλλὰ καὶ διαφορεῖ καὶ συμπέττει. πλεόν γάρ ἐν αὐτῷ τὸ τῆς θερμῆς οὐσίας ἐστὶν ἢ περὶ τὸ τῆς ψυχρᾶς. [15]

[Galen 12.70.9-12]

272) Melilot (*Melilotus officinalis* Lam.) has a mixed capacity; for it has some astringent effect, but disperses and concocts. There is, in fact, more of the warm nature in it than the cold.

272) Aëtius quotes Galen verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[108.16-109.2]

(σογ') Μέλι θερμαίνει καὶ ξηραίνει κατὰ τὴν δευτέραν τάξιν. ἐστὶ δὲ ἀπλῶς ὡς ἐνὶ μάλιστα δυνάμεώς τε καὶ κράσεως τῆς ῥυπτικῆς ὀνομαζομένης· λεπτομερέστατόν τε ἐστὶ καὶ μάλιστα τὸ γινόμενον ἔνθα θύμος πλεῖστα εὐρίσκεται. λεπτομερὲς δὲ ὑπάρχον ἐξ ἀνάγκης ἔχει τι καὶ ῥυπτει· τοῦτο οὖν ἀφαιροῦντες αὐτοῦ, λέγω δὴ τὸ ῥυπτειν, διουρητικώτερον αὐτὸ ἀποτελοῦμεν, καὶ πρὸς ἀνάδοσιν καὶ θρέψιν ἐπιτήδειον. καλλίστη δὲ ἀφαίρεσις γίνεται μιχθέντος ὕδατος πλείστου καὶ ἐψηθέντος ἄχρι περ ἂν ἀφρίζον παύσῃται, ἀφαιρουμένου συνεχῶς δηλονότι τοῦ ἀφροῦ. τὸ δὲ μὴ ἐψηθὲν μελίκρατον ὑπέρχεσθαι κάτω φθάνει πρὸ τοῦ πεφθῆναι. γέρουσι μὲν οὖν καὶ ὄλως ταῖς ψυχραῖς τοῦ σώματος κράσεσιν ἐπιτήδειον τὸ μέλι, τοῖς δὲ ἀκμάζουσι καὶ θερ-

5 [20]

10 [25]

μαῖς ἐκχολοῦται πρὶν πεφθῆναι. ἐψηθὲν δὲ καθ' αὐτὸ ἦττον γίνετα
δριμὺ καὶ δηκτικόν, ὅθεν καὶ μᾶλλον τρέφει καὶ εἰς τὰς τῶν κόλπων
κολλήσεις ἐπιτηδειότατον γίνετα.

[p109]
15

[108.19] θύμος *replaces* θύμα

[108.24] παύσηται *repl.* παύσητα

[109.1] δηκτικόν *repl.* ῥυπτικόν

[Galen 12.70.13-71.9]

273) Honey warms and dries at the level of the second rank. It has simply, as is perfectly possible, a capacity and composition called cleansing. It is very fine-grained, especially that produced where thyme is found most. Since it is fine-grained, of necessity it has some bitterness, through which it stimulates the bowel towards defaecation. And it has been said that it also cleanses. So, taking this away – I am talking, that is, about the cleansing action – we render it more diuretic, and suitable for assimilation and nourishment. The separation becomes finest when an excess of water is mixed in, and it is boiled until foaming stops, while, obviously, the foam is continually removed. The unboiled honey-water sinks down first, before concoction. Honey, therefore, is suitable for old men, and in every case of cold temperaments of the body, and it empties of bile those in their prime and those with warm temperaments, before having been concocted. When boiled by itself, it becomes less sharp and biting, whence it is also more nourishing, and becomes most suitable for closure of superficial sinuses.

273) Aëtius quotes only Galen's initial statement in *SMT* about honey's cleansing capacity (12.70.13-15); Aëtius' subsequent comments are drawn from *Alim.Fac.* 6.738.14-74217, while the remaining unquoted four fifths of Galen's *SMT* text concern mainly the differences due to provenance.

The antiseptic properties of honey are documented (Acton & Dunwoody, 2008), and it may therefore aid sinus closure, as well as helping other infected skin conditions when used as an excipient. Aëtius' other claims remain unsubstantiated.

[109.3-7]

(σοδ´) Μελισσόφυλλον. Μελισσόφυλλον πρασίῳ μὲν ἐστὶ παραπλήσιον τὴν δύναμιν, ἀπολείπεται δὲ αὐτοῦ πάμπολυ. διὰ τοῦτο οὐδὲ χρῆταί τις αὐτῷ· περιττὸν γὰρ πρασίῳ παρόντος πανταχῆ τῆς γῆς μελισσοφύλλῳ χρῆσθαι· εἰ μὲντοι μὴ παρείη πράσιον εἰς ὅσαπερ ἐκεῖνῳ χρώμεθα καὶ τούτῳ χρηστέον, γινώσκοντα τὸ τῆς ἐνεργείας ἔλλιπές. [5] 5

[Galen 12.71.10-16]

274) Balm (*Melissa officinalis* L.). Balm is similar to horehound (*Marrubium* L. spp.) in capacity, but is very much inferior to it. For this reason one never uses it. For, since horehound is present everywhere on earth, it is superfluous to use balm. If, however, horehound is not available, it [balm] must be used for all the conditions for which we use that [horehound], despite knowing its lesser effectiveness.

274) Aëtius quotes Galen largely verbatim.

Balm is now believed to have various pharmacological properties, but Aëtius has not listed these; horehound is of doubtful efficacy (Bruneton, 1995: 520).

[109.8-9]

(σοε´) Μέσπιλον στρυφνὸς ἰκανῶς ὁ καρπὸς τοῦ δένδρου τούτου, ἐφεκτικὸς δὲ ἰκανῶς γαστρός.

[Galen 12.71.17-72.6]

275) Medlar (*Mespilus germanica* L.). The fruit of this tree is sufficiently astringent, and sufficiently able to check the bowel.

275) Aëtius quotes only a quarter of Galen's text, omitting details of the structure of the plant, responsible for its being called *trikokkon*, and a mention of the astringency of its shoots and leaves.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists *Campanula lingulata* L., omitted by Aëtius, whose root and fruit supposedly have opposing capacities, the former inhibiting, and the latter provoking, menstruation (Περὶ μηδίου 12.72.7-12).]

[109.10-17]

(σος) Μήκων πᾶσα ψυκτικῆς ἐστὶ δυνάμεως· ἀλλὰ τῆς μὲν κηπευομένης, ἦν καὶ θυλακίτιδα προσαγορεύουσι, μετρίως ὑπνῶδες τὸ σπέρμα· τῆς δὲ ροιάδος ἰσχυρότερον ψύχει τὸ σπέρμα, ὥστε οὐκ ἂν τις αὐτῷ μόνῳ χρῆσαιτο ἀλύπως, ὥσπερ τῷ τῆς κηπευομένης· τῆς δὲ ἀγρίας τὸ σπέρμα μέλαν ὑπάρχον ἤδη φαρμακῶδές ἐστὶν ἰκανῶς ψύχον καὶ μάλιστα τῆς θηβαίας καὶ ὁ ὅπος δὲ ἰσχυρῶς ψύχει μέχρι νάρκης καὶ νεκρώσεως. ἐστὶ γὰρ τῆς τετάρτης τε καὶ ἐσχάτης τάξεως τῶν ψυχόντων.

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[15]

[Galen 12.72.13-74.4]

276) Every poppy has a cooling capacity. But the seed of the variety grown in gardens, which they also call the common poppy, is moderately sleep-inducing; the seed of the corn poppy (*Papaver rhoeas* L. or *hybridum* L.) cools more powerfully, so that one would not use it alone harmlessly, like that of the garden variety. The black seed of the wild poppy (*P. rhoeas* L.), which is actually poisonous, is sufficiently cool, and especially the Theban variety, and the juice cools powerfully to the point of stupor and death. For it belongs to the fourth and uttermost rank of cooling substances.

276) Aëtius quotes only four short passages (12.73.3-5; 7-9; 12-13; 18-74.1) from Galen's much longer entry, which gives a more detailed account of the different varieties, mentions eating it mixed with honey, stresses its narcotic potency, and refers to its use in compound drugs.

The principal source of opium, which can sedate to a lethal degree, is the seed-pod of *P. somniferum* L., but the “taxonomy of the genus is complex” (Bruneton, 1995: 755), and so it may be assumed that Aëtius has opium in mind. It is interesting that he has omitted the other well known effects of the drug (Bruneton, 1995: 761-2), well described by other ancient authors, such as Celsus (5.23; 5.25.3-4, 10, 12), Pliny the Elder (*N.H.* 20.76) and Dioscorides (4.65 (K. 25.1.554-7)).

[109.18-25]

(σοζ΄) Μήκων κερατῖτις. Καλεῖται δὲ καὶ παραλία, ἐπειδὴ τὰ πολλὰ
πλησίον τῆς θαλάσσης φύεται· δύναμιν δὲ ἔχει ῥυπτικήν τε καὶ τμη-
τικήν, ὥστε ἡ μὲν ρίζα ἐν ὕδατι καθεψηθεῖσα μέχρι ἡμισείας, ἥπατι- [20]
κάς ὠφελεῖ διαθέσεις. τὰ δὲ φύλλα καὶ τὰ ἄνθη τὰ ῥυπαρὰ σφόδρα
καὶ κακοήθη τῶν ἐλκῶν ὀνίνησι. χρὴ δὲ αὐτῶν ἀφίστασθαι καθαρῶν 5
γενομένων τῶν ἐλκῶν· εἰς τοσοῦτο γὰρ ῥύπτειν πέφυκεν, ὡς καὶ
αὐτῆς τῆς καθαρᾶς σαρκὸς ἀποτήκειν. διὰ τοῦτο καὶ τὰς ἐσχάρας
ἀφαιρεῖ τῶν ἐλκῶν. [25]

[Galen 12.74.5-16]

277) Horned poppy (*Glaucium flavum* Crantz). It is called also the maritime variety, since the majority grow near the sea. It has a capacity both cleansing and cutting, so that when the root is boiled down in water to half volume, it helps liver conditions. The leaves and the flowers help exceptionally dirty lesions and malignant forms of ulcers. But it is necessary for them [leaves and flowers] to be removed when the wounds become clean; for they actually cleanse to the extent that they melt away the pure flesh itself. For this reason, it also removes eschars from ulcers.

277) Galen expands on the reason for its name (12.74.6-7), but otherwise Aëtius quotes him largely verbatim.

There appear to be two species, *G. corniculatum* Curtis and *G. flavum* Crantz, which share the same English name (cf. ch. 80, p.106).

G. flavum Crantz has been shown *in vitro* to have antibacterial effects (Cabo et al., 1988).

[Galen next lists frothy poppy (*Silene venosa* Asch.), whose seed supposedly purges inflammation/phlegm (Περὶ μήκωνος ἥρακλείας 12.74.17-75.2).]

[110.1-12]

(ση΄) Μηλέα περσική. Ταύτης τὰ φύλλα καὶ οἱ βλαστοὶ ἐπικρατοῦσαν
ἔχουσι τὴν πικρὰν ποιότητα· διὸ καὶ τὰς ἔλμινθας ἀποκτείνει λειω-
θέντα καὶ κατὰ τοῦ ὀμφαλοῦ ἐπιτεθέντα· καὶ ἄλλως δὲ διαφορητικόν
ἐστὶ φάρμακον. ὁ δὲ καρπὸς αὐτοῦ, τὸ περσικὸν ὀνομαζόμενον ὑγρό-
τερόν τε ἐστὶ καὶ ψυχρότερον τὴν κρᾶσιν. ἐσθιομένη δὲ ἡ σὰρξ αὐτοῦ 5 [5]
εὐφθαρτός τε ἐστὶ καὶ πάντη μοχθηρά, ὥστε οὐ χρὴ, καθάπερ ἔνιοι,
τελευταῖα τῆς ἄλλης τροφῆς αὐτὰ προσφέρεσθαι· διαφθείρεται γὰρ

ἐπιπολάζοντα. μεμνήσθαι δὲ χρῆ τοῦδε κοινοῦ πάντων ὄντος· ὅσα
κακόχυμα μὲν, ὑγρὰ δὲ καὶ ὀλισθηρὰ καὶ ῥαδίως ὑπιέναι δυνάμενα,
διὰ τοῦτ' ἐσθίειν αὐτὰ πρότερα τῶν ἄλλων. οὕτω γὰρ αὐτὰ τε ταχέως 10 [10]
ὑπέρχεται, κάκεινοις ποδηγεῖ· τὰ δὲ ὕστατα ληφθέντα συνδιαφθείρει
καὶ τὰ ἄλλα.

[Galen 12.76.7-15]

278) Peach (*Prunus persica* Batsch). The leaves and shoots of this plant have a predominant bitter quality; hence, when ground down and inserted into the navel, they even kill worms. Otherwise the drug is also dispersive. Its fruit, which is called the peach, is moister and cooler in composition. When its flesh is eaten, it is easily digested and of completely poor quality, so that it is unnecessary, just as several people do, for them to be administered at the end of the meal; for the superficial material is destroyed. And it is necessary to remember this which is common to all: all the unwholesome substances, the moist and slippery, and those capable of going down easily – remember to eat them, for that reason, before the others. For thus they go down quickly, and guide those others; what is taken last also destroys the rest at the same time.

278) Omitting information about the name (12.76.8-9), Aëtius quotes most of Galen's *SMT* entry fairly accurately, and then adds comments about digestibility (278.5-12 [110.5-12]) by quoting *Alim.Fac.* 6.593.1-6 virtually verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

110.13-18

(σοθ') Μηλέα ἀρμενιακή. Ταύτης καὶ τὸ δένδρον καὶ τὸν καρπὸν προκκόκ-
κιον καλοῦσιν. ἐστὶ δὲ ὑγρὸς τε καὶ ψυχρὸς ὁ καρπὸς κατὰ τὴν δευ-
τέραν που μάλιστα πεπονθῶς ἀπόστασιν. διαφορὰν δὲ τινα ἐπὶ τὸ [15]
βέλτιον τοῦτο κέκτηται· οὔτε γὰρ ὁμοίως διαφθείρεται κατὰ τὴν κοι-
λίαν, ὥσπερ τὰ περσικά, οὔτ' ὀξύνεται. φαίνεται δὲ τοῖς πολλοῖς 5
ἡδίων καὶ διὰ τοῦτο καὶ εὐστομαχότερα.

[Galen 12.76.16-77.2]

279) Apricot (*Prunus armeniaca* L.). They call its tree and fruit *prekokkion*. From my experience, the fruit is both moist and cold, at the

second level. This has gained it some advantage; for neither is it destroyed the same way in the abdomen as the peaches, nor is it made acid. To most, it seems more pleasant, and also better for the stomach because of this.

279) Omitting some information about the name, Aëtius quotes Galen's *SMT* fairly accurately, and then adds his own comments about digestibility (279.3-6 [110.15-18]) by quoting *Alim.Fac.* 6.593.8-11.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[110.19-27]

(σπ') Μηλέα μηδική [ἦτοι κιτρέα]. Ταύτης ὁ καρπὸς κιτρίον ὀνομάζεται ὑπὸ πάντων. κατὰ μὲν τὴν ἐντεριώνην τὴν ὀξειαν ποιότητα καὶ ξηραντικὴν δύναμιν ἐπικρατοῦσαν ἔχει, ὡς τῆς τρίτης εἶναι τάξεως τῶν ξηραίνοντων τε καὶ ψυχόντων. κατὰ δὲ τὸν φλοιὸν ξηραίνουσης κἀνταῦθα μετέχει κράσεως κατὰ τὴν δευτέραν ἀπόστασιν, οὐ μὴν ψυχρᾶς διὰ τὸ ἀρωματίζειν. ἡ δὲ σὰρξ αὐτοῦ παχύχυμὸς ἐστὶ καὶ ψυχρὰ διὰ τὸ σκληρόν. τὸ δὲ σπέρμα πᾶν ἄβρωτον· πικρὸν γὰρ καὶ δηλονότι καὶ διαφορητικὸν καὶ ξηραντικὸν κατὰ τὴν δευτέραν τάξιν καὶ τὰ φύλλα δὲ ξηραντικῆς ἐστὶ καὶ διαφορητικῆς δυνάμεως.

[20]

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[25]

[Galen 12.77.3-18]

280) Citron (*Citrus medica* L.) [Median plum or *kitrion*]. Its fruit is called *kitrion* by everyone. In its pith it has a sour quality and predominantly drying capacity, so as to belong to the third rank of drying and cooling substances. But in its bark, it shares a drying composition there also at the second level, not actually cool, according to its aromatic smell. Its flesh has a thick juice and is cool on account of its hardness. Its seed is completely inedible; for it is clearly bitter, dispersive and drying at the level of the second rank, and the leaves have a drying and dispersive capacity.

280) Aëtius reproduces five eighths of Galen's text fairly closely, omitting some details of the distribution of elemental properties, but adding his own comments about smell (280.6 [119.24]) and hardness (280.7 [119.25]).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[111.1-11]

(σπα´) Μήλα. Ἐν δὲ τοῖς ἄλλοις μήλοις πολλή τις ἡ διαφορά. ὅσα μὲν γὰρ στύφει μήλα ψυχρὸν ἔχει καὶ γεώδη χυμὸν, ὅσα δὲ ὀξέα φαίνεται ψυχρὸν μὲν ἀλλὰ λεπτομερῆ. μέσης δὲ ἐστὶ κράσεως τὰ γλυκέα πρὸς τὸ θερμότερον ῥέποντα. τοῖς μὲν οὖν αὐστηροῖς μήλοις κεχρηῆσθαι δεῖ, ὅταν ἦτοι διὰ δυσκρασίαν θερμὴν ἢ ὑγρότητα πολλὴν ἄτονος ἢ γαστήρ 5 [5] ὑπάρχει, τοῖς δὲ στρυφνοῖς ὅταν ἱκανῶς ταῦτα ἀυξηθῆ. ἐπέχει γὰρ διὰ παντὸς ὅσον ἐφ' ἑαυτοῖς τὰ στύφοντα τὰς κάτω διαχωρήσεις. τὰ δὲ ὀξέα ὀρμᾶ, διὸ ὅταν ὑπολάβῃς ἐν τῇ γαστρὶ παχὺν ἠθροῖσθαι χυμὸν, οὐ πάνυ τοι ψυχρὸν, πρόσαγε ταῦτα. τέμνοντα γὰρ τοῦτον ὑπάγει 10 [10] τε κάτω καὶ διὰ τοῦτο ὑγραίνει τὰ διαχωρήματα, καθαρὰν δὲ εὐρόντα τὴν κοιλίαν ἐπέχει αὐτὴν μᾶλλον.

[Galen 12.75.3-76.6]

281) Fruit. There is great variation in the other kinds of fruit. All the fruit that are astringent have a cool and earthy humour, but all that appear sour have a cool but fine-grained one. The sweet ones have an intermediate composition, inclining towards warming. It is therefore necessary to use the harsh ones when the bowel is slack because of either a warm humoral imbalance or a lot of moistness, and to use the astringent ones when these things increase sufficiently. For they [the harsh ones] always check diarrhoeas as much as the astringent ones can on their own. But the sour fruit stimulate; hence, administer these varieties whenever you suspect that thick fluid, not necessarily very cold, has gathered in the bowel. For by cutting, they drive this fluid down, and, for this reason, moisten the faeces, and having found the abdomen purged, settle it more.

281) Aëtius' summary of the properties of fruit is about half the length of Galen's, and he does not attempt to quote from it, although they both deal with the elemental and therapeutic considerations. Aëtius' chapter follows those on specific types of fruit, Galen's precedes them.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[111.12-16]

(σπβ´) Μήου αἱ ῥίζαι χρήσιμοι, κατὰ μὲν τὴν τρίτην ἀπόστασιν ὑπάρχουσαι θερμαί, ξηραὶ δὲ κατὰ τὴν δευτέραν, ὑγρότητα περιττωματικὴν

ἐν ἑαυταῖς ἔχουσαι. οὖρα οὖν κινεῖ καὶ καταμήνια προκαλεῖται πινό-
μενον. κεφαλαλγές δέ ἐστι πλεῖον λαμβανόμενον καὶ φυσῶδες διὰ τὴν [15]
ὕγρότητα. 5

[Galen 12.78.1-8]

282) The roots of spignel (*Meum athamanticum* Jacq.) are useful, being warm at the third level, dry at the second level, and having residual moisture in them. So, when drunk, they facilitate urination and provoke menstruation. When more is taken, it causes headache and is productive of flatus because of the moistness.

282) Aëtius follows Galen fairly closely.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists two plants, omitted by Aëtius: rough bindweed (*Smilax aspera*), with supposedly bitter, warming leaves (Περὶ μίλακος τραχείας 12.78.9-12); and the rather similar great bindweed (*Convolvulus sepium* L.) (Περὶ μίλακος λείας 12.78.13-14).]

[111.17-112.13]

(σπγ') Μορέας ὁ καρπὸς συκάμιννα καὶ συκόμορα καλεῖται συνήθως ὑπὸ
πολλῶν. καθαρᾷ μὲν οὖν ἐμπεσόντα γαστρὶ τὰ πέπειρα μόρα καὶ
πρῶτα ληφθέντα διεξέρχεται τάχιστα κατ' ἔντερον καὶ τοῖς ἄλλοις
σιτίοις ὑψηγεῖται. μετὰ δὲ τὴν τροφήν ληφθέντα ἢ χυμὸν εὐρόντα [20]
μοχθηρὸν ἐν τῇ γαστρὶ τάχιστα διαφθαρέντα ἀλλόκοτόν τινα καὶ οὐ
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δυνάμενον ῥηθῆναι ἴσχυσι διαφθοράν, ταῖς κολοκύνθαις ὁμοίως καὶ
τοῖς πέποσιν, ὅταν μὴ πεφθῶσι. καιρὸς δὲ τῆς χρήσεως ὡσπερ τοῖς
πέποσι καὶ τοῖς σικύοις, οὕτως καὶ τοῖς μόροις, ὅταν ἀνχηρὸν καὶ
θερμὸν γένηται τὸ τῆς γαστρὸς σῶμα, ἐξ ἀνάγκης δὲ καὶ τοῦ ἥπατος. [p112]
10
τότε γὰρ τοῖς τοιοῦτοις ἅπασιν μόνως ἂν τις εἰς ὠφέλειαν χρῆσαιτο,
καὶ ὅταν τεταλαιπωρημένος ἐν ὀδοιπορίᾳ σφοδρᾷ καὶ καύματι λάβρω
τύχη. τηνικαῦτα γὰρ ὀνίνησι τέγγοντα μὲν τὸν ἀνχηρὸν τοῦ σώματος,
ἐμψύχοντα δὲ μετρίως. ὁ δὲ ἄωρος καρπὸς τῆς μορέας ξηρανθεὶς ἐν [5]
ἡλίῳ ἀκριβῶς καὶ ἀποτιθέμενος στεγνωτικὸν ἱκανῶς γίγνεται φάρμα-
κον, ἀγαθόν, ὡς καὶ δυσεντερίας ἰᾶσθαι καὶ κοιλιακᾶς χρονίας διαθέ-
σεις καὶ τὰς ἄλλας ὅσαι ροῶδεις. κόπτεται δὲ καὶ τοῖς ὄψοις μίγνυ-
ται, καθάπερ καὶ ὁ τῆς ροῦ καρπός, καὶ πίνεται δὲ μεθ' ὕδατος καὶ
μετ' οἴνου. ὁ δὲ φλοιὸς τῆς ρίζης τοῦ δένδρου καθαρτικῆς μετέχει [10]
δυνάμεως μετὰ τινος πικρότητος, ὥστε καὶ πλατεῖαν ἔλμινθα ἀναρρεῖ
ἀποζεννύμενος μετ' οἴνου καὶ πινομένου τοῦ ἀκράτου θερμοῦ, ὅσον
20
κύαθον ἄ', καὶ τὰ χρονίως ἐπεσχημένα καταμήνια προκαλεῖται.

[Galen 12.78.15-79.13]

283) The fruit of the mulberry tree (*Morus nigra* L.) is usually called *sykaminon* or *sykomoron* by many. So, when ripe mulberries have got into the bowel, they purge, and what has been taken first exits very rapidly down through the intestine, and is guided down by the other foodstuffs. When they have been taken after food, or when they have met in the bowel with unwholesome fluid which is being destroyed very quickly, in some strange way not able to be specified, they check the destruction, like round gourds and water-melons, when they have not been digested. The right time for use, as for cucumbers and water-melons, so for also for mulberries, is when the body of the bowel becomes dry and warm, and of necessity also that of the liver, for then only, in all such circumstances, would one use it to advantage, also when distressed in excessive walking, and in the event of a raging fever. Then, in fact, they help, moistening the dryness of the body, and cooling it proportionately. The unripe fruit of the mulberry tree, carefully dried in the sun and stored, becomes a sufficiently constipating drug, excellent also for treating dysenteries, chronic abdominal conditions and others involving fluxions. They are chopped and mixed with cooked food, just like the fruit of sumac is too, and drunk with water and with wine. The rind of the tree's roots shares a purgative capacity with some bitterness, so that, when it is boiled with wine, which is also drunk hot and undiluted, in a quantity of 1 cyathus, it even removes a tapeworm, and brings on periods that have been chronically held back.

283) Aëtius quotes less than half Galen's *SMT* entry, omits information mainly concerning the taste and elemental capacity of various parts of the plant, but adds comments regarding digestion (283.3-13 [111.19-112.5]), largely by quoting *alim.fac.* (6,586.10-587.6), and his own comments, apparently, regarding preparation (283.16-21 [112.8-13]).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists *myagros* (possibly *Camelina sativa* Crantz, according to *OLD*, or *Asparagus acutifolius* L., according to LSJ), not listed by Aëtius, which has an oily seed (Περὶ μύαγρου 12.79.14-16).]

[112.14-15]

(σπδ´) Μύκητες ψυχρὸν καὶ ὑγρὸν ἰκανῶς ἔδεσμα, ὅθεν καὶ δηλητηρίου
δυνάμεως ἐγγύς ἤκουσι καὶ τινες αὐτῶν καὶ ἀναιροῦσι. [15]

[Galen 12.79.17-80.2]

284) Mushrooms are a sufficiently cool and moist food, whence they have even come near to a harmful capacity, and some of them even kill.

284) Aëtius quotes Galen largely verbatim, omitting a comment about their putrefying quality (12.80.1-2). Galen refers to mushrooms in *SMT* as a plant (12.79.18) rather than a food, perhaps reflecting the fact that only a few species are edible; he is more expansive about their properties, including adverse effects, in *Alim.Fac.* 6.655.13-656.15.

It is common knowledge that some fungi are edible, and some deadly (Evans, 2009: 20).

[Galen next lists *myle*, omitted by Aëtius, which, citing Dioscorides, he says is used to treat opened-up uteruses. Which plant is meant is unclear; as both Galen and Aëtius list μῶλυ separately, the LSJ suggestion that μύλη is synonymous with μῶλυ seems untenable (Περὶ μύλης 12.80.3-6).]

[112.16-18]

(σπε´) Μυοσωτίς. Ξηραίνει μὲν κατὰ τὴν δευτέραν τάξιν, θερμότητα δὲ οὐδεμίαν ἐπιφανῆ κέκτηται· ὁ δὲ χυλὸς αὐτῆς ὅσον κύαθος μετὰ ζύθου πινόμενος τὴν πλατεῖαν ἔλμινθα ἀπαραβάτως ἐκτινάσσει.

[Galen 12.80.7-9]

285) Madwort (*Asperugo procumbens* L.). Although it dries at the level of the second rank, it has no conspicuous warmth. When its juice is drunk in a volume of a cyathus with beer, it expels tapeworms infallibly.

285) Aëtius quotes Galen almost verbatim, and then adds the prescription for expelling tapeworms.

There is no apparent substantiation of the above claims in modern scientific literature.

[112.19-25]

(σπζ´) Μυρική τμητικῆς καὶ ῥυπτικῆς ἐστὶ δυνάμεως ἄνευ τοῦ ξηραίνειν ἐπιφανῶς. ἔχει δὲ τινα στύψιν καὶ διὰ ταύτας τὰς δυνάμεις σπλῆνας μὲν ἰκανῶς ὀνίνησιν ἐσκιρρωμένους σὺν ὄξει ἢ οἴνῳ, τῶν ῥιζῶν ἢ τῶν ἀκρεμόνων ἢ τῶν φύλλων ἀφεψομένων. ὁ δὲ καρπὸς καὶ ὁ φλοιὸς οὐ βραχεῖαν στύψιν προσειλήφασι, μετὰ τοῦ ἔχειν καὶ τὸ ῥυπτικὸν καὶ λεπτομερές. ἡ δὲ τῆς καθείσεως μυρικής τέφρα ξηραντικῆς γίνεται δυνάμεως. [20] 5 [25]

[Galen 12.80.10-81.7]

286) Tamarisk (*Tamarix tetrandra* Pall. or *articulata* Wall.) has a cutting and cleansing capacity, without obviously drying. It has some astringency, and, because of this capacity, it helps indurated spleens adequately, [when drunk] with vinegar or wine, when the roots, branches or leaves are boiled down. The fruit and the bark have got in addition no small amount of astringency, with having also a cleansing and fine-grained quality. The ash of burnt tamarisk develops a drying capacity.

286) Aëtius quotes half of Galen's text fairly accurately, omitting an indication for toothache (12.80.15), and a lengthy comparison with the castor-oil berry (12.80.16-81.4).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists two plants omitted by Aëtius: water-milfoil (*Myriophyllum spicatum* L.), used to close wounds (Περὶ μυριοφύλλου 12.81.8-9); and sweet cicely (*Myrrhis odorata* L.), a supposed emmenagogue and lung clearer (Περὶ μύρριδος 12.81.10-14).]

[113.1-5]

(σπζ´) Μυρρίνη ἢ μυρσίνη. Ἐξ ἐναντίων καὶ τοῦτο τὸ φυτὸν σύγκειται οὐσιῶν, ἐπικρατεῖ δὲ ἐν αὐτῇ ὁμοῦς τὸ γεῶδες ψυχρόν· ἔχει δὲ τι καὶ λεπτομερές θερμόν, ὅθεν ἰσχυρῶς ξηραίνει· στεγνωτικῆς δὲ δυνάμεως εἰσὶν ἅπαντα τὰ μόρια τοῦ φυτοῦ, ἔξωθὲν τε τοῦ σώματος ἐπιτιθέ-

μενα καὶ εἴσω λαμβανόμενα.

5 [5]

[Galen 12.81.15-82.12]

287) Myrtle (*Myrtus communis* L.) [*Myrrine* or *myrsine*]. This plant is also composed of opposing natures, but nevertheless earthy cold is predominant in it; it has some fine-grained warmth as well, whence it dries powerfully. All the parts of the plant have a constipating capacity, both when applied externally to the body and taken internally.

287) Aëtius quotes Galen's first sentence and part of his last sentence almost verbatim, but omits the remaining two thirds of his text, mainly concerned with the properties and preservation of various parts of the plant.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

113.6-12

(σπη΄) Μῶλυ ἢ βήσασα. Μῶλυ, ὃ τινες ἄγριον πήγανον ὀνομάζουσιν, ἔνιοι δὲ ἄρμαλά, Σύροι δὲ βήσασα. ἡ δύναμις δὲ αὐτοῦ λεπτομερῆς ἐστὶ καὶ θερμὴ κατὰ τὴν τρίτην ἀπόστασιν, ὅθεν καὶ τέμνει καὶ διαφορεῖ τοὺς παχεῖς καὶ γλίσχρους χυμοὺς καὶ ἐπ' οὖρησιν προτρέπει. χρῶνται δὲ αὐτῷ οἱ κατ' ἀγρὸν ἐπὶ τῶν χρονίως κεφαλαλγούντων ἔψοντες ὕδατι καὶ καταιονοῦντες τὴν κεφαλὴν· ὁμοίως δὲ καὶ ἐπὶ τῶν ἐψυγμένων μέρος τι τοῦ σώματος.

10 [5]

[Galen 12.82.13-18]

288) Moly or Syrian rue (*Peganum harmala* L.). Moly, which some call wild rue, and several *harmala*, and the Syrians *besasa*. Its capacity is fine-grained and warm at the third level, whence it cuts and disperses thick and sticky humours, and secretes them in urine. Those in the countryside use it for those suffering chronic headache, by boiling it in water and pouring it over the head, and likewise for those chilled in some part of the body.

288) Aëtius quotes most of Galen's entry verbatim, and then adds his own comments about headaches and chills (288.5-7 [113.10-12]).

288.1 [113.6] **Μῶλυ** Although from earliest times this has been considered a magic herb (cf. *Od.* 10.305), Aëtius confines discussion in his brief entry to its medical properties, as do Galen (12.82.13-18) and Dioscorides (3.47 (54))

[K 25.395.13-396.4]); typically, Aëtius tends to avoid digressions away from practical medical information, presumably for the sake of brevity and clarity.

There is no apparent substantiation of the above claims in modern scientific literature.

[113.13-20]

(σπθ´) Νάρδου στάχυς. Θερμαίνει μὲν κατὰ τὴν πρώτην ἀπόστασιν, ξηραίνει δὲ κατὰ τὴν δευτέραν συμπληρουμένην. σύγκειται δὲ ἔκ τε στυφούσης αὐτάρκως οὐσίας καὶ δριμείας θερμῆς οὐ πολλῆς καὶ τινοῦ ὑπολίγκρου βραχείας· ὅθεν καὶ πρὸς ἥπαρ καὶ στόμαχον εὐλόγως ἀρμόττει πινομένη τε καὶ ἔξωθεν ἐπιτιθεμένη καὶ οὖρα κινεῖ καὶ δήξει ἰᾶται στομάχου καὶ τὰ κατὰ τὴν γαστέρα καὶ τὰ ἔντερα ῥεύματα ξηραίνει καὶ πρὸς τούτοις ἔτι τὰ κατὰ τὴν κεφαλὴν καὶ τὸν θώρακα· ἰσχυροτέρα δὲ ἢ Ἰνδική, μελαντέρα τῆς Συριακῆς ὑπάρχουσα. [15] 5 [20]

[Galen 12.84.11-85.3]

289) Spikenard (*Nardostachys jatamansi* DC.). It warms at the first level but dries entirely at the second. It consists of a nature which is sufficiently astringent, sharp and not very warm, and mildly bitter to some small extent. Thereby it is reasonably suitable for both liver and stomach, when it is drunk and applied externally, and it promotes urination and heals pangs in the gullet, and it dries fluxions in the stomach and intestines, and in addition still to these, in the head and chest. The Indian variety is stronger since it is darker than the Syrian.

289) Aëtius quotes Galen largely verbatim, but differs in apparently placing spikenard in the first (πρώτην) level of warming substances, rather than the third (τρίτην) as in Galen (12.84.12), possibly a scribal error involving two letters, π and ὦ being substituted for τ and ί respectively.

289.6 [113.18] **στομάχου... γαστέρα... ἔντερα** cf. Intro. xxxvii-xl.

There is no apparent substantiation of the above claims in modern scientific literature.

[113.21-23]

(σφ´) Νάρδος Κελτική. Παραπλησίας μὲν πως κατὰ γένος δυνάμεως τῇ προειρημένῃ, ἀσθενεστέρα δὲ εἰς ἅπαντα, πλὴν εἰς οὖρα· θερμότερα μὲν γὰρ ἐκείνης ἐστίν, ἥττον δὲ στύφει.

[Galen 12.85.4-7]

290) Celtic nard (*Valeriana celtica* L.). In accordance with its class, it has a somewhat similar capacity to the forementioned, but it is weaker in every respect, except as far as urine is concerned; for it is warmer than the former, and less astringent.

290) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists mountain nard (*Valeriana dioscoridis* L.), omitted by Aëtius, which is a weaker plant from Cilicia (Περὶ νάρδου ὀρείας 12.85.8-10).]

[113.24-26]

(σφα´) Νάρθηξ. Τούτου τὸ μὲν σπέρμα λεπτόνει καὶ θερμαίνει, τὸ δὲ ἐντὸς τὸ καλούμενον ἐντεριῶνη στυπτικῆς τινοῦ μετέχει ποιότητος, δι' ἣν αἱμοπτυκοῖς καὶ κοιλιακοῖς ἀρμόττει. [25]

[Galen 12.85.11-14]

291) Giant fennel (*Ferula communis* L.). Its seed thins and warms, and the inside, which is called pith, shares a certain astringent quality, on account of which it is suitable for those coughing blood, and suffering abdominal disorders.

291) Aëtius quotes Galen largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[114.1-3]

(σφβ´) Νᾶπυ θερμαίνει καὶ ξηραίνει κατὰ τὴν τετάρτην ἀπόστασιν, [ἄριστον δὲ καὶ τὸ Αἰγύπτιον ἢ τὸ Συριακόν, μικρότερον δὲ τῷ ὄγκῳ καὶ ἀναιμότερον κεχρωσμένον.]

[Galen 12.85.15-16]

292) Mustard (*Sinapis alba* L.) warms and dries at the fourth level, [and the Egyptian or Syrian is best, smaller in bulk and with less of a blood-coloured tinge.]

292) Aëtius quotes Galen verbatim, apart from substituting ἀπόστασιν for τάξι (12.85.16).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[114.4-6]

(σφγ´) Νάρκισσος. Τούτου ἡ ρίζα ξηραντικῆς ἐστὶ δυνάμεως εἰς τοσοῦτον, ὡς κολλᾶν τραύματα μεγάλα μέχρι καὶ τῶν περὶ τοὺς τένοντας διακοπῶν. ἔχει δὲ τι καὶ ρυπτικὸν καὶ ἐπισπαστικόν. [5]

[Galen 12.85.17-86.2]

293) Narcissus (*Narcissus* L. spp.). Its root has a drying capacity, to the extent that it causes closure of large wounds, even as far as gashes involving the tendons. It has both some cleansing and drawing effect.

293) Aëtius quotes Galen almost verbatim.

While no beneficial properties are recorded in modern scientific literature, *Narcissus* spp. are known to cause contact dermatitis, and to be toxic when ingested (Bruneton, 1995: 780).

[Galen next lists goat's thorn (*Astragalus poterium* Vahl), omitted by Aëtius, supposedly non-erosively drying and useful for sinew problems (Περὶ νευράδος 12.86.3-7).]

[114.7-10]

(σφδ´) Νήριον ἢ ῥοδοδάφνη γνώριμος ἅπασι θάμνος· ἔξωθεν μὲν οὖν τοῦ σώματος εἰ καταπλασθεῖη διαφορητικῆς ἐστὶ δυνάμεως, εἴσω δὲ λαμβανόμενος ὀλέθριός τε καὶ δηλητήριος οὐκ ἀνθρώποις μόνον, ἀλλὰ καὶ τοῖς πλείστοις τῶν βοσκημάτων. [10]

[Galen 12.86.8-12]

294) Oleander or rose-laurel (*Nerium oleander* L.) is a bush familiar to everyone. If it is applied as a poultice on the outside of the body, it has a dispersive capacity, but when taken internally it is destructive and harmful, not only to humans but also to the majority of beasts.

294) Aëtius quotes Galen verbatim.

Ingestion of oleander seeds or leaves is known to be potentially lethal (Evans, 2009: 329).

[114.11-19]

(σφε΄) Νυμφαία. Ταύτης ἢ τε ρίζα καὶ τὸ σπέρμα δύναμιν ἔχει ξηραν-
τικὴν ἄδηκτον· ἐπέχει τοιγαροῦν καὶ τὰ τῆς γαστρὸς ρεύματα καὶ τὸ
σπέρμα κατὰ τε τοὺς ὄνειρωγμοὺς καὶ ἄλλως ἄμετρον φερόμενον·
ὀνίνησι δὲ καὶ δυσεντερικούς. ἡ δὲ τὴν λευκὴν ἔχουσα ρίζαν νυμφαία
σφοδρότερας ἐστὶ δυνάμεως, ὥστε καὶ ῥοῦν γυναικεῖον ἰᾶσθαι. πίνεται 5 [15]
δὲ καὶ αὕτη καὶ ἡ τὴν μέλαιναν ἔχουσα ρίζαν ἐν οἴνῳ μέλανι αὐστη-
ρῶ. μετέχουσι δὲ τι καὶ ῥυπτικῆς δυνάμεως, ὥστε καὶ ἀλφουὺς ἰῶνται
δευθεῖσαι ὕδατι καὶ ἀλωπεκίας σὺν ὑγρᾷ πίσσῃ. κρεῖττων δὲ εἰς ταῦτα
ἡ τὴν μέλαιναν ἔχουσα ρίζαν, εἰς δὲ τὰ ἄλλα ἡ τὴν λευκὴν.

[Galen 12.12.86.13-87.6]

295) Yellow water-lily (*Nuphar luteum* L.). Its root and seed have a non-erosive drying capacity; accordingly, it checks bowel fluxions and the immoderate production of semen, in wet dreams and otherwise; it also helps those suffering from dysentery. The water-lily which has the white root has a more powerful capacity, so as to treat female flow as well. Both this one and the one with the black root are drunk in harsh dark wine. They share some cleansing capacity too, so as to treat pale skin lesions, when they are steeped in water, and patchy hair loss, with moist pitch. The one with the black root is better for these purposes, and the one with the white root for the others.

295) Aëtius quotes Galen largely verbatim.

295.1 [114.11] **Νυμφαία** Or possibly other species such as white water-lily (*Nymphaea alba* L.).

There is no apparent substantiation of the above claims in modern scientific literature.

[114.20-23]

(σφς΄) Ξάνθιον, οἱ δὲ φασγάνιον, οἱ δὲ φιλάνθρωπον, οἱ δὲ χοιραδό-
λεθρον. τοῦτου ὁ καρπὸς διαφορητικῆς ἐστὶ δυνάμεως· τὸ δὲ ἀφέψημα
τοῦ φλοιοῦ τῆς ρίζης πινόμενον σπλήνας τήκει. καὶ ὀδόντας σειομέ-
νους κρατύνει μετ' οἴνου ἐψόμενον.

[114.23] *after ἐψόμενον om. καὶ πινόμενον*

[Galen 12.87.7-8]

296) Broad-leaved burweed (*Xanthium strumarium* L.), some call *phasganion*, some *philanthropon*, and some *choiradolethron*. Its fruit has a dispersive capacity. When the decoction of the rind of the root is drunk, it makes spleens waste away. When boiled with wine and drunk, it strengthens wobbly teeth.

296) Aëtius quotes Galen's single-sentence entry, and adds his own comments about preparation and indications.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists gladwyn (*Iris foetidissima* L.), omitted by Aëtius, supposedly diuretic and useful for indurated spleens (Περὶ ξυρίδος 12.87.9-13).]

[114.24-25]

(σφζ´) Ξιφίου ἢ ρίζα, μάλιστα ἢ ἄνωθεν, ἐλκτικῆς ἐστὶ καὶ διαφορητικῆς καὶ δηλονότι καὶ ξηραντικῆς δυνάμεως. [25]

[Galen 87.14-16]

297) The root of corn-flag (*Gladiolus segetum* Ker Gawl.), especially the upper part, has a drawing, dispersive and clearly a drying capacity as well.

297) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists service-tree (*Sorbus domestica* L.), omitted by Aëtius, which he says is less astringent than medlar (Περὶ ὄης 12.87.17-86.2).]

[115.1-23]

(σφη´) Οἶνος ἐκ τῆς δευτέρας ἐστὶ τάξεως τῶν θερμαινόντων, ὁ δὲ ἱκανῶς παλαιὸς τῆς τρίτης, ὥσπερ ὁ νέος γλεύκινος τῆς πρώτης. ἀνάλογον δὲ ταῖς θερμότησι καὶ αἱ ξηρότητες αὐτοῦ. ἐπεὶ δὲ πλείστα

ἐν τῷ οἴνῳ εὐρίσκομεν διαφοράς, διοριστέον περὶ αὐτῶν ὡς οἶόν τε
 διὰ βραχέων. πάντων μὲν οὖν οἴνων οἱ ἐρυθροὶ τε ἅμα καὶ παχεῖς 5 [5]
 εἰς αἷματος γένεσιν ἐπιτηδειότατοι, βραχυτάτης δεόμενοι τῆς εἰς τὸ
 αἷμα μεταβολῆς· ἐφεξῆς δὲ αὐτῶν οἱ μέλανές τε ἅμα καὶ γλυκεῖς καὶ
 παχεῖς, εἴθ' οἱ κατὰ μὲν τὴν χροῖαν ἐρυθροὶ καὶ μέλανες, ἐν δὲ τῇ
 συστάσει παχεῖς, μετέχοντες ἅμα καὶ τῆς στυφοῦσης ποιότητος. τούτων
 δὲ ἦττον οἱ λευκοὶ τε ἅμα καὶ παχεῖς καὶ στρυφνοὶ τρέφειν πεφύκασιν· 10 [10]
 ἀπάντων δὲ ἥκιστα τρέφουσιν οἱ λευκοὶ μὲν τῇ χροῖα, λεπτοὶ δὲ τῇ
 συστάσει, παραπλήσιοι πῶς ὄντες ὕδατι· πέττονται δὲ κατὰ γαστέρα
 καὶ ἀναδίδονται μᾶλλον οἱ γλυκεῖς τῶν ἀστυρῶν, ὡς θερμότεροι τὴν
 δύναμιν ὄντες· καὶ ὑπακτικοὶ δὲ μᾶλλον εἰσι γαστρός. οἱ δὲ πάνυ
 παχεῖς καὶ βραδύτερον πέττονται καὶ βραδύτερον ἀναδίδονται· γαστρός 15 [15]
 δὲ ἰσχυρᾶς ἐπιτυχόντες, ὡς πεφθῆναι καλῶς, πλείονα τροφὴν διδῶσιν
 τῷ σώματι. πρόδηλον δὲ ὅτι καὶ σταλτικοὶ γαστρός εἰσι καὶ εἰς οὐρη-
 σιν δὲ οὐκ ἀγαθοί, παχὺν χυμὸν ἐπὶ τινῶν γεννῶντες· ἐμφράττονται
 δὲ ἐξ αὐτῶν τινες ἥπαρ τε καὶ σπλῆνα καὶ νεφροῦς. κἀντεῦθεν οἱ
 μὲν ὑδεριῶσιν, οἱ δὲ λιθιῶσιν τῶν ἐπὶ πλέον αὐτοῖς χρησαμένων, καὶ 20 [20]
 μάλιστα γερόντων. ἄριστος δὲ ἐν οἴνοις ἐστὶ καὶ τοῖς ὑγιαίνουσιν
 ἐπιτηδειότερος καὶ τοῖς ἐκ νόσων ἀνακομιζομένοις ὁ τῇ χροῖα μὲν
 ἐρυθρὸς, τῇ δὲ συστάσει λεπτὸς ὑποστύφων ἡρέμα.

[115.21] ὑγρᾶίνουσιν *replaced. with* ὑγιαίνουσιν

[Galen 12.88.4-7]

298) Wine is from the second rank of warming substances, but sufficiently
 old wine is from the third, just as young, partially fermented is from the first.
 Its drying properties are also in proportion to its warming ones. Since we
 find very many differences in wine, it is necessary to draw distinctions
 about them in as few words as possible. So, of all wines the red and at the
 same time thick ones are most suitable for the production of blood, requiring
 the briefest conversion to blood; next, the varieties of them that are dark and
 at the same time sweet and thick, and then those dark and red in colour but
 thick in composition, sharing in addition an astringent quality. The white,
 thick and astringent happen to nourish less than these; those white in colour
 but thin in composition, which are rather near to water, nourish least of all.
 The sweet ones are digested in the bowel and absorbed more than the harsh
 ones, as they are warmer in capacity; they also are more aperient for the
 bowel. The really thick wines are digested more slowly and absorbed more
 slowly; when they chance upon a strong bowel so as to be well digested,
 they give more nourishment to the body. It is clear at the outset that they
 have a checking effect on the bowel and that they are not good for urination,
 while producing a thick humour in some; some people suffer a blockage of

the liver, spleen and kidneys from their effect. Some of those who use them too much, especially the elderly, develop oedema, and some develop stones. The best among wines, and more suitable for those in good health and those recovering from diseases, is the red in colour and delicate in composition, which has a gentle, mild astringency.

298) After quoting Galen's short *SMT* entry in his first two sentences, Aëtius adds a lengthy discourse on the nature and effects of various types of wine; the passage πάντων ... σώματι from 298.5-17 [115.5-17] is quoted almost verbatim from *Alim.Fac.* 6.744.4-745.1.

The importance of wine as a therapy in ancient times is emphasised by Garzya, who discusses extensively the different types of wine and the conditions they were used to treat (Garzya, 2002: 194-200).

298.5-6 [115.5-6] πάντων ... ἐπιτηδειότατοι This probably represents a rare instance of sympathetic magic. The mistaken belief that red wine has haematinic properties is not unknown in modern times.

There is no apparent substantiation of the above claims in modern scientific literature, with the exception that excessive consumption of wine, or any alcoholic beverage, can lead to cirrhosis, a feature of which is oedema (Underwood, 2004: 419-420).

[Galen next lists seven plants, not in strict alphabetical order, omitted by Aëtius: a type of fig used to disperse hard masses and remove various warts (Περὶ ὀλύνθων 12.88.7-12); all-bone (*Plantago albicans* L.), used for fractures (Περὶ ὀλοστίου 12.88.13-15); a type of grain, between wheat and barley as a food (Περὶ ὀλύρων 12.88.16-18); oleander (*Nerium oleander* L.), similar in capacity to wine (Περὶ ὀνάγρου 12.89.1-3); stone bugloss (*Onosma echinoides* L.), a supposed abortifacient (Περὶ ὀνόσματος 12.89.4-7); cock's head (*Onobrychis caput-galli* Link), used in various ways for swellings, retention of urine, and as a dispersive (Περὶ ὀνοβρυχίδος 12.89.8-12); and rest-harrow (*Ononis antiquorum* L.), used as a diuretic, for crumbling kidney stones, for removing eschars, and for toothache (Περὶ ὀνώνιδος 12.89.13-90.2).]

[116.1-4]

(σφθ') Ὅξος μικτῆς ἐστὶν οὐσίας ψυχρᾶς καὶ θερμῆς, ἀμφοῖν λεπτομερῶν. ἐπικρατεῖ δὲ ἐν αὐτῷ ἡ ψυχρὰ οὐσία, καθὼς ἐν ἀρχῇ τοῦ βιβλίου προεῖρηται. ξηραντικὸν δὲ ἐστὶν ἰκανῶς τὸ φάρμακον, ὡς τῆς τρίτης εἶναι τάξεως, ἤδη συμπληρουμένης, ὅταν γε ἰσχυρὸν ὑπάρχη.

[Galen 12.90.3-7].

299) Vinegar has a mixed nature, cold and hot, and both fine-grained. The cold essence predominates in it, as has been previously mentioned in the beginning of the book. The drug is sufficiently drying, so as to belong to the third rank, completely in fact, at least whenever it is strong.

299) Aëtius quotes Galen largely verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists fiery thorn (*Cotoneaster pyracantha* Spach), omitted by Aëtius, whose various parts he compares with those of wild pear and myrtle berries, and which, he says, can check all fluxions (Περὶ ὄξυακάνθου 12.90.8-16).]

[116.5]

(τ') Περὶ ὄξυσχοίνου εἴρηται ἐν τῷ περὶ σχοίνου τόπῳ.

300) About great sea-rush (*Juncus acutus* L.) mention has been made in the section on rush.

300) This entry is absent from Galen.

Details of this simple are indeed to be found in ch. 385 p.328.

116.6-9

(τα') Ὅπος. Ὁ μὲν Κυρηναϊκὸς ἀπάντων ἐστὶ θερμότερός τε καὶ λεπτομερέστερος καὶ διὰ τοῦτο καὶ διαφορητικώτερος. οὐ μὴν ἀλλὰ καὶ οἱ ἄλλοι θερμοὶ τέ εἰσι καὶ πνευματώδεις, τουτέστιν ὃ τε Μηδικὸς καὶ ὁ Συριακός, ὃν λάσαρ ὀνομάζουσιν.

[Galen 12.90.17-91.8]

301) [Silphium] juice. The Cyrenian variety is warmer and more fine-grained than all others, and accordingly more dispersive. Yet there is no

doubt that the other varieties are warm and flatus-producing – that is, the Median and the Syrian, which they call *lasar* [asafoetida, or silphium juice].

301) Aëtius quotes the first third of Galen's entry fairly accurately, omitting further details regarding the physical and elemental nature of juice; Aëtius adds mention of the term *lasar*.

301.1 [116.6] Ὀπός The juice in question is most likely to be from silphium plants, for which Cyrenia was famous, and which featured on its coins in ancient times (*OCD*); this is supported by the reference to *lasar*. Theophrastus gives a detailed description of the plant, and suggests that the climate of Cyrene is particularly conducive to its growth (*HP* 3.1.6), and says how abundant it was in North Africa. Pliny points out that it was particularly valuable, but had become extinct in Cyrene, with the last stalk sent to the Emperor Nero (*NH* 19.38-9).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[116.10-13]

(τβ') Ὀρίγανον. Ταύτης τῆς πόας τριττὸν τὸ εἶδος· τμητικῆς δέ εἰσι καὶ λεπτυντικῆς καὶ ξηραντικῆς καὶ θερμαντικῆς δυνάμεως κατὰ τὴν τρίτην ἀπόστασιν ἔχουσαι ταῦτα. ἡ δὲ τραγορίγανος προσεῖληφέ τι καὶ στύψεως.

[Galen 12.91.9-92.2]

302) Oregano (*Origanum* spp.). The form of this herb is threefold: these forms have a cutting, thinning, drying and warming capacity, having these features at the third level. Goat's marjoram (*Thymus teucrioides* Boiss.) has also some additional astringency.

302) Whereas Aëtius merely refers to the plant's having three forms, Galen specifically names and compares them: oregano (*Origanum heracleotium* Rchb.), pot marjoram (*Origanum onites* L.) and Hercules' woundwort (*Opopanax hispidus* Griseb.). Aëtius then quotes Galen's comments about their capacities, adding that they are also drying, and adding his mention of goat's marjoram.

Thymol, present in *Origanum* spp., has antiseptic properties (Evans, 2009: 272).

[116.14-17]

(τγ') Ὅροβος. Ξηραίνει μὲν κατὰ τὴν δευτέραν ἀπόστασιν ἐπιτεταμένην, θερμαίνει δὲ κατὰ τὴν πρώτην· εἰς ὅσον δὲ πικρότητος μετείληφεν, εἰς τοσοῦτον καὶ τέμνει καὶ ῥύπτει καὶ ἐκφράττει, πλείων δὲ ληφθεὶς αἷμα δι' οὖρων ἄγει. [15]

[Galen 12.91.15-92.2]

303) Bitter vetch (*Vicia ervilia* Willd.). It dries according to the top of the second level, and warms according to the first. It cuts, cleanses and unblocks to the extent that it has a share of bitterness, but when too much is taken it induces haematuria.

303) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[116.8]

(τδ') Ὅροβάκκη ψυχρᾶς καὶ ξηρᾶς ἐστὶ κράσεως κατὰ τὴν πρώτην τάξιν.

[Galen 12.92.3-4]

304) Dodder (*Cuscuta europaea* L.)/Choke-fitch (*Orobancha crenata* Forssk.) has a cold and dry composition at the level of the first rank.

304) Aëtius quotes Galen almost verbatim. Both Aëtius and Galen have put this plant out of alphabetical order with the preceding one.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[116.19-20]

(τε') Ὅρυζα ἔχει τι καὶ στυπτικόν· διὸ καὶ μετρίως τὴν γαστέρα ἐπέχει. δύσπεπτον δὲ ἐστὶν ἔδεσμα. [20]

[Galen 12.92.5-6]

305) Rice (*Oryza sativa* L.) has something even astringent; thereby it also keeps the bowel moderately in check, and is difficult to digest as a food.

305) Aëtius quotes Galen almost verbatim, and adds the comment that rice is difficult to digest (305.2 [116.20]).

Asiatic rice may have been introduced into the Middle East in Hellenistic times, and was known to have been grown in Italy in Roman times (Zohary & Hopf, 2000: 91).

There is no apparent substantiation of the above claims in modern scientific literature.

[117.1-4]

(τς') Ὅρχις, οἱ δὲ κυνὸς ὄρχις. Ταύτης ἡ ρίζα διπλῆ βολβοειδῆς ὑγρὰ καὶ θερμὴ· διὸ καὶ γλυκεῖα γευομένοις ἐστὶ. καὶ ἡ μὲν μείζων ρίζα διὰ τὴν πολλὴν ὑγρότητα πρὸς ἀφροδίσια προτρέπει πινομένη· ἡ δὲ μικροτέρα ἐπὶ τὸ ξηρότερον ῥέπουσα ἐπέχει τὰς τῆς συνουσίας ὀρμάς.

[Galen 12.92.7-17]

306) Orchid (*Orchis papilionacea* L.), some call “dog’s testicle”. Its root is double bulb-like, moist and warm; accordingly, it is also sweet to those tasting it. And when the greater root is drunk, it urges one to sexual activity; but the smaller root, which inclines towards being drier, restrains impulses towards copulation.

306) Aëtius follows Galen's text fairly closely, adding that the root is sweet to taste (306.2 [117.2]), but omitting that it produces flatus (12.92.11).

306.3 [117.3] **πρὸς ἀφροδίσια** (cf. Intro. lxxiv-lxxv; 3.6n.)

There is no apparent substantiation of the above claims in modern scientific literature.

117.5-10

(τς') Ὅρχις, ἣν σαραπιάδα καλοῦσιν, ξηροτέρας ἐστὶ δυνάμεως ἢ κατὰ τὴν προτέραν, ὅθεν εἰς ἀφροδίσια μὲν οὐχ ὁμοίως ἐπιτήδειός ἐστιν. οἰδήματα δὲ καταπλασσομένη διαφορεῖ καὶ ἔλκη ῥυπαρὰ καθαίρει καὶ ἔρπητας ἰᾶται. ἡ δὲ ξηρὰ καὶ τὰ σηπεδονώδη καὶ κακοήθη τῶν ἐλκῶν ἰᾶται. καὶ γὰρ τι καὶ ὑποστῦφον ἔχει· διὸ καὶ κοιλίαν ἐπέχει μετ' οἴ-
νου πινομένη.

[5]

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[Galen 12.93.1-8]

307) Orchid, which they call “plant of Sarapis” (*Orchis longicruris* L.), has a drier capacity than is the case with the previous one, whence it is not similarly suitable for sexual purposes. When applied as a poultice, it disperses swellings, purifies dirty wounds, and heals cases of herpes. The dry form heals putrescent and malignant types of ulcers. What is more, it is mildly astringent; accordingly, when drunk with wine, it restrains the abdomen.

307) Aëtius quotes Galen largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[117.11-13]

{ (τη') Οὔβα καὶ μέσπιλα καὶ πάντα τὰ στύφοντα ρεούση γαστρὶ ἐπι-
τήδεια πρῶτα λαμβανόμενα· ταῖς δὲ δι' ἀτονίας ἐπεχομέναις ὕστερον
δεῖ προσφέρειν.

308) *Ouba* and the medlar tree (*Mespilus germanica* L.) and all the astringent substances are suitable, when taken in the first place, for bowels that are running. It is necessary to administer it later for bowels held in check because of slackness. }

[117.14-16]

(τθ') Ὅσιριάς. Ὅσιριάδος τῆς πόας, ἐξ ἧς καὶ τὰ κορήματα παραγίνε-
ται, πικρὰ μὲν ἢ ποιότης, ἐκφρακτικὴ δὲ ἢ δύναμις, ὅθεν καὶ τὰς καθ' [15]
ἧπαρ ἐμφράξεις ὠφελεῖ.

[Galen 12.93.9-11]

309) Poet's cassia. The quality of the plant poet's cassia (*Osyris alba* L.), from which brooms are obtained, is bitter, and its capacity is unblocking, whence it helps blockages affecting the liver.

309) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[117.17-19]

(τι') Παγκράτιον. Ἡ τούτου ῥίζα σκίλλη κατά τε τὴν γεῦσιν ἔοικε καὶ κατὰ τὴν δύναμιν, ὥστε καὶ χρῶνται τινες αὐτῇ μὴ παρούσης σκίλλης· ἀσθενεστέρα δὲ ἐστὶ μακροῦ.

[Galen 12.93.12-16]

310) Sea daffodil (*Pancratium maritimum* L.). Its root resembles squill (*Urginea maritima* Baker) with regard to taste and capacity, so that some people use it when squill is unavailable; but it is weaker by far.

310) Omitting a short generalisation (12.93.15), Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[118.1-6]

(τια') Παλίουρος. Παλιούρου τὰ φύλλα καὶ ἡ ῥίζα στυπτικῆς μὲν οὐκ ἀσαφῶς μετείληφε δυνάμεως, ὥστε καὶ τὴν ρέουσιν ἐπέχειν γαστέρα, διαφορητικῆς δὲ εἰς τοσοῦτον, ὡς καὶ τὰ φύματα θεραπεύειν, ὅσα γε μὴ λίαν ἐστὶ φλεγμονώδη τε καὶ θερμά. ὁ δὲ καρπὸς τμητικῆς εἰς τοσοῦτον μετέχει δυνάμεως, ὥστε καὶ τοὺς ἐν κύστει λίθους θρύπτειν καὶ ταῖς ἐκ θώρακός τε καὶ πνεύμονος ἀναπτύσσει βοηθεῖν.

5 [5]

[Galen 12.93.17-94.6]

311) Christ's thorn (*Paliurus spina-christi* Mill.). The leaves and roots of Christ's thorn share a very distinct astringent capacity, so that it checks bowel flow, and it is dispersive to the extent that it treats swellings, at least those that are not too inflamed and warm. The fruit has a share of a cutting capacity to the extent that it crumbles stones in the bladder and helps coughing up from the chest and lungs.

311) Aëtius quotes Galen almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists papyrus (*Cyperus papyrus* L.), omitted by Aëtius, which can be prepared for use in closing fresh wounds, and used as a drying agent (Περὶ παπύρου 12.94.7-14).].

[118.7-13]

(τιβ') Πάνακες Ἡράκλειον. Ἐκ τούτου καὶ ὁ καλούμενος ὀποπάναξ γίνεται. ἐστὶ δὲ ὁ ὀπὸς οὗτος θερμὸς μὲν καὶ διαφορητικὸς ἐκ τῆς τρίτης τάξεως, ξηρὸς δὲ τῆς δευτέρας. ὁ δὲ φλοιὸς τῆς ῥίζης ξηραντικὸς καὶ θερμαντικὸς ἐστίν, ἀλλ' ἦττον τοῦ ὀποῦ, ῥύπτει μέντοι. διὸ καὶ ἀρμόζει πρὸς τε τὰ γυμνὰ τῶν ἐλκῶν καὶ τὰ κακοήθη. ῥύπτει γὰρ καὶ ξηραίνει καὶ σαρκοῖ ἀδήκτως. ὁ δὲ καρπὸς θερμὸς ὦν καὶ καταμήνια ἄγει.

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[Galen 12.94.15-95.12]

312) Hercules' woundwort (*Oporanax hispidus* Griseb.). What is called *oporanax* [the gum of Hercules' woundwort] comes from this. And this juice is warm and dispersive at the third rank, and dry at the second. The rind of the root is drying and warming, but less so than the juice; nevertheless, it is cleansing. Accordingly, it is also suitable for bare and malignant sorts of ulcers. For it cleanses, dries and fleshes up non-erosively. As the fruit is warm, it is also emmenagogic.

312) Aëtius reduces Galen's entry mainly by extracting and reporting the therapeutic details fairly accurately.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists three plants, omitted by Aëtius: Asclepius' all-heal, weaker than Hercules' woundwort (Περὶ πάνακος τοῦ Ἀσκληπείου 12.95.13-16); Cheiron's all-heal (*Hypericum olympicum* L.), similar to the forementioned (Περὶ πάνακος τοῦ χειρωνείου 12.95.17-18); and *paronychia*, so called because it treats paronychia, as Dioscorides rightly said, and is used for diseases requiring to be dispersed (Περὶ παρωνυχίας 12.96.1-9).]

[118.14-16]

(τιγ') Πεντάφυλλον. Ταύτης ἡ ῥίζα ξηραίνει μὲν κατὰ τὴν τρίτην ἀπόστασιν, ἥκιστα δὲ ἐστὶ δριμεῖα. διὸ καὶ πολύχρηστος ὑπάρχει. ἐστὶ γὰρ καὶ λεπτομερής.

[15]

[Galen 12.96.10-15]

313) Creeping cinquefoil (*Potentilla reptans* L.). Its root dries at the third level but is least sharp. Accordingly, it is very useful. For it is also fine-grained.

313) Aëtius quotes about half of Galen's text fairly accurately, omitting a more detailed description of its qualities.

This plant contains astringent tannins (Evans, 2009: 230), and compounds that are antibacterial *in vitro* (Watkins et al., 2012).

[Galen next lists wartweed (*Euphorbia peplus* L. [Carnoy]), omitted by Aëtius, called by some “frothy poppy”, whose juice, similar to spurges, has a purgative effect (Περὶ πέπλου 12.96.16-18).]

118.17-119.2

(τιδ') Πέπλιον. Τούτου [γάρ] τὸ σπέρμα χρήσιμον· σὺν γὰρ τῷ φλέγματι καὶ χολὴν ἄγει· καὶ φουσῶν ἐστὶ καταρρηκτικόν, ὡς καὶ Ἴπποκράτης ἔφη. [p119]

[Galen 12.97.1-6]

314) Wild purslane (*Euphorbia peplis* L. (Carnoy)). [For] its seed is useful. For it shifts bile along with phlegm; also it is purgative of flatus, as Hippocrates, too, said.

314) Galen's short entry differs substantially from Aëtius'; it mentions the shrub's habitat, root and juice, but, in common with Aëtius, claims it purges flatus.

Purslane can be toxic when ingested, and, used externally, it can damage skin (Bruneton, 1995: 525).

[119.3-18]

(τιε') Πέπων. Ὁ μὲν πεπεμμένος λεπτομερεστέρας ἐστὶν οὐσίας, ὁ δὲ μὴ τοιοῦτος παχυμερεστέρας· ῥυπτικῆς δὲ καὶ τμητικῆς μετειλήφασιν δυνάμεως, ὅθεν οὖρητικοὶ τέ εἰσι καὶ λαμπρύνουσι τὸ σῶμα καὶ μᾶλλον εἰ ξηράνας τις τὸ σπέρμα, κάπειτα κόψας καὶ σήσας σμήγματι χρῶτο ἐπὶ τ' ἐφηλίδων καὶ φακῶν ἐπὶ τοῦ προσώπου καὶ ἀλφῶν ἐπιπολαίων, κρατεῖ δὲ ἐν αὐτοῖς ἢ ὑγρὰ καὶ ψυχρὰ κρᾶσις, ὡς εἶναι τῆς δευτέρας κατ' ἄμφω τάξεως· τὸ δὲ σπέρμα καὶ ἡ ῥίζα ξηρὰ γινόμενα τῆς δευτέρας που τάξεως ἀρχομένης γίνονται. ἐστὶ δὲ τὸ ῥυπτικὸν ἐν τῇ ῥίζῃ πλέον τῆς σαρκός. ἡ δὲ σὰρξ αὐτῶν ἐσθιομένη τῷ [5] 5 [10]

ῥύπτειν καὶ οὔρα κινεῖ, καὶ διέρχεται κάτω μᾶλλον τῶν κολοκυνθῶν. 10
 μᾶλλον δὲ τὸ σπέρμα ῥύπτει, ὥστε καὶ πρὸς λιθιῶντας ἀρμόττει
 νεφροῦς. μοχθηρὸν δὲ ἐργάζεται χυμὸν ὁ πέπων ἐν τῷ σώματι, καὶ
 μᾶλλον ὅταν μὴ καλῶς πεφθῇ· τηνικαῦτα γὰρ καὶ χολερικοὺς ἀποτε- [15]
 λεῖν εἴωθε· καὶ γὰρ καὶ πρὶν διαφθαρεῖν πρὸς ἔμετον ἐπιτήδειός
 ἐστι. καὶ πλεῖόν γε βρωθεῖς, ἐὰν μὴ τις αὐτῷ τι τῶν εὐχύμων ἐδεσ- 15
 μάτων ἐπιφάγη, κινήσει πάντως ἔμετον.

315) Water-melon (*Citrullus vulgaris* Schrad.). The ripe sort has a more fine-grained nature, but those that are not like this have a more coarse-grained one. They have a cleansing and cutting capacity, whence they are diuretic, lighten the colour of the body, and more so if one dries the seed, and then chops it up, sifts it and uses it as ointment on keratoses, freckles on the face, and superficial pale lesions; and the moist and cold composition predominates in them [i.e., both ripe and unripe forms], so as to be of the second rank in both cases. When the seed and root have become dry, they belong somewhere in the beginning of the second rank. But the cleansing effect is greater in the root than the flesh. When the flesh is eaten, it also facilitates urination by cleansing, and promotes defaecation more than round gourd. The seed cleanses more, so that it is suitable for kidneys affected by stones. The water-melon makes an inferior humour in the body, and more so when it has not been well digested; for then it is wont to result even in cases of cholera. Moreover, before going off, it is suitable for vomiting. At least when it is eaten it will be more inclined to bring about vomiting completely, unless one has eaten some sort of wholesome food along with it.

315) This plant is absent from Galen's *SMT*, but Aëtius has based his text on a paraphrase of *Alim.Fac.* 6.564.5-565.1.

315.1 [119.3] **Πέπων** LSJ translates this as “a kind of gourd or melon, not eaten until ripe”; Carnoy has “melon”, and André “water-melon”. Consideration of Pliny the Elder (*NH* 19.65, 67) suggests that *melopepo* is the sweet, or honeydew, melon, and *pepo*, derived from πέπων, the water-melon.

315.13 [119.15] **χολερικοὺς** Cholera, whose symptoms and signs were recognisable in ancient times (cf. Intro lxx), is a water-borne bacterial infection (Grist et al., 1993: 342-3).

There is no apparent substantiation of the above claims in modern scientific literature.

[119.19-120.3]

(τιζ΄) Πεπέρεως τὸ μὲν ἄρτι βλαστάνον τὸ μακρόν ἐστι, διὸ καὶ ὑγρό-
τερον ὑπάρχει, ὁ δὲ οἶον ὄμφαξ καρπὸς τὸ λευκὸν ἐστι πέπερι, δρι- [20]
μύτερον ὑπάρχον τοῦ μέλανος· τὸ γὰρ μέλαν οἶον ὑπερωπτημένον [p120]
ἤδη καὶ ὑπερεξηρασμένον ἐστίν. ἀμφοτέρω δὲ ἰσχυρῶς θερμαίνει καὶ
ξηραίνει. 5

[Galen 12.97.7-16]

316) The newly sprouted sort of pepper is the long variety (*Piper officinarum* DC.), whereby it is moister, whereas pepper (*Piper nigrum* L.) is the fruit like an unripe grape, which is white, and is sharper than the black; for the black is now of the overbaked and overdried sort. Both warm and dry strongly.

