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Anthimus the dietician*

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SUMMARY

The present study analyses the fragment reading *...in dulci piper habentem, parum cariofilum et gingiber, costo et spicanardi vel folio*, being part of Chapter 13 of *De observatione ciborum*, penned by a Byzantine physician Anthimus at the beginning of the 6th c. AD.

The author of the article tries to reconstruct (on the basis of topical culinary, agronomic and encyclopaedic literature of Antiquity and Byzantium) the technology employed in preparing the delicacy, and its full list of ingredients (claiming that the term *folium* in the recipe denotes tejpat, i.e. *Cinnamomum tamala* [Buch.-Ham.] T. Nees & Eberm, and not spikenard). The research leads to the conclusion that Anthimus' literary advice is based on his profound medical competence.

KEYWORDS: history of ancient and Byzantine culinary art, history of ancient and Byzantine medicine, Anthimus, *De observatione ciborum*.

STRESZCZENIE

Dietetyk Antimus

Niniejsze studium analizuje fragment brzmiący: *...in dulci piper habentem, parum cariofilum et gingiber, costo et spicanardi vel folio*, który stanowi część rozdziału 13 traktatu *De observatione ciborum*. Został on napisany przez bizantyńskiego lekarza Antimusa/Antyma na początku VI w. n.e.

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Autor artykułu podjął próbę rekonstrukcji technologii przygotowania dania opisywanego przez bizantyńskiego dietetyka oraz uzupełnienia listy ingrediencji zalecanych w celu przygotowania potrawy (stawiając hipotezę, że użyty w przepisie termin *folium* oznacza teapat, tzn. *Cinnamomum tamala* [Buch.-Ham.] T. Nees & Eberm, a nie nard). Czyni to na podstawie wybranej literatury kulinarnej, medycznej i encyklopedycznej powstałej w okresie antyku i Bizancjum. Badania doprowadzają także do konkluzji, że rady Antimusa zawarte w jego dziele oparte zostały na jego głębokiej kompetencji w zakresie wiedzy medycznej.

SŁOWA KLUCZOWE: historia kuchni antycznej i bizantyńskiej, historia medycyny antycznej i bizantyńskiej, Antimus, Antym, *De observatione ciborum*.

Introduction

De observatione ciborum penned by Anthimus, is a dietetic treatise dedicated to the Frankish ruler Teuderich (511–534 AD), and was composed in the first part of the 6th c. AD¹. Anthimus is said to have been a physician exiled from Constantinople in 478 AD². It is believed that Anthimus either spent the remainder of his life close to Theodoric the Great's (471–526) court (to be sent by the Gothic king to Theuderic)³, or that he returned (between 491 and 497 AD) to Constantinople (to be an envoy on two imperial missions to the Franks, whose ruler himself commissioned *De observatione ciborum*)⁴.

¹ Circa 516 or 523 AD; M. Grant, *Introduction*, in: Anthimus, *On the Observance of Foods. De observatione ciborum*, ed., transl. M. Grant, Blackawton–Totnes 2007, p. 9–42, especially 23–24. Grant considers the former date to be more likely. Cf. J. Scarborough, *Anthimus (of Constantinople?) (ca 475 – 525 CE)*, in: *The Encyclopedia of Ancient Natural Scientists. The Greek Tradition and its Many Heirs*, eds P.T. Keyser, G. Irby-Massie, London–New York 2008, p. 91.

² Malchus, *Historia Byzantina* 15, p. 422, 30–39.

³ Such course of events was proposed by Valentin Rose and his later followers; V. Rose, *Die Diätetik des Anthimus an Theuderich König der Franken*, in: *Anecdota graeca et graecolatina. Mitteilungen aus Handschriften zur Geschichte der griechischen Wissenschaft*, ed. V. Rose, vol. 2, Berolini 1870, p. 43–62, especially 44–56. A useful bibliography on the subject cf. C. Deroux, *Anthime, un médecin gourmet du début des temps mérovingiens*, “Revue Belge de Philologie et d’Histoire” 2002, vol. 80, no. 4, p. 1107–1108.