316) Aëtius quotes just over half of Galen's text largely verbatim, omitting a comparison with spice root, and evidence for, and effects of, its moist nature.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[120.4-6]

(τιζ΄) Περσέα. Ταύτης τὰ φύλλα στυπτικῆς μετείληφε συμμετρῶς δυνά-
μεως, ὡς δύνασθαι ποτε καὶ τοῖς αἰμορραγοῦσι μορίοις ἐπιτίθεσθαι [5]
συμφερόντως· ὠφελεῖ καὶ κνησμονὰς ξηρὰ λίαν σμωμένας.

[Galen 12.97.17-19]

317) Sebesten (*Cordia myxa* L.). The leaves of this tree have a share in a moderately astringent capacity, so that sometimes they can even be placed on bleeding parts with good effect; when used dry, they also help grazes which have been wiped really clean.

317) Aëtius quotes Galen's entry verbatim, and then adds the comment about grazes.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists honeysuckle (*Lonicera* L. spp.), omitted by Aëtius, which, supposedly, is cutting and warming, may be used externally and drunk, can cause diuresis and haematuria, lack of semen and sterility, and helps splenic conditions and difficulty in breathing (Περὶ περικλυμένου 12.98.1-13).]

[120.7-22]

(τιη΄) Περιστερεῶν ὀρθός. Ταύτην ἱερὰν βοτάνην καλοῦσι· κεφαλαγίαν δὲ ἄκρως ἀπαλλάσσει, φησὶν Ἀρχιγένης, στεφανουμένη καὶ λεία μετ' ὄξους καὶ ῥοδίνου ἐπιχριομένη, καὶ ἐψομένη δὲ ἐν ἐλαίῳ καὶ ἐμβρεχομένης τῆς κεφαλῆς ἰᾶται πᾶσαν χρονίαν κεφαλαγίαν καὶ τὰς ρεούσας τρίχας ἐπέχει. τὸ δὲ ἀφέψημα τῆς ῥίζης διακρατούμενον θερμὸν ἐν τῷ στόματι <καὶ> ὀδονταλγίας παύει, καὶ κινουμένους ὀδόντας κρατύνει καὶ τὰ ἐν τῷ στόματι ἔλκη ἰᾶται. πρὸς δὲ κολικούς τὴν ῥίζαν ἀδρομερῶς κόψας ἔψε μεθ' ὕδατος ἕως εἰς τὸ ἥμισυ καὶ δίδου πίνειν ἐπὶ ἡμέρας ε΄· ἐστὶ γὰρ διὰ πείρας. πρὸς δὲ λιθιῶντας καὶ ἀρχὴν ἐλεφαντιάσεως δίδου ὁμοίως πίνειν τὸ ἀφέψημα μετὰ μέλιτος. χρῶ δὲ ὁμοίως καὶ πρὸς ἐπιληπτικούς καὶ ἀμφημερινούς καὶ τεταρταίους πυρετούς· πρὸς δὲ ποδαγρικούς καὶ ἰσχιαδικούς ἐν οἴνῳ ἐψησας δίδου. χυλιζομένη δὲ ἡ ῥίζα κλύσμα συρίγγων ἄριστον γίγνεται μάλιστα προσμιγνυμένου συκαμίνου ὀποῦ καὶ μέλιτος. καὶ καυθεῖσα καὶ ξηρὰ ἐπιπασσομένη ἰᾶται σύριγγας, καὶ μέλιτι δὲ ἀναληφθεῖσα ἀπέφθω ἢ κεκαυμένοι ἐντίθεται τῇ σύριγγι ὡς κολλύριον καὶ ποιεῖ παραδόξως.

[120.21] καέντι *repl. with* κεκαυμένοι

[Galen 12.98.14-17]

318) Vervain (*Verbena officinalis* L.), the upright form. They call this the holy plant. It very effectively relieves headaches, Archigenes says, when used as a garland and smeared on, when ground down with vinegar and rose water. Also, when it is boiled in oil, and the head is soaked with it, it treats all chronic headaches, and checks diffuse hair loss. The decoction of its root held warm in the mouth stops toothache, and strengthens wobbly teeth, and heals ulcers in the mouth. For cases of colic, chop up the root in large pieces and boil with water until reduced to half, and give it to drink for 5 days; for this is based on experience. For those suffering from stones and the onset of elephantiasis, give the concoction likewise to drink with honey. Use it similarly for epileptics, and for quotidian and quaternary fevers. For cases of gout and hip problems, give it boiled in wine. When the root has

the juice extracted, it becomes the best wash for deep sinuses, especially when mulberry juice and honey are mixed in. Also, when sprinkled on in a burnt and dry state, it treats deep sinuses, and, made up with refined or roasted honey, it is inserted in the sinus as a pellet, and acts marvellously.

318) Aëtius' text is entirely different from Galen's short entry, which concerns the derivation of its name, and its ability to close wounds through being drying.

318.1 [120.7] **ἱερὸν βοτάνην** The plant was holy to the Romans, who believed it conferred protection against evil (BP 15.291, Siebert). In Dioscorides, it is named as the tear of the prophetess of Hera, or the blood of Hermes (4.60.3-5 [K 25.548.15-549.16]).

Despite Aëtius' enthusiasm for the plant, there is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists butter-bur (*Petasites officinalis* Moench), omitted by Aëtius, which is supposedly drying, and is used for malignant and cancerous ulcers (Περὶ πετασίτου 12.98.18-99.2).]

[120.23-25]

Περὶ τῆς περδικίου προεῖρηται ἐν τῷ ε στοιχείῳ, ἐλξίνην αὐτὴν ὀνομάσαντες. Περὶ τῆς παιωνίας προεῖρηται ἐν τῷ γ, γλυκυσίδην αὐτὴν γράψαντες.

[No number] Previous mention has been made of *Polygonum maritimum* L. [*perdikion*], which they named bindweed, under the letter ε. Previous mention has been made of paeony, which they have written down as *glykyside*, under the letter γ.

This entry does not appear in Galen.

[121.1-4]

(τιθ') Πετροσέλινον. Τούτου τὸ σπέρμα μάλιστα χρησιμώτατον, ἀσθενεστέρα δὲ ἢ πόα. ἐστὶ δὲ τὸ σπέρμα θερμὸν καὶ ξηρὸν τῆς τρίτης τάξεως καὶ τμητικόν· καταμήνια οὖν προτρέπει καὶ οὔρα δαμνίῃ. ἐστὶ δὲ καὶ ἄφυσον.

[Galen 12.99,3-13]

319) Parsley (*Petroselinum sativum* Hoffm.). Its seed is certainly very useful, but the herb is weaker. The seed is warm and dry, of the third rank, and cutting. It therefore brings on periods and abundant urine. It also suppresses flatulence.

319) Aëtius quotes half of Galen's entry fairly closely, omitting comments about taste, and discussion of the Cilicians' mistaken views on parsley.

There is no apparent substantiation of the above claims in modern scientific literature.

[121.5-15]

(τκ') Πευκέδανον. Τούτου τῆ ρίζῃ μάλιστα χρώμεθα, χρώμεθα δὲ καὶ τῷ ὀπῷ καὶ τῷ χυλῷ αὐτῆς· ἐστὶ δὲ τῆς αὐτῆς ἅπαντα δυνάμεως. ἰσχυρότερος δὲ ὁ ὀπὸς ἰκανῶς θερμαίνων καὶ διαφορῶν, ὅθεν καὶ τοῖς κατὰ νεῦρα πάθεσιν ἀρμόττει· καὶ τὰ κατὰ πνεύμονά τε καὶ θώρακα νοσήματα τὰ διὰ πάχος ἢ γλισχρότητα χυμῶν γιγνόμενα καὶ εἴσω μὲν τοῦ σώματος λαμβανόμενος καὶ ὀσμώμενος <ὠφελεῖ>. ὠφελεῖ δὲ καὶ σπλήνας ἐσκιρρωμένους. τῆ δὲ ρίζῃ καὶ πρὸς ταῦτα μὲν ἐστὶ χρῆσθαι. καὶ λεπίδας δὲ ὀστῶν ἀφίστησι τάχιστα καὶ τοῖς κακοήθεσιν ἔλκεσι ξηρὰ ἐπιπαττομένη ἐστὶν ἄριστον φάρμακον. καθαίρει γὰρ καὶ σαρκῶν καὶ μέχρι ἐπουλώσεως ἄγει, θερμαίνουσα μὲν κατὰ τὴν δευτέραν τάξιν, ξηραίνουσα δὲ κατὰ τὴν τρίτην ἀρχομένην.

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[Galen 12.99.14-100.15]

320) Sulphurwort (*Peucedanum officinale* L.). We certainly use its root, but we also use its sap and its juice; all have the same capacity. The sap is stronger, being amply warming and dispersing, whence it is suitable for ailments affecting the sinews. But when taken into the body and smelt, <it helps> diseases affecting the lungs and chest, which have come about because of the thickness or stickiness of humours. It also helps indurated spleens. Use of the root as well is indicated for these conditions. It removes flakes of bone very quickly, and it is a very good drug for malignant ulcers when sprinkled dry on them. For it purifies, fleshes up and acts until it brings about cicatrisation, being warming at the level of the second rank, and drying at the beginning of the third.

320) Aëtius quotes Galen largely verbatim, omitting a use in toothache (12.100.3-6).

There is no apparent substantiation of the above claims in modern scientific literature.

[121.16-122.24]

(τκα΄) Πήγανον. Τὸ μὲν ἄγριον ἐκ τῆς τετάρτης ἐστὶ ἤδη τάξεως τῶν θερμαινόντων καὶ ξηραίνόντων, τὸ δὲ ἡμερον ἐκ τῆς τρίτης. ἐστὶ δὲ οὐ μόνον δριμύ, ἀλλὰ καὶ πικρόν, ᾧ καὶ τὸ τέμνειν τε καὶ διαφορεῖν ἔχει τοὺς παχεῖς καὶ γλίσχρους χυμοὺς καὶ δι' οὐρῶν δὲ κενοῖ. καὶ μὲν δὴ καὶ λεπτομερές ἐστὶ καὶ ἄφυσον καὶ διὰ τοῦτο πρὸς τε ἐμπνευματώσεις ἀρμόττει καὶ τὰς πρὸς ἀφροδίσια προθυμίας ἐπέχει καὶ ξηραίνει γενναίως. ἐστὶ γὰρ τῶν ἰσχυρῶς ξηραίνόντων φαρμάκων. Ροῦφος δὲ φησι τοῦ μὲν ἀγρίου πηγάνου ἢ δύναμις διάπυρός ἐστὶ καὶ ἐλκωτικὴ καὶ μάλιστα κύστεως, διὰ τοῦτο καὶ οἱ τὸ ποδαγρικὸν πίνοντες φάρμακον τὸ διὰ τοῦ ἀγρίου πηγάνου πονηρῶς διατίθενται τὴν κύστιν, ὅσοι δ' ἂν ὑπενέγκωσιν αὐτό, ἐπιφανέστερον ὠφελοῦνται· ἀγαθὸν γὰρ πρὸς τὰ ἀρθριτικά· εἰ δὲ μίσγοις τοῦ ἡμέρου ἀσφαλέστερον, καίτοι καὶ αὐτὸ τὸ ἡμερον βλαβερὸν κύστεως, ἀλλ' ἦττον. χρώμεθα δὲ τῷ ἀγρίῳ ἐφ' ὧν κατεψυγμένων τι μειζόνως βουλόμεθα ἀναθάλλαι, οἷον πνευματίας ὑδέρους καὶ τοὺς ἀνὰ σάρκα ὠφελεῖ, καὶ τοὺς ὑπὸ ἐχίδνης ἢ μυγαλῆς δηχθέντας καὶ μᾶλλον ἢν κύουσα ἢ μυγαλὴ δάκη καὶ μάλιστα ἐπὶ ὑποζυγίων. ἰσχυρὸν δὲ καὶ πρὸς τὸν τοῦ μήκωνος ὀπὸν ποθέντα καὶ πρὸς ἀκόνιτον μετ' οἴνου. τὸ δὲ ἡμερον πήγανον πραύνει καὶ τὰ τῶν περιόδων ῥίγη πινόμενον πρὸ τῆς ἐπισημασίας καὶ ἐπὶ κολικῶν ἀλγημάτων πινόμενόν τε καὶ ἐνιέμενον καὶ ἐπὶ ὑστερικῆς πνιγός. καὶ ὀξυδερκές ἐστὶν ἐσθιόμενον καὶ διὰ τοῦτο οἱ ζωγράφοι συνεχῶς αὐτοῦ ἀπογευόμενοι ὀξύτερον βλέπουσι καὶ μέλιτι δὲ μίξας τὸν χυλὸν ἄλυπον ὀξυωπὲς ἐργάση φάρμακον. βοηθεῖ δὲ καὶ δυσουρίαις μετ' ἐλαίου ἐψόμενον καὶ πυριωμένης τῆς κύστεως· εἰ τι γὰρ καὶ ἄλλο τούτοις βοηθεῖ. ἐπὶ δὲ ὀσφύος ὀδύνης καὶ ἐπὶ δυσπνοικῶν δοθὲν μετ' ὀξυμέλιτος παραχρῆμα ὤνησεν. ἐπὶ δὲ ληθαργικῶν καὶ πινόμενον καὶ διὰ κλυστήρος ἐνιέμενον ἀγαθὸν σφόδρα· καὶ λειώσαντα δὲ χρῆ μετὰ ῥοδίνου καὶ ὄξους χρίειν αὐτῶν τὴν κεφαλὴν. λύει δὲ καὶ τοὺς τῶν ἰσχιῶν πόνους πινόμενον καὶ καταπλαττόμενον καὶ ἐνιέμενον. καταπλασσομένον δὲ ἐπὶ ποδαγρικῶν καὶ τῶν τὰ γόνατα ἐμφυσωμένων ταχὺ ὀνίνησι, καὶ τὰς ὀδύνας πραύνει. ἐσχάρας δὲ τὰς ἀπὸ ἀνθρώκων ταχὺ ἀφίστησι καταπλασσομένον μετὰ μέλιτος ἢ σταφίδων.

[121.16] ἤδη *added after* ἐστὶ

[122.22] ταχὺ *omitted after* ὀδύνας

[Galen 12.100.16-101.8]

321) Rue (*Ruta graveolens* L.). The wild variety (*R. halepensis* LSJ) comes already from the fourth rank of warming and drying substances, the cultivated variety from the third. It is not only sharp but also bitter, for

which reason it has a cutting and a dispersing effect on thick and sticky humours and it empties them through the urine. In particular, it is fine-grained and suppresses flatulence, and it is suitable for this reason for cases of flatulence, it suppresses sexual urges, and dries outstandingly. Rufus says that the capacity of wild rue is extremely hot and capable of ulcerating, especially with respect to the bladder, and for this reason those drinking the drug for gout suffer bladder problems, when the drug comes from wild rue, but all who persist with it are helped rather conspicuously; for it is excellent for joint diseases. If you mix in some of the cultivated variety it is safer, although the cultivated variety itself is also harmful to the bladder, but less so. But we use the wild variety in those cases which have been chilled and which we want to heat up again somewhat more greatly, such as helps inflated dropsy and anasarca, and those bitten by a viper or field mouse, and more so if a pregnant field mouse has bitten one, and most of all in the case of beasts of burden. It is also a powerful antidote, when taken with wine, for poppy juice which has been drunk, and for aconite. The cultivated variety also soothes intermittent rigors when drunk before the symptom, and in cases of colonic pains, both when it is drunk and used as an enema, and in cases of hysteria. Also, when eaten, it promotes sharp-sightedness, and for this reason, painters, constantly taking a taste of it, see more sharply, and when one has mixed the sap with honey one will contrive a drug that painlessly renders the sight sharp. When it is boiled with oil and the bladder is fomented, it helps problems in urination; it helps these if, in fact, anything can. When given with vinegar and honey for loin pain and for those with breathing difficulties, it is of immediate benefit. It is exceptionally good for cases of lethargic fever both when it is drunk and inserted by enema; additionally, one must grind it into a paste with rose water and vinegar, and smear it on their heads. When drunk, applied as a poultice and used as an enema, it relieves hip pains. And applied as a poultice, it is of rapid benefit in cases of gout and knee effusions, and soothes pain. When applied as a poultice with honey or raisins, it rapidly removes eschars formed from carbuncles.

321) Aëtius quotes most of Galen's entry almost verbatim, and then adds the lengthy passage at the beginning of which he cites Rufus (321.8-33 [121.223-122.24]). Rue was considered by several to have wide-ranging therapeutic effects in ancient times. Pliny the Elder claimed it was effective against poisonous bites, colonic pains, hysteria, lethargic fever, and it improved eyesight (*N.H.* 20.131-143), while Dioscorides asserted its efficacy in oedema, dyspnoea, hip pains and as an antidote (3.45(52) [K 25.391]).

321.27 [122.18] **ληθαργικῶν** (v. Intro. lviii.)

There is no apparent substantiation of the above claims in modern scientific literature. Contact with rue can cause skin phototoxicity (Bruneton, 1995: 239), and ingestion for medicinal reasons has resulted in serious systemic poisoning (Sear & Lin, 2007).

[122.25-123.12]

(τκβ') Πίσσα. Ἡ μὲν ξηρὰ ξηραίνει τε καὶ θερμαίνει κατὰ τὴν δευτέραν ἀπόστασιν, πλέον δὲ ξηραίνει ἢ θερμαίνει· ἡ δ' ὑγρὰ θερμαίνει πλέον ἢ ξηραίνει. ἔχει δὲ τι καὶ λεπτομερές, ὃ καὶ τοὺς ἀσθματικούς καὶ τοὺς ἐμπυκτικούς ὠφελεῖ· πλῆθος δὲ ἐκλειχόμενον ἀρκεῖ κυάθου μέλιτι μιγνύντας. ἀλλὰ καὶ ῥυπτικὸν ἔχουσί τι καὶ συμπεπτικὸν καὶ διαφορητικόν· οὕτως τε λεπρούς ὄνυχας ἐξάγουσι μιγνύμενα κηρῶ καὶ λειχῆνας ἀπορρύπτουσι. συμπέττουσι δὲ καὶ τοὺς σκληροὺς καὶ ἀπέπτους ὄγκους ἅπαντας, ἐμβαλλόμενα τοῖς καταπλάσμασιν. ἰσχυροτέρα δὲ πρὸς ἅπαντα ταῦτα ἡ ὑγρὰ, ἡ δὲ ξηρὰ πρὸς μὲν ταῦτα χείρων, εἰς δὲ τὰς κολλήσεις τῶν τραυμάτων ἐπιτηδειότερα. 5 [p123]

Σκευασία λιγνύος ἐκ τῆς πίττης. Σκευάζεται δὲ ἐκ τῆς ὑγρᾶς πίττης λιγνύς οὕτως· εἰς λύχνον καινὸν ἐλλυχνιασμένον βαλὼν τὴν ὑγρὰν πίτταν καὶ ἄψας καὶ πωμάσας κεραμεῖω ἀγγεῖω, καθάπερ ἐπὶ τοῦ λιβάνου προεῖρηται, ἕα καίεσθαι. ὅταν δὲ ἀναλωθῇ τὸ πρῶτον ὑγρὸν, ἄλλο ἐπίχεε, ἕως ἂν αὐτάρκη λιγνὺν συναγάγῃς καὶ χρῶ. ποιεῖ δὲ 10 [5]

πρὸς τὰ καλλιβλέφαρα καὶ τὰ μυδῶντα βλέφαρα καὶ ὅπου τριχοποιῆσαι δεῖ καὶ πρὸς τὰ ἀσθενέστατα καὶ δακρυρροοῦντα καὶ ἐλκώδη ὄμματα.

[123.8] ἢ ὡς *replaced with* καθάπερ

[Galen 12.101.9-102.6]

322) Pitch. The dry form dries and warms at the second level, and dries more than it warms; but the moist form warms more than it dries. It has some fine-grained nature as well, through which it helps those with breathing difficulties and those with suppurations; a volume of a cyathus mixed with honey suffices as a linctus. But [both forms] also have some cleansing, digestive and dispersive effect; thus they remove scaly nails when

mixed with wax, and thoroughly cleanse impetigo. They bring to a head all hard and unconcocted masses, when added to poultices. The moist form is more powerful for all these indications, whereas the dry form is worse for them, but more suitable for closure of wounds.

Preparation of soot from pitch. Soot is prepared from wet pitch as follows: put the wet pitch into a lamp fitted with a new wick, light it, cover it with a pottery bowl, just as has been said previously about frankincense, and let it burn. When the first liquid has been used up, pour in some other, until you have collected sufficient soot, and [then] use it. It works as eye make-up, and for damp eyelids, and wherever it is necessary for hair to be grown, and for the weakest, weepy, sore eyes.

322) Aëtius quotes Galen largely verbatim, and then adds his own passage regarding the preparation of soot from pitch (322.11-17 [133.6-12]).

322.11 [123.16] **πρὸς τὰ καλλιβλέφαρα** A reminder of the cosmetic skills expected of Aëtius and his contemporary physicians (Weigel, 1791: 25-6). The inclusion of recipes for cosmetic preparations, mostly derived from plants, listed by Oribasius and Aëtius, “testifies to a society interested in appearing beautiful and fit” (Buzzi & Calà, 2013).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists pitch oil, omitted by Aëtius, essentially finer-grained (Περὶ πισσελαίου 12.102.7-9).]

[123.13-16]

(τγκγ') Πιστάκια. Τοῦ πιστακίου ὁ καρπὸς λεπτομερεστέρας πῶς ἐστὶν οὐσίας, ὑπόπικρόν τι καὶ ἀρωματίζον ἐχούσης. ἐκφράττει τοιγαροῦν καὶ διακαθαίρει μάλιστα μὲν τὰ καθ' ἥπαρ, ἥδη δὲ καὶ τὸν θώρακα καὶ τὸν πνεῦμονα. [15]

[Galen 12.102.10-15]

323) Pistachio nuts. The fruit of the pistachio (*Pistacia vera* L.) has a somewhat more fine-grained essence, which has some slight bitterness and

spiciness. So therefore it unblocks and purifies certainly the subhepatic region, and in addition the chest and the lung.

323) Aëtius quotes Galen almost verbatim, omitting a comment about their provenance from Syria.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[123.17-21]

(τκδ') Πιτιίδες. Ὀνομάζεται δὲ οὕτως ὁ καρπὸς τῶν πιτύων· ἔνιοι δὲ καὶ τὸν τῆς πεύκης ὡσαύτως προσαγορεύουσιν. μικτῆς δὲ εἰσι δυνάμεως, ὡς ἂν καὶ στύφουσαι καὶ δριμύτητά τινα κεκτημέναι μετὰ πικρότητος. ὅθεν καὶ ταῖς ἐκ θώρακος καὶ πνεύμονος ἀποστάσεις συναίρονται. [20] 5

[Galen 12.102.16-103.3]

324) Pine cones. The fruit of pine trees (*Pinus* L. spp.) is named thus; several also call that of the *peuke* [other pine species] in like manner. They have a mixed capacity, so that they are both astringent and have acquired a certain sharpness with some bitterness. Hence they help to relieve the suppurations from the chest and lung.

324) Aëtius quotes Galen almost verbatim, but omits his assertion that those calling *peuke* seed the same, do so mistakenly (12.102.17).

There is no apparent substantiation of the above claims in modern scientific literature.

[123.22-28]

(τκε') Πίτυος φλοιὸς ἐπικρατοῦσαν ἔχει τὴν στυπτικὴν δυνάμιν εἰς τοσοῦτον, ὡς παρατρίμματα ἰᾶσθαι καταπλαπτόμενος κάλλιστα καὶ τὰ κατακαύματα ἐπουλοῦν καὶ κοιλίαν φερομένην ἐπέχειν, εἰ ποθείη. καὶ ὁ τῆς πεύκης δὲ φλοιὸς ὅμοιος τούτῳ ἐστίν, ἀσθενέστερος δὲ κατὰ τὴν δυνάμιν. ἐν δὲ τοῖς φύλλοις ἀμφοτέρων τῶν δένδρων δυνάμεις ἐστὶ κολλητικὴ τραυμάτων. ἢ δὲ λιγνὸς αὐτῶν πρὸς πτίλα βλέφαρα καὶ μυδῶντας κανθοῦς καὶ περιβεβρωμένους καὶ δακρύνοντας ἐστὶ χρήσιμος. [25] 5

[Galen 12.103.4-17]

325) The bark of the pine tree has a predominantly astringent capacity, to the extent that, when applied as a poultice, it is best at healing intertrigos, and cicatrises burns, and if drunk it suppresses abdominal activity. The bark of *peuke* also is similar in this respect, but weaker in capacity. In the leaves of both trees there is a capacity to achieve closure of wounds. The soot is useful for blepharitis, and for canthi that are purulent, ulcerated and weeping.

325) Aëtius quotes Galen largely verbatim, omitting a comment about pinecones (12.103.11-14).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists quacksalver's spurge (*Euphorbia pityusa* L.), omitted by Aëtius, considered by some to be a species of spurge, mainly because of its purgative juice (Περὶ πιτυούσης 12.103.18-104.2).]

[124.1-10]

(τκς') Πλάτανος ὑγροτέρας ἐστὶ καὶ ψυχροτέρας οὐσίας οὐ πολλῶ τινι τῶν συμμέτρων· ὅθεν καὶ τὰ φύλλα χλωρὰ λειωθέντα καὶ καταπλασθέντα τὰς ἐν γόνασι φλεγμονὰς ὀνίνησιν οὐκ ἄσαφῶς. ὁ δὲ φλοιὸς αὐτῆς καὶ τὰ σφαιρία ξηραντικωτέρας ἤδη δυνάμεώς ἐστιν, ὥστε τὸν μὲν φλοιὸν <ἐν> ὄξει καθεψόμενον εἰς ὀδόντων ἀλγήματα παραλαμβάνεσθαι, τὰ δὲ σφαιρία μετὰ στέατος ἐπὶ τῶν πυρκαυτῶν ἐλκῶν. τινὲς δὲ καύσαντες τὸν φλοιὸν ῥυπτικὸν ἀπεργάζονται φάρμακον, ὡς μεθ' ὕδατος μὲν ἰᾶσθαι λέπρας, αὐτὴν δὲ τὴν τέφραν καθ' αὐτὴν ἐπιπάττοντες τὰ δι' ὑγρότητα πολλὴν ἔλκη παλαιὰ καὶ ῥυπαρὰ θεραπεύειν.

5 [5]

10 [10]

[124.5] ὡς replaced with ὥστε

[124.9] ἐπιπάττοντες repl. with ἐπιπάττοντες

[Galen 12.10.104.3-17]

326) Plane tree (*Platanus orientalis* L.) has a wetter and cooler essence, not by a large amount, than proportionate substances. Hence, when the fresh leaves are ground down and applied as a poultice, they very definitely help acute inflammations in the knees. Its bark and seeds have in fact a more drying capacity, so that while its bark boiled down <in> vinegar is used for toothache, the seeds are used with suet for third-degree burns. Some people

burn the bark and make from it a cleansing drug, mixing it with water, to heal scaly skin lesions, but sprinkling the same ash on its own to treat ulcers that are long-standing and dirty through excessive moistness.

326) Aëtius quotes Galen largely verbatim, omitting a warning about the toxic effects of the down/dust that forms on the leaves (12.104.14-17).

326.6-7 [124.6-7] **πυρिकाύτων ἑλκῶν** Lit., “ulcers caused by burns” (for anatomical classification, cf. Glaister & Rentoul, 1966:197).

There is no apparent substantiation of the above claims in modern scientific literature.

[124.11-19]

(τκζ') Πολύγονον ἔχει μὲν τι καὶ στῦφον, ἐπικρατεῖ δὲ ἐν αὐτῷ τὸ ὑδατῶδες ψυχρόν, ὡς εἶναι κατὰ τὴν δευτέραν τάξιν συμπληρουμένην ἢ τὴν τρίτην ἀρχομένην ἐν τοῖς ψύχουσιν. ὅθεν ὠφελεῖ τοὺς ἐγκαιομένους τὸν στόμαχον ἔξωθεν ἐπιπλαττόμενον ψυχρόν, ὥσπερ καὶ τὰς θερμὰς φλεγμονάς· καὶ γὰρ ἀποκρούεται τὰ ρεύματα. διὸ καὶ τῶν ἐρπήτων ἐστὶν ἀγαθὸν φάρμακον καὶ τῶν ἑλκῶν πάντων, μάλιστα δὲ τῶν φλεγμονωδῶν τε καὶ ρευματικῶν καὶ τῶν ἐν ὠσί· καὶ γὰρ ξηραίνει τὸ πῦον. καὶ ῥοῦν γυναικεῖον ἴστησι καὶ δυσεντερίαν καὶ αἵματος ἀναγωγάς. ἐστὶ δὲ εἰς ἅπαντα τὸ ἄρρεν ἰσχυρότερον.

5 [15]

[124.16] ἑλκούντων *repl. with* ἑλκῶν

[Galen 12.104.18-105.17]

327) Whereas knot grass (*Polygonum aviculare* L.)/mare's tail (*Hippuris vulgaris* L.) has something astringent as well, watery cold predominates in it, so as to be fully at the level of the second or the beginning of the third rank of the cooling substances. Hence, when applied cold externally, it helps those suffering from heartburn, just as it also helps hot inflammatory swellings; and indeed, it dispels fluxions. Accordingly, it is an excellent drug for herpes, and for all ulcers, especially the inflamed and discharging ones, and those in the ears; for it even dries up the pus. It also checks female flow, and cases of dysentery and bringing up blood. The male variety is more powerful for all indications.

327) Aëtius follows Galen's text fairly closely, omitting a use in treating strangury attributed to Dioscorides but considered imprecise by Galen (12.105.13-15).

327.1 [124.11] **Πολύγονον** Aëtius' account of this simple closely matches Dioscorides' description of male "*polygonon*" (Περὶ πολυγόνου ἄρβενος 4.4 (K25.1.507.12)) the female variety, πολύγονον θηλῶ, is similar but weaker. Carnoy translates πολύγονον as *P. aviculare* L., whereas André translates the male variety as *Polygonum* spp. and the female variety as *H. vulgaris* L..

327.3-4 [124.13-14] **ἐγκαιομένους τὸν στόμαχον** Or, "being burnt in their gullets" (cf. Intro. xxxviii).

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists two plants, omitted by Aëtius: milk-wort (*Polygala venulosa* B.Heyne), thought to promote lactation (Περὶ πολυγάλου 12.105.18-106.2); and seal-wort (*Polygonatum multiflorum* L.), of limited use for wounds and facial spots (Περὶ πολυγονάτου 12.106.3-8).]

[124.20-23]

(τκη') Πολεμώνιον, οἱ δὲ φιλεταίριον οἱ δὲ χλιοδύναμον, λεπτομεροῦς ἐστὶ καὶ ξηραντικῆς δυνάμεως, ὅθεν ἐνιοὶ πρὸς ἰσχιάδα καὶ δυσεντερίαν καὶ σκιρρούμενον σπλῆνα διδόασιν πίνειν τὴν ῥίζαν αὐτοῦ μετ' οἴνου.

[Galen 12.105.9-12]

328) Polemonium (*Hypericum olympicum* L.) – some call it *philetairion*, others *chiliodynamon* – has a fine-grained and drying capacity, whence several give its root to drink with wine for hip problems, dysentery and an indurated spleen.

328) Aëtius quotes Galen almost verbatim, omitting a reference to the Cappadocians (12.106.10).

There is no apparent substantiation of the above claims in modern scientific literature.

(τκθ') Πόλιον πικρόν ἐστὶ καὶ μετρίως δριμύ· ἐκφράττει τοιγαροῦν πάντα τὰ σπλάγχνα καὶ οὔρα καὶ ἔμμηνα κινεῖ, καὶ χλωρὸν μὲν κολλᾷ τραύματα, ξηρὸν δὲ ἰᾶται τὰ κακοήθη τῶν ἐλκῶν, καὶ μάλιστα τὸ μικρότερον, ὃ καὶ πρὸς τὰς ἀντιδότους χρώμεθα. καὶ γὰρ καὶ πικρότερόν ἐστὶ καὶ δριμύτερον τοῦ μείζονος, ὡς εἶναι τῆς τρίτης τάξεως μὲν τῶν ξηραίνοντων, τῆς δευτέρας δὲ συμπληρουμένης τῶν θερμαίνοντων. [25] 5 [p125]

[Galen 12.106.14-107.2; 107.3-7]

329) Germander (*Teucrium polium* L.) is bitter and moderately sharp; so therefore it unblocks all the internal organs and facilitates urination and is emmenagogic, and while the fresh variety closes wounds, the dry heals the malignant forms of ulcers, and especially the small variety of the plant, which we also use for remedies. For in fact, it is more bitter and sharper than the greater variety, so as to belong to the third rank of drying substances, and completely to the second rank of the warming ones.

329) Aëtius quotes Galen fairly closely, but combines Galen's separate entries for the larger and smaller plants.

There is no apparent substantiation of the above claims in modern scientific literature, but germander has been shown to be hepatotoxic (Larrey et al., 1992).

[Galen next lists field basil (*Zizyphora capitata* L.), omitted by Aëtius, used to close wounds (Περὶ πολυκνήμου 12.107.8-10).]

[125.3-4]

(τλ') Ποταμογείτων στύφει καὶ ψύχει παραπλησίως πολυγόνω· παχυμερεστέρα δὲ αὐτοῦ ἐστὶν ἡ οὐσία τοῦ πολυγόνου.

[Galen 12.107.11-13]

330) Pondweed (*Potamogeton natans* L.) draws and cools similarly to knot-grass; its essence is more thick-grained than that of knot-grass.

330) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[125.5-6]

(τλα') Πολυπόδιον τὴν γλυκεῖαν ἄμα καὶ αὐστηρὰν ἐπικρατοῦσαν ἔχει ποιότητα, ὡς εἶναι δυνάμεως ἰκανῶς ξηραντικῆς, ἀδήκτου μὴν ἔτι.

[Galen 12.107.14-16]

331) Polypody (*Polypodium vulgare* L.) has a sweet and, at the same time, predominantly harsh quality, so as to have a sufficiently drying capacity, albeit non-erosive.

331) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[125.7-12]

(τλβ') Πράσιον. Θερμαίνει μὲν κατὰ τὴν δευτέραν τάξιν συμπληρουμένην, ξηραίνει δὲ κατὰ τὴν τρίτην συμπληρουμένην, ἐκφράττει δὲ ἡπαρ καὶ σπλῆνα καὶ τὰ κατὰ θώρακα καὶ πνεύμονα διακαθαίρει καὶ ἔμμηνα προτρέπει καὶ διὰ ῥινῶν ἰκτερικοὺς καθαίρει, καὶ πρὸς ὠτῶν ὀδύνας τὰς ἤδη κεχρονισμένας ποιεῖ. καταπλασσομένον δὲ ῥύπτει καὶ διαφορεῖ. [10] 5

[Galen 12.107.17-108.11]

332) Horehound (*Marrubium vulgare* L.). It warms fully at the level of the second rank and dries fully at the third, and unblocks liver and spleen, and thoroughly purges conditions affecting the chest and lung, brings on periods and purges jaundiced patients through their noses, and acts on earaches which have already become chronic. When applied as a poultice it cleanses and dispels.

332) Aëtius condenses his text to half the length of Galen's, mainly by omitting comments regarding taste and related effect (12.107.17-108.1), use of juice to improve eyesight (12.108.6-8), and the mechanism by which it relieves earache (12.108.9-11).

There is no apparent substantiation of the above claims in modern scientific literature, at least for white horehound (*M. vulgare* L.). If, however, black horehound (*Ballota nigra* L.) is meant, there is some evidence that it may have antibacterial properties (Didry et al., 1999).

[125.13-21]

(τλγ') Πράσα δριμεῖαν κέκτηται δύναμιν, ὡς καὶ τὰ κρόμυα· ἀνάλογον δὲ καὶ θερμαίνει τὸ σῶμα καὶ λεπτύνει τοὺς ἐν αὐτῷ χυμοὺς καὶ τέμνει τοὺς γλίσχρους. ἐστὶ δὲ καὶ διουρητικὰ ἐκκαθαίροντα τὸ αἷμα. [15]

καλλίστη δὲ ἡ χρῆσις αὐτῶν δις ἐψηθέντων· ἀποτίθεται γὰρ οὕτως
 ἐσθιόμενα τὴν δριμύτητα τὴν τε κακοχυμίαν οὐκέτι διασώζει· φείδεσθαι 5
 δὲ χρῆ τῆς συνεχοῦς ἐδώδῃς ἀπάντων τῶν δριμέων, καὶ μάλισθ' ὅταν
 ὁ προσφερόμενος αὐτὰ χολωδέστερος ἢ φύσει. μόνοις γὰρ τοῖς ἦτοι
 τὸν φλεγματοῦδη χυμὸν ἢ τὸν ὠμὸν καὶ παχὺν καὶ γλίσχρον ἦθροι- [20]
 κόσιν ἐπιτήδεια τὰ τοιαῦτα τῶν ἐδεσμάτων.

333) Leeks (*Allium porrum* L.) have a sharp capacity, as too have onions; in consequence they warm the body and thin the humours in it, and cut the sticky ones. They are diuretic, while purifying the blood. It is best to use them when twice boiled; for in this way, when they are eaten, the sharpness is set aside, and they no longer retain their unwholesomeness. It is necessary to avoid the continual eating of all sharp substances, and especially whenever the person taking them is more bilious by nature. For really, that sort of food is suitable only for those who have accumulated fluid that is full of phlegm or crude, thick and sticky.

333) This entry is absent in Galen's SMT; leeks attract only a brief comment regarding their bitter quality in *Alim.Fac.* (6.659.5-9).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[125.22-24]

(τλδ') Πρόπολις. Ῥυπτικῆς μὲν ἐστὶν οὐκ ἰσχυρᾶς δυνάμεως, ἔλκτικῆς δὲ ἰκανῶς ἰσχυρᾶς. ἐστὶ γὰρ λεπτομερῆς τὴν οὐσίαν καὶ θερμαίνει κατὰ τὴν δευτέραν ἀπόστασιν συμπληρουμένην ἢ τὴν τρίτην ἀρχομένην.

[Galen 12.108.12-15]

334) Bee-glue. While it does not have a strong cleansing capacity, it has a sufficiently strong drawing capacity. For it is fine-grained in essence and warms fully at the second level or at the beginning of the third.

334) Aëtius quotes Galen almost verbatim.

Bee-glue, or propolis, is a variable mixture of plant materials and worker-bee secretions, with antibacterial properties (Evans, 2009: 224).

[Galen next lists sneezewort (*Achillea ptarmica* L.), omitted by Aëtius, whose flower's effect, he says, gives the plant its name; the whole plant disperses bruises and other ecchymoses (Περὶ πταρμικῆς 12.108.16-109.3).]

[126.1-5]

(τλε΄) Πτελέα. Πτελέας τοῖς φύλλοις ἐκολλήσαμεν πρόσφατον τραῦμα· στύφει γὰρ καὶ ρύπτει. ὁ δὲ φλοιὸς πικρότερος καὶ στυπτικώτερος, ὥστε καὶ λέπρας ἰᾶται σὺν ὄξει. καὶ αἱ ρίζαι τῆς αὐτῆς εἰσι δυνάμεως, ὥστε καὶ τῷ ἀφεψημάτι καταντλοῦσιν τινες ὅσα πωρώσεως δεῖται κατάγματα.

5 [5]

[Galen 12.109.4-12]

335) Elm (*Ulnus glabra* LSJ). We have achieved closure of a fresh wound with elm leaves, for they are astringent and cleansing. The bark is more bitter and more astringent, so that, with vinegar, it heals scaly lesions. Its roots also have the same capacity, so that some pour a concoction over all fractures that lack callus formation.

335) Aëtius largely quotes Galen fairly closely, but omits a comment about using a dressing of bark to close wounds (12.109.9-10).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[126.6-8]

(τλζ΄) Πτέρις. Πτέρεως ἡ ρίζα χρήσιμος. ἀναιρεῖ γὰρ ἔλμινθα πλατεῖαν < δ΄ πλῆθος ἐν μελικράτῳ διδομένη· καὶ ἔμβρυα τὰ μὲν ζῶντα κτείνει, τὰ δὲ νεκρὰ ἐκβάλλει. καὶ τὰ ἔλκη δὲ ἐπιπαττομένη ξηραίνει ἀδήκτως.

[Galen 12.109.13-110.3]

336) Male fern (*Dryopteris* [formerly *Aspidium*] *felix-mas* Schott). The root of male fern is useful. For an amount of 4 drachmas drunk in honey-water removes a tapeworm; and it kills living foetuses and aborts dead ones. Also, when sprinkled on ulcers it dries them non-erosively.

336) Aëtius quotes Galen fairly accurately, but omits an explanation of its effect by virtue of its taste (12.109.17-18), and his comments about bracken

(*Pteris aquilina* L.), included in this entry by Galen as θηλύπτερις (“female fern”) (12.110.1-2).

The oleo-resin from *felix mas* is known to kill tapeworms, but it is no longer used as absorption can result in blindness, and there are now safer alternatives (Evans, 1996: 221).

[Galen next lists motherwort (*Leonurus cardiaca* L.), omitted by Aëtius, a plant whose leaves supposedly disperse swellings and boils, whose fruit, being more powerful, is used for thorns, and its root, though weaker, purges yellow bile (Περὶ πυκνοκόμου 12.110.4-13).]

[126.9-12]

(τλζ΄) Πύρεθρον. Πυρέθρου τῆ ρίζη μάλιστα χρώμεθα καυστικὴν ἐχούση δύναμιν, καθ’ ἣν ὀδόντων ἐψυγμένων ὀδύνας πραύνει καὶ ἐπὶ τῶν [10] κατὰ περίοδον ῥιγῶν ἀνατρίβεται μετ’ ἐλαίου πρὸ τῶν εἰσβολῶν καὶ τοὺς ναρκῶδεις καὶ παρειμένους ὠφελεῖ.

[Galen 12.110.14-18]

337) Pellitory (*Anacyclus pyrethrum* DC.). We make very much use of pellitory root, which has a caustic capacity, by which it soothes the pains of chilled teeth, and it is rubbed on with oil in cases of recurrent rigors before their onset, and it helps those who are numb and weakened.

337) Aëtius quotes Galen almost verbatim, adding only that it is applied before the onset of rigors.

337.1 [126.9] **Πύρεθρον** *Anthemis pyrethrum* L., according to Carnoy.

Dioscorides gives 6 synonyms, and describes the plant as being similar in appearance to wild carrot (3.86 (K 25.1.421.11)).

There is no apparent substantiation of the above claims in modern scientific literature.

[126.13-18]

(τλη΄) Πυροὶ ἔξωθεν ἐπιτιθέμενοι ἐκ τῆς πρώτης εἰσὶ τάξεως τῶν θερμαινόντων, οὐ μὴν οὔτε ξηραίνειν οὔθ’ ὑγραίνειν ἐπιφανῶς πεφύκασιν. τὸ δὲ ἐξ αὐτῶν ἄμυλον ψυχρότερόν τε καὶ ξηραντικώτερον αὐτῶν [15] γίγνεται. καὶ τὸ ἐξ ἄρτου κατάπλασμα διαφορητικώτερας ἐστὶ δυνάμεως, ὡς ἂν καὶ ἄλων καὶ ζύμης προσειληφότος τοῦ ἄρτου· δυνάμεως 5 γὰρ ἐπισπαστικῆς τε καὶ διαφορητικῆς τῶν ἐκ βᾶθους ἐστὶν ἢ ζύμη.

[Galen 12.111.1-11]

338) Wheat, when applied externally, belongs to the first rank of the warming substances, but it does not manifestly dry or moisten. Starch from it becomes both cooler and drier than it. And a bread poultice has a more dispersive capacity, because the bread has taken in addition salt and leaven; for leaven has a capacity both drawing and dispersive for deep substances.

338) Aëtius largely quotes Galen accurately.

338.1 [126.13] **Πυροῖ** *Triticum* spp. (For discussion of wheat species found in ancient times, v. Zohary & Hopf, 2000: 19-59.)

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[126.19-21]

(τλθ') Ῥάμνος. Ξηραίνει μὲν κατὰ τὴν δευτέραν ἀπόστασιν, ψύχει δὲ κατὰ τὴν πρώτην συμπληρουμένην, ἢ τὴν δευτέραν ἀρχομένην, ὅθεν καὶ ἔρηπτας ἰᾶται, καὶ ἐρυσιπέλατα τὰ μὴ σφόδρα θερμά. [20]

[Galen 12.111.12-16]

339) Buckthorn species (*Rhamnus* L. spp.). It dries at the second level, but cools fully at the first, or at the beginning of the second, whence it treats cases of herpes, and cases of cellulitis that are not too hot.

339) Aëtius quotes Galen almost verbatim, omitting that the plant has a dispersive capacity, and that its tender leaves should be used (12.111.16).

There is no apparent substantiation of the above claims in modern scientific literature.

[126.22-127.3]

(τμ') Ῥαφανίς. Θερμαίνει μὲν κατὰ τὴν τρίτην ἀπόστασιν, ξηραίνει δὲ κατὰ τὴν δευτέραν· διαφορητικῆς δὲ ἐστὶ δυνάμεως, ὡς ὑπόπια χρονίζοντα καὶ τὰ ἄλλα τὰ πελιδνὰ ὠφελεῖν καταπλασσομένη<ν>. τῆς λεπτυνούσης δὲ ἐστὶ δυνάμεως μετὰ τοῦ θερμαίνειν. θαυμάσαι δὲ ἐστὶν ἐκείνους ὅσοι μετὰ τὸ δεῖπνον ὠμὰς ἐσθίουσιν αὐτὰς εὐπεψίας ἕνεκα· αὐτοὶ μὲν γὰρ ἰκανὴν ἐσχηκέναι τούτου φασὶν πεῖραν. οἱ μιμησάμενοι δὲ αὐτοὺς ἅπαντες ἐβλάβησαν. 5 [p127]

[Galen 12.111.17-112.4]

340) Radish (*Raphanus sativus* L.). It warms at the third level, but dries at the second; it has a dispersive capacity, so that it helps persistent black eyes

and the other bruises, when applied as a poultice. Along with warming, it has a thinning capacity. It is amazing that there are those who eat them raw after dinner for the sake of enhanced digestion; for they say that they have had sufficient experience of this. But all who have imitated them have harmed themselves.

340) Aëtius quotes two thirds of Galen's entry, omitting comments that the wild variety and the seed are more effective, but adding comments regarding digestibility (340.4-7 [126.25-127.3]), drawn from Galen's *Alim.Fac.* (6.658.4-8); the rather disparaging comments about after-dinner radish eaters are copied from Galen, who was never one to avoid an argument in which he poured scorn on the ideas of his perceived opponents, named or anonymous.

There is no apparent substantiation of the above claims in modern scientific literature.

[127.4-8]

(τμα΄) Ῥῆον ποντικόν. Ῥῆον, ἔνιοι δὲ ῥᾶ προσαγορεύουσι, μικτῆς ἐστὶ κράσεως στυφούσης καὶ θερμαινούσης καὶ λεπτομεροῦς, ὅθεν σπάσματα καὶ ῥήγματα καὶ ὀρθόπνοιαν ὠφελεῖ πινόμενον, καὶ αἱμοπτυκοὺς καὶ κοιλιακοὺς καὶ δυσεντερικοὺς ὀνίνησι· πελιώματα δὲ καὶ λειχήνας ἰᾶται μετ' ὄξους ἐπαλειφόμενον.

5

[Galen 12.112.5-18]

341) Rhubarb (Pontic rhubarb – *Rheum officinale* Baill.). Rhubarb, and several call it *rha*, has a mixed composition, astringent, warming and fine-grained, whence when drunk it helps sprains and soft-tissue injuries, and orthopnoea, and benefits cases of haemoptysis, bowel problems and dysentery. When spread on with vinegar, it heals purpura and impetigo.

341) While retaining the salient therapeutic indications, Aëtius omits approximately two thirds of Galen's entry, mainly comprising a discussion of the plant's composition in terms of taste and elemental qualities.

In small doses the tannins in rhubarb rhizome have an anti-diarrhoeal effect, and might be beneficial in dysentery, whereas in large doses the anthraquinones present would be laxative, and possibly help

“bowel problems”, if constipation were to blame (Bruneton, 1995: 365-6).

Otherwise, there is no apparent substantiation of the above claims in modern scientific literature.

[127.9-22]

(τμβ΄) Ῥητῖναι πᾶσαι ἐν αἷς ἢ μαστίχη ξηραίνουσι καὶ θερμαίνουσι·
διαφέρουσι δὲ ἀλλήλων τῷ τε μᾶλλον ἢ ἥττον ἔχειν τὸ ἐν τῇ γεύσει [10]
δριμύ καὶ τῇ δυνάμει θερμὸν καὶ κατὰ τὰς ἄλλας ποιότητος ὁμοίως
τὰς μὲν μᾶλλον τὰς δὲ ἥττον. προκέκριται δὲ ἐξ ἀπασῶν ἢ σχινίνη,
μαστίχη δὲ ὀνομάζεται, πρὸς γὰρ τῷ στύψεως ὀλίγη μετέχειν, ὡς 5
καὶ ταῖς κατὰ τὸν στόμαχον καὶ τὴν γαστέρα καὶ τὸ ἥπαρ ἀτονίαις
ἀρμόττειν· ἔτι καὶ ξηραίνει ἀλύπως. ἐστὶ γὰρ μάλιστα λεπτομερῆς καὶ [15]
οὐδαμῶς δριμεῖα· τῶν δὲ ἄλλων ἢ τερεβινθίνη πρωτεύει, οὐχ ὁμοίως
τῇ μαστίχῃ τὴν στύψιν ἔχουσα. διαφορεῖ δὲ μᾶλλον τῆς μαστίχης καὶ
ρύπτει ἐπὶ τοσοῦτον, ὡς καὶ ψώρας ἰᾶσθαι καὶ τὰ κατὰ βάθους ἔλκειν 10
μᾶλλον τῶν ἄλλων ῤητινῶν, ὅτι καὶ λεπτομερεστέρα. ἔχει δὲ τι καὶ
μαλακτικὸν πλεον τῆς μαστίχης. αἱ δὲ ἄλλα πᾶσαι δριμύτεραι ταύτης [20]
εἰσὶ παρὰ τὸ μᾶλλον καὶ ἥττον· ξηροτέρα δὲ πασῶν ἐστὶν ἢ ξηρὰ πι-
τυίνη, ἣν ἰδίως πιτύινον φύσημα καλοῦσιν.

[Galen 12.113.1-114.7]

342) All resins in which there is mastic dry and warm; they differ from one another by having to a greater or lesser extent sharpness in taste and warmth in capacity, and likewise according to greater or less amounts of the other qualities. *Schinine* [the resin made from mastic (1)] is preferred above all others, and is named “mastic”; for in addition to sharing a little astringency, so as to be suitable for weaknesses affecting the stomach, bowel and liver, what is more, it also dries painlessly. For it is very fine-grained and not at all sharp. Of the others, turpentine is foremost, not having astringency like mastic. It disperses more than mastic and cleanses to the extent that it heals itchy scabby lesions and draws deep-set materials more than the other resins, because it is also more fine-grained. And it also has a certain softening effect, more than mastic. All the others are more or less sharper than this one. The dry pine-resin is drier than all, and they call it specifically pine exhalation.

342) Aëtius adds to Galen’s account that he is discussing resins in which there is mastic (342.1 [127.9]), and omits a fairly lengthy comparison involving fir, pine and cypress resin (12.113.17-114.7).

342.4-7 [127.12-15] **προκέκριται... ἀλύπως.** Galen has this passage divided into two sentences after “...μαστίχην δ’ αὐτήν ὀνομάζουσι”, with no high point after ἀρμόττειν (12.113.6-10), which makes better sense, and has guided my translation.

There is conflicting evidence regarding mastic’s ability to eradicate *Helicobacter pylori*, the causative organism in peptic ulceration (Evans, 2009: 300, 448; Loughlin et al., 2003); otherwise, there is no apparent substantiation of the above claims in modern scientific literature.

[127.23-128.10]

(τμγ’) Ὅπως δεῖ καίειν τὴν ῥητίνην. Καίεται δὲ πᾶσα ῥητίνη ὑγρὰ ἐν τετραπλασίονι ἀγγεῖῳ κατὰ τὸ τοῦ ἐγχεομένου ὑγροῦ πλήθος. δεῖ γὰρ λίτραν μὲν ῥητίνης, β δε λίτρας ὀμβρίου ὕδατος βάλλοντα τῇ κακάβῃ ἔψειν ἐπ’ ἀνθράκων πραέως, κινουῖντα διηνεκῶς, ἄχρις ἂν ἄνοσμος καὶ εὐθρυπτος καὶ καπυρὰ γένηται, ὥστε καὶ τοῖς δακτύλοις ἀποκλᾶσθαι καὶ ψύξας ἀπόθου εἰς ἀγγεῖον ὀστράκινον. γίνεται δὲ οὕτως λευκοτάτη. δεῖ μέντοι ὑλίζειν τὴν μέλλουσαν καίεσθαι ῥητίνην καὶ χωρίζειν τὸ ῥυπῶδες αὐτῆς. καίονται δὲ καὶ δίχα ὕδατος· πρῶτον μὲν καεῖσαι καὶ διηθεῖσαι, ἔπειτα ἐνόμεναι ἐπ’ ἀνθράκων δι’ ὅλης ἡμέρας κινῶν συνεχῶς. καὶ ὅταν καπυρὰ γένηται ἀνελόμενος ἀπόθου, ὡς εἴρηται. ἐκλαμβάνεται δὲ καὶ λιγνὺς ἐκ τῆς ῥητίνης, ὥσπερ ἐπὶ τοῦ λιβάνου προεῖρηται. καὶ χρησιμεύει εἰς τὰ καλλιβλέφαρα καὶ δακρύνοντας καὶ διαβεβρωμένους κανθοὺς καὶ μυδῶντα βλέφαρα. ἡ δὲ φρυγομένη ῥητίνη χρησιμεύει εἰς τὰ εὐῶδη μαλάγματα καὶ ἄκοπα. [p128] 5 [5] 10 [10]

343) How resin should be burned. Every wet resin is burned in a four-chambered vessel according to the volume of the liquid poured in. For, having added a *litra* of resin and 2 *litrae* of rainwater to the three-legged pot, it is necessary to boil it gently over coals, stirring it continuously, until it becomes odourless, crumbly and brittle, so that it can be broken off with the fingers; and, having cooled it, set it aside into an earthenware vessel. In this way it becomes lightest in colour. It is necessary, however, to strain the resin which is about to be baked, and to separate its dirty material. [The pieces of resin] are also baked separately from water; [it is necessary that they are] first baked and filtered, then boiled over coals, stirring continuously for a whole day. And when it becomes brittle, remove it and set it aside, as has been said. Soot is removed from the resin, as has been previously stated in the case of the frankincense tree. And it can be used as eye-shadow, and for the corners of the eye that are weeping and eaten away,

and for purulent eyelids. Roasted resin can be used for sweet-smelling emollients and soothing applications.

343) This section does not appear in Galen.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[128.11-14]

(τιμδ') Ῥόδα. Ῥόδων ἡ δύναμις ἐξ ὕδατώδους θερμῆς ἀναμεμιγμένης δύο ποιότησιν ἐτέραις, τῇ τε στυφούσῃ καὶ τῇ πικρᾷ, σύγκειται. τὸ δὲ ἄνθος αὐτῶν ἔτι μᾶλλον τῶν ῥόδων στυπτικόν ἐστι καὶ διὰ τοῦτο ξηραντικόν.

[Galen 12.114.8-15]

344) Roses (*Rosa* L. spp.). The capacity of roses comprises moist heat, mixed together with two distinct qualities, astringent and bitter. Their flowers are even more astringent than the rose bushes, and, accordingly, drying.

344) Omitting Galen's references to his other books, Aëtius quotes his comments about roses almost verbatim.

The tannins in roses have an astringent effect (Bruneton, 1995: 332-3).

[Galen next lists Macedonian rose root, omitted by Aëtius, which has a fine-grained and dispersive capacity (Περὶ ῥοδίας ῥίζης 12.114.16-19).]

[128.15]

(τιμε') Ῥοδοδάφνη. Περὶ ῥοδοδάφνης προεῖρηται, νήριον αὐτὴν εἰπόντες.

[Galen 12.115.1-5]

345) Oleander (*Nerium oleander* L.). Previous mention has been made concerning oleander, calling it *nerion*.

345) Whereas Aëtius refers to his previous entry under νήριον (cf. ch. 294 p.267), Galen discusses its harmful effects under ῥοδοδάφνη.

(τμς') Ῥόα πᾶσα τῆς στυφούσης μετέχει ποιότητος, οὐ μὴν ἐπικρατούσης γε πάντως· ἔναι μὲν γὰρ αὐτῶν εἰσιν ὀξεῖαι, τινὲς δὲ γλυκεῖαι, τινὲς δὲ αὐστηραί. ἐξ ὧν δὲ προεῖρηται ἐν τῷ περὶ μήλων λόγῳ ἔνεστι καὶ περὶ τούτων τεκμαίρεσθαι. χυλὸν δὲ ἔχουσι πλέονα μήλων τε καὶ ἀπίων, ἔτι τε πρὸς τούτῳ τὴν γεῦσιν ἡδυτέραν μᾶλλον ἐκείνων. 5 [20] γίνονται δὲ ποτε χρησιμώτεροι αὐτῶν εἰς ἄλλα τέ τινα καὶ ἐπὶ τῶν δακνομένων σφόδρα τὸν στόμαχον διὰ μοχθηρῶν χυμῶν περιουσίαν, τοῦ χυλοῦ σὺν ἀλφίτοις προσφερομένου, ὡς Ἴπποκράτης ἐπὶ τοῖς καρδιαλοῦσιν ἐκέλευσε. τὰ δὲ γίγαρτα τῆς ῥόας στυπτικώτερα τοῦ χυλοῦ ἐστὶ καὶ ξηραντικώτερα, ἔτι δὲ μᾶλλον τὰ λέμματα. παραπλήσιοι δὲ τὴν δύναμιν εἰσι καὶ οἱ κύτινοι. [p129] 10

[Galen 12.115.6-16]

346) Every pomegranate (*Punica granatum* L.) has a share of the astringent quality, but not really overwhelming. Several of them are sour, some are sweet, and some are harsh. From what has previously been mentioned in the discussion about fruit, it is possible to form a judgment about these as well. They have more juice than apples and pears, and furthermore, in addition to this, they have a rather sweeter taste than them. They become occasionally more useful than them, both for various other conditions and especially in cases of those being gnawed in the gullet through a surplus of troublesome humours, the juice being added to barley-meal, as Hippocrates prescribed for heartburn sufferers. Pomegranate pips are more astringent than the juice and more drying, and the rinds even more so. Pomegranate calyces are also similar in capacity.

346) Omitting Galen's reference to a discussion of tastes elsewhere in his work (12.115.8-13), Aëtius quotes the remainder in *SMT* largely verbatim, but inserts the indication regarding heartburn and the reference to Hippocrates (*Epid.* 2.2.1), which also appears in *Alim.Fac.* 6.604.8-605.3.

346.7 [128.22] **στόμαχον** Here translated as “gullet” (cf. Intro. xxvii-xxxviii).

Pomegranate alkaloids in excess are toxic, and their use in the United Kingdom is restricted by law (Glaister & Rentoul, 1966: 464); the rinds contain tannins, the cause of astringency (Evans, 2009: 232). There is no modern evidence of benefit in heartburn or dyspepsia.

[129.4-7]

(τμζ´) Ροῦς τὸ φυτὸν στύφει καὶ ξηραίνει. Τούτω δὲ οἱ βυρσοδέψαι
χρῶνται· τοῖς δὲ ἰατροῖς μᾶλλον ὃ τε καρπὸς καὶ ὁ χυλὸς εἰς χρεῖαν [5]
ἤκουσιν ἰκανῶς αὐστηράς ὄντα ποιότητος. ξηραίνει δὲ κατὰ τὴν τρίτην
τάξιν καὶ ψύχει κατὰ τὴν δευτέραν.

[Galen 12.115.17-116.7]

347) The sumac plant (*Rhus coriaria* L.) is astringent and dries. The tanners use this. Since they have a harsh quality, both the fruit and the juice adequately meet the need of the doctors. It dries at the level of the third rank and cools at the second.

347) Aëtius quotes Galen selectively, to give us the important points, but omits that the plant is also called βυρσοδεψική (“tanners’ plant”), and omits Galen's generalisation regarding taste and qualities.

347.3 [129.6] ὄντα Presumably a neuter nominative plural, supposedly agreeing with ὃ τε καρπὸς καὶ ὁ χυλὸς; Galen has ὄντες (12.116.4).

Rhus spp. can cause severe contact dermatitis, and the fruit of myrtle-leaved sumac contain a potentially lethal poison (Bruneton, 1995: 382, 510).

[129.8-12]

(τμη´) Ῥύπος. Ὁ μὲν ἀπὸ τῶν ἐν τοῖς γυμνασίοις ἀνδριάντων διαφο-
ρητικὸς ἐστὶ καὶ μαλακτικὸς φυμάτων ἀπέπτων· ὁ δὲ ἐν ταῖς παλαι-
στραῖς, ὃν καὶ πάτον καλοῦσιν, ἄριστον ἴμα φλεγμονῆς τιθῶν ἐστὶ· [10]
καὶ γὰρ τὸ πυρῶδες αὐτῶν σβέννυσι καὶ τὸ ἐπιρρέον ἀναστέλλει καὶ
τὸ περιεχόμενον διαφορεῖ. 5

[Galen 12.116.8-117.6]

348) Dirt. That which comes from the statues in the schools is dispersive and softens unconcocted swellings; but that in the wrestling gymnastic schools, which they also call *potos* [? floor dirt] is the best treatment for the acute inflammation of nipples, for it quenches their fieriness, checks the discharge, and disperses the surrounding material.

348) Galen is more expansive about the composition of dirt, explaining that the dust from statues abounds in oil and also contains verdigris, and that

from the wrestling-school floor consists of dust, oil, human dirt and sweat. He explains the therapeutic effect of each component, and justifies his inclusion of dust among the plant simples because of the olive oil, and points out the necessity of mentioning it in the animal section because of the sweat. Aëtius selects his quoted material from the first half of Galen's entry.

There is no apparent substantiation of the above claims in modern scientific literature.

[129.13-16]

(τμθ') Σαγαπηνόν. Ὅπως ἐστὶ θερμὸς καὶ λεπτομερής, ὡς οἱ ἄλλοι ὀποί. ἔχει δέ τι καὶ ῥυπτικόν, ᾧ καὶ τὰς ἐν ὀφθαλμοῖς οὐλὰς ἀποκαθαίρει καὶ λεπτύνει· οὐ μὴν ἀλλὰ καὶ ὑποχύσει καὶ ἀμβλωπίας ταῖς διὰ πάχος ὑγρῶν γιγνομέναις ἀγαθὸν φάρμακον. 15

[Galen 12.117.7-18]

349) *Ferula persica* Willd.. The sap is warm and fine-grained, like the other saps. It also has a certain cleansing effect, through which it clears away and thins scars in the eyes; but, however, it is a good drug for cataracts and cases of impaired eyesight which have occurred due to the thickness of humours.

349) Aëtius quotes the first half of Galen's entry almost verbatim, and then omits his discussion of the name of the therapeutic material, which should be called *sagapemon* juice to distinguish from an ineffective form of the plant, similar to fennel.

There is no apparent substantiation of the above claims in modern scientific literature.

[129.17-18]

(τν') Σάμψυλον λεπτομεροῦς ἐστὶ καὶ διαφορητικῆς δυνάμεως· ξηραίνει τε γὰρ καὶ θερμαίνει κατὰ τὴν τρίτην τάξιν.

[Galen 12.118.1-3]

350) Marjoram (*Origanum marjorana* LSJ) has a fine-grained and dispersive capacity; for it dries and warms at the level of the third rank.

350) Aëtius quotes Galen verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[129.19-20]

(τνα΄) Σαπρότης ξύλων, καὶ μάλισθ' ὅσα μετέχει στύψεώς τε ἅμα καὶ ρύψεως, ὥσπερ ἡ πτελέα, καθαίρει καὶ ἀναπληροῖ τὰ ὑγρὰ τῶν ἐλκῶν κάλλιστα. [20]

[Galen 12.118.4-6]

351) Rottenness of timbers, and especially all that have a share of astringency and cleansing at the same time, such as the elm, purify and fill up the moist parts of ulcers in the finest manner.

351) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[129.21-23]

(τνβ΄) Σαρκοκόλλα δάκρυόν ἐστι δένδρου περσικοῦ, μικτὸν τὴν δύναμιν ἐξ ἐμπλαστικῆς τέτινος οὐσίας καὶ βραχείας πικρᾶς, ὅθεν ἀδήκτως ξηραίνει καὶ διὰ τοῦτο τραύματα κολλᾷ.

[Galen 12.118.7-10]

352) *Astragalus fasciculifolius* Boiss. is the “tear” of a Persian tree, mixed in capacity from a certain adherent essence and small amount of bitterness, whence it dries without erosion, and because of this it closes wounds.

352) Aëtius quotes Galen almost verbatim.

The material described is tragacanth (Evans, 2009: 210), but there is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[130.1-5]

(τνγ΄) Σατύριον. Τινὲς τοῦτο καὶ τρίφυλλον καλοῦσιν, ὑγρὸν ἐστὶ καὶ θερμὸν τὴν κρᾶσιν, διὸ καὶ γευομένοις φαίνεται γλυκύ. περιττωματικὴν μέντοι καὶ φυσώδη τὴν ὑγρότητα κέκτηται, καὶ διὰ τοῦτο παρορμᾷ πρὸς ἀφροδίσια. ταῦτο δὲ καὶ ἡ ρίζα τῆς βοτάνης δρᾶν πέφυκε. φασὶ δὲ τινες καὶ ὀπισθότονον ἰᾶσθαι αὐτὴν μετ' οἴνου αὐστηροῦ πινομένην. 5 [5]

[Galen 12.118.11-16]

353) Male orchid (*Acera anthropophora* LSJ). Some call this “trefoil”; it is moist and warm in composition, whereby it appears sweet to those who taste it. It has, however, a flatus-producing residual moisture, and for this reason it stimulates sexual urges. The root of the plant happens to do the same thing. Several say that, when drunk with harsh wine, it also treats opisthotonos.

353) Aëtius quotes Galen almost verbatim.

353.5 [130.5] **ὀπισθότονον** Opisthotonos is severe backward extension of the spine, caused, for example, by meningitis and tetanus (*OCMD*).

No relevant information is available in modern literature.

[130.6-7]

(τνδ') Σέλινον θερμόν ἐστιν εἰς τοσοῦτον, ὡς οὐρά τε καὶ καταμήνια κινεῖν. ἐστὶ δὲ καὶ ἄφυσον, καὶ μᾶλλον τῆς πόας τὸ σπέρμα.

[Galen 12.118.17-119.3]

354) Celery (*Apium graveolens* L.) is warm to the extent that it brings on urination and menstruation. It also suppresses flatus, the seed even more so than the herb.

354) Aëtius quotes the first half of Galen's entry almost verbatim, and then omits information about what Galen considers related species, namely ὄρεοσέλινον (mountain parsley – *Athamanta macedonica* Spreng.) and ἱπποσέλινον (alexanders – *Smyrniium olusatrum* L.).

There is no apparent substantiation of the above claims in modern scientific literature.

[130.8-14]

(τνε') Σέρις ἢ κιχόριον ὑπόπικρόν ἐστὶ λάχανον καὶ μᾶλλον τὸ ἄγριον· ὅπερ καὶ διὰ τοῦτο πικρίδα προσαγορεύουσιν ἔνιοι, τινὲς δὲ κιχόριον ὀνομάζουσιν. ἐστὶ δὲ ἢ μὲν ἀγρία ψυχρᾶς καὶ ξηρᾶς κρᾶσεως κατὰ τὴν πρώτην ἀπόστασιν, ἢ δὲ ἡμερος ἐπὶ μᾶλλον ψύχει τῆς ἀγρίας, ἐπιμῖξια δὲ πολλῆς ὑγρότητος ἀπόλλυσι τὸ ξηραίνειν. ἀμφοτέραι δὲ μετέχουσι τῆς στυφοῦσης ποιότητος, ὥσπερ καὶ ἡ χονδρίλλη· καὶ γὰρ καὶ αὐτὴ σέρεώς ἐστὶν εἶδος.

[10]

5

[130.8] *after* κιχόριον *omit* ἢ πικρίς

[Galen 12.119.4-12]

355) Chicory/endive (Wild variety: *Cichorium intybus* L.. Garden variety: *C. endivia* L.) *Seris* or *kichorion* is fairly bitter as a vegetable, the wild variety even more so; and, for this reason, several name it “*pikris*”, and some name it “*kichorion*”. The wild variety has a cold and dry composition, at the first level, but the cultivated variety cools to a greater degree than the wild, and destroys the drying effect by an admixture of much moisture. Both forms share the astringent quality, as gum succory (*Chondrilla juncea* L.) also does; for in fact it is itself a species of chicory.

355) Aëtius quotes Galen almost verbatim, adding κυχόριον as an alternative title for the entry.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists *Artemisia maritima* L., a kind of wormwood, omitted by Aëtius. Referring to his sixth book, Galen says it is similar to ἀψίνθιον (?*A. monosperma* L.), is warming and drying, bad for the stomach, and effective in killing worms (Περὶ σερίφου 12.119.13-120.4).]

[130.15-17]

(τνς') Σεσέλεως ἡ ρίζα καὶ ὁ καρπὸς τῶν θερμαινόντων ἐστὶν εἰς τοσοῦτον, ὡς ἰκανῶς οὖρητικὸν ὑπάρχειν φάρμακον. ἐστὶ δὲ λεπτομερές, ὡς πρὸς ἐπιληψίας τε καὶ ὀρθοπνοίας ἀρμόττειν.

[Galen 12.120.5-8]

356) The root and fruit of hartwort (*Tordylium officinale* L.) belong to the warming substances, to the extent that it is an adequately diuretic drug. And it is fine-grained, so that it is suitable for cases of epilepsy and orthopnoea.

356) Aëtius quotes Galen almost verbatim.

No information regarding this plant is available in modern scientific literature.

[130.18-20]

(τνζ΄) Σήσαμον οὐκ ὀλίγον ἔχει τὸ γλίσχρον ἐν ἑαυτῷ καὶ λιπαρόν· ὅθεν καὶ ἐμπλαστικόν τε ἅμα καὶ μαλακτικὸν καὶ μετρίως θερμόν. τῆς δὲ αὐτῆς δυνάμεώς ἐστι τὸ ἐξ αὐτοῦ ἔλαιον.

[20]

[Galen 12.120.9-13]

357) Sesame (*Sesamum indicum* L.) is in no small amount sticky in itself, and greasy; whence it is adherent and softening at the same time, and moderately warm. The oil from it has the same capacity.

357) Aëtius quotes Galen almost verbatim, omitting a final comment about the similar capacity of the boiled-down plant.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists two plants omitted by Aëtius: great *sesamoeides* – bastard rocket (*Reseda alba* L.), which, he says, is also called hellebore from Anticyra, and is similar in its capacities to hellebore (Περὶ σησαμοειδοῦς 12.120.14-19); and white *sesamoeides*, whose seed is sharp and bitter, and warms, shatters and cleanses (Περὶ σησαμοειδοῦς λευκοῦ 12.121.1-4).]