⁴ Y. Hen, *Food and Drink in Merovingian Gaul*, in: *Tätigkeitsfelder und Erfahrungshorizonte des ländlichen Menschen in der frühmittelalterlichen Grundherrschaft (bis ca. 1000): Festschrift für Dieter Hägermann zum 65. Geburtstag*, ed. B. Kasten, München 2006, p. 99–110, especially 100–103.

Short as it may be, *De observatione ciborum* is a compelling work. For historians of medicine, the text illustrates the evolution of dietetic thought and the development of *materia medica* before the 6th century AD⁵. Food historians analyse the treatise as a source reflecting the Mediterranean cuisine of Anthimus' lifetime⁶, while philologists consider it to be material allowing to research into the evolution of Latin⁷.

This paper delves into the data provided by Anthimus through the prism of a researcher in the field of medical thought, approaching *De observatione ciborum* as a collection of advice on nutrition principles, i.e., as a regimen based on

⁵ Historians of medicine usually appreciate Anthimus' interest in dietetics; C. Deroux, *Anthime*, p. 1107–1124; P. Prioreschi, *A History of Medicine*, vol. 5, *Medieval Medicine*, Omaha, NE 2003, p. 146–147; V. Nutton, *Ancient Medicine*, London–New York 2004, p. 301; J. Scarborough, *Anthimus*, p. 91–92. Klaus-Dietrich Fischer (*Ein brennendes Problem: Anthimus, praef., p. 3, 6, Liechtenhan*, "Latomus" 1989, vol. 48, p. 880–881) implied that the treatise by Anthimus also contains information on veterinary medicine, and more precisely data on cauterisation of horses suffering from dysentery. Cf. C. Deroux, *The Allusion by Anthimus the Physician to the Cauterisation of Horses (De obs. cib., praef., p. 3, l. 6–8 Liechtenhan)*, in: *Studies in Latin Literature and Roman History*, ed. C. Deroux, Bruxelles 2005, p. 484–493.

⁶ Anthimus is customarily presented as an author who gathered a substantial amount of important data on Byzantine cuisine. For instance, cf. A. Dalby, *Tastes of Byzantium. The Cuisine of a Legendary Empire*, London–New York, p. 173–177, 188–189, 209–210, etc.; J. Koder, *Cuisine and Dining in Byzantium*, in: *Byzantine Culture. Papers from the Conference 'Byzantine Days of Istanbul' Held on the Occasion of Istanbul being European Cultural Capital 2010 Istanbul, May 21–23 2010*, ed. D. Sakel, Ankara 2014, p. 423, 428, 431–434; *idem*, *Die Byzantiner. Kultur und Alltag in Mittelalter*, Wien–Köln–Weimar 2016, p. 207, 213, 216, etc. He is also depicted as an author describing Gallic cuisine, cf. B. Effros, *Creating Community with Food and Drinks in Merovingian Gaul*, New York–Houndmills 2003, p. 7, 61–68; C. Deroux, *The Franks and Bacon According to Doctor Anthimus (De obs. cib. 14)*, in: *Studies in Latin Literature and Roman History*, ed. C. Deroux, Bruxelles 2008, p. 518–528.

⁷ The treatise is most commonly studied through the prism of its lexis, which often causes numerous interpretative difficulties. For instance, cf. G.M. Messing, *Remarks on Anthimus De observatione ciborum*, "Classical Philology" 1942, vol. 37, no. 2, p. 150–158; M. Grant, *A Problematical Word in Anthimus' 'De Observatione Ciborum Epistula' 43*, "Rheinisches Museum für Philologie, Neue Folge" 1993, vol. 136, no. 3/4, p. 377–379; C. Deroux, *Le médecin Anthimus et le vocabulaire de la diagnose (De obs. cib. 25: agnoscens)*, "Latomus" 2015, vol. 74, p. 491–493 etc. Some researchers classify the lexis by its ethnic origin. Cf. M. Capparini, *Per un approfondimento dei germanismi dell'Epistula Anthimi de observatione ciborum: bridum /spiss, sodinga /prue*, "Linguistica e Filologia" 2009, vol. 29, p. 179–196. Another interesting aspect of *De observatione ciborum* is the fact that the author was bilingual. Cf. J. Adams, *Bilingualism and the Latin Language*, Cambridge 2003, p. 496–497.