[131.1-3]

(τνη΄) Σιδηρῖτις. Ἔχει μὲν τι καὶ ῥυπτικόν, ἀλλὰ τό γε πλεον αὐτῆς ὑγρόν τέ ἐστι καὶ μετρίως ψυχρόν· ὀλίγη δὲ τινος μετείληφε στυψέως, ὅθεν ἀφλέγμαντός τέ ἐστι καὶ κολλητική.

[Galen 12.121.5-12]

358) Ironwort (*Sideritis scardica* L. or *romana* L.). It has also some cleansing capacity but the greater part of it, at least, is moist and moderately cool; it has a share in some little astringency, whence it is both anti-inflammatory and adhesive.

358) Aëtius quotes Galen's first sentence almost verbatim, and then omits his comments on whether the plant should be called Achilles' woundwort, and on its use for haemorrhages, dysentery and female flow.

Anti-inflammatory activity in ironwort has been demonstrated in animal experiments (Tadic et al., 2012).

[131.4-13]

(τνθ') Σικὺς ἡμερος. Οὐρητικὸν ἔχουσί τι καὶ οὔτοι, καθάπερ οἱ πέπονες, ἀλλ' ἦττον ἐκείνων, τῶ καὶ τὴν οὐσίαν αὐτῶν ἦττον ἐκείνων ὑγρὰν εἶναι. καὶ διὰ τοῦτο καὶ διαφθεῖρονται ῥαδίως ἐν τῇ γαστρὶ παρα- [5] πλησίως τοῖς πέποσι. πέττουσι δὲ αὐτοὺς ἐνιοὶ οἰκειότητι τῆς πρὸς αὐτὰ φύσεως. καὶ ὅταν αὐτῶ τούτῳ θαρρήσαντες ἄδην [δαφυλῶς ἢ 5 πολὺ] αὐτῶν ἐμφορηθῆσονται, λανθάνει ἐν χρόνῳ πλέονι μοχθηρὸς καὶ παχὺς μετρίως ἐν ταῖς φλεψὶ χυμὸς ἐξ αὐτῶν ἀθροιζόμενος, ὅς, [10] ἐπειδὴν ἀφορμῆς εἰς σῆψιν ἐπιλάβηται, πυρετοὺς κακοήθεις ἐργάζεται. διὰ τοῦτ' οὖν πάντων ἀπέχεσθαι συμβουλεύω τῶν κακοχύμων ἐδεσμά- 10 των, κἂν εὐπεπτά τιςιν ᾖ.

[Galen 12.121.13-122.6]

359) Cultivated cucumber (*Cucumis sativus* L.). These have some diuretic effect, just like water-melons, but less than those, for which reason their essence is less moist than water-melons' essence. Also for this reason, they are easily destroyed in the bowel similarly to water-melons. Several people cook them as being naturally related to the latter. And whenever, emboldened by this very fact, they take their fill of them [abundantly or greatly], in a longer period, a troublesome and moderately thick humour in their veins gathers unobtrusively from them, and whenever this humour gains a foothold toward putrefaction, it results in malignant fevers. For this reason, therefore, I counsel you to abstain from all the unwholesome foodstuffs, even if they are digestible for some.

359) Aëtius' account differs almost entirely from Galen's in *SMT*. The latter gives details of the plant's elemental composition and capacities, and the use of its seed; unlike Aëtius, he makes no mention here of adverse effects. Their only point of agreement is on its supposed diuretic effect. Galen's ideas in *Alim.Fac.* (6.567.1-569.10), however, bear a close resemblance to Aëtius', who seems to have chosen *Alim.Fac.* as his source in this instance.

There is no apparent substantiation of the above claims in modern scientific literature.

[131.14-24]

(τξ') Σικὺς ἄγριος. Σικύος ἀγρίου τοῦ καρποῦ ὁ χυλὸς ἢ ὀπός, ὃν ἐλατήριον ὀνομάζουσιν, οὐ μὴν ἀλλὰ καὶ ὁ τῆς ῥίζης καὶ τῶν φύλλων [15] χρήσιμοι εἰς τὰς ἰάσεις. τὸ μὲν οὖν ἐλατήριον ἔμμηνα κινεῖ καὶ τὰ κυούμενα φθεῖρει προστιθέμενον. ἄκρως μὲν γάρ ἐστι πικρὸν, ἐπ' ὀλί-

γον δὲ θερμόν, ὡς ἐκ τῆς δευτέρας τάξεως εἶναι τῶν θερμαινόντων. 5
 διὰ τοῦτο καὶ διαφορητικῆς ἐστὶ δυνάμεως. οὕτως γὰρ οὖν καὶ συν-
 αγχικοὺς αὐτῶ διαχρίουσιν ἔνιοι μετὰ μέλιτος. ἀγαθὸν δὲ καὶ τοῖς [20]
 ἰκτερικοῖς ἐγγεόμενον ταῖς ῥίσι μετὰ γάλακτος γυναικείου καὶ κεφαλαλ-
 γίας δὲ οὕτως ἰᾶται. ὁ δὲ τῆς ῥίζης χυλὸς καὶ τῶν καυλῶν ἀσθενέ-
 στερος τούτου ἐστὶ καὶ αὐτὴ δὲ ἡ ῥίζα παραπλησίας δυνάμεώς ἐστι· 10
 καὶ γὰρ ῥύπτει καὶ μαλάττει· ξηραντικώτερος δὲ αὐτῆς ὁ φλοιός.
 [Galen 12.122.7-123.5]

360) Squirting cucumber (*Ecballium elaterium* A.Rich.). The juice or sap of the fruit of the squirting cucumber, which they call *elaterion*, and particularly that of the root and leaves as well, are useful for therapies. In fact, *elaterion* brings on periods and destroys the products of conception, when inserted vaginally. For it is exceedingly bitter, and warm to a small extent, so as to be from the second rank of warming substances. Accordingly, it also has a dispersive capacity. So, therefore, some smear it mixed with honey over those affected by sore throats. It is also excellent for jaundice sufferers when poured into their nostrils with woman's milk, and it also treats headaches in this way. The juice of the root and stalks is weaker than this, and the root itself has a similar capacity; for it cleanses and softens. Its rind has a greater drying effect.

360) Aëtius quotes Galen largely verbatim, omitting a sentence comparing squirting cucumber to other plants with similar properties (12.122.11-13).

This plant is a drastic purgative (Bruneton, 1995: 606), but there is no apparent substantiation of the above claims in modern scientific literature.

[132.1-5]

(τξα') Σιλφίου. Θερμότετος μὲν ἐστὶν ὁ ὀπός, οὐ μὴν ἀλλὰ καὶ τὰ φύλλα καὶ ὁ καυλὸς καὶ ἡ ῥίζα θερμαίνει γενναίως. ἐστὶ δὲ φουσδε-
 στέρας καὶ ἀερώδους οὐσίας ἅπαντα καὶ κατὰ τοῦτο καὶ δύσπεπτα·
 ἔξωθεν μέντοι ἐπιτιθέμενα δραστικωδέστερα, καὶ μάλιστα πάντων ὁ
 ὀπός ἐλκτικῆς ὑπάρχων δυνάμεως καὶ καθαιρετικῆς καὶ ἀποτηκτικῆς. 5 [5]

[Galen 12.123.6-13]

361) About laserwort (*Ferula tingitana* L.). The juice is warmest, but, however, the leaves, stalk and root warm outstandingly as well. They all have a rather flatus-inducing and airy essence, and in accordance with this they are hard to digest. They are, however, more effective when applied

externally, and in particular the juice of all parts, which has a capacity which is drawing, purgative and reducing.

361) Aëtius quotes Galen almost verbatim.

361.1 [132.1] **Σιλφίου** Although this plant was reported as being extinct some five centuries before Aëtius' time (cf. 301.1 n p272), plants later imported from Persia may have been the same or very similar (*F. asafoetida* L.); “the real identity of silphium, however, remains a mystery” (Totelin, 2014).

There is no apparent substantiation of the above claims in modern scientific literature.

[132.6-8]

(τζβ') Σίνων θερμός καὶ ὑπόπικρός ἐστὶ τὴν γεῦσιν, ὅθεν οὐρητικός τέ ἐστὶν καὶ πεπτικός· ἐμμήνων τε προκλητικός καὶ ἐκφρακτικός τῶν κατὰ σπλάγχνα πασῶν ἐμφράξεων.

[Galen 123.14-17]

362) Stone parsley (*Sison amomum* L.) is warm and fairly bitter to taste, whence it is diuretic and aids digestion. It provokes periods and has an unblocking effect on all blockages affecting the internal organs.

362) Aëtius quotes Galen almost verbatim.

No information about this plant is available in modern scientific literature.

[132.9-11]

(τζγ') Σίον εἰς ὅσον ἀρωματίζει πῶς κατὰ τὴν γεῦσιν, εἰς τοσοῦτον καὶ θερμαιοῦσης μετείληφε δυνάμεως. ἐστὶ δὲ διαφορητικόν τε καὶ οὐρη- [10]
τικόν καὶ λίθων γε τῶν ἐν νεφροῖς θρυπτικόν καὶ ἐμμήνων ἀγωγόν.

[Galen 12.123.18-124.2]

363) As much as water parsnip (*Sium angustifolium* L.) has a smell somewhat in accordance with its taste, it has to that extent a share in a warming capacity. It is dispersive and diuretic, and has at least a crumbling effect on kidney stones, and it is emmenagogic.

363) Aëtius quotes Galen almost verbatim.

No information about this plant is available in modern scientific literature.

[Galen next lists parsnip root (*Pastinaca sativa* L.), omitted by Aëtius, which, when boiled, is, he says, good for the stomach, and diuretic (Περὶ σισάρου ρίζης 12.124.3-6).]

[132.12-15]

(τξδ') Σισύμβριον λεπτομεροῦς καὶ διαφορητικῆς καὶ θερμαινούσης καὶ ξηραίνουσας κατὰ τὴν τρίτην τάξιν ἐστὶν δυνάμεως καὶ τὸ σπέρμα δ' αὐτοῦ λεπτομερὲς καὶ θερμόν ἐστιν, ὅθεν σὺν οἴνῳ τινὲς αὐτὸ διδόασιν καὶ στροφουμένοις καὶ τοῖς λύζουσι.

[15]

[Galen 12.124.7-11]

364) Calamint (*Mentha aquatica* L.) has a fine-grained, dispersive, warming and drying capacity at the level of the third rank, and its seed is also fine-grained and warm, whence some people give it with wine to those with griping and with hiccups.

364) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen has a second entry about *sisymbrium*, omitted by Aëtius, which some call *cardamine*, which has drying and warming properties (Περὶ σισυμβρίου 12.124.12-16).]

[132.16-19]

(τξε') Σκάνδιξ. Τῶν ἀγρίων ἐστὶ λαχάνων παραπλήσιον τῷ γιγγιδίῳ, ὑπόδριμύ τε καὶ ὑπόπικρον, ὡς εἶναι τῷ ξηραίνειν καὶ τῷ θερμαίνειν τῆς τρίτης τάξεως ἐκλελυμένης. σῶρητικὸν δέ ἐστι καὶ τῶν σπλάγχων ἐκφρακτικόν.

[Galen 12.124.17-125.3]

365) Wild chervil (*Scandix pecten-veneris* L.). It is one of the wild vegetables, similar to *Daucus gingidium*, both fairly sharp and fairly bitter,

so as to belong to the top of the third rank for drying and warming substances. It is diuretic and has an unblocking effect on the internal organs.

365) Aëtius quotes Galen largely verbatim, but adds that the plant is similar to *Daucus gingidium* L..

There is no apparent substantiation of the above claims in modern scientific literature.

[132.20-21]

(τξζ') Σκίλλα τμητικῆς ἐστὶν ἰκανῶς δυνάμεως, οὐ μὴν ἰσχυρῶς γε θερμῆς, ἀλλὰ τῆς δευτέρας τάξεως τῶν θερμαινόντων.

[Galen 12.125.4-8]

366) Squill (*Urginea maritima* Baker) has an amply cutting capacity, not actually powerfully warm, but of the second rank of warming substances.

366) Omitting a suggestion that it should be roasted or boiled to enhance its capacity (12.125.7-8), Aëtius quotes Galen largely verbatim.

Although squill contains several pharmacologically active compounds, there is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[133.1-4]

(τξζ') Σκολύμου ἢ ρίζα πλῆθος οὔρων ἄγει δυσωδῶν, εἰ ἀφεψησας αὐτὴν τις ἐν οἴνῳ πίνει καὶ διὰ τοῦτο τὰς τῶν μασχαλῶν καὶ ὅλου τοῦ σώματος ἰᾶται δυσωδίας. θερμὴ οὖν ἐστὶ κατὰ τὴν τρίτην τάξιν ἀρχομένην, ξηρὰ δὲ κατὰ τὴν δευτέραν.

[Galen 12.125.9-16]

367) The root of golden thistle (*Scolymus hispanicus* L.) produces lots of foul-smelling urine, if after having boiled it down one drinks it in wine, and for this reason it treats bad smells of the armpits and the whole body. It is warm, therefore, at the level of the beginning of the third rank, and drying at the second.

367) Omitting a comment about the purgative effect of its juice (12.125.12-13), Aëtius quotes Galen largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[133.5-11]

(τζη΄) Σκόρδιον. Ἐκ πολυειδῶν τοῦτο δυνάμεων σύγκειται· καὶ γὰρ πικρὸν ἔχει τι καὶ στρυφνὸν καὶ δριμύ. διακαθαίρει τοιγαροῦν ἅμα καὶ θερμαίνει τὰ σπλάγχνα καὶ καταμήνια καὶ οὖρα κινεῖ καὶ σπάσματα καὶ ῥήγματα καὶ πλευρῶν ἀλγήματα κατ' ἔμφραξιν γιγνόμενα ἰᾶται πινόμενον καὶ κολλᾷ μὲν τὰ μεγάλα τραύματα χλωρὸν καταπλασσομένον, ἀνακαθαίρει δὲ τὰ ῥυπαρὰ καὶ εἰς οὐλήν ἄγει τὰ κακοήθη ξηρὸν ἐπιπασσόμενον. 5 [10]

[Galen 12.125.17-126.8]

368) Garlic germander (*Teucrium scordium* L.). This is composed of many kinds of capacities; for it has some bitterness, astringency and sharpness. Therefore it certainly purifies thoroughly and at the same time warms the internal organs, it is emmenogogic and facilitates urination, and it treats sprains and soft-tissue injuries, and pains in the side occasioned by blockages, when it is drunk, and it closes serious wounds when applied fresh as a plaster, and it cleanses dirty lesions, and, when sprinkled on dry, it effects cicatrization of malignant [ulcers].

368) Aëtius quotes Galen almost verbatim, but omits Galen's speculation that it has acquired its name because its sharpness resembles that of garlic (σκόροδον) (12.126.1-3).

There is no apparent substantiation of the above claims in modern scientific literature.

[133.12-16]

(τζθ΄) Σκόροδον. Θερμαίνει καὶ ξηραίνει κατὰ τὴν τετάρτην ἀπόστασιν. ἐσθιόμενον δὲ ἄφυσόν ἐστι καὶ ἄδιψον καὶ παχέων καὶ γλίσχρων χυμῶν ἐκφρακτικὸν τε καὶ τμητικόν. ἔχει δὲ τι καὶ φαρμακῶδες καὶ κακόχυμον, ὅπερ ἀποβάλλει ὕδατι ἐνόμενον. φεύγειν δὲ αὐτοῦ χρῆ τὴν συνεχῆ χρῆσιν, καὶ μάλιστα ἐπὶ τῶν θερμότερων ἔξεων. 5 [15]

[Galen 12.126.9-12]

369) Garlic (*Allium sativum*L.). It warms and dries at the fourth level. When eaten, it suppresses flatulence and thirst, and it has an unblocking and cutting effect on thick and sticky humours. But it has something both medicinal and unwholesome, which it loses when boiled in water. It is necessary to avoid its continual use, and especially as far as those with warmer systems are concerned.

369) Galen merely states the elemental status of garlic, and this is quoted by Aëtius, who then adds his own comments about its effect. A second sentence by Galen, about the stronger wild garlic (*Allium scorodoprasum* L.), is omitted by Aëtius.

369.3 [133.14] **φαρμακῶδες** This may be translated also as “poisonous”.

Although there has been much modern research into the medicinal use of garlic (e.g. Evans, 2009: 351), there appears to be nothing relevant to Aëtius' claims.

[Galen next lists three plants, omitted by Aëtius: garlic-leek (*Allium descendens* L.), whose quality is a mixture of garlic and leek (Περὶ σκορδοπράσου 12.126.13-15); scorpion-wort (*Scorpiurus sulcata* LSJ), warming and drying (Περὶ σκορπιοειδοῦς 12.126.16-17); and yew (*Taxus baccata* L.), which has a harmful capacity (Περὶ σμίλακος 12.127.1-2).]

[133.17-134.2]

(τοῦ) Σμύρνα τῆς δευτέρας ἐστὶ τάξεως τῶν θερμαινόντων τε καὶ ξηραίνοντων. ἐπιπαττομένη γοῦν τοῖς ἐν κεφαλῇ τραύμασι κολλᾶν αὐτὰ δύναται. μετέχει δὲ καὶ πικρότητος οὐκ ὀλίγης, δι' ἣν καὶ ἔλμινθας καὶ ἔμβρυα κτείνει τε καὶ ἐκβάλλει. ἔχει δὲ τι καὶ ῥυπτικόν, ὅθεν καὶ ταῖς [20] ὀφθαλμικαῖς μίγνυται δυνάμεσιν, ὅσαι πρὸς ἔλκη καὶ οὐλὰς παχείας 5 συντίθενται. μίγνυται δὲ καὶ τοῖς ἀσθματικοῖς καὶ βηχικοῖς βοηθήμασι [p134] καὶ τοῖς ἀρτηριακοῖς· οὐ μὴν τραχύνει γε τὴν ἀρτηρίαν.

[Galen 12.127.3-16]

370) Myrrh (*Commiphora myrrha* Engl.) belongs to the second rank of warming and drying substances. So, when sprinkled on head wounds it is able to close them. It also shares no small amount of bitterness, through which it kills and expels worms and fetuses. It has some cleansing effect too, whence it is also comprises ophthalmic capacities, all that deal with

ulcers and thick scars. It is compounded also with remedies for those with breathing difficulties and coughs, and those with windpipe problems; at least, it does not roughen the windpipe.

370) Aëtius quotes almost the first two thirds of Galen's entry largely verbatim, but omits his final comments expanding on its use in respiratory problems.

The effect of myrrh in reducing nematode infestations in mice has been demonstrated (Basyoni & El-Sabaa, 2013); otherwise, there is no apparent substantiation of the Aëtius' claims in modern scientific literature.

[Galen next lists ox-myrrh, omitted by Aëtius, supposedly warming, dissolving and softening (Περὶ σμύρνης βοϊκῆς 12.127.17-18).]

[134.3-7]

(τοα΄) Σμύρνιον, οἱ δὲ ἵπποσέλινον καλοῦσιν, ἐκ ταύτου γένους ἐστὶ σελίνω τε καὶ πετροσελίνω· μέλαν δὲ καὶ πολὺ μείζον ἔχει τὸ σπέρμα. καὶ ἐστὶ σελίνου μὲν ἰσχυρότερον, πετροσελίνου δὲ ἀσθενέστερον, θερμὸν καὶ ξηρὸν κατὰ τὴν τρίτην τάξιν. ἐμμήνων δὲ ἀγωγόν ἐστὶ καὶ οὐρητικόν. [5] 5

[Galen 12.128.1-13]

371) Cretan alexanders (*Smyrniium perfoliatum* L.) – some call it alexanders (*S. olusatrum* L.) – is from the same genus as celery (*Apium graveolens* L.) and parsley (*Petroselinum sativum* Hoffm.); but it has a black and much bigger seed. Also, it is stronger than celery but weaker than parsley, warm and dry at the level of the third rank. It is emmenogogic and diuretic.

371) Aëtius quotes almost the first half of Galen's entry largely verbatim, but adds the information about its seed. He omits Galen's comments about what is called parsley (πετροσέλινον) in Cilicia (12.128.6-13).

There is no apparent substantiation of the above claims in modern scientific literature.

[134.8-11]

(τοβ') Σόγχος χλωρὸς ἔτι καὶ ἀπαλὸς ἐσθίεται, ὡς τὰ ἄλλα ἄγρια τῶν λαχάνων. σύγκειται δὲ ἐξ ὕδατώδους τε καὶ γεώδους οὐσίας, ἀμφοῖν ψυχρῶν· καὶ στύψεώς τι μετέχει καὶ σαφῶς ἐμψύχει καταπλασσομένουσ τε κατὰ τοῦ στομάχου καὶ ἐσθιόμενος. [10]

[Galen 12.128.14-129.2]

372) Sow thistle (*Sonchus aspera* L.) is eaten still fresh and tender, like the other wild varieties of vegetables. It is composed of moist and earthy essences, both cold; it also has some share in astringency, and has a distinctly cooling effect, both when applied as a plaster upon the stomach and when eaten.

372) Aëtius quotes most of Galen's entry, omitting comments about its spiny nature when full grown, and its composition when dried.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists bur-weed (*Sparganium ramosum* Huds.), omitted by Aëtius, supposedly of a drying capacity (Περὶ σπαργανίου 12.129.3-4).]

[134.12-13]

(τογ') Σπάρτον. Σπάρτου, ᾧ παρ' ἡμῖν τὰς ἀμπέλους δεσμεύουσιν, ὃ τε καρπὸς καὶ ὁ τῶν ῥάβδων χυλὸς ἐλκτικῆς οὐκ ἀγεννοῦς ἐστὶ δυνάμεως.

[Galen 12.129.5-7]

373) Esparto (*Stipa tenacissima* L.). Both the fruit and the juice of the stems of esparto, with which, among us, they tie up vines, has a very notable drawing capacity.

373) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[134.14-18]

{ (τοδ') Στακτὴ καλεῖται τῆς προσφάτου σμύρνης τὸ λιπαρόν, κεκομμένη μεθ' ὕδατος ὀλίγου ἀποτεθλιμμένης τε δι' ὀριγάνου. εὐώδης τε λίαν καὶ πολυτελής οὔσα καὶ καθ' ἑαυτὴν μύρον καλούμενον. δόκιμος δὲ ἐστὶν ἢ ἀμιγῆς ἐλαίου καὶ ἐν ἐλαχίστῳ πλείστην δυνάμιν κεκτημένη [15]

θερμαντικὴν ἀναλογοῦσαν τῇ σμύρνῃ καὶ τοῖς θερμαίνουσι τῶν μύρων. 5

374) The greasy material of fresh myrrh, pounded with a little water and expressed through oregano, is called “oil of myrrh” [*stakte*]. It is very sweet-scented and expensive, and it is called on its own “sweet oil”. The pure form of the oil is highly esteemed, which even in the least amount has a very large warming capacity, comparable to myrrh and the warming types of unguents. }

[134.19-21]

(τοε΄) Σταφυλῖνος. Ὁ μὲν ἡμερος ἀσθενέστερος, ὁ δὲ ἄγριος, ὄν καὶ
δαῦκον καλοῦσιν, ἰσχυρότερος εἰς ἅπαντα. οὖρα δὲ κινεῖ καὶ καταμήνια [20]
προτρέπει. ἔχει δὲ τι καὶ ῥυπτικὸν ἐν αὐτῷ.

[Galen 12.129.8-14]

375) Carrot. The cultivated variety (*Daucus carota* L.) is weaker, but the wild variety, which they also call *daukos* (*D. guttatus* Sm.), is stronger in every respect. It facilitates urination and brings on periods. It also has something cleansing in it.

375) Aëtius quotes Galen almost verbatim, but omits comments about the different parts of the plant, and its use in treating wounds.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists two plants, omitted by Aëtius: base horehound (*Stachys germanica* L.), similar to horehound (*Marrubium* L. spp.), supposedly emmenagogic, abortifacient and able to expel placentas (Περὶ στάχθος 12.129.15-130.2); and thorny burnet (*Poterium spinosum* L.), said to be very useful for treating dysentery, purulent ears, wounds, moist conditions, haemorrhages and eye injuries (Περὶ στοιβῆς 12.130.3-12).]

[134.22-24]

(τος΄) Στοιχᾶς πικρᾶς καὶ στυφούσης μετέχει ποιότητος· ἐστὶ δὲ καὶ
λεπτομερῆς διὰ τὴν εὐωδίαν. ἐκφράττειν οὖν καὶ λεπτύνειν καὶ ῥων-
νύναι πέφυκε τὰ τε σπλάγχνα πάντα καὶ ὄλην τοῦ ζώου τὴν ἕξιν.
[Galen 12.130.13-131.3]

376) French lavender (*Lavandula stoechas* L.) has a share of bitter and astringent quality; it is also fine-grained on account of being sweet-scented. It naturally, therefore, unblocks, thins and strengthens all the internal organs and the entire system of living creatures.

376) Aëtius reduces Galen's entry by more than half, by omitting a more detailed discussion of its composition, along with generalisations.

Although this plant is now believed to have various pharmacological properties (e.g., Bruneton, 1995: 429), there is nothing relevant to Aëtius' fairly non-specific claims in modern scientific literature.

[Galen next lists water-lettuce (*Pistia stratiotes* L.), omitted by Aëtius, said to be useful for wounds, ulcers, haemorrhages and sinuses (Περὶ στρατιώτητος 12.131.4-8).]

[134.25-27]

(τοζ΄) Στρούθιον. Στρουθίου ἡ ρίζα χρήσιμος, θερμὴ καὶ ξηρὰ, τῆς τετάρτης που τάξεως ὑπάρχουσα. ἐστὶ δὲ καὶ ῥυπτικὴ καὶ ἐρεθιστικὴ καὶ διὰ τοῦτο πταρμὸς κινεῖ.

[Galen 12.131.9-14]

377) Soapwort (*Saponaria officinalis* L.). The root of soapwort is useful, warm and dry, belonging somewhere in the fourth rank. It is both cleansing and irritant, and for this reason it causes sneezing.

377) Aëtius quotes much of Galen's entry verbatim, omitting comments about taste and composition.

Soapwort is known to contain detergent material (Evans, 2009: 304), but nothing to cause irritation or sneezing.

[135.1-4]

(τοη΄) Στύραξ μαλάττει θερμαίνει συμπέττει, διὸ καὶ βῆχας καὶ κατάρρους καὶ κορυζας καὶ βράγχους ὀνίνησιν, ἔμμηνά τε προτρέπει πινόμενός τε καὶ προστιθέμενος. ἡ δὲ ἐξ αὐτοῦ λιγνὺς σκευάζεται ὡσπερ ἡ τοῦ λιβάνου καὶ ἐνέργειαν τὴν αὐτὴν ἔχει.

[Galen 12.131.15-132.2]

378) Storax (resin from *Liquidambar orientalis* Mill.) softens, warms and concocts, whereby it helps coughs, catarrhs, colds and hoarse, sore throats;

when drunk and inserted vaginally, it brings on periods. Soot is prepared from it just as that from frankincense, and has an effect which is the same.

378) Aëtius quotes Galen largely verbatim.

There is modern *in vitro* evidence that this material has some antibacterial effects (Sagdic et al., 2005), and that when inhaled as benzoin or Friar's balsam (Evans, 2009: 186) it gives at least symptomatic relief in respiratory tract infections, but nothing to suggest it is emmenagogic.

[135.5-136.9]

(τοθ') Σταφυλή τρέφει μᾶλλον ἀπάντων τῶν ώραίων, καὶ μάλισθ' ὅταν ἀκριβῶς ἢ πεπεμμένη. ἦττον δὲ τῶν σύκων αἱ σταφυλαὶ τρέφουσιν καὶ μέγιστον ἀγαθὸν αὐταῖς ἐστὶ τὸ ταχέως ὑπέρχεσθαι. διὸ κἂν ἐπι-σχεθῶσι ποτε, βλάπτουσιν ἰκανῶς. οὔτε γὰρ πέττονται καλῶς ἐπι-σχεθεῖσαι, καὶ κατὰ τὴν εἰς ἡπάρ τε καὶ φλέβας ἀνάδοσιν ὠμὸν γεν-νῶσι χυμὸν οὐ ῥαδίως εἰς αἷμα μεταβαλλόμενον διὰ τε τὸ ἐξωθεν περικείμενον δέρμα καὶ τὰ γίγαρτα ξηρὰ καὶ στύφοντα τὴν οὐσίαν ὑπάρχοντα. διὸ τινες καλῶς ποιῶντες, ὡς ἄχρηστα ταῦτα ἀποπτύ-ουσιν, ἀπομυζήσαντες ἅπασαν τὴν ἔνδον σάρκα σὺν τῷ χυλῷ καὶ μᾶλλον τούτοις ἢ γαστήρ ὑπέρχεται. ἀποτίθενται δὲ τὴν σταφυλὴν εἰς τὸν χεῖμῶνα διαφόρως. ἢ μὲν οὖν ἐν χύτρᾳ συντιθεμένη, πωμασθείσης δηλονότι τῆς χύτρας ἀκριβῶς καὶ πιττωθέντος τοῦ πώματος πρὸς τῷ μηδαμόθεν διαπνεῖσθαι, τονωτικὴ ἐκλύτου γαστροῦς ἢ τοιαύτη γίγνεται καὶ τοὺς ἀνορέκτους ἐπεγείρει πρὸς ἐδωδὴν σίτου· οὐ μὴν ὑπέρχεται γε κατὰ γαστέρα καὶ εἰ ἐπὶ πλείον βρωθείη, ἅπτεται τῆς κεφαλῆς. ταύτης δὲ ἔτι μᾶλλον ἐστὶ κεφαλαλγῆς, ἢν ἀποτίθενται κατὰ τὸ γλεῦκος. ἢ δὲ κρεμασθεῖσα κεφαλὴν οὐδόλως πλήττει, γαστέρα δὲ οὐδὲ προ-τρέπειν οὐδὲ ἐπέχειν πέφυκεν. ὡσαύτως δὲ οὐδὲ ἐπεγείρει τὴν ἄρρω-στον ὄρεξιν οὐδὲ ἐκλύει τὴν εὔρωστον. αἱ μὲν οὖν γλυκεῖαι θερμό-τερον ἔχουσι τὸν χυλόν, διὸ καὶ διψώδεις καὶ γαστέρα δὲ ὑπά-γουσι καὶ μάλισθ' ὅταν ὄσιν ὑγραί· μεταξὺ γὰρ τῶν θερμαινόντων καὶ ψυχόντων εἰσί. μοχθηραὶ δὲ οὐκ εἰς ταῦτα μόνον, ἀλλὰ καὶ πρὸς τὴν ἐν γαστρὶ πέψιν καὶ ἀνάδοσιν καὶ θρέψιν, αἱ τε ὀξεῖαι καὶ αὐστηραὶ σταφυλαὶ καὶ αἱ τὸ περικείμενον δέρμα παχύτερον ἔχουσαι. καθόλου δὲ σε περὶ τῶν ἐδωδίμων τοῖς ἀνθρώποις καρπῶν ἐπίστασθαι χρή λόγῳ κοινῷ· τοὺς μὲν ὑγροὺς ὑγρὰν καὶ λεπτὴν ἐργάζεσθαι τὴν ἐξ αὐτῶν ἀναδιδόμενην τῷ σώματι τροφήν, πορίμην τε καὶ διεξερχομένην ὅλον τὸ σῶμα ταχέως, ἐκκενουμένην τε δι' οὔρων καὶ κατὰ τὸ δέρμα· ἔμπαλιν δὲ τῶν στερεῶν ταῖς συστάσεσι καρπῶν ἦτε εἰς τὸ σῶμα πρόσθεσις παχεῖα αἱ τε διέξοδοι βραδύτεραι καὶ μάλισθ' ὅταν ἔχωσιν ἐν ἑαυτοῖς χυμὸν ἢ παχὺν ἢ γλίσχρον ἢ στυπτικόν.

[135.17] τονική *replaced with* τονωτική

[135.24] *after* διψώδεις *omit* εἰσιν

379) Grapes nourish more than all the fruit in season, and especially when they are perfectly ripened. But grapes nourish less than figs, and it is best by far for them to be excreted quickly. Accordingly, if they are ever retained, they cause ample harm. For they are not well digested when their passage is checked, and they produce a raw humour in relation to distribution to the liver and veins, and this is not easily changed into blood because of the skin wrapped outside them and the pips being dry, and their essence being astringent. Accordingly, some do well when they spit out these useless bits, and suck away the entire inner flesh and juice, and with these the bowel is more emptied. They lay aside grapes for winter differently. So, they are collected in an earthenware pot and when obviously the pot has been covered carefully and the lid has been sealed with pitch against any passage of air from anywhere, the grapes thus treated become capable of strengthening a weakened bowel, and they stimulate those with no appetite towards eating food; at least, they do not really pass down, as far as the bowel is concerned, and if they are consumed to excess, they reach the head. Even more likely to cause headache than this, is the one which they lay up for sweet new wine. When hung up, it does not at all affect the head, and neither naturally provokes nor checks the bowel. In like manner, it neither arouses an unhealthy appetite nor dissipates a healthy one. The sweet grapes, therefore, have juice which is warmer, whereby they induce thirst and purge the bowel, especially when they are moist; for they are between the warming and cooling substances. The sour and harsh grapes, and the ones which have thicker skin around them, are troublesome not only in these aspects, but also to digestion in the bowel and to assimilation and nutrition. It is generally necessary for you to have a scientific knowledge, based on common reasoning, about the fruits fit for human consumption: the moist ones produce a moist and thin nourishment distributed from them to the body, making a passage and going quickly through the whole body, being emptied out through urine and throughout the skin. On the other hand, the contribution to the body of fruits solid in texture is thick, and their evacuation is slower, especially when they have within themselves fluid which is thick, sticky or astringent.

379) This entry is absent from *SMT*, but Galen includes a long section about grapes in *Alim.Fac.* (6.573.10-581.7), from which Aëtius has taken much of the information for his entry. It is out of alphabetical order in Aëtius.

379.17 [135.21] **κρεμασθεῖσα** Perhaps this refers to storing the wine to allow it to mature, and lose by evaporation some of the more toxic congeners.

379.17 [135.21] **οὐδόλως** (cf. 134.8n. p151.)

There is nothing apparent in modern scientific literature relevant to Aëtius' rather extensive claims.

[136.10-137.14]

(τπ') Σῦκα. Τὸ μὲν κοινὸν οὐ μόνον ὀπώρας, ἀλλὰ καὶ τοῖς ὠραίοις ὀνομαζομένοις καρποῖς, ἔχει καὶ τὰ σῦκα, φυγεῖν οὐ δυνηθέντα τὴν κακοχυμίαν οὐδ' αὐτά. πρόσεστι δὲ τοῖς σύκοις ἀγαθὰ τό τε κατὰ γαστέρα πορίμοις εἶναι, καὶ τὸ διεξέρχεσθαι ῥαδίως ὅλον τὸ σῶμα. καὶ γάρ τι ῥυπτικὸν ἀξιόλογον ἔχει, καὶ ψαμμώδη πολλὰ τοῖς νεφριτικοῖς ἐπὶ ταῖς ἐδωδαῖς αὐτῶν ἐκκρίνεται. τροφήν δὲ δίδωσι τῷ σώματι οὐ στερεάν, ἀλλ' ὑπόσομφον. ἐμπύπλησί γε μὴν φύσης αὐτὰ τὴν γαστέρα· τῷ δὲ τάχει τῆς διεξόδου τὴν φύσαν ὀλιγοχρόνιον ἐργάζεται· καὶ κατὰ τοῦτο τῆς ἄλλης ὀπώρας ἥττον βλάπτει. τὸ δὲ πέπειρον ἀκριβῶς σῦκον ἐγγὺς τοῦ μηδόλως βλάπτειν ἔχει. τὰ δὲ ξηρὰ σῦκα θερμότερα τῆς δυνάμεως ἐστὶ κατὰ τὴν δευτέραν τάξιν ἀρχομένην. ἔχει δέ τι καὶ λεπτομερὲς καὶ εἰς πολλὰ τὸ χρήσιμον. μοχθηρὸν δὲ ἐν τι κέκτηται τοῖς πλεονάζουσιν ἐν τῇ τούτων ἐδωδῇ. οὐ πάνυ γὰρ αἷμα χρηστὸν γεννῶσιν αἱ ἰσχάδες· ὅθεν αὐταῖς καὶ τὸ τῶν φθειρῶν πλῆθος ἐπεταί. εἰ δὲ καὶ κακοχυμία τις περιέχοιτο ἐν τῇ γαστρὶ, ἐσχάτως ἀδικοῦσιν αἱ ἰσχάδες ἐσθιόμεναι· αὐξοῦσι γὰρ μᾶλλον τὴν κακοχυμίαν διαφθειρόμεναι καὶ μὴ διαχωροῦσαι κάτω. δύνανται δὲ ἔχουσι λεπτοτυκίην τε καὶ τμητικίην, δι' ἣν καὶ τὴν γαστέρα πρὸς ἐκκρίσιν ὀρμῶσι καὶ νεφροὺς ἐκκαθαίρουσιν. ἥπατι δὲ καὶ σπληνὶ φλεγμαίνουσι μὲν εἰς βλαβεραῖ, καθάπερ καὶ τὰ χλωρὰ σῦκα, τῷ κοινῷ λόγῳ τῶν γλυκέων ἀπάντων· ἐμπεφραγμένοι δὲ ἢ σκιρροῦμένοι ταῦτα τὰ σπλάγχνα μετὰ θύμων ἢ γλήχωνος ἢ θύμβρας ἢ καλαμίνθης ἢ ὀριγάνου ἢ πεπέρεως ἢ ζιγγιβέρεως πρὸ πολλοῦ τῆς τροφῆς οἱ ἰατροὶ παρέχουσιν. ὅσοι δὲ μετὰ τινος τῶν παχυνόντων ἐσθίουσι τὰ τε σῦκα καὶ τὰς ἰσχάδας οὐ σμικρὰ βλάπτονται. τῷ δὲ λεπτομερεῖ συμπέττει καταπλαττόμενα τὰ ξηρὰ σῦκα τοὺς σκληροὺς τῶν ὄγκων καὶ διαφορεῖ. καὶ τὸ ἀφέψημα δὲ αὐτῶν ὁμοίως ὑπάρχει δυνάμεως. χρή δὲ ὅπου συμπέψαι βούλει, πύρινον ἄλευρον μίγνυειν, ὅπου δὲ διαφορῆσαι, κρίθινον. καὶ αἱ μὲν λιπαρότεροι συμπέττειν τοὺς ὄγκους μᾶλλον πεφύκασιν, αἱ δὲ δριμυτέραι ἐν τῷ γεύεσθαι ῥύπτειν τε καὶ διαφορεῖν. τὸ δὲ ἐξ αὐτῶν ἐνομένων ἐν ὕδατι κατασκευαζόμενον μελιτῶδες ὁμοίον ἐστὶ μέλιτι κατὰ τὴν δύνανται.

[Galen 12.132.3-133.6]

380) Figs (fruit of *Ficus carica* L.). Figs also have the feature common not only to fruit but also to fruit called seasonable, namely that they themselves too cannot avoid unwholesomeness. But good things are inherent in figs, both providing a passage in the bowel and passing easily through the whole body. For they have some remarkable cleansing effect, and much gravel is expelled by kidney patients after eating them. They give to the body nourishment which is not solid but spongy. At any rate, they fill the bowel full of wind; by the rapidity of passage through the body they create wind that is short-lived; and in this respect they are less harmful than the other fruit. But the perfectly ripe fig approaches close to causing no harm at all. Dried figs are warmer in capacity, at the level of the beginning of the second rank. They have an aspect that is fine-grained and useful for many purposes. But they have one troublesome feature for those who eat them to excess. For dried figs do not create entirely useful blood; hence, a large number of ticks/lice are a consequence. And if some unwholesome humour is prevalent in the bowel, when dried figs are eaten, they are extremely injurious; for, being destroyed and not voided downwards, they increase the unwholesome humour to a greater extent. They have a thinning and cutting capacity, through which they stimulate the bowel to excretion, and thoroughly purge the kidneys. But they are harmful to the liver and spleen when inflamed, just like the fresh figs, in keeping with the rule common to all sweet things; doctors provide them together with thyme, pennyroyal (*Mentha pulegium* L.), savory, mint, oregano, pepper or ginger, instead of much of their diet, to those with blockage or induration in these internal organs. All who eat figs and dried figs with one of the thickening substances are harmed. When applied as a poultice, dried figs, on account of being fine-grained, bring to a head and disperse the hard sorts of masses. Their boiled-down residue also has similar capacity. Where you want to bring something to a head, it is necessary to mix it with wheat flour, but to disperse something, to mix it with barley flour. And it is more in the nature of greasier materials to bring masses to a head, but for those sharper in taste to cleanse and disperse them. What is prepared from boiling them [figs] in water is like honey, similar in capacity to honey.

380) Aëtius quotes only one third of Galen's *SMT* entry, mainly some shortened comments about elemental composition and preparation, while omitting more expansive discussion involving the preparation and uses of dried and fresh figs. Three quarters of Aëtius' entry, which, in total, is 50% longer than Galen's in *SMT*, does not appear to be derived from *SMT*, apart from the mention of figs' laxative effect (12.133.2-3), but is taken from Galen's discussion of figs in *Alim.Fac.* (6.570.11-573.9).

Figs are known to contain a laxative (Evans, 2009: 217), but otherwise there is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists fig tree (*Ficus carica* L.), omitted by Aëtius, which supposedly has an ulcerative, opening and wart-removing effect on the skin, and whose shoots are used to tenderise beef (Περὶ συκῆς 12.133.7-16).]

[137.15-20]

(τπα') Σύμφυτον πετραῖον ἐξ ἐναντίων σύγκειται δυνάμεων· ἔχει μὲν γάρ τι τμητικόν, ᾧ καὶ τὸ περιεχόμενον ἐν θώρακι καὶ πνεύμονι πῶν ἐκκαθαίρει, ἔχει δὲ καὶ συνακτικόν, ᾧ καὶ πρὸς τὰς τοῦ αἵματος ἀναγωγὰς ἐπιβοηθεῖ. διὰ δὲ τὴν ὑγρότητα ἄδιψόν ἐστι μασωμένοις καὶ τὰς τῆς ἀρτηρίας τραχύτητας ἰᾶται. διὰ δὲ ταῦτα καὶ ταῖς ἐντεροκήλαις ἐπιτίθεται καὶ πρὸς σπάσματα καὶ ῥήγματα σὺν ὄξυμέλιτι πίνεται. 5 [20]

[Galen 12.133.17-134.14]

381) Low pine (*Coris monspeliensis* L.) is composed of opposite capacities; for it has some cutting effect, by which it thoroughly purges pus contained in the chest and lung, but it also has some constrictive effect, by which it is of assistance in instances of bringing up blood. Because of its moistness, it prevents thirst in those who chew it, and it treats roughness in the windpipe. And for these reasons it is applied to hernias, and drunk with vinegar and honey for sprains and soft-tissue injuries.

381) Omitting comments about taste and smell (12.134.3-5), and use in dysentery, “red flow” and kidney disorders (12.134.11-14), Aëtius quotes the remaining half of Galen's entry largely verbatim.

381.1 [137.15] **Σύμφυτον** LSJ and André translate as *C. monspeliensis* L. or others, and Carnoy gives *Symphytum bulbosum* LSJ.

No pharmacological information regarding this plant is available in modern literature.

[Galen next lists two plants, omitted by Aëtius: “great symphyton”, similar to low pine, but sticky and not sweet (Περὶ συμφύτου τοῦ μεγάλου 12.134.15-135.2); and cow-parsnip (*Heracleum spondylium* LSJ), supposedly useful for breathing problems, epilepsy, jaundice, sinuses and chronic ear ulcers (Περὶ σπονδύλου 12.135.3-10).]

[137.21-25]

(τββ') Περὶ συκομόρων. Ὁ καρπὸς οὗτος σύκῳ παραπλήσιος τὴν ἰδέαν ἐστίν, δριμύτητα δὲ οὐδεμίαν κέκτηται, βραχείας μετέχων γλυκύτητος, ὑγρότερός τε πῶς καὶ ψυκτικώτερος ὢν κατὰ τὴν δύναμιν ὡς τὰ μόρα. μᾶλλον δὲ ἐν τῷ μεταξὺ μόρων τε καὶ σύκων αὐτὸν τις εἰκότως ἂν θείη, ὅθεν καὶ τοῦνομα ἔσχεν.

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382) Concerning sycomores (fruit of *Ficus sycomorus* L. or *aegyptia* L.). This fruit is similar to a fig in form, but has no bitterness while sharing a little sweetness, and being somewhat moister and more cooling in capacity, as are mulberries. One might reasonably place it rather in the middle between mulberries and figs, and hence it has acquired its name.

382) This entry is absent from *SMT*, but Aëtius has created it largely by quoting from Galen's *Alim.Fac.* (6.616.11-16).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

137.26-138.7

(τγγ') Σχῆνος ὁ θάμνος. Ἐξ ὑδατώδους οὐσίας ἀτρέμα θερμῆς καὶ γεώδους ψυχρᾶς οὐ πολλῆς σύγκειται, δι' ἣν καὶ στύφει μετρίως. ξηραίνει μὲν οὖν κατὰ τὴν τρίτην τάξιν ἀρχομένην, κατὰ δὲ θερμότητα καὶ ψυχρότητα εὐκρατος. ὁμοίαν δὲ ἔχει ἐν πᾶσι τοῖς ἑαυτοῦ μέρεσι τὴν δύναμιν, ὅθεν καὶ πίνεται καὶ καθ' ἑαυτὸν καὶ σὺν τοῖς ἄλλοις φαρ-

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μάκοις <καὶ> πρὸς κοιλιακὰς διαθέσεις καὶ δυσεντερίας καὶ τὰς τοῦ αἵματος πτύσεις καὶ τὰς ἐκ μήτρας αἰμορραγίας καὶ προπτώσεις τῆς ἕδρας τε καὶ ὑστέρας ἐπιτήδειός ἐστιν, ἐγγὺς τῆς ὑποκυστίδος ὑπάρχων. 5

[Galen 12.135.11-136.7]

383) The mastic bush (*Pistacia lentiscus* L.). It is composed of a watery, gently warm essence, but not much of an earthy coldness, because of which it is moderately astringent. It dries, therefore, at the beginning of the third rank, but it is moderate in terms of warmth and coldness. It has a capacity which is similar in all its parts, whence it is drunk both on its own and with other drugs, <and> it is suitable for abdominal conditions, dysenteries, cases of haemoptysis, uterine bleedings and rectal and uterine prolapses, being near to the hypocist (*Cytinus hypocistis* L.).

383) Aëtius largely quotes Galen fairly accurately, omitting more detailed information about different parts of the plant (12.135.17-136.2).

Apart from some potential benefit in Crohn's disease (Dimas et al., 2012), there is no apparent substantiation of the above claims in modern scientific literature.

138.8-12

(τπδ') Σχοίνου ἄνθος θερμαίνει μετρίως καὶ στύφει μετριώτερον, μετέχει δὲ καὶ λεπτομεροῦς τινος δυνάμεως· ὅθεν οὖρητικόν ἐστι φάρμακον καὶ καταμηνίων ἀγωγόν, ἐν πυρίαις τε καὶ πόμασι καὶ καταπλάσμασι παραλαμβάνομενον. ὠφελεῖ δὲ καὶ τὰς καθ' ἥπαρ καὶ κοιλίαν καὶ στόμαχον φλεγμονάς. 10 [5]

[Galen 12.136.8-17]

384) The flower of rush [possibly camel-hay (*Cymbopogon schoenanthus* Spreng.)] warms moderately and is more moderately astringent, and it also has a share in some fine-grained capacity; hence it is a diuretic and emmenagogic drug, when received in vapour-baths, drinks and poultices. It helps inflammations affecting the liver, abdomen and stomach.

384) Aëtius quotes the first half of Galen's entry fairly accurately, but with the important difference that he writes about the flower of σχοίνου (rush), as

opposed to Galen's σχίνου (mastic bush); in view of the accuracy of the quotation of the first part, it seems that they are talking about the same plant, and they either have different names for it, as frequently occurs, or else there has been a scribal error. Aëtius omits Galen's comments comparing different parts of the plant and suggesting a use in haemoptysis.

There is no apparent substantiation of the above claims in modern scientific literature.

[138.13-23]

(τπε') Σχοίνου λείας. Ἡ μὲν ὀξύσχοινος ὀνομάζεται, ἡ δὲ ὀλόσχοινος ἰσχυρότερα μὲν καὶ σκληρότερα ἢ ὀξύσχοινος, παχύτερα δὲ καὶ χαυνοτέρα ἢ ὀλόσχοινος. ὁ καρπὸς δὲ τῆς ὀλοσχοίνου μὲν ὑπνωτικός. τῆς δὲ ὀξύσχοίνου εἶδη δύο ἐστὶ· τὸ μὲν ἄκαρπον, ὅπερ καὶ ἄχρηστον ἡμῖν, τὸ δὲ καρποφόρον. ὑπνώδης δὲ καὶ ταύτης ὁ καρπός, ἀλλ' ἦττον τῆς ἐτέρας. ἐστὶ δὲ οὗτος κεφαλαλγῆς. ἀμφοτέροι δὲ εἰ φρυγέντες μετ' οἴνου πίνονται, τὰ κατὰ γαστέρα ξηραίνουσι ρεύματα καὶ ῥοῦν γυναικεῖον τὸν ἐρυθρὸν ἐπέχουσι. διὰ ταῦτα καὶ ἡ κρᾶσις ἀτρέμα ψυχρά ἐστὶ καὶ ὑδατώδης θερμῆ· ξηραίνει οὖν τὰ κάτω. διὰ ταῦτα καὶ ἐπὶ τὴν κεφαλὴν ἡρέμα ἀναφέρει ψυχροὺς ἀτμούς, οἷς ὑπνώδεις ἐργάζεται.

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[Galen 12.136.18-137.13]

385) Concerning smooth rush. One sort is called *oxuschoinos* [great sea-rush (*Juncus acutus* L.)] by some, the other is called *holoschoinos* [club-rush (*Scirpus holoschoenus* L.)]; the great sea-rush is more slender and harder, whereas the club-rush is thicker and spongier. The fruit of club-rush is narcotic. There are two forms of great sea-rush: one bears no fruit, which is useless for us, but the other does bear fruit. Its fruit also is sleep-inducing, but less than the other variety. It causes headaches. If roasted and drunk with wine, both varieties dry bowel fluxions, and check female flow which is red. For these reasons, its composition is mildly cold and warm in a moist way; it dries, therefore, the lower parts of the body. For these reasons, also, it gently brings cool vapours up to the head, through which it produces sleep-inducing effects.

385) Aëtius quotes Galen largely verbatim.

385.11 [138.23] ἐργάζεται Lit, “it makes [people] drowsy”, but Galen has ἐργάζονται – “they are made drowsy”.

There is no apparent substantiation of the above claims in modern scientific literature.

[138.24-27]

(τπς) Τερεβίνθου καὶ ὁ φλοιὸς καὶ τὰ φύλλα καὶ ὁ καρπὸς ἔχουσί τι
στυπτικόν, ἀλλὰ καὶ θερμαίνουσι κατὰ τὴν δευτέραν τάξιν. ὁ δὲ καρ- [25]
πὸς ἐγγύς ἐστι καὶ τῆς τρίτης τάξεως τῶν ξηραίνόντων· ταῦτ' ἄρα
καὶ οὐρητικός ἐστι καὶ σπληνὰς ὀνίνησι.

[Galen 12.137.14-138.4]

386) The bark, leaves and fruit of the terebinth (*Pistacia terebinthus* L.) have some astringent effect, but they also warm at the level of the second rank. The fruit is also near to the third rank of drying substances. That is why it is diuretic and benefits spleens.

386) Aëtius quotes most of Galen's entry verbatim, omitting some comments about its qualities when fresh or dried, and the effect of chewing its fruit.

There is no apparent substantiation of the above claims in modern scientific literature.

[139.1-11]

(τπζ') Τεῦτλον νιτρῶδους τινὸς μετείληφε δυνάμεως, ἧ καὶ ρύπτει καὶ
διαφορεῖ καὶ διὰ τῶν ρινῶν ἐκκαθαίρει. ἐψηθὲν δὲ τὸ μὲν νιτρῶδες
τε καὶ δριμύ ἀποτίθεται, γίγνεται δὲ ἀφλεγμάντου δυνάμεως ἀτρέμα
διαφορητικῆς. ἰσχυρότερον δὲ εἰς τὸ ρύπτειν καὶ διαφορεῖν ἐστὶ τὸ
λευκόν. τὸ γὰρ μέλαν στύψεως μετέχει καὶ μᾶλλον κατὰ τὴν ρίζαν· 5 [5]
τῷ δὲ ρυπτικὸν ἔχει τὸν χυλὸν καὶ τὴν γαστέρα πρὸς ἔκκρισιν ἐπε-
γείρει καὶ τὸν στόμαχον ἐνίοτε δάκνει καὶ μάλιστ' ἐφ' ὧν εὐαίσθητός
ἐστὶ φύσει, καὶ διὰ τοῦτο κακοστόμαχόν ἐστὶν ἔδεσμα πλεῖον βρωθέν.
ἐπιτηδειότερον δὲ ἐστὶ μαλάχης εἰς τὰς καθ' ἧπαρ ἐμφράξεις, ἔτι δὲ
μᾶλλον ὅταν μετὰ νάπιος ἢ πάντως γε ὄξους ἐσθίηται. καὶ τοῖς ὑπο- 10 [10]
σπληνοῖς δὲ τὸν αὐτὸν τρόπον ἐσθιόμενον ἀγαθὸν γίνεται φάρμακον.

[Galen 12.138.5-15]

387) Beet (*Beta maritima* L.) has a share of an alkaline capacity, with which it cleanses, dissipates and purges out through the nostrils. When boiled, it sets aside the alkalinity and sharpness, and it acquires a gently dispersive, anti-inflammatory capacity. The white variety is stronger for cleansing and dissipating. For the black has a share in astringency, and

more so in the root; by having a juice that is cleansing, it stimulates the bowel to evacuation and sometimes stings the stomach, especially in those for whom it is sensitive in its nature, and, for this reason, when eaten in excess as food, it is bad for the stomach. It is more suitable than mallow for blockages affecting the liver, and even more so when it is eaten with mustard or certainly with vinegar. It also becomes an excellent drug for those suffering spleen problems, when eaten in the same manner.

387) Aëtius quotes Galen's *SMT* almost verbatim, and then adds comments regarding stomach, bowel, liver and spleen (387.6-11 [139.6-11]) by quoting *Alim.Fac.* 6.630.3-10 largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists, out of alphabetical order, tree germander (*Teucrium flavum* L.), omitted by Aëtius, which, he says, is cutting, fine-grained drying and warming, and treats spleens (Περὶ τευκρίου 12.138.12-15).]

[139.12-24]

(τη) Τέφρα πᾶσα τῶν κεκαυμένων ξύλων ἢ ἐτέρων ὑλῶν τὸ λείψανον τέφρα προσαγορεύεται, σύνθετον ὑπάρχον ἐξ ἐναντίων οὐσιῶν τε καὶ ποιότητων. ἔχει γὰρ ἐν ἑαυτῷ τὸ μὲν τι γεῶδες, τὸ δὲ οἶον αἰθαλώδες ἢ λιγνυῶδες. ταυτὶ μὲν οὖν τὰ μόρια λεπτομερῆ τέ ἐστι, καὶ βρεχομένης ὕδατι τέφρας καὶ διηθουμένης συναποφέρεται· ὅσον δὲ ὑπολείπεται γεῶδες ἀσθενὲς καὶ ἀδηκτόν τι γίνεται, τῷ ὕδατι τὴν θερμὴν δύναμιν ἐντιθέμενον. οὐχ ἅπασα δὲ τέφρα τὴν αὐτὴν ἀκριβῶς ἔχει κρᾶσιν, ἀλλὰ κατὰ τὴν τῆς καυθείσης ὕλης διαφορὰν ὑπαλλάττεται. ἐκ μὲν δὴ τῶν στρυφνῶν ξύλων ἢ τέφρα, ὥσπερ τῶν δρυίνων καὶ τῶν παραπλησίων, στυπτικὸν οὐκ ὀλίγον ἔχει ἐν τῷ γεῶδει μέρει· ὅθεν καὶ αἱμορραγίας ἐπέχει. ἢ δὲ συκίνη πολὺ τὸ δριμύ καὶ καυστικὸν ἔχει ἐν τῷ αἰθαλώδει μέρει, ἐν δὲ τῷ γεῶδει τὸ ῥυπτικόν. παραπλησία δὲ καὶ ἢ ἐκ τῶν τιθυμάλλων τέφρα.

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[Galen 12.138.16-140.5]

388) All ashes: what is left over from burnt woods or other materials is called ash, being a compound of disparate essences and qualities. For it has within itself something earthy, and something sooty or smoky. These constituents, therefore, are fine-grained, and when ash is soaked in water and filtered, they are carried away along with it; all that is left behind is some weak, non-erosive earthy material, which has instilled the warm

capacity into the water. Not every ash has exactly the same composition, but is somewhat changed according to the variation in the material which has been burnt. Ash from astringent materials, such as oak timbers and similar, has no small amount of astringency in the earthy fraction; hence it checks bleedings. That from fig wood is very sharp and caustic in the sooty fraction, but cleansing in the earthy fraction. Ash from spurge is also similar.

388) Aëtius quotes two fifths of this part of Galen's entry almost verbatim, and paraphrases a few more lines; he omits a reference to Dioscorides, whom Galen contradicts by citing a list of examples (12.139.8-14).

There is no apparent substantiation of the above claims in modern scientific literature.

[140.1-4]

(τπθ') Τίτανος. Ἐστὶ δὲ καὶ ἡ τίτανος εἶδος τέφρας, λεπτομερεστέρα οὕσα τῆς ἐκ τῶν ξύλων γιγνομένης, πλυθεῖσα γοῦν ὕδατι ἀκριβῶς τρίς ἢ τετράκις ἀποχεομένου τοῦ ὕδατος ξηραντικὸν ἀδήκτως γίνεταί φάρμακον, διαφορητικὸν δὲ γίνεταί πλυθεῖσα θαλάσση.

[Galen 12.140.5-12]

389) White earth. White earth is also a type of ash, and is more fine-grained than what comes from timbers. At least, when washed carefully with fresh water three or four times, and the water is poured away, it becomes a non-stinging, drying drug, but it becomes dispersive when washed in sea-water.

389) Omitting a generalisation and a reference to Galen's book on minerals, Aëtius quotes about half of Galen's comments about this mineral, which the latter has included in the previous entry about ash.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists *Andrachna telephioides* L., omitted by Aëtius, which is purported to be drying and warming, and suitable for putrescent ulcers, and white and pale skin lesions (Περὶ τηλεφίου 12.140.14-141.2).]

(τρ´) Τῆλις. Θερμὴ μὲν ἐκ τῆς δευτέρας ἐστὶ τάξεως, ξηρὰ δὲ ἐκ τῆς πρώτης· μετέχει δὲ ῥυπτικῆς δυνάμεως, καὶ διὰ τοῦτο τὰς ζεοῦσας φλεγμονὰς παροξύνει, τὰς δὲ ἥττον θερμὰς καὶ τὰς σκιρρώδεις διαφορεῖ. ἐσθίεται δὲ διαφόρως ἢ τῆλις, κεφαλῆς δὲ ἄπτεται εἰ πλείων ληφθεῖσα, καὶ μᾶλλον εἰ χωρὶς ἄρτου προσενέγκοιτό τις αὐτήν· ἐνίοις δὲ καὶ τὸν στόμαχον ἀνατρέπει. ὁ χυλὸς δὲ ἐψηθείσης τῆς τήλεως μετὰ βραχέος μέλιτος λαμβανόμενος ἐπιτήδειός ἐστιν ὑπάγειν ἅπαντας τοὺς ἐν ἐντέροις μοχθηροὺς χυμούς. ὀλίγον δὲ εἶναι χρὴ τὸ μιγνύμενον αὐτῇ μέλι, μήπως γένηται δακνώδης. ἐπὶ δὲ τῶν κατὰ τὸν θώρακα χρονιζόντων ἀλγημάτων ἄνευ πυρετοῦ συναφεψεῖν δεῖ αὐτῇ λιπαροὺς φοίνικας. ἐκθλίψαντας δὲ τὸν χυλὸν εἶτα μέλι μίξαντας κᾶπειθ' ἐψησαντας αὖθις ἐπ' ἀνθράκων ἄχρι πάχους συμμέτρου, χρῆσθαι πρὸ πολλοῦ τῶν σιτίων. φυλάττεσθαι δὲ τὴν τούτου χρῆσιν ἐπὶ τῶν εὐπαθῆ ἐχόντων τὴν κεφαλὴν καὶ γὰρ καὶ οἱ φοίνικες κεφαλῆς ἄπτονται.

[Galen 12.141.3-6]

390) Fenugreek (*Trigonella foenum-graecum* L.). It is warm at the second rank and dry at the first. It has a share of cleansing capacity, and for this reason it stimulates inflammatory swellings to come to a head, and disperses the less warm ones and those of a hard nature. Fenugreek is eaten in different ways. It goes to the head if too much is taken, and more so if one were to get it without bread; it even upsets the stomach in several people. The juice of boiled fenugreek, taken with a little honey, is suitable for driving down all troublesome humours in the gut. It is necessary for the honey mixed with it to be small in quantity, so that it in no way becomes erosive. In the case of chronic pains affecting the chest without fever, it is necessary to boil down greasy dates together with it. Having expressed the juice, then mixed in honey, and boiled it again over coals until it is of an even thickness, one should use it for much of the diet. Its use must be prevented in those who have a head susceptible to disease, for dates in particular go to the head.

390) Aëtius quotes all of Galen's entry largely verbatim, and adds a considerable amount of his own comments regarding eating, and preparation and use of juice (390.4-14 [140.8-18]).

There is no apparent substantiation of the above claims in modern scientific literature.

(τρα') Τιθύμαλλοι πάντες. Ἐπικρατοῦσαν μὲν ἔχουσι τὴν δριμεῖάν τε καὶ
θερμὴν δύναμιν· ὑπάρχει δὲ αὐτοῖς καὶ πικρότης. ἰσχυρότατος μὲν οὖν [20]
ὁ ὀπός, ἐφεξῆς δὲ ὁ τε καρπὸς καὶ τὰ φύλλα, μετέχει δὲ καὶ ἡ ῥίζα
τῶν εἰρημένων δυνάμεων ἀλλ' οὐκ <ἐπ'> ἴσης. αὕτη μὲν οὖν ἐνομένη
σὺν ὄξει τὰ τῶν ὀδόντων ἀλγήματα, καὶ μάλισθ' ὅσα βεβρωμένοις 5
αὐτοῖς γίνεταί, θεραπεύει. εἰσὶ δὲ οἱ ὅποι ἐκ τῆς τετάρτης τάξεως
τῶν θερμαινόντων, τῆς καυστικῆς εἰρημένης· διὰ τοῦτο καὶ καταχρίο- [25]
μενοι οἱ ὅποι τρίχας ψιλοῦσιν. ἐπεὶ δὲ σφοδρὰ ἐστὶν αὐτῶν ἡ δύνα-
μις, ἐλαίῳ μίγνυνται· καὶ εἰ πολλάκις τοῦτο γίγνοιτο, τελέως αἱ ῥίζαι
τῶν τριχῶν ἀπόλλυνται καυθεῖσαι, καὶ ψιλὸν αὐτῶν γίνεταί τὸ σῶμα. 10 [p141]
ὁμοίως καὶ ἀκροχορδόνας καὶ θύμους ἀφαιροῦσιν· ἀπορρύπτουσι δὲ
καὶ λειχήνας καὶ ψώρας. τοῦ δὲ χαρακίτου λεγομένου ὁ φλοιὸς τῆς
ρίζης ἐν σκιᾷ ξηραίνόμενος κοπτόμενός τε καὶ σηθόμενος καθαίρει γεν-
ναίως πινόμενος. δεῖ δὲ ἀφ' ἐσπέρας στήσαντας Γρ δ' βρέχειν ἐν οἴνῳ [5]
γλυκεῖ, ἔωθεν δὲ σειρώσαντας διὰ ῥάκους τὸν οἶνον καὶ χλιαίνοντας 15
διδόναι τὸν οἶνον πίνειν.

391) All the spurges (*Euphorbia* L. spp.). They have a predominant sharp and warm capacity; bitterness is also inherent in them. The juice is strongest, and then respectively the fruit and leaves, and the root also has a share in the aforementioned capacities, but not to an equal extent. When, therefore, the root is boiled with vinegar, it treats toothache, especially all cases that have been produced by cavitation. The juices belong to the fourth rank of warming substances, the rank spoken of as caustic; for this reason, the juices even strip off hairs when smeared on them. Since their capacity is excessive, they are mixed with oil; and if this is done many times, the roots of the hairs are burnt and destroyed, and the body becomes stripped bare of them. In like manner, they remove pedunculated warts and genital warts; and they cleanse away impetigo and itchy scabby lesions. When the rind of the root of the one called wood spurge (*E. sibthorpii* Boiss.) is dried in the dark, chopped up and sifted, and drunk, it purges outstandingly. After setting it up from the onset of nightfall, it is necessary to soak 4 grams in sweet wine, and, after dawn, having filtered the wine through cloth and warming it, give it to drink.

391) Aëtius quotes the first fifth of Galen's text very nearly verbatim; he then omits a passage about inserting the juice into dental cavities, and

protecting other parts of the body from its ulcerative effects with wax (12.141.13-17). Next he reproduces a further fifth of Galen's text, and then omits the remainder (12.142.7-143.5), about its ability to help putrescent, blackened and gangrenous ulcers, and pointing sinuses. Furthermore, Galen mentions use of its leaves and fruit, which are weaker, to stun fish in still water and bring them to the surface, and he discusses other species: wood spurge (*Euphorbia sibthorpii* Boiss.), myrtle spurge (*E. myrsinites* L.), *E. alephica* LSJ, sea spurge (*E. paralias* L.), and *helioskopos*. Aëtius has added the passage about the preparation of the root rind (391.12-16 [141.3-7]).

Constituents of *Euphorbia* spp. are known to have a purgative effect, to be toxic when ingested by young children, and to cause intense, vesicant inflammation on contact with skin (Bruneton, 1995: 525). There are, however, no modern reports of their ability to remove warts and hairs.

[141.8-10]

(τρβ') Τραγάκανθα ὀπός ἐστιν ἀκανθώδους φυτοῦ παραπλησίαν ἔχων τῷ κόμμει δύναμιν, ἐμπλαστικὴν τέ τινα καὶ ἀμβλυνητικὴν δριμυτήτων. καὶ δὴ καὶ ξηραίνει παραπλησίως ἐκεῖνω.

[10]

[Galen 12.143.6-8]

392) Tragacanth (*Astragalus parnassi* LSJ or *creticus* LSJ) is juice of a thorny plant, which has a capacity similar to gum, somewhat adherent and able to dull sharpness. Moreover, it dries similarly to it.

392) Adding that it is the juice of a thorny plant, Aëtius quotes Galen almost verbatim.

This plant is a source of gum, still used pharmaceutically as an emulsifier (Bruneton, 1995: 90).

[Galen next lists two plants, omitted by Aëtius: stinking tutsan (*Hypericum hircinum* L.)/pimpinell (*Pimpinella tragium* Vill.), a Cretan variety of which is said to draw thorns, crumble stones, and bring on periods, and a smaller variety to be suitable for disorders featuring fluxes (Περὶ τραγίου 12.143.9-

18); and goat's marjoram (*Thymus teucrioides* Boiss.), previously discussed in the section on origanum (Περὶ τραγοριγάνου 12.144.1-2).]

[141.11-15]

(τργγ') Τρίβολος ἐξ ὑγρᾶς οὐσίας μετρίως ψυχρᾶς καὶ ξηρᾶς συνέστηκεν. ἐπικρατεῖ δὲ ἐν μὲν τῷ χερσαίῳ τὸ γεῶδες ψυχρόν, καὶ διὰ τοῦτο στύφει μᾶλλον, ἐν δὲ τῷ ἐνύδρῳ τὸ ὑδατῶδες, καὶ διὰ τοῦτο πρὸς τὰς ζεοῦσας φλεγμονὰς ἀρμόττουσι. τοῦ δὲ χερσαίου ὁ καρπὸς τοὺς ἐν νεφροῖς λίθους θρύπτει πινόμενος.

5 [15]

[Galen 12.144.3-10]

393) *Tribolos* [water chestnut (*Trapa natans* L.) or caltrops (*Tribulus terrestris* L.)] is composed of a moist essence, moderately cool and dry. Earthy cold predominates in the dry land variety [caltrops], and accordingly it is more astringent, but the moist essence predominates in the aquatic variety [water chestnut], and accordingly it is suitable for boils coming to a head. When drunk, the dry land variety crumbles kidney stones.

393) Aëtius quotes Galen largely verbatim.

393.1 [141.11] **Τρίβολος** This is the name of two entirely different plants, which Carnoy and André list as *Trapa natans* L. and, among other species, *Tribulus terrestris* L.. Under this heading, Dioscorides lists an aquatic and a dry-land plant, each with different uses (4.15 (K25.1.517.3)).

There is *in vitro* evidence that *Tribulus terrestris* L. contains an antilithiatic protein (Aggarwal et al., 2012), which may prevent calculus formation, rather than “crumble kidney stones”; there is also evidence that this plant may be extremely nephrotoxic (Talasaz et al., 2010). There is nothing to support the use of *Trapa natans* L..

[Galen next lists sea-starwort (*Aster tripolium* L.), omitted by Aëtius, whose root has a warming capacity (Περὶ τριπολίου 12.144.11-13).]

[141.16-18]

(τργδ') Τρίφυλλον, οἱ δὲ ἀσφάλτιον, δυνάμεώς ἐστι θερμῆς καὶ ξηρᾶς τῆς τρίτης τάξεως κατὰ τὴν ἄσφαλτον καὶ διὰ τοῦτο πινόμενον καὶ πλευρῶν ἀλγῆματα ἐπ' ἐμφράξεσιν ὀνίνησι καὶ οὔρα κινεῖ καὶ καταμήνια.

[Galen 12.144.14-145.2]

394) Clover (*Trifolium fragiferum* L.), which some call treacle clover (*Psoralea bituminosa* L.), has a warm and dry capacity of the third rank, in the region of bitumen, and, for this reason, when drunk it benefits pains in the sides in cases of blockage, and provokes urine and periods.

394) Omitting a discussion on alternative names for the plant (12.144.16-17), Aëtius quotes Galen largely verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists water-wort (*Asplenium trixomanes* L.), omitted by Aëtius, which has the same capacity as adiantum (Περὶ τριχομανοῦς 145.3-4).]