the rules of dietetics⁸. When Anthimus was compiling his treatise, this branch of medicine was already nearly 1000 years old, which explains why the rules of dietetics deeply permeate the text. The foundations of Greek dietetics are mentioned, for instance, in a sentence within the *proemium*, which explicitly attributes good health to an appropriate diet (...*prima sanitas hominum in cibis congruis constat*⁹), and in an extract that describes the consequences of eating unsuitable foodstuffs, identifying them as the main reason behind disturbances of the process of digestion and absorption of food¹⁰. These statements are supplemented with the remark ... *si autem bene praeparati fuerint cibi, digestio bona et dulcis fiet, et humoris boni nutriuntur* ...¹¹, which explains the author's interest in food preparation, i.e., culinary art. Anthimus' dietetics (as well as dietetics in general) was connected with *materia medica*, i.e. with a branch of medicine which focused on a knowledge of therapeutic substances, a large fraction of which were also foodstuffs. This is visible on almost every page of Anthimus' text, e.g., in the extract where the author refers to dried figs¹², explicitly attributing them with a therapeutic effect in clearly specified treatments, e.g., early stages of rhinitis, sore throats, and dysphonia.

Nevertheless, *De observatione ciborum* is not just an ordinary collection of practical advice on food preparation based on knowledge of the properties of various foodstuffs. The treatise also reveals a tendency to summarise the output of previous generations of physicians which is akin to that we can find in medical encyclopaedias by Oribasius (4th cent. AD)¹³, Aëtius of Amida (6th cent. AD), and Paul of Aegina (7th cent. AD)¹⁴. Simple though it is, the text by Anthimus is based

⁸ Thus, I share Liliane Plouvier's view (*L'alimentation carnée au Haut Moyen Âge d'après le De observatione ciborum d'Anthime et les Excerpta de Vinidarius*, "Revue belge de philologie et d'histoire" 2002, vol. 80, no. 4, p. 1358–1360).

⁹ *Anthimus, Proemium*, p. 1, 8–9.

¹⁰ *Ibidem*, p. 1,9–2,2.

¹¹ *Ibidem*, p. 2, 3–4.

¹² *Anthimus*, 93, p. 33, 1–3.

¹³ Od the physician and his work – B. Baldwin, *The Career of Oribasius*, "Acta Classica" 1975, vol. 18, p. 85–97; M. Grant, *Oribasios and Medical Dietetics or the Three Ps*, in: *Food in Antiquity*, eds J. Wilkins, D. Harvey, M. Dobson, Exeter 1995, p. 368–379; R. de Lucia, *Oreibasios v. Pergamon*, in: *Antike Medizin. Ein Lexikon*, ed. K.-H. Leven, München 2005, col. 660–661; K. Jagusiak, M. Kokoszko, *Życie i kariera Orybazjusza w świetle relacji źródłowych*, "Przegląd Nauk Historycznych" 2011, vol. 10, no. 1, p. 5–21; *iidem*, *Pisma Orybazjusza jako źródło informacji o pożywieniu ludzi w późnym Cesarstwie Rzymskim*, "Vox Patrum" 2013, vol. 59, p. 339–357.

¹⁴ On the continuity of medical tradition in Antiquity and Early Byzantium, cf. V. Nutton, *Ancient*, p. 292–309; Ph. van der Eijk, *Principles and Practices of Compilation and Abbre-*

on the acquisition of knowledge mastered by medical experts. Two statements that refer to this *corpus* of expertise – and thus, emphasise the competences of the author himself – can be already found in the introduction to *De observatione ciborum*. First of all, Anthimus assures the reader that the substantive part of the treatise is a body of knowledge based on *praecepta auctorum medicinalium*...¹⁵, and next he reveals that the content was compiled *...secundum praecepta diversorum auctorum*...¹⁶ Finally, we have references to this substantial theoretical base in the numerous chapters that provide more detailed information, including sections 23, 25, 26, 36, and 57.