[141.19-25]

(τρε΄) Τρύχνον, ἔνιοι δὲ μετὰ τῶν στρύχνον ὀνομάζουσι. τὸ μὲν κηπαῖον
στύφει καὶ ψύχει κατὰ τὴν δευτέραν τάξιν, τὸ δὲ ἀλικάκκαβον καλού- [20]
μενον ἐν τῇ τῶν φύλλων δυνάμει παραπλήσιον ἔστι τῷ κηπευομένῳ,
τὸν δὲ καρπὸν οὐρητικὸν ἔχει. τοῦ δὲ ὑπνωτικοῦ ὁ φλοιὸς τῆς ῥίζης
ψύχει παραπλήσιον ὁπῶ μήκωνος, ὡς τῆς τρίτης εἶναι τάξεως τῶν 5
ψυχόντων. τὸ δὲ σπέρμα καὶ τούτου οὐρητικόν. μανιῶδες δὲ γίγνεται
πλέον τῶν δώδεκα κορύμβων προσφερόμενον. [25]

[Galen 12.145.5-18]

395) *Truchnon*; several call it, with an 's', *struchnon*. The garden variety [hound's berry (*Solanum nigrum* L.)] is astringent and cools at the level of the second rank, and the one called winter cherry (*Physalis alkekengi* L.) is similar in the capacity of its leaves to the cultivated variety, but has a diuretic fruit. The rind of the root of the narcotic variety cools similarly to poppy juice, so as to belong to the third rank of cooling substances. Its seed also is diuretic. Administration of more than twelve clusters is liable to cause madness.

395) Aëtius quotes or paraphrases less than half of Galen's text, omitting a description of winter cherry and its use in wreaths (12.145.9-12), and mention of second and third varieties, which cause sleep and madness

respectively (12.145.12-13). Galen also comments on the use of winter cherry in compound drugs for liver, bladder and kidney (12.145.16-17), and the use of the second variety in wine as a hypnotic (12.145.17-146.4). Furthermore, Galen warns that, taken internally, the plant is of no therapeutic value, but dangerous, four drachmas being lethal; external application, especially of the root, can be used to treat malignant ulcers (12.146.6-11). A final omitted comment concerns its elemental classification.

Physalis spp. contain potential sedatives and hypnotics (Evans, 2009: 331); there is no apparent evidence to support Aëtius' other claims.

[141.26-142.5]

(τρῆς) Ὑάκινθος. Ὑακίνθου ἡ ρίζα βολβοειδῆς οὕσα τάξεώς ἐστὶ τῆς πρώτης μὲν ἐν τῷ ξηραίνειν, τῆς δευτέρας δὲ ἐν τῷ ψύχειν. ἀνήβους δὲ ἐπὶ πλεόν τοὺς παῖδας φυλάττειν πεπίστευται μετ' οἴνου καταπλασσομένη. ὁ δὲ καρπὸς μετρίως ῥύπτει καὶ στύφει, ὅθεν δίδονται ἰκτερικοῖς σὺν οἴνῳ, ξηραίνων μὲν κατὰ τὴν τρίτην τάξιν, θερμότητος δὲ καὶ ψύξεως ἐν τῷ μέσῳ ἐστὶ. [p142] 5 [5]

[Galen 12.146.15-147.5]

396) Wild hyacinth or bluebell (*Scilla bifolia* L.). The root of wild hyacinth, which is bulb-like, belongs to the first rank among drying substances, and to the second among cooling ones. When applied as a plaster with wine, it has been believed to keep boys impubert for longer. The fruit moderately cleanses and is astringent, whence it is given with wine to jaundice sufferers, and it dries at the level of the third rank; and it is in the middle between warming and cooling.

396) Aëtius quotes Galen largely verbatim.

396.5 [142.4] **ἰκτερικοῖς σὺν οἴνῳ** If the jaundice is due to liver disease, the alcohol in wine will aggravate the problem.

There is no apparent substantiation of the above claims in modern scientific literature.

[142.6-7]

(τρζ') Ὑδνα γεωδεστέραν μὲν οὐσίαν ἐπικρατοῦσαν κέκτηται, βραχέος τινὸς αὐτῆ μινυμένου λεπτομεροῦς.

[Galen 12.147.6-8]

397) Truffles (*Tuber cibarium* L.) have got an overwhelming rather earthy essence, with some small fine-grained essence mixed with it.

397) Aëtius quotes Galen largely verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[142.8-13]

(τρη') Ὑδροπέπερι. Ἐν ὕδασι φύεται τὸ βοτάνιον εἰκὸς τοῖς φύλλοις καὶ τοῖς κλωνίοις ἠδυόσμφ· μείζον μέντοι, τῆ δὲ γεύσει δριμύ, παραπλήσιον πεπέρει. σπερμάτια δὲ μικρὰ φέρει καθ' ἕκαστον τῶν φύλλων. ἐστὶ δὲ θερμὸν μὲν, ἀλλ' οὐκ ἴσον τῷ πεπέρει. καταπλασσομένον δὲ χλωρὸν ὑπόπια καὶ σκίρρους θεραπεύει. χρῶνται δὲ τινες αὐτῷ ἀρτύματι ἀντὶ πεπέρεως. 5

[Galen 12.147.9-14]

398) Smartweed (*Polygonum hydropiper* L.). The plant grows in water, resembling mint in its leaves and branches; it is, however, bigger and sharp to the taste, similar to pepper. It bears little seedlets on each of the leaves. It is warm, but not equal to pepper. When applied fresh as a plaster, it treats black eyes and hardened lesions. Several use it as seasoning in preference to pepper.

398) Aëtius paraphrases Galen's text, and adds the comment about culinary use (398.5-6 [142.12-13]).

There is no apparent substantiation of the above claims in modern scientific literature.

[142.14-16]

(τρθ') Ὑοσκύαμος ἐπιτηδειότατος πρὸς τὰς ἰάσεις, οὗ καὶ τὸ ἄνθος καὶ τὸ σπέρμα λευκόν, ἐκ τῆς τρίτης που τάξεως ὑπάρχων τῶν ψυχόντων· οἱ δὲ ἄλλοι δηλητηριώδεις. [15]

[Galen 12.147.15-148.5]

399) Henbane (*Hyoscyamus albus* L. or *niger* L.), the one whose flower and seed are both white, is very suitable for remedies, since it is somewhere in the third rank of cooling substances. The others are noxious.

399) Aëtius quotes one sentence from Galen accurately (12.148.2-4), and then adds that the other varieties are harmful, whereas Galen, whose entry is four times longer, lists these varieties: one with black seed, which causes madness and sleepiness, and one with a fairly yellow seed, similar in effect, both to be avoided (12.147.15-148.2). He adds descriptions of their flowers (12.148.4-5).

The presence of hyoscyamine and hyoscine in henbane (Bruneton, 1995: 659-665) indeed renders it “very suitable for remedies”, which, however, Aëtius does not enumerate. His placing it among the strongly cooling substances, a classification shared by poppies (ch. 276 p.255) and hemlock (ch. 240 p.232), is consistent with its ability to sedate, and, in high doses, cause paralysis and coma.

[142.17-22]

(υ´) Ὑπερικὸν θερμαίνει καὶ ξηραίνει λεπτομεροῦς οὐσίας ὑπάρχον, ὡς καταμήνιά τε καὶ οὖρα προκαλεῖσθαι. χρῆ δὲ εἰς ταῦτα λαμβάνειν οὐ τὸ σπέρμα μόνον, ἀλλὰ καὶ τὰ φύλλα. ἐπιπλαττόμενος δὲ χλωρὸς <ὁ καρπὸς> εἰς οὐλήν ἄγειν τὰ ἔλκη δύναται, μάλιστα δὲ τὰ πυρί- [20]
καυστα. ξηρὰ δὲ λίαν ἐπιπασσόμενα τὰ πλαδαρὰ καὶ σηπεδονώδη τῶν 5
ἐλκῶν ἰᾶται. τινὲς ἀπὶ τῶν ἰσχυαδικῶν αὐτὸ ποτίζουσιν.

[Galen 12.148.6-13]

400) St. John’s wort (*Hypericum crispum* L.) warms and dries, being of a fine-grained nature, so as to provoke periods and urine. For these effects, it is necessary to take not only the seed but also the leaves. When <the fruit> is applied as a plaster, it can, when fresh, cicatrise ulcers, especially those due to burns. But when thoroughly dry and sprinkled on, it heals the moist and putrescent forms of ulcers. Some also give it to drink in cases of hip problems.

400) Aëtius quotes Galen fairly closely.

There is *in vitro* evidence of antibacterial compounds in this plant, which may help “putrescent...ulcers”; its ability to cause contact photosensitivity would, however, be counterproductive (Evans, 2009: 249-250). There is no scientific evidence to support Aëtius’ other claims.

[Galen next lists two plants, omitted by Aëtius: horned cumin (*Hypocoum procumbens* L.), almost as cooling as poppy (Περὶ ὑπηκόου 12.148.14-16); and horse-tongue (*Ruscus hypoglossum* L.), whose root and juice are of a supposed softening capacity, and whose name is derived from its appearance (Περὶ ὑπογλώσσου 12.148.17-149.2).]

[142.23-24]

(υα´) Ὑσσωπον ἢ πόα. θερμαίνει καὶ ξηραίνει κατὰ τὴν τρίτην τάξιν· ἐστὶ δὲ καὶ λεπτομερές.

[Galen 12.149.3-4]

401) Hyssop (*Hyssopus officinalis* L.), the herb. It warms and dries at the level of the third rank; it is also fine-grained.

401) Aëtius quotes Galen almost verbatim.

401.1 [142.23] Ὑσσωπον There is doubt over which plant is meant. Carnoy suggests *Origanum hirtum* L., but André suggests *Hyssopus* L. spp. other than *officinalis*, which does not grow in Greece or Asia Minor.

The essential oil from hyssop is toxic when ingested; its adverse effects include convulsions (Bruneton, 1995: 423, 428).

[143.1-5]

(υβ´) Φακοί. Στύφουσι μὲν οὐκ ἰσχυρῶς, θερμότητος δὲ καὶ ψύξεως ἐν τῷ μέσῳ καθεστήκασι. ξηραίνουσι δὲ κατὰ τὴν δευτέραν τάξιν. αὐτὸ μὲν οὖν τὸ σῶμα ξηραίνει τε καὶ ἴστησι γαστέρα, τὸ δὲ ἀφέψημα προτρέπει. διὸ καὶ ἀποχεῖται τὸ πρότερον ὕδωρ, ὅταν ἐπισχέσεως ἕνεκα λαμβάνωνται.

5 [5]

[Galen 12.149.5-10]

402) Lentils (*Ervum lens* L.). They are astringent, not strongly so, and are situated in the middle between warmth and cold. They dry at the level of the second rank. By itself, it dries the body and settles the bowel, whereas its boiled-down form sets it in motion. Accordingly the water obtained at

first is poured away, whenever they are being taken for the sake of checking [the bowel].

402) Aëtius quotes Galen almost verbatim, but with the notable difference that he apparently contradicts Galen by inserting οὐκ before ισχυρῶς in the first sentence, or else a scribal error has occurred. In *Alim.Fac.* Galen attributes astringency only to lentil husks, while the juice has the opposite effect (6.525.6-10).

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[143.6-7]

(υγ') Φακὸς ὁ ἐπὶ τῶν τελμάτων ὑγρᾶς καὶ ψυχρᾶς κράσεως, ἐκ τῆς δευτέρας τάξεώς ἐστι.

[Galen 12.149.11-13]

403) Duckweed (*Lemna minor* L.) [lit. “pond lentil”] has a moist and cold composition, of the second rank.

403) Aëtius quotes Galen almost verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[143.8-11]

(υδ') Περὶ φασήλων καὶ ὄχρων. Μέσα πῶς ἐστὶν ἐδέσματα ταῦτα τῶν εὐχύμων τε καὶ κακοχύμων, εὐπέπτων τε καὶ δυσπέπτων, βραδυπόρων τε καὶ ταχυπόρων, ἀφύσων τε καὶ φυσιωδῶν, ὀλιγοτρόφων τε καὶ πολυτρόφων. [10]

404) Concerning calavances (*Vigna sinensis* Endl.) and birds' pease (*Lathyrus ochrus* DC.). These foods are somewhat midway between wholesome and unwholesome substances as far as humours are concerned, and between easily digested and badly digested, slowly and quickly passing, flatus suppressing and inducing, and the ones providing little and much nourishment.

404) This entry does not appear in Galen's *SMT*, but is quoted verbatim from his *Alim.Fac.* 6.540.17-20.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[Galen next lists two plants, omitted by Aëtius: canary grass (*Phalaris nodosa* L.), which is believed to help bladder pains (Περὶ φαληρίδος 12.149.14-17); and spider-wort (*Lloydia graeca* L.), so named because it is thought to help those bitten by a similarly named kind of spider, and supposed to help colic (Περὶ φαλαγγίτου 12.150.1-4).]

[143.12-16]

(νε´) Φλόμος διαφορὰς ἔχει τρεῖς· τῶν μὲν οὖν δύο ἡ ρίζα στρυφνὴ ἐστίν, ὅθεν καὶ τοῖς ροώδεσι πάθεισι ἀρήγει. διακλύζονται δὲ αὐτὴν τινες ἀφέψοντες καὶ πρὸς ὀδόντων ἀλγήματα. τὰ δὲ φύλλα πασῶν διαφορητικῆς καὶ ῥυπτικῆς ἐστὶ δυνάμεως. τῇ μὲν οὖν ἑτέρα εἰς τοὺς λύχνους χρῶνται καλοῦντες κυρίως θρυαλλίδα. [15]
5

[Galen 12.150.5-18]

405) Mullein (*Verbascum sinuatum* L.) has three varieties; in fact, the root of two of these is astringent, and hence it is of help in diseases involving fluxes. Some boil it down and use it also as a mouth wash for toothache. The leaves of all of them have a dispersive and cleansing capacity. They use the other variety, which they correctly call plantain (*Plantago crassifolia* Forssk.), for lamps.

405) Aëtius omits more than two thirds of Galen's entry, which discusses the spelling of the plant's name and details of the appearance of its varieties (12.150.5-10), and a use as a blonde hair-dye (12.150.16). Aëtius adds that plantain is used for lamps.

There is no apparent substantiation of the above claims in modern scientific literature.

[143.17-144.18]

(υζ´) Φοῖνιξ. Τὸ μὲν δένδρον στυπτικῆς μετέχει δυνάμεως ἐν πᾶσι τοῖς ἑαυτοῦ μέρεσιν. ὁ μὲν οὖν τῶν κλάδων χυλὸς αὐστηρὸς ἐστίν, ὁμοίως

δὲ καὶ ὁ καλούμενος ἐγκέφαλος ὁ ἐδώδιμος. ὁ δὲ καρπὸς αὐτοῦ καὶ
 μάλισθ' ὁ γλυκὺς οὐκ ὀλίγη μετέχει θερμότητος, ἐδώδιμος καὶ πολὺ- [p144]
 χρηστός καὶ ἔξωθεν προσφερόμενος καὶ εἴσω τοῦ σώματος λαμβανό- 5
 μενος, ὅτε τονῶσαί τε καὶ ξηρᾶναι καὶ συναγαγεῖν καὶ πυκνῶσαι καὶ
 πιλῆσαι χρῆζομεν. ἅπαντες δὲ οἱ φοίνικες δύσπεπτοὶ τέ εἰσι καὶ κεφα- [5]
 λαλαγεῖς πλείονες βρωθέντες. ἔνιοι δὲ καὶ δῆξεώς τινος ἔμφρασιν ἐμποι-
 οῦσι τῷ στόματι τῆς κοιλίας· οἱ δὲ καὶ μᾶλλον εἰσι κεφαλαλαγεῖς. ὁ δὲ 10
 ἐξ αὐτῶν ἀναδιδόμενος εἰς τὸ σῶμα χυμὸς παχὺς πάντως ἐστίν. ἔχει δὲ
 τι καὶ γλίσχρον, ὅταν ὁ φοῖνιξ ἢ λιπαρός· ὅταν δὲ τῷ παχεῖ καὶ
 γλίσχρῳ χυμῷ γλυκύτες μιχθῆ, τάχιστα μὲν ὑπ' αὐτοῦ τὸ ἥπαρ ἐμ- [10]
 φράττεται. εἰ δὲ καὶ φλεγμαῖνοι ἢ ἐσκίρρωμένον ἢ, βλάπτεται ἐσχά-
 τως ὑπὸ τῆς ἐδωδῆς αὐτῶν. ἐφεξῆς δὲ τῷ ἥπατι καὶ ὁ σπλῆν ἐμ- 15
 φράττεται τε καὶ βλάπτεται. πολὺ δὲ δὴ μάλιστα βλάπτουσι οἱ χλωροὶ
 φοίνικες εἰς ἅπαντα, βραχεῖ πλέονες βρωθέντες καὶ φύσης ἐμπιμπλάσι
 τὴν γαστέρα † καὶ ὠμῶν χυμῶν καὶ ῥίγεςι δυσεκθερμάντοις ἀλίσκονται
 οἱ τοιοῦτοι. ὁ δὲ καλοῦσιν ἐλάτην, τὸ ἀπαλὸν ἐκβλάστημα, τὴν αὐτὴν [15]
 τῷ ἐγκεφάλῳ ἔχει δύναμιν· τὸ δὲ οἶον ἀμφίεσμα αὐτοῦ στυπτικὸν
 μὲν, ξηραίνει δὲ μᾶλλον τῶν εἰρημένων. ἐστὶ δὲ καὶ ἡ ῥίζα τοῦ φυτοῦ 20
 ξηραντικῆς ἀδήκτου δυνάμεως, μετέχουσα καὶ στύψεως.

[144.7] παχύτατός replaced with παχὺς πάντως

[Galen 12.151.1-152.3]

406) Date palm (*Phoenix dactylifera* L.). The tree has a share of astringent capacity in all of its parts. The sap of the branches is harsh, and the edible part, which is called “brain”, is also similar. The fruit, especially the sweet sort, shares no small amount of warmth, it is edible and very useful, it is both administered externally and taken internally, when we use it to strengthen, dry, contract, condense and compress. All the dates are bad for digestion and cause headaches when eaten in excess. Several also cause a sensation of some stinging in the gullet; some are also more likely to cause headaches. What is assimilated from them into the body is a completely thick humour. It also has some stickiness, whenever the date is greasy; and whenever sweetness is mixed with a thick and sticky humour, the liver is very quickly blocked by it. And if the liver is inflamed or indurated, it is extremely harmed by eating them. Next after the liver, the spleen is blocked and harmed. In fact, very certainly fresh dates are harmful in all circumstances, and in a short time, when too many are eaten, they fill the bowel with wind and raw humours, and those who have eaten them are seized by shiverings that are hard to warm. What they call the spathe of the date, the soft offshoot, has the same capacity as the “brain”; its wrapping

part is astringent, but dries more than the aforesaid. The root of the plant has a drying, non-stinging capacity, with a share in astringency as well.

406) Aëtius omits one third of Galen's *SMT* entry, concerning further details of its elemental composition (12.151.3-5), its fruit's use as bread (12.151.9-11), and the spathe's composition and use for slackened joints and liver and stomach treatments (12.151.15-152.2). Aëtius does, however, add a substantial warning of adverse effects (406.7-18 [144.3-15]), mainly by quoting *Alim.Fac.* 6.607.12-608.6 almost verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists *Salvia horminum* L., used for corneal opacities and the removal of thorns (Περὶ φορβίου 12.152.4-8).]

[144.19-20]

(υζ´) Φοῦ. Τούτου ἡ ρίζα νάρδω παραπλησία τὴν δύναμιν, ἀσθενεστέρα μέντοι εἰς τὰ ἄλλα· τὰ δὲ οὖρα προτρέπει μᾶλλον. [20]

[Galen 12.152.9-12]

407) Wild spikenard (*Valeriana phu* L.). The root of this is similar to spikenard in capacity, but weaker, however, in other respects; it stimulates urination more.

407) Aëtius reduces Galen's entry by more than half, by omitting details of its scent, and comparison with different varieties of spikenard.

407.1 [144.19] **Φοῦ** Carnoy suggests that the plant is so named because of its disgusting smell.

No modern information was found regarding this plant.

[144.21-23]

(υη´) Φῦκος βρύον ἐστὶ τῆς θαλάσσης. ἐστὶ δὲ χλωρὸν ἐξαιρούμενον· ψύχει καὶ ξηραίνει κατὰ τὴν δευτέραν ἀπόστασιν. ἔχει δὲ τι καὶ στῦ- φον μετρίως.

[Galen 12.152.13-15]

408) Seaweed oyster-green is a marine plant. It is picked when green; it cools and dries at the second level. It also has some moderate astringency.

408) Aëtius quotes Galen largely verbatim.

No modern information was found regarding this plant.

[Galen next lists two plants omitted by Aëtius: hart's tongue (*Scolopodendrium officinale*), supposedly astringent and antidiarrhoeal (Περὶ φυλλίτιδος 12.152.16-18); and leaf of *Cinnamomum* spp., similar to spikenard (Περὶ φύλλου μαλαβάθρου 12.153.1-2).]

[145.1-3]

(υθ') Χαλβάνη ὁπὸς ἐστὶ νερθηκώδους φυτοῦ, μαλακτικῆς καὶ διαφορητικῆς οὔσα δυνάμεως, θερμαίνει δὲ κατὰ τὴν τρίτην που τάξιν, ξηραίνει δὲ κατὰ τὴν δευτέραν.

[Galen 12.153.3-7]

409) Galbanum (oleo-gum-resin of all-heal, *Ferula galbaniflua* Boiss.) is the juice of a plant like giant fennel, and has a softening and dispersive capacity. It warms somewhere at the level of the third rank, and dries at the second.

409) Aëtius largely quotes Galen closely.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[145.4-9]

(υι') Χαμαίδρυς ἐπικρατοῦσαν ἔχει τὴν πικρὰν ποιότητα· ἐστὶ δὲ καὶ δριμεῖά πως, ὅθεν σπλῆνα τήκει καὶ οὔρα καὶ καταμήνια κινεῖ καὶ πάχος χυμῶν τέμνει καὶ τὰς ἐν τοῖς σπλάγχχοις ἐμφράξεις ἐκκαθαίρει. ἐστὶ δὲ τῆς τρίτης τάξεως κατὰ τὸ θερμαίνειν καὶ ξηραίνειν. τὸ δὲ ἀφένημα αὐτῆς ἐπὶ πολὺ ἐνομόμενης πινόμενον συνεχῶς τεταρταίῳ πυρετῷ περιεχομένους ἀπολύει.

[5]

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[Galen 12.153.8-14]

410) Germander (*Teucrium chamaedrys* L.) has a predominantly bitter quality; it is also somewhat sharp, whence it shrinks spleens, brings on urine and periods, cuts the thickness of humours, and thoroughly purges

blockages in the internal organs. It belongs to the third warming and drying rank. When it is boiled for a long time and its boiled-down residue is drunk on a regular basis, it frees those gripped by quaternary fevers.

410) Aëtius quotes Galen largely verbatim, but abbreviates his text regarding elemental ranking. The information about the treatment of quaternary fevers has been added by Aëtius (410.4-6 [145.7-9]).

410.5-6 [145.8-9] **τεταρταίῳ πυρετῷ** The most likely cause of a quaternary fever is malaria caused by *Plasmodium malariae* (Grist et al., 1993: 329). This form has a 72 hour cycle, which, counting inclusively, can be termed “quaternary”.

Evidence of this plant’s acute hepatotoxicity led to its being banned in France in 1992 (Bruneton, 1995: 519). There is no apparent substantiation of Aëtius’ therapeutic claims in modern scientific literature.

[Galen next lists ground-ivy (*Glechoma hederacea* L.), omitted by Aëtius, whose bitter flower, he says, unblocks the subhepatic region, and may be used for hip problems (Περὶ χαμαικισσοῦ 12.153.15-17).]

[145.10-12]

(υια΄) Χαμελαία τὴν πικρὰν ἐπικρατοῦσαν ἔχει ποιότητα· διὸ καὶ ὅσα τὰς μεγίστας ἐσχάρας ἔχει μετὰ μέλιτος ἀνακαθαίρειν δύνатаι. ἐστὶ δὲ καὶ πινομένη τῶν καθαιρόντων.

[Galen 12.154.1-3]

411) Spurge-olive (*Daphne oleoides* Schreb.) has a predominantly bitter quality; accordingly, it can, with honey, completely cleanse all [ulcers] that have very great eschars. When it is drunk it belongs to the purging substances.

411) Aëtius quotes most of Galen's entry verbatim, and then adds that it is a purgative. This entry is out of alphabetical order, both in Aëtius and Galen.

There is evidence that this species may promote wound healing (Süntar et al., 2012); members of the genus, however, are known to be toxic,

causing contact dermatitis, and when ingested, vomiting and diarrhoea, and convulsions (Bruneton, 1995: 523-4).

[145.13-15]

(υιβ΄) Χαμαιλεύκη θερμὴ τὴν δυνάμιν ἔστι κατὰ τὴν τρίτην τάξιν, ξηρὰ δὲ κατὰ τὴν πρώτην· ὅθεν καὶ θυμιωμένη ἐπ' ἀνθράκων ὀνίνησιν ἐν-
αργῶς τοὺς δυσπνοικοὺς, δεχομένων αὐτῶν τὸν καπνὸν διὰ χώνης. [15]

[Galen 12.154.4-6]

412) Colt's foot (*Tussilago farfara* L.) is warm in capacity at the level of the third rank, and dry at the first; and hence, when burnt over coals to produce smoke, it is of distinct benefit to the those with breathing difficulties, when they receive the smoke through a funnel.

412) Aëtius quotes Galen almost verbatim, and then adds the information about the inhalation of its smoke.

Colt's foot is known to be hepatotoxic when ingested, and a respiratory stimulant when administered systemically to dogs (Bruneton, 1995: 683); the effects of its smoke are unknown.

[145.16-23]

(υιγ΄) Χαμαιλέων. Χαμαιλέοντος ἡ ρίζα τοῦ μὲν μέλανος ἔχει τι δηλη-
τηριῶδες, ὅθεν ἔξωθεν αὐτῆς ἡ χρῆσις ἔστι πρὸς τε ψώρας καὶ λει-
χῆνας καὶ ἀλφουὺς καὶ ὄλως ὅσα δεῖται ῥύψεως. μετέχει δὲ καὶ μαλα-
κτικῆς τε καὶ διαφορητικῆς δυνάμεως. ξηραίνει δὲ κατὰ τὴν τρίτην
τάξιν, θερμαίνει δὲ κατὰ τὴν δευτέραν συμπληρουμένην. ἡ δὲ τοῦ
λευκοῦ χαμαιλέοντος ρίζα πινομένη μετ' οἴνου αὐστηροῦ ὄξυβάφου
πλήθος πλατεῖαν ἔλμινθα ἐκτινάσσει. διαδιδόσσι δὲ αὐτὴν καὶ τοῖς
ὕδερικοῖς. 5 [20]

[Galen 12.154.7-18]

413) Chamaeleon. The root of black chamaeleon (*Cardopatum corymbosum* Pers.) is somewhat destructive and hence its external application is used for itchy scabby, impetiginous and pale skin lesions, and for every single sort that requires cleansing. It also has a share of a softening and dispersive capacity. It dries at the level of the third rank, and warms fully at the level of the second. The root of white chamaeleon (pine thistle, *Atractylis gummifera* L.), when drunk with harsh wine in a volume

of an *oxybaphon*, expels a tapeworm. They also give it out to those suffering from oedema.

413) Aëtius largely follows Galen's text accurately, but omits a final comment about the similarity of the black and white forms (12.154.16-18).

There is no apparent substantiation of the above claims in modern scientific literature for either of these plants. *A. gummifera* L., however, is a potentially lethal poison when ingested, as attested in several instances in modern literature (e.g., Daniele et al., 2005; Mouaffak et al., 2013).

[145.24-146.4]

(υιδ΄) Χαμαίπιτυς τῆς τρίτης τάξεώς ἐστὶ τῶν ξηραίνοντων, τῆς δευτέρας δὲ τῶν θερμαίνοντων. πικρὰ δὲ ἰσχυρῶς ὑπάρχουσα ῥύπτει τὰ σπλάγχνα μᾶλλον ἢ θερμαίνει, ὅθεν ἰκτεριῶσι δίδονται καὶ ὅλως οἷς ἐμφράττεται ῥαδίως τὸ ἥπαρ ἀγαθὸν ἐστὶ φάρμακον. ἄγει δὲ καὶ καταμήνια πινομένη τε καὶ μετὰ μέλιτος προστιθεμένη. ἐστὶ δὲ καὶ οὐρητική. τινὲς δὲ καὶ ἰσχιαδικοῖς αὐτὴν διδῶσιν ἀφενήσαντες ἐν μελικράτῳ. γλωρὰ δὲ ἢ πόα τὰ μεγάλα τραύματα κολλᾶν δύναται καὶ τὰ σηπεδονώδη τῶν ἐλκῶν ἰᾶσθαι καὶ τὰς ἐν μαστοῖς σκληρότητας διαφορεῖν.

[25]

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[p146]

[Galen 12.155.1-12]

414) Ground-pine (*Ajuga chamaepitys* Schreb.) belongs to the third rank of drying substances, and the second of warming ones. Since it is powerfully bitter, it cleanses the internal organs more than it warms them, whence it is given to jaundice sufferers, and it is altogether a good drug for those in whom the liver is easily blocked. It is also emmenagogic both when drunk and inserted vaginally with honey. It is also diuretic. Some boil it down in honey-water and give it to sufferers from hip problems. When fresh, the herb can effect closure of serious wounds, heal putrescent sorts of ulcers, and disperse hard lesions in breasts.

414) Aëtius is more succinct about the plant's taste, but otherwise largely quotes Galen verbatim.

There is no apparent substantiation of the above claims in modern scientific literature.

[Galen next lists thyme spurge (*Euphorbia chamaesyce* L.), omitted by Aëtius, supposedly useful for wart removal, corneal scars and cataracts (Περὶ χαμαισύκης 12.155.13-18).]

[146.5-12]

(υιε΄) Χελιδόνιον ῥυπτικῆς ἰκανῶς καὶ θερμῆς ἐστὶ δυνάμεως καὶ ὁ χυλὸς ὀξυωπῆς ἐστὶν, ἐφ' ὧν ἀθροίζεται τι παχὺ κατὰ τὴν κόρην δυνάμενον διαφορεῖσθαι. ἐχρήσαντο δὲ τινες τῆ ῥίζῃ πρὸς ἰκτερικοὺς τοὺς ἐπ' ἐμφράζει τοῦ ἥπατος, ἐν οἴνῳ λευκῷ διδόντες πίνειν σὺν ἀνίσῳ. τὸ δὲ μικρὸν χελιδόνιον δριμύτερον τοῦ μείζονος, ὅθεν ἐλκοῖ τὸ δέρμα καταπλασσομένον καὶ ὄνυχας λεπρούς ἐκβάλλει. καθαίρει δὲ ὁ χυλὸς διὰ ῥινῶν ἰσχυρῶς. ἐστὶ γὰρ τῆς τετάρτης τάξεως τῶν θερμαινόντων καὶ ξηραίνόντων, τὸ δὲ μείζον τῆς τρίτης κατ' ἄμφω. 5 [10]

[Galen 12.156.1-12]

415) Celandine (*Chelidonium majus* L.) has an amply cleansing and warming capacity, and the juice sharpens the eyesight in those on whose pupil there is gathered something thick and capable of being dispersed. Several use the root for those suffering from jaundice due to blockage of the liver, giving it to drink in white wine with anise (*Pimpinella anisum* L.). Small *chelidonium* (pilewort, *Ranunculus ficaria* L.) is sharper than the greater [celandine], and hence it ulcerates the skin when plastered on, and removes scaly nails. The juice purges strongly through the nostrils. For pilewort belongs to the fourth rank of warming and drying substances, whereas the greater celandine belongs to the third in both respects.

415) Aëtius relates most of the content of Galen's entry by paraphrasing or quoting, but omits a claim that the root helps toothache (12.156.6-7).

415.5 [146.9] **μικρὸν χελιδόνιον** Or *Ficaria verna* Huds. [Carnoy].

Greater celandine is known to be hepatotoxic (Teschke et al., 2012), and would therefore cause rather than relieve jaundice, an effect which could only be aggravated by giving it in wine. There is no apparent substantiation of Aëtius' other claims for these plants in modern scientific literature.

[146.13-14]

(υις΄) Περὶ χονδρίλλης προεῖρηται ἐν τῷ περὶ σέρεως τόπῳ, ἐστὶ γὰρ σέρεως εἶδος.

[Galen 12. 156.13-16]

416) Previous mention has been made of gum succory (*Chondrilla juncea* L.) in the chapter about endive/chicory, for it is a species of endive/chicory.

416) Galen discusses the plant's taste and capacity in this entry. Aëtius has included it in his ch. 355 p.307.

[Galen next lists three plants omitted by Aëtius: groats from spelt (*Triticum spelta* L.) or possibly emmer (*T. dicoccum* Schübl.), which he compares with wheat (*T. vulgare*) with regard to nutritional value and drying capacity (Περὶ χόνδρου 12.157.1-15); immortelle (*Helichrysum orientale* Gaertn.), supposedly useful in liver and lung disorders, and in purging menstrual periods (Περὶ χρυσοκόμης 12.157.16-158.3); and false dittany (*Ballota acetabulosa* Benth.), which has the capacity of weak dittany (*Origanum dictamnus* L.) (Περὶ ψευδοδικτάμνου 12.158.4-5).]

[146.15-17]

(υιζ΄) Ψύλλιον. Τούτου τὸ σπέρμα μάλιστά ἐστι χρήσιμον, τῆς δευτέρας δ' ἐστὶ τάξεως τῶν ψυχόντων· κατὰ δὲ τὸ ξηραίνειν καὶ ὑγραίνειν τῆς μέσης.

[Galen 12.158.6-9]

417) Fleawort (*Plantago psyllium* L.). Its seed is very useful, and belongs to the second rank of cooling substances; it belongs to the middle as far as drying and moistening are concerned.

417) Aëtius quotes Galen largely verbatim.

There is nothing relevant to Aëtius' claims apparent in modern scientific literature.

[146.18-23]

(υιη΄) Ὠκιμον. Ἐκ τῆς δευτέρας μὲν ἐστὶ τάξεως τῶν θερμαινόντων, ἔχει δὲ ὑγρότητα περιττωματικὴν, ὅθεν οὐδὲ χρήσιμὸν ἐστὶν εἰς τὸ σώματος λαμβανόμενον· ἔξωθεν δὲ καταπλαττόμενον εἰς τὸ διαφορεῖν καὶ συμπέττειν ἐστὶ χρήσιμον. τὸ δὲ ἀφέψημα αὐτοῦ ἐπὶ τῶν διὰ πλῆθος παχυτέρας ὕλης μάλιστα ὀφθαλμιῶντων καταιονοῦμενον θερμὸν 5
μεγάλως ὠφελεῖ καὶ μάλιστα τὰ νήπια.

[Galen 12.158.10-14]

418) Basil (*Ocimum basilicum* L.). While it belongs to the second rank of warming substances, it has residual moisture, for which reason it is not useful when taken internally; but when applied externally, it is useful for dispersal and concoction. When used as a hot fomentation, its boiled-down residue is of great benefit, especially in cases of conjunctivitis due to an accumulation of rather thick discharge, and especially in paediatric practice.

418) Aëtius quotes Galen almost verbatim, and then adds the final sentence about ophthalmic usage.

Although antibacterial activity has been demonstrated in basil essential oil (Sienkiewicz et al., 2013), no effect has been shown specific to the causative organisms of conjunctivitis.

[Galen lists one more plant, catchfly (*Silene gallica* L.), omitted by Aëtius, whose root, he says, is useless but whose seed has a fine-grained and non-erosive drying capacity (Περὶ ὠκτιμοειδοῦς 12.15815-18).]