Having said that, a method of approach towards Anthimus' output employed in the present article involves a close reading of ancient medical theories, and is supposed to analyse his writing with an eye to re-constructing his line of reasoning. Consequently, the present work is not only based on the culinary literature but – above all – on the achievements of dietetics and *materia medica*. For spatial and temporal constraints, the study focuses on one instance only, notably on a sauce recommended by the author for hare. Short as it might seem, it illustrates accurately Anthimus' world of knowledge.

A sauce for hare

We shall now examine an extract from Chapter 13 within *De observatione ciborum*, which discusses the preparation of a sauce for hare meat, and is worded as follows: *...in dulci piper habentem, parum cariofilum et gingiber, costo et spicanardi vel folio*¹⁷. Anthimus claims that hare should be consumed *in dulci*..., which – being slightly imprecise – suggests that the prepared meat of *lepores novelli* ought to be served with a sweet sauce aromatised with spices, to which Anthimus refers using the term *iuscellum*¹⁸. What is more, the preposition *in* with the ablative case

viation in the Medical Encyclopaedias of Late Antiquity, in: *Condensing Texts – Condensed Texts*, eds M. Horster, Ch. Reitz, Stuttgart 2010, p. 519–554, especially 519–525; A. Touwaide, *Medicine and Pharmacy*, in: *A Companion to Byzantine Science*, ed. S. Lazaris, Leiden–Boston 2020, p. 364–365.

¹⁵ *Anthimus, Proemium*, p. 1, 6–7.

¹⁶ *Ibidem*, p. 4, 4–5.

¹⁷ *Anthimus*, 13, 5–6.

¹⁸ *Ibidem*, 3, p. 5, 1; 4, p. 6, 1; 5, p. 6, 7; 10, p. 7, 8; 23, p. 12, 14; 24, p. 13, 2; 34, p. 16, 7.

may imply that the served meat was either steeped in the sauce, or meant to be dipped in it¹⁹. Whether the meat was also stewed in it, we do not know.

Since the recipe itself does not specify how the said *dulce iuscellum* was prepared, we may conclude that Anthimus chose not to provide any details in the recipe within Chapter 13 as the general principles of making meat sauces had been laid out previously – in Chapter 3 on serving beef²⁰. Presumably, the physician assumed that Theuderic's cooks were familiar with the technicalities of the matter, and thus, he focused on key issues concerning the health of the Frankish king.

In the treatise, Anthimus lists three sweetening substances that could possibly have been used in the recipe, referring to them as *dulcedines*²¹. These are *...mel aut sapa vel carenum...*²². As the author does not specify the type of honey as such, we may conclude that it was not necessary to select one type from among numerous kinds described in medical and agronomic literature by the properties imbued by its origins²³ (for instance, it did not have to be exclusively Attic honey, which is, preferably, made from thyme flowers that blossomed on Hymettus). While it is safe to say that *sapa* and *carenum* (or *caroenum*) were liquids in which food could be boiled or stewed, honey is either fluid or solid in consistency (when it crystallises). Although reversible, once honey has been exposed to a higher temperature, the de process of re-liquefaction is not easy to control since the substance tends to caramelize rather quickly. Therefore, it is advisable to mix it with another liquid so that it can dissolve when heated up. The problem, however, did not bother ancient cooks, since – as we learn from Galen in the chapter on honey²⁴ in *De alimentorum facultatibus* (2nd/3rd cent. AD)²⁵ – prior to use, honey was customarily disso-

¹⁹ The second option was described in the chapter on serving piglets (*lactantis/lactantes*), namely *...intingendo in oximelli simplici...* Cf. *Ibidem*, 10, p. 7, 10.

²⁰ *Ibidem*, 3, p. 4, 16 – 5, 15. For the first time, Anthimus reveals that it is his tried and tested way of writing about things in the recipe for boar meat, where he refers to the data he had already included in the recipe for mutton: *...quomodo de verbicinas indicavimus*, cf. *Anthimus*, 8, p. 6, 15.

²¹ *Ibidem*, 3, p. 5, 6 (*...dulcedinem...*).

²² *Ibidem*, 3, p. 5, 13–14.

²³ On honey, cf. A. Dalby, *Food in the Ancient World from A to Z*, London–New York 2003, p. 179–180; P. Faas, *Around the Roman Table. Food and Feasting in Ancient Rome*, transl. S. Whiteside, Chicago 2005, p. 146–148; M. Χρόνη, *Η πανίδα στη διατροφή και στην ιατρική στο Βυζάντιο*, Athens 2012, p. 236–259; Σ. Γερμανίδου, *Βυζαντινός μελίρρυτος πολιτισμός: Πηγές, τέχνη, ευρήματα*, Αθήνα 2016, p. 31–33.

²⁴ Galen, *De alimentorum facultatibus*, 738, 15 – 742, 17, vol. 6.

²⁵ On the physician and his output, cf. V. Boudon-Millot, *Introduction générale*, in: *Galien*, t. 1: *Introduction générale, Sur l'ordre de ses propres livres, Sur ses propres livres, Que l'excellent*

lved in water and then boiled. The main purpose of the procedure was to eliminate its impurities, which – according to the contemporaneous theory of *materia medica* – changed the overall dietetic nature of honey by removing the characteristic sharpness, provoking the viscera to excrete (which, in turn, would impede the appropriate absorption of food)²⁶. Accordingly, as a result of being processed in this way, honey always had an admixture of water, and thereby remained fluid.

The term *sapa* refers to reduced grape must²⁷, produced – according to Columella (1st cent. AD) – when it was heat-reduced to three quarters, two thirds, or even half of its initial volume²⁸. On the other hand, Pliny (1st cent. AD)²⁹ and Palladius (4th cent. AD)³⁰ accounted that must was customarily boiled down to one third of its original volume³¹. Pliny added that such product was called *sira-eum* and *hepsema*³² (in Greek *σίπαιον*³³ or *ἔψημα*³⁴). As for *carenum/caroenum*, Palladius maintained that the noun referred to must that had been reduced to two thirds of its initial volume³⁵, meaning it contained less sugar and more water than *sapa*. However, it is possible that it was not grape must, but reduced sweet wine, whose taste resembled οἶνος Καρύβιος (dark, thick and very sweet) produced in Lydia, often mentioned by Galen, and compared to *σίπαιον*³⁶. Even though these terms are not precisely defined in the ancient literature, they undoubtedly referred to distinct syrups characterised by varied, but invariably high, concen-

médecin est aussi philosophe, transl. V. Boudon-Millot, Paris 2007, p. VII–XC; S.P. Mattern, *The Prince of Medicine: Galen in the Roman Empire*, Oxford 2013, *passim*.

²⁶ Galen, *De alimentorum facultatibus*, 740, 10 – 741, 3, vol. 6.

²⁷ On *sapa*, cf. A. Dalby, *Food*, p. 225; P. Faas, *Around*, p. 149.

²⁸ Columella, *De re rustica*, XII, 19, 1, 4–8. On the author, cf. R.H. Rodgers, *L. Iunius Moderatus Columella of Gades (ca 40 – ca 70 CE)*, in: *The Encyclopedia*, p. 456–457.

²⁹ Pliny, *Historia naturalis*, XIV, 80, 5–7. On the author and his encyclopaedia, cf. T. Murphy, *Pliny the Elder's Natural History: The Empire in the Encyclopedia*, Oxford–New York 2004, *passim*, especially p. 1–48.

³⁰ On the author, cf. R.H. Rodgers, *Palladius Rutilius Taurus Aemilianus (ca 375–ca 450 CE)*, in: *The Encyclopedia*, p. 35–36.

³¹ Palladius, *Opus agriculturae*, XI, 18.

³² Pliny, *Historia naturalis*, XIV, 80, 5–6.

³³ The term is used in numerous medical writings, cf. Dioscorides, *De materia medica*, V, 6, 4, 4; Galen, *De victu attenuante*, 88, 1 – 89, 1; Galen, *De alimentorum facultatibus*, 503, 8, vol. 6 etc.

³⁴ The term was used in the medical literature, cf. Dioscorides, *De materia medica*, V, 6, 4, 4; Galen, *De alimentorum facultatibus*, 503, 8, vol. 6; Galen, *De alimentorum facultatibus*, 667, 10, vol. 6 etc.