Bibliography

Editions of Aëtius

- Aldus Manutius (1534), books 1-8. Venice.
- Janus Cornarius (1542), Latin translation of Tetrabiblos. Basel.
- Olivieri, A. (1934), books 1-4. Leipzig & Berlin, *CMG*, Teubner.
- Olivieri, A. (1950), books 5-8. Leipzig & Berlin, *CMG*, Teubner.
- Zervos, S. (1911), book 9. *Athena* 23: 273-390.
- Darenberg, C. & Ruelle, C.E. (1897), book 11, in *Oeuvres de Rufus d'Éphèse: 85-126, 568-581*. Paris, Imprimerie Nationale.
- Kostomiris, G.A. (1892), book 12. Paris, Klincksieck.
- Zervos, S. (1906), book 13. *Athena* 18: 264-292.
- Zervos, S. (1909), book 15. *Athena* 21: 7-138.
- Zervos, S. (1901), book 16, *Gynaekologie des Aëtios*. Leipzig, Fock.

Editions of Other Ancient Authors

- Alcmaeon: *De Alcmaeone Crotoniata*, ed. Wachtler, I. (1896). Leipzig, Teubner.
- Aretaeus: *On the Treatment of Chronic Diseases*, ed. Hude, K. (1958), *Aretaeus* 2nd edn., *CMG* vol. 2. Berlin, Akademie Verlag.
- Aristotle: *Historia animalium*, ed. Louis, P. (1964-9), *Aristote. Histoire des animaux*. Paris, Les Belles Lettres.
- De mundo*, ed. Lorimer, W.L. (1933). Paris, Les Belles Lettres.
- Problemata*, ed. Bekker, I. (1831), *Aristoteles opera* vol. 2. Berlin, Reimer.
- Celsus: *De Medicina*, ed. Spencer, W.G., (1935-8), Loeb Classical Library. London, Heinemann.
- Dioscorides: *De Materia Medica (Περὶ ὕλης ἰατρικῆς)*, ed. Kühn, K.G. (1829), *CMG* vol. 25. Leipzig, Knobloch.
- Empedocles: *Empedocles: the Extant Fragments*, Wright, M.R. (1981). New Haven, Yale University Press.
- Galen: *On Antidotes*, ed. Kühn, K.G. (1827), *Claudii Galeni Opera Omnia* vol. 14. Leipzig, Knobloch.
- On the Composition of Drugs according to Kind*, ed. Kühn, K.G. (1827), *Claudii Galeni Opera Omnia* vol. 13. Leipzig, Knobloch.

- On the Composition of Drugs according to Places*, ed. Kühn, K.G. (1827), *Claudii Galeni Opera Omnia* vol. 12-13. Leipzig, Knobloch.
- On Mixtures*, ed. Helmreich G. (1904), *Galeni de temperamentis*. Leipzig, Teubner.
- On the Natural Faculties*, ed. Helmreich G., Marquardt, J., Müller, I. (1893), *Claudii Galeni Pergameni scripta minora* vol. 3. Leipzig, Teubner.
- On the Powers [and Mixtures] of Simple Drugs*, ed. Kühn, K.G. (1826), *Claudii Galeni Opera Omnia* vol. 11-12. Leipzig, Knobloch.
- On the Properties of Foodstuffs*, ed. Helmreich, G. (1923). [*Corpus Medicorum Graecorum* 5.4.2] Leipzig, Teubner.
- On the Utility of Parts*, ed. Helmreich, G. (1907, 1909), *Galeni de usu partium*. Leipzig, Teubner.
- Herodotus: *Historiae*, ed. Hude, C. (1908), in Oxford Classical Texts. Oxford, OUP.
- Hesiod: *Theogony*, ed. West, M.L. (1966). Oxford, Clarendon Press.
- Hippocratic Corpus: ed. Littré. É. (1839-1861), *Oeuvres complètes d'Hippocrate*, vol. 1-9. Paris, Baillière.
- Homer: *Iliad*, ed. Monro, D.B. (1899), Clarendon Press Series, 3rd edn. Oxford, Clarendon Press.
- Horace: *Odes*, ed. Goold, G.P. (1988), in Loeb Classical Library. London, Heinemann.
- Satires*, ed. Fairclough, H.R. (1926), in Loeb Classical Library. London, Heinemann.
- Oribasius: *Collectiones medicae; Eclogae medicamentorum; Synopsis ad Eustathium filium; Libri ad Eunapium*, ed. Raeder, J. (1926-1933), *CMG* vol. 6. Leipzig, Teubner.
- Pliny the Elder: *Historia naturalis* vol.5, books 17-19, ed. Rackham, H. (1950);
 vol. 6, books 20-23, ed. Jones, W.H.S. (1951);
 vol. 7, books 24-27, ed. Jones, W.H.S. (1956);
 vol. 8, books 28-32, ed. Jones, W.H.S. (1963);
 vol. 9, books 33-35, ed. Rackham, H. (1952);
 in Loeb Classical Library. London, Heinemann, and Cambridge Mass., Harvard University Press.
- Plutarch: *Fabius Maximus*, ed. Ziegler, K. (1964), *Plutarchi vitae parallelae*, vol. 1.2, 3rd edn. Leipzig, Teubner.

- Plato: *Timaeus*, ed. Burnet, J. (1902), *Platonis opera*, vol. 4. Oxford, Clarendon Press.
- Praxagoras: *The Fragments of Praxagoras and his School*, Steckerl, F. (1958). Leiden, E.T. Brill.
- Rufus: *De partibus corporis humani; De corporis humani appellationibus*, ed. C. Daremberg and C.É. Ruelle (1879), *Oeuvres de Rufus d'Éphèse*. Paris: Imprimerie Nationale.
- Soranus: *Gynaecology*, ed. Ilberg, J. (1927), *Sorani Gynaeciorum libri iv*, *CMG* vol. 4. Leipzig, Teubner.
- Theophrastus: *Characteres*, ed. Steinmetz, P. (1960), *Das Wort der Antike* 7. Munich, Hueber.
- Historia plantarum*, Amigues, S. (1988), *Théophraste. Recherches sur les plantes*, vol. 1. Paris., Les Belles Lettres.
- Historia plantarum; Enquiry into Plants*, vol. 1, book 3, ed. Hort, Sir A. (1916), in *Loeb Classical Library*. London, Heinemann.
- Thucydides: *Historiae*, ed. Jones, S.J. (1942), In *Oxford Classical Texts*. Oxford, OUP.

Other Works

- Abdalla S, Abu-Zarga M, Sabri S. (1989), 'Preliminary observations on the pharmacology of petaline chloride, a quaternary alkaloid from *Leontice leontopetalum*.' *Gen Pharmacol.* 1989; 20(5):565-9.
- Abu El Ezz NM. (2005), 'Effect of *Nigella sativa* and *Allium cepa* oils on *Trichinella spiralis* in experimentally infected rats.' *J Egypt Soc Parasitol.* 2005 Aug; 35(2):511-23.
- Acton, C. & Dunwoody, G. (2008), 'The Use of Medical Grade Honey in Clinical Practice' in *The British Journal of Nursing (Tissue Viability Supplement)*, Vol. 17, No. 20.
- Aggarwal A, Tandon S, Singla SK, Tandon C. (2012), 'A novel antilithiatic protein from *Tribulus terrestris* having cytoprotective potency.' *Protein Pept Lett.* 2012 Aug; 19(8):812-9.
- Akbulut S, Semur H, Kose O, Ozhasenekler A, Celiktas M, Basbug M, Yagmur Y. (2011), 'Phytocontact dermatitis due to *Ranunculus arvensis* mimicking

- burn injury: report of three cases and literature review.' *Int J Emerg Med.* 2011 Feb 21; 4:7.
- Akhtar MS, Riffat S. (1991), 'Field trial of *Saussurea lappa* roots against nematodes and *Nigella sativa* seeds against cestodes in children.' *J Pak Med Assoc.* 1991 Aug; 41(8):185-7.
- Al Ashaal HA, Farghaly AA, Abd El Aziz MM, Ali MA. (2010), 'Phytochemical investigation and medicinal evaluation of fixed oil of *Balanites aegyptiaca* fruits (Balantiaceae).' *J Ethnopharmacol.* 2010 Feb 3;127(2):495-501.
- Al-Rubiay KK, Jaber NN; Al-Mhaawe BH, Alrubaiy LK. (2008), 'Antimicrobial efficacy of henna extracts.' *Oman Med J.* 2008 Oct; 23(4):253-6.
- Alem G, Mekonnen Y, Tiruneh M, Mulu A. (2008), 'In vitro antibacterial activity of crude preparation of myrtle (*Myrtus communis*) on common human pathogens.' *Ethiop Med J.* 2008 Jan; 46(1):63-9.
- Alstead, S. & Macarthur, J.G. (1965), *Clinical Pharmacology (Dilling)*. London, Baillière, Tindall & Cassell.
- Amigues, S. (1988), *Théophraste. Recherches sur les plantes, vol. 1*. Paris, Les Belles Lettres.
- Banu, A, Sathyanarayana B, Chattannavar G. (2012), 'Efficacy of fresh Aloe vera gel against multi-drug resistant bacteria in infected leg ulcers.' *Australas Med J.* 2012; 5(6):305-9.
- Beck, L.Y. (2011), *Pedanius Dioscorides of Anazarbus: De materia medica*. Hildesheim, Olms.
- Basyoni MM, El-Sabaa AA. (2013), 'Therapeutic potential of myrrh and ivermectin against experimental *Trichinella spiralis* infection in mice.' *Korean J Parasitol.* 2013 Jun; 51(3):297-304.
- Bell, G.H., Davidson, N., & Scarborough H. (1961), *Textbook of Physiology and Biochemistry*. Edinburgh, Livingstone.
- Berrios RL, Arbiser JL. (2011), 'Effectiveness of gentian violet and similar products commonly used to treat pyodermas.' *Dermatol Clin.* 2011 Jan; 29(1):69-73.
- Blazević I, Radonić A, Mastelić J, Zekić M, Skocibusić M, Maravić A. (2010), 'Hedge mustard (*Sisymbrium officinale*): chemical diversity of volatiles and their antimicrobial activity. *Chem Biodivers.* 2010 Aug; 7(8):2023-34.

- Boyanova L, Neshev G. (1999), 'Inhibitory effect of rose oil products on *Helicobacter pylori* growth in vitro: preliminary report.' *J Med Microbiol.* 1999 Jul; 48(7):705-6.
- Brain, P. (1986), *Galen on Bloodletting.* Cambridge, C.U.P.
- Braun-Falco, O., Plewig, G., Wolff, H.H., Winkelmann, R.K. (1991), *Dermatology.* Berlin, Heidelberg, New York, Springer-Verlag.
- Breasted, J.H. (1930), ed. *Edwin Smith Surgical Papyrus.* Chicago, Univ. of Chicago Press.
- Bruneton, J. (1995), trans. Hatton, C.K., *Pharmacognosy, Phytochemistry, Medicinal Plants.* Paris, Lavoisier.
- Buzzi, S. & Calà, I. (2013), 'The cosmetic Recipes in Late Antique Medical Encyclopaedias'. Workshop: *Late Antique – Early Byzantine Pharmacology and its Reception in the Talmudic Tradition.* Berlin.
- Cabo J, Cabo MM, Cabo MP, Cruz T, Ruiz C. (1988), '*Glaucium flavum* Crantz. IV. Antimicrobial activity.' *Microbios.* 1988; 56(228-229):177-80.
- Calà, I (2012), *Per l'edizione del primo dei 'Libri medicinali' di Aezio Amideno,* University of Bologna: <http://amsdottorato.cib.unibo.it/4988/>.
- Chambers (2011), *The Chambers Dictionary.* London; Chambers Harrap.
- Chawla, H.B. (1993), *Ophthalmology.* Edinburgh & London, Churchill Livingstone.
- Chung IM, Kim EH, Kim JJ, Moon HI. (2011), 'Inhibition effects of the classical pathway complement of isolated compounds from *Quercus glauca*.' *Hum Exp Toxicol.* 2011 Sep; 30(9):1415-9.
- Craik, E.M. (1998), *Places in Man.* Oxford, Clarendon Press.
- Daniele C, Dahamna S, Firuzi O, Sekfali N, Saso L, Mazzanti G. (2005), '*Atractylis gummifera* L. poisoning: an ethnopharmacological review.' *J Ethnopharmacol.* 2005 Feb 28; 97(2):175-81.
- Daniele C, Thompson Coon J, Pittler MH, Ernst E. (2005), '*Vitex agnus-castus*: a systematic review of adverse events.' *Drug Saf.* 2005; 28(4):319-32.
- Davis SC, Mertz PM. (2008), 'Determining the effect of an oak bark formulation on methicillin-resistant *Staphylococcus aureus* and wound healing in porcine wound models.' *Ostomy Wound Manage.* 2008 Oct; 54(10):16-8, 20, 22-5.
- Debru, A. (1997), 'Philosophie et Pharmacologie: La Dynamique des Substances *Leptomères* chez Galien.' in *Galen on Pharmacology. Philosophy, History and Medicine. Proceedings of Vth International Galen*

- Colloquium, Lille, 16-18 March, 1995.* ed. Debru. Leiden. New York. London, Brill.
- Deubner, L. (1962), *Attische Feste*. Hildesheim, Georg Olms.
- Dey CD. (1967), 'Study of the laxative action of *Euphorbia lathyris* seed oil.' *J Exp Med Sci*. 1967 Mar; 10(4):79-81.
- Di Sotto A, Vitalone A, Nicoletti M, Piccin A, Mazzanti G. (2010), 'Pharmacological and phytochemical study on a *Sisymbrium officinale* Scop. extract.' *J Ethnopharmacol*. 2010 Feb 17; 127(3):731-6.
- Didry N, Seidel V, Dubreuil L, Tillequin F, Bailleul F. (1999), 'Isolation and antibacterial activity of phenylpropanoid derivatives from *Ballota nigra*.' *J Ethnopharmacol*. 1999 Nov 1; 67(2):197-202.
- Dimas KS, Pantazis P, Ramanujam R. (2010), 'Review: Chios mastic gum: a plant-produced resin exhibiting numerous diverse pharmaceutical and biomedical properties.' *In Vivo*. 2012 Sep-Oct; 26(5):777-85.
- Dwarampudi LP, Palaniswamy D, Nithyanantham M, Raghu PS. (2012), 'Antipsoriatic activity and cytotoxicity of ethanolic extract of *Nigella sativa* seeds.' *Pharmacogn Mag*. 2012 Oct; 8(32):268-72.
- Ebbell, B. (1937), trans. *Papyrus Ebers*. Copenhagen, Levin & Munksgaard.
- van der Eijk, P.J. (2009), 'Aristotle! What a thing to say! Galen's engagement with Aristotole and Aristotelians' in *Galen and the World of Knowledge* ed. Gill, C., Whitmarsh, T., Wilkins, J. (2009). Cambridge, C.U.P.
- (2010), 'Principles and Practices of Compilation and Abbreviation in the Medical 'Encyclopaedias' of Late Antiquity' in *Condensing Text – Condensed Texts* ed. Horster M & Reitz C (2010). Stuttgart, Franz Steiner Verlag.
- (2012), 'Powers of Medicines, their Ontological Status and the Structure of their Efficacy'. International Conference: *Causing Health and Disease: Medical Powers in Classical and Late Antiquity*. Oxford.
- El-Haci IA, Bekkara FA, Mazari W, Hassani F, Didi MA. (2013), 'Screening of biological activities of *Polygonum maritimum* L. from Algerian coast. *Asian Pac J Trop Biomed*. 2013 Aug;3(8): 611-6; discussion 615.
- Ellis, H., Calne, R.Y. (1968), *Lecture Notes on General Surgery*. Oxford & Edinburgh, Blackwell.
- Evans, W.C. (1996) (editor), *Trease & Evans Pharmacognosy, 14th edition*. London, Saunders.
- (2009) (editor), *Trease & Evans Pharmacognosy, 16th edition*. London, Saunders.

- Faulkner, R.O. (2002), *A Concise Dictionary of Middle Egyptian*. Oxford, Griffith Institute.
- Fehrle, E. (1910), *Die kultische Keuschheit in Altertum*. Giessen, Alfred Töpelmann.
- Frosch PJ, Johansen JD, Menné T, Pirker C, Rastogi SC, Andersen KE, Bruze M, Goossens A, Lepoittevin JP, White IR. (2002), 'Further important sensitizers in patients sensitive to fragrances.' *Contact Dermatitis*. 2002 Nov;47(5): 279-87.
- Gaillard Y, Pepin G. (2001), 'LC-EI-MS determination of veratridine and cevadine in two fatal cases of *Veratrum album* poisoning.' *J Anal Toxicol*. 2001 Sep; 25(6):481-5.
- Gardner DR, Panter KE, James LF, Stegelmeier BL. (1998), 'Abortifacient effects of lodgepole pine (*Pinus contorta*) and common juniper (*Juniperus communis*) on cattle.' *Vet Hum Toxicol*. 1998 Oct; 40(5):260-3.
- Garzya, A. (2002), in *Vin et Santé en Grèce Ancienne*, ed. Jouanna, J. & Villard, L. Athens, École Française d'Athènes.
- Gilotta I, Brvar M. (2010), 'Accidental poisoning with *Veratrum album* mistaken for wild garlic (*Allium ursinum*).' *Clin Toxicol (Phila)*. 2010 Nov; 48(9):949-52.
- Glaister, J. & Rentoul, E. (1966), *Medical Jurisprudence and Toxicology*. Edinburgh, Livingstone.
- Grist, N.R., Ho-Yen, D.O., Walker, E., Williams, G.R. (1993), *Diseases of Infection*. Oxford, OUP.
- Grmek, M.D. (1983), trans. Muellner M. & Muellner L. (1989), *Diseases in the Ancient Greek World*. Baltimore & London, John Hopkins U.P.
- Guariso G, Bertoli S, Cernetti R, Battistella PA, Setari M, Zacchello F. (1993), 'Migraine and food intolerance: a controlled study in pediatric patients.' *Pediatr Med Chir*. 1993 Jan-Feb; 15(1):57-61.
- Guo L, Shi Q, Fang JL, Mei N, Ali AA, Lewis SM, Leakey JE, Frankos VH. (2008), 'Review of usnic acid and *Usnea barbata* toxicity.' *J Environ Sci Health C Environ Carcinog Ecotoxicol Rev*. 2008 Oct-Dec; 26(4):317-38.
- Halicioglu O, Astarcioglu G, Yaprak I, Aydinlioglu H. (2011), 'Toxicity of *Salvia officinalis* in a newborn and a child: an alarming report.' *Pediatr Neurol*. 2011 Oct; 45(4):259-60.
- Hankinson, R.J. (2008), 'The man and his work', 1-33 in *The Cambridge Companion to Galen*, ed. Hankinson. Cambridge, CUP.

- Hongratanaworakit T. (2009), 'Relaxing effect of rose oil on humans.' *Nat Prod Commun.* 2009 Feb; 4(2):291-6.
- Horrocks, G. (1997), *Greek: A History of the Language and its Speakers*, London & New York, Longman.
- Horster, M. & Reitz, C. (2010), ' 'Condensation' of literature and the pragmatics of literary production' in *Condensing Text – Condensed Texts* ed. Horster M & Reitz C (2010). Stuttgart, Franz Steiner Verlag.
- Hussey, R. (1836), *An Essay on the Ancient Weights and Money and the Roman and Greek Liquid Measures.* Oxford.
- Jones, F.A. (1973), 'Carbenoxolone Sodium and Deglycyrrhizinated Liquorice in Gastric Ulcer' in *British Medical Journal*, 1973 July 14; 3 (5871).
- Kapparis, K. (2002), *Abortion in the Ancient World.* London, Duckworth.
- Katzung, B.G. (editor) (2007), *Basic and Clinical Pharmacology, 10th edition.* New York, etc., Lange, McGraw-Hill.
- Keyser, P.T. & Irby-Massie, G.L. (2012), *The Encyclopaedia of Ancient Natural Scientists*, New York.
- Khajavi Rad A, Hadjzadeh MA, Rajaei Z, Mohammadian N, Valiollahi S, Sonei M. (2011), 'The beneficial effect of *Cynodon dactylon* fractions on ethylene glycol-induced kidney calculi in rats.' *Urol J.* 2011 Summer; 8(3):179-84.
- Kim WJ, Hwang KH, Park DG, Kim TJ, Kim DW, Choi DK, Moon WK, Lee KH. (2011), 'Major constituents and antimicrobial activity of Korean herb *Acorus calamus*.' *Nat Prod Res.* 2011 Aug; 25(13):1278-81.
- King, H. (1998), *Hippocrates' Woman; Reading the Female Body in Ancient Greece.* London & New York, Routledge.
- Kondo S, Tabe Y, Yamada T, Misawa S, Oguri T, Ohsaka A, Miida T. (2012), 'Comparison of antifungal activities of gentian violet and povidone-iodine against clinical isolates of *Candida* species and other yeasts: a framework to establish topical disinfectant activities.' *Mycopathologia.* 2012 Jan; 173(1):21-5.
- König J. & Whitmarsh, T. (2007), 'Ordering Knowledge' in *Ordering Knowledge in the Roman Empire*, eds. König J. & Whitmarsh T. (2007) Cambridge, C.U.P.
- Küpelı Akkol E, Süntar I, Fafal Erdoğan T, Keleş H, Mert Gonenç T, Kıvçak B. (2012), 'Wound healing and anti-inflammatory properties of *Ranunculus pedatus* and *Ranunculus constantinopolitanus*: A comparative study.' *J Ethnopharmacol.* 2012 Jan 31; 139(2):478-84.

- Lahlou S, Tahraoui A, Israili Z, Lyoussi B. (2007), 'Diuretic activity of the aqueous extracts of *Carum carvi* and *Tanacetum vulgare* in normal rats.' *J Ethnopharmacol.* 2007 Apr 4; 110(3):458-63.
- Lang, M. & Crosby, M. (1953), 'Weights, Measures and Tokens' in *The Athenian Agora*, vol. 10. Princeton New Jersey, The American School of Classical Studies at Athens.
- Langman, M.J. (1968), 'Carbenoxolone Sodium' in *Gut*, 1968, 9.
- Larrey D, Vial T, Pauwels A, Castot A, Biour M, David M, Michel H. (1992), 'Hepatitis after germander (*Teucrium chamaedrys*) administration: another instance of herbal medicine hepatotoxicity.' *Ann Intern Med.* 1992 Jul 15; 117(2):129-32.
- Lewis, W.H. (1977), *Medical Botany: Plants affecting man's health*. New York, John Wiley & Sons.
- Lin WC, Lin JY. (2011), 'Five bitter compounds display different anti-inflammatory effects through modulating cytokine secretion using mouse primary splenocytes in vitro.' *J Agric Food Chem.* 2011 Jan 12; 59(1):184-92.
- Liolios CC, Graikou K, Skaltsa E, Chinou I. (2010), 'Dittany of Crete: a botanical and ethnopharmacological review.' *J Ethnopharmacol.* 2010 Sep 15; 131(2):229-41.
- Liou JR, El-Shazly M, Du YC, Tseng CN, Hwang TL, Chuang YL, Hsu YM, Hsieh PW, Wu CC, Chen SL, Hou MF, Chang FR, Wu YC. (2013), '1,5-Diphenylpent-3-en-1-ynes and methyl naphthalene carboxylates from *Lawsonia inermis* and their anti-inflammatory activity.' *Phytochemistry.* 2013 Apr; 88:67-73.
- Liu B, Yang J, Wen Q, Li Y. (2008), 'Isoliquiritigenin, a flavonoid from licorice, relaxes guinea-pig tracheal smooth muscle in vitro and in vivo: role of cGMP/PKG pathway.' *Eur J Pharmacol.* 2008 Jun 10; 587(1-3):257-66.
- Longmore, M., Wilkinson, I. & Török, E. (2001), *Oxford Handbook of Clinical Medicine*. Oxford, OUP.
- Loughlin MF, Ala'Aldeen DA, Jenks PJ. (2003), 'Monotherapy with mastic does not eradicate *Helicobacter pylori* infection from mice.' *J Antimicrob Chemother.* 2003 Feb; 51(2):367-71.
- Maggiore MA, Albanese AA, Gende LB, Eguaras MJ, Denegri GM, Elissondo MC. (2012), 'Anthelmintic effect of *Mentha* spp. essential oils on *Echinococcus granulosus* protoscoleces and metacestodes.' *Parasitol Res.* 2012 Mar; 110(3):1103-12.

- Marks, R. (1983), *Practical Dermatology*. London, Dunitz.
- Milovanović V, Radulović N, Todorović Z, Stanković M, Stojanović G. (2007), 'Antioxidant, antimicrobial and genotoxicity screening of hydro-alcoholic extracts of five Serbian *Equisetum* species.' *Plant Foods Hum Nutr.* 2007 Sep; 62(3):113-9.
- Moore J, Perkins A. (2010), 'Evaluating antimicrobial efficacy and cost of 3 dressings containing silver versus a novel antimicrobial hydrogel impregnated gauze dressing containing Oakin, an oak extract.' *Adv Skin Wound Care.* 2010 Dec;23(12):544-51.
- Mouaffak Y, Boutbaoucht M, Ejlaidi A, Toufiki R, Younous S. (2013), 'Fatal poisoning by *Atractylis gummifera* L.: a case report.' *Arch Pediatr.* 2013 May; 20(5):496-8.
- Nelson, W.E., Vaughan, V.C., McKay, R.J. (1969), *Textbook of Pediatrics*. Philadelphia, W.B. Saunders.
- Nutton, V. (2002), in *The Unknown Galen*, ed. Nutton. London, University of London.
- (2013), *Ancient Medicine*, 2nd edn. London & New York, Routledge.
- Ou MC, Hsu TF, Lai AC, Lin YT, Lin CC. (2012), 'Pain relief assessment by aromatic essential oil massage on outpatients with primary dysmenorrhea: A randomized, double-blind clinical trial.' *J Obstet Gynaecol Res.* 2012 May; 38(5):817-22.
- Pages N, Fournier G, Chamorro G, Salazar M, Paris M, Boudene C. (1989), 'Teratological evaluation of *Juniperus sabina* essential oil in mice.' *Planta med.* 1989 Apr; 55(2):144-6.
- Panizzi L, Caponi C, Catalano S, Cioni PL, Morelli I. (2002), 'In vitro antimicrobial activity of extracts and isolated constituents of *Rubus ulmifolius*.' *J Ethnopharmacol.* 2002 Feb; 79(2):165-8
- Pérez-Calderón R, Gonzalo-Garijo A, Bartolomé-Zavala B, Lamilla-Yerga A, Moreno-Gastón I. (2007), 'Occupational contact urticaria due to pennyroyal (*Mentha pulegium*).' *Contact Dermatitis.* 2007 Oct; 57(4):285-6.
- Petit, C. (2010), *La tradition manuscrite du traité des Simples de Galien*. Editio princeps et traduction annotée des chapitres 1 à 3 du livre I, in *Storia della Tradizione e Edizione dei Medici Greci*, eds. Boudon-Millot V., Garzya A, Jouanna J., Roselli A. Naples, M. D'Auria Editore.
- Pränting M, Lööv C, Burman R, Göransson U, Andersson DI. (2010), 'The cyclotide cycloviolacin O2 from *Viola odorata* has potent bactericidal

- activity against Gram-negative bacteria. *J Antimicrob Chemother.* 2010 Sep; 65(9):1964-71.
- Qureshi S, Shah AH, Tariq M, Ageel AM. (1989), 'Studies on herbal aphrodisiacs used in Arab system of medicine.' *Am J Chin Med.* 1989; 17(1-2):57-63.
- Raeder, I. (1928), ed. *Oribasii collectionum medicarum, Vol .I.* Leipzig & Berlin.
- Raven, J.E. (2000), *Plants and Plant Lore in Ancient Greece.* Oxford, Leopard's Head Press.
- Rehman NU, Khan AU, Alkharfy KM, Gilani AH. (2012), 'Pharmacological Basis for the Medicinal Use of *Lepidium sativum* in Airways Disorders.' *Evid Based Complement Alternat Med.* 2012; 2012:596524.
- Reig R, Sanz P, Blanche C, Fontarnau R, Dominguez A, Corbella J. (1990), 'Fatal poisoning by *Rumex crispus* (curled dock): pathological findings and application of scanning electron microscopy.' *Vet Hum Toxicol.* 1990 Oct; 32(5):468-70.
- Riddle, J.M. (1994), *Contraception and Abortion from the Ancient World to the Renaissance.* Cambridge, Mass. & London, Harvard University Press.
- Roé E, Serra-Baldrich E, Dalmau J, Peramiqúel L, Pérez M, Granel C, Alomar A. (2005), '*Mentha pulegium* contact dermatitis.' *Contact Dermatitis.* 2005 Dec; 53(6):355.
- Romanes, J.G. (ed.) (1964), *Cunningham's Textbook of Anatomy.* Oxford, OUP.
- Rubiolo P, Matteodo M, Riccio G, Ballero M, Christen P, Fleury-Souverain S, Veuthey JL, Bicchi C. (2006), 'Analytical discrimination of poisonous and nonpoisonous chemotypes of giant fennel (*Ferula communis* L.) through their biologically active and volatile fractions.' *J Agric Food Chem.* 2006 Oct 4; 54(20):7556-63.
- Sađđıç O, Ozkan G, Ozcan M, Ozçelik S. (2005), 'A study on inhibitory effects of Siđđla tree (*Liquidambar orientalis* Mill. var. *orientalis*) storax against several bacteria. *Phytother Res.* 2005 Jun; 19(6):549-51.
- Sarac N, Ugur A. (2008), 'Antimicrobial activities of the essential oils of *Origanum onites* L., *Origanum vulgare* L. subspecies *hirtum* (Link) Ietswaart, *Satureja thymbra* L., and *Thymus cilicicus* Boiss. & Bal. growing wild in Turkey.' *J Med Food.* 2008 Sep; 11(3):568-73.
- Scarborough, J. (1984), 'Early Byzantine Pharmacology' in *Dumbarton Oaks Papers*, Vol. 38, Symposium on Byzantine Medicine (1984), 213-232.
- (2013), 'Theodora, Aëtius of Amida, and Procopius: Some Possible Connections.' *Greek, Roman and Byzantine Studies* 53 (2013): 742-762.

- Seak CJ, Lin CC. (2007), '*Ruta graveolens* intoxication.' *Clin Toxicol (Phila)*. 2007; 45(2):173-5.
- Sharma S, Khan N, Sultana S. (2005), '*Balsamodendron mukul* suppresses benzoyl peroxide and ultraviolet light induced tumor promotional events in Swiss mice.' *J Photochem Photobiol B*. 2005 Jan 14; 78(1):43-51.
- Sharquie KE, Al-Obaidi HK. (2002), 'Onion juice (*Allium cepa* L.), a new topical treatment for alopecia areata.' *J Dermatol*. 2002 Jun; 29(6):343-6.
- Sienkiewicz M, Łysakowska M, Pastuszka M, Bienias W, Kowalczyk E. (2013), 'The potential of use basil and rosemary essential oils as effective antibacterial agents.' *Molecules*. 2013 Aug 5; 18(8):9334-51.
- Sneddon, I.B. & Church, R.E. (1964), *Practical Dermatology*. London, Arnold.
- Steckerl, F. (1958), *The Fragments of Praxagoras of Cos and his School*. Leiden, E.T. Brill.
- Sterer N. (2006), 'Antimicrobial effect of mastic gum methanolic extract against *Porphyromonas gingivalis*.' *J Med Food*. 2006 Summer; 9(2):290-2.
- Süntar I, Küpeli Akkol E, Keles H, Yesilada E, Sarker SD, Arroo R, Baykal T. (2012), 'Efficacy of *Daphne oleoides* subsp. *kurdica* used for wound healing: identification of active compounds through bioassay guided isolation technique.' *J Ethnopharmacol*. 2012 Jun 14; 141(3):1058-70.
- Tadić VM, Jeremic I, Dobric S, Isakovic A, Markovic I, Trajkovic V, Bojovic D, Arsic I. (2012), 'Anti-inflammatory, gastroprotective, and cytotoxic effects of *Sideritis scardica* extracts.' *Planta Med*. 2012 Mar; 78(5):415-27.
- Talasz AH, Abbasi MR, Abkhiz S, Dashti-Khavidaki S. (2010), '*Tribulus terrestris*-induced severe nephrotoxicity in a young healthy male.' *Nephrol Dial Transplant*. 2010 Nov; 25(11):3792-3.
- Teschke R, Frenzel C, Glass X, Schulze J, Eickhoff A. (2012), 'Greater Celandine hepatotoxicity: a clinical review.' *Ann Hepatol*. 2012 Nov-Dec; 11(6):838-48.
- Tomás-Menor L, Morales-Soto A, Barrajión-Catalán E, Roldán-Segura C, Segura-Carretero A, Micol V. (2013), 'Correlation between the antibacterial activity and the composition of extracts derived from various Spanish *Cistus* species.' *Food Chem Toxicol*. 2013 May; 55:313-22.
- Totelin, L.M.V. (2012), 'And to end on a poetic note; Galen's authorial strategies in the pharmacological books.' *Studies in History and Philosophy of Science* 43 (2012) pp. 307-315.

- (2014), 'When foods become remedies in ancient Greece: The curious case of garlic and other substances.' *J. Ethnopharmacol.* 2014 <http://dx.doi.org/10.1016/j.jep.2014.08.18>.
- Touwaide, A. (1997), 'La thérapeutique médicamenteuse de Dioscoride à Galien: du *Pharmaco-centrisme* au *Médico-centrisme*.' in *Galen on Pharmacology. Philosophy, History and Medicine. Proceedings of Vth International Galen Colloquium, Lille, 16-18 March, 1995*. ed. Debru. Leiden. New York. London, Brill.
- Ulusoy S, Boşgelmez-Tinaz G, Seçilmiş-Canbay H. (2009), 'Tocopherol, carotene, phenolic contents and antibacterial properties of rose essential oil, hydrosol and absolute.' *Curr Microbiol.* 2009 Nov; 59(5):554-8.
- Underwood, J.C.E. (editor) (2004), *General and Systematic Pathology*. Edinburgh, London, New York, Churchill Livingstone.
- Vazquez E. (1999), 'Oat bran treats diarrhea.' *Posit Aware*. 1999 Mar-Apr; 10(2):16.
- Waqas MK, Akhtar N, Ahmad M, Murtaza G, Khan HM, Iqbal M, Rasul A, Bhatti NS. (2010), 'Formulation and characterization of a cream containing extract of fenugreek seeds.' *Acta Pol Pharm.* 2010 Mar-Apr;67(2):173-8.
- Watkins F, Pendry B, Sanchez-Medina A, Corcoran O. (2012), 'Antimicrobial assays of three native British plants used in Anglo-Saxon medicine for wound healing formulations in 10th century England.' *J Ethnopharmacol.* 2012 Nov 21; 144(2):408-15.
- Weigel, C. (1791), *Aetianarum Exercitationum Specimen*. Leipzig, Officina Taubetiana.
- West, M.L. (1973), *Textual Criticism and Editorial Technique*. Stuttgart, B.G. Teubner.
- White, A., Handler, P. & Smith, E.L. (1964), *Principles of Biochemistry*, 3rd edn. New York, Toronto & London, McGraw-Hill.
- Wilkins, J. (2003), in Powell, O., *Galen: On the Properties of Foodstuffs*. Cambridge, Cambridge University Press.
- Yoon SJ, Koh EJ, Kim CS, Zee OP, Kwak JH, Jeong WJ, Kim JH, Lee SM. (2012), 'Agrimonia eupatoria protects against chronic ethanol-induced liver injury in rats' *Food Chem Toxicol.* 2012 Jul;50(7):2335-41.
- Zohary, D. & Hopf, M. (2000), *Domestication of Plants in the Old World*, 3rd edn. Oxford, Oxford University Press.