³⁵ Palladius, *Opus agriculturae*, XI, 18. On *caroenum*, cf. A. Dalby, *Food...*, p. 224; P. Faas, *op.cit.*, p. 148.

³⁶ For instance, cf. Galen, *De victu attenuante*, 98, 2 – 99, 1; Galen, *De rebus boni malique suci*, 801, 2–6; Galen, *De dignoscendis pulsibus*, 774, 16 – 775, 5, vol. 8 etc.

trations of sugars, which made them all suitable for Anthimus' recipe. Since we can conclude that both *sapa* and *carenum/caroenum* were commonly available for cooking, the physician must have known how they differed. Therefore, it was unnecessary for him to elaborate on something that was clearly obvious.

In addition, Anthimus' recipe contained certain exotic spices: pepper (*piper*), cloves (*cariofilum*), ginger (*gingiber*), costus, also known as putchuk (*costus*), and, as Anthimus puts it, *spicanardi vel folio*³⁷. If we take into account analogical data in the recipe for beef, these ingredients were pounded in an earthenware mortar with the addition of small amounts of wine³⁸. Next, the ingredients were mixed with honey or *sapa* or *carenum/caroenum*.

Even though Anthimus never mentioned whether the sauce was to be prepared cold or heated, the technique – described in his recipe for *oxymel*³⁹ within Chapter 10 (devoted to serving young pork)⁴⁰, and Chapter 24 (on peacock meat)⁴¹ of *De observatione ciborum* – allows us to conclude that the meat sauces were usually made by boiling their ingredients. This cooking method is also implied by the fact that the heat treatment of sauces was remarked in the vast majority of the recipes for hare meat to be found in *De re coquinaria* (4th cent. AD)⁴², and specifically in the recipes 1⁴³, 3⁴⁴, 4⁴⁵,

³⁷ Mark Grant stresses the fact that spices used to make the sauce were expensive rarities in 6th century Gaul, cf. M. Grant, *Introduction*, p. 28.

³⁸ *ista omnia simul trita bene in mortario fictile addito vino modico...*, cf. *Anthimus*, 3, p. 5, 10–11.

³⁹ Medical sources indicate that *oxymel* was obtained through boiling water, honey and vinegar until the decoction gained the appropriate consistency. Anthimus (10, p. 7, 11–12) describes the process as follows: ... *duas partis de melle et una pars de aceto... coquat in vas fictile...*, and yet, he never mentions water among its ingredients. Despite medical texts reporting numerous variants of the recipe, they all confirm Anthimus' information that *oxymel* was prepared by heating its ingredients. Cf. Dioscorides, *De materia medica*, V, 14, 1, 1–4; Galen, *De sanitate tuenda*, 273, 11 – 274, 7, vol. 6; Oribasius, *Collectiones medicae*, V, 24, 9, 1 – 15, 3; Oribasius, *Libri ad Eunapium*, IV, 144, 4, 1 – 6, 2; Aëtius of Amida, *Iatricorum libri*, IX, 24, 101–113. On *oxymel*, cf. M. Χρόνη, Η πανίδα, p. 272–278.

⁴⁰ *Anthimus*, 10, p. 7, 8–13.

⁴¹ *Anthimus*, 24, p. 12, 17 – 13, 5.

⁴² On the treatise, cf. M. Kokoszko, Z. Rzeźnicka, K. Jagusiak, *Health and Culinary Art in Antiquity and Early Byzantium in the Light of De re coquinaria*, "Studia Ceranea: Journal of the Waldemar Ceran Research Centre for the History and Culture of the Mediterranean Area and South–East Europe" 2012, vol. 2 p. 145–164; W. Asfora Nadler, *Collecting and Interpreting Apicius in Fifteenth-Century Italy Manuscript Tradition and Circulation of Culinary/Dietary Knowledge*, "Food and History" 2016, vol. 14, no. 2/3, p. 183–203.

⁴³ Apicius, *De re coquinaria*, VIII, 8, 1.

⁴⁴ *Ibidem*, 8, 3.

⁴⁵ *Ibidem*, 8, 4.

5⁴⁶, 6⁴⁷, 7⁴⁸, 9⁴⁹, 11⁵⁰, 12⁵¹ and 13⁵². Heating was particularly important whenever the dish contained aromatic ingredients, since – as stated by Anthimus in his recipe for beef – cooks of that time were aware that higher temperatures brought out the aroma of spices added to the sauce⁵³.

Hare sauce contained pepper, which from the 6th/5th centuries BC was one of the most favoured spices in antiquity⁵⁴. Immensely popular, it had to be imported from distant lands (at that time called India), which translated into its high price. Pliny accounts that the most expensive long pepper was sold for 10–15 denarii per pound⁵⁵, while its white and black variants cost 7–10 and 4–10 denarii respectively⁵⁶. Just like other aromatic substances, pepper was listed in the edict *De pretiis rerum venalium* issued by emperor Diocletian, where a pound of pepper is said to have cost 800 denarii⁵⁷. Although we have no detailed data on the pricing of pepper in Anthimus' times, the information provided in the history by Theophylact Simocatta⁵⁸ (and later also in the chronicle by Theophanes the Confessor⁵⁹) which gives an account of the failed campaigns conducted by emperor Maurice against the Avars (when the Romans had to pay a tribute to

⁴⁶ *Ibidem*, 8, 5.

⁴⁷ *Ibidem*, 8, 6.

⁴⁸ *Ibidem*, 8, 7.

⁴⁹ *Ibidem*, 8, 9.

⁵⁰ *Ibidem*, 8, 11.

⁵¹ *Ibidem*, 8, 12.

⁵² *Ibidem*, VIII, 8, 13.

⁵³ *ista omnia trita ...mittis in ollam... ut antequam tollatur de foco, modicum sentiam et remittat in ius virtutem suam* – Anthimus, 3, p. 5, 10–13.

⁵⁴ On pepper, cf. B. Lauriou, *Spices in the Medieval Diet: A New Approach*, "Food and Foodways: Explorations in the History and Culture of Human Nourishment" 1985, vol. 1, p. 43–75; A. Dalby, *Siren Feasts: A History of Food and Gastronomy in Greece*, London–New York 1996, p. 137–138; *idem*, *Dangerous Tastes: The Story of Spices*, London 2000, p. 90–94; *idem*, *Empire of Pleasures: Luxury and Indulgence in the Roman Empire*, London 2000, p. 194–196; *idem*, *Food*, p. 254–255; P. Faas, *Around*, p. 165–166; E. Lev, Z. Amar, *Practical Materia Medica of the Medieval Eastern Mediterranean According to the Cairo Genizah*, Leiden–Boston 2008, p. 236–239; M.A. Cobb, *The Reception and Consumption of Eastern Goods in Roman Society*, "Greece & Rome" 2013, vol. 60, no. 1, p. 140–141; *idem*, *Black Pepper Consumption in the Roman Empire*, "Journal of the Economic and Social History of the Orient" 2018, vol. 61, no. 4, p. 519–559.

⁵⁵ One pound = 327 g.

⁵⁶ Pliny, *Historia naturalis*, XII, 28, 6 – 29, 1.

⁵⁷ *Edictum Diocletiani de pretiis rerum venalium*, 36, 114 (Lauffer); 34, 67 (Reynolds).

⁵⁸ Theophylact Simocatta, *Historiae*, VII, 13, 6, 1–4.

⁵⁹ Theophanes the Confessor, *Chronographia*, 278, 22–24.

the victorious barbarians in kind, including pepper, φύλλον Ἰνδικόν⁶⁰, cinnamon κασία, and costus [κόστος]⁶¹), together with the inventory of the treasury of the Persian ruler Khosrow II (which was captured by emperor Heraclius' troops in 627, and where the Romans found pepper and ginger⁶²), preserved by Theophanes the Confessor⁶³ clearly prove that the spice was still highly valued in the late 6th and the early 7th centuries AD. Undoubtedly, the barbarian Avars would never have accepted a tribute made up of spices if they had not regarded it at least as highly as precious metals. Analogically, the Persians would not have hoarded pepper and ginger if they had not considered them luxury goods. In addition, the two pieces of information would not be preserved in the works by Byzantine historians if Theophylact (6th/7th cent. AD) and Theophanes (early 9th cent. AD) had not recognised them as noteworthy and prestigious commodities. Therefore, both the history written by Theophylact and the chronicle compiled by Theophanes prove that pepper was still a valuable merchandise long after Anthimus composed *De observatione ciborum*. Physicians also took interest in pepper, and its first comprehensive description is known as part of the pharmacopoeia compiled by Dioscorides (1st cent. AD)⁶⁴. He listed three types of the foodstuff (i.e., long, black, and white pepper), attributing them with sharpness, a pleasant taste, and culinary applicability. Moreover, the author described all variants of the spice as substances that facilitate digestion, with warming, diuretic, astringent, and diaphoretic effects⁶⁵. Pepper was also a subject of interest among posteriori physicians, who treated it invariably as a foodstuff and a medicament⁶⁶.

⁶⁰ Cf. deliberations on the term *folium* herein.

⁶¹ Cf. deliberations on the term *costus* herein.

⁶² Cf. deliberations on the term *gingiber* herein.

⁶³ Theophanes the Confessor, *Chronographia*, 322, 5.

⁶⁴ Dioscorides, *De materia medica*, II, 159, 1, 1 – 4, 3. On the author and the treatise, cf. J.M. Riddle, *Dioscorides on Pharmacy and Medicine*, foreword by J. Sarborough, Austin 1985, *passim* (especially 1–24); M. Kokoszko, K. Jagusiak, Z. Rzeźnicka, J. Dybała, *Pedanius Dioscorides' Remarks on Milk Properties, Quality and Processing Technology*, "Journal of Archaeological Science: Reports" 2018, vol. 19, p. 982. The significance of Dioscorides' treatise for the Byzantine *materia medica*, cf. A. Touwaide, *Medicine*, p. 364–366, 376–377, 381–382.

⁶⁵ Dioscorides, *De materia medica*, II, 159, 1, 1 – 4, 8 (description of individual types – II, 159, 1, 6 – 2, 7; shared effects of all types of pepper – II, 159, 3, 1–2).

⁶⁶ Galen discussed pepper as a foodstuff in *De alimentorum facultatibus*. Even though no separate chapter was devoted to the spice, its properties were listed within descriptions of other foods. For instance, the author attributed pepper with warming qualities (when expounding on the properties of various parts of plants and animals), cf. Galen, *De alimentorum facultatibus*, 477, 5–9, vol. 6. In the chapter on figs (Galen, *De alimentorum facultatibus*, 570, 11 – 573, 9, vol. 6), Galen lists pepper among substances that have cutting

Cloves were imported from as far as the Maluku Islands. Pliny maintained that they originated from India⁶⁷. Their regular presence in the Greek pharmacopoeia is proven by the fact that in the 6th century AD they are mentioned (as an ingredient of aromatic preparations and medicines) by Aëtius of Amida⁶⁸ and Alexander of Tralles (6th/7th cent. AD)⁶⁹. However, the first fully comprehensive description dates back to as late as the 7th century AD, and is preserved in the medical encyclopaedia by Paul of Aegina. The author stated that their smell was pleasant, and assessed the spice as sharp, slightly bitter, and having a warming and strongly siccative effect. He also added that cloves could be used for multiple purposes in cooking and pharmacology⁷⁰.

(τέμνοντα), diluting (λεπτύνοντα; both terms referred to the impact pepper had on thick humours within the body) as well as purifying (ρύπτοντα) properties, cf. Galen, *De alimentorum facultatibus*, 572, 6–12, vol. 6. In another passage within the same treatise (Galen, *De alimentorum facultatibus*, 703, 12 – 705, 14, vol. 6), he argues that pepper facilitates digestion (i.e. is πεπτικός), cf. Galen, *De alimentorum facultatibus*, 705, 9–13, vol. 6. Galen also includes an analysis of the plant's qualities in his theory of *materia medica*, emphasising its sharpness and warming properties (as a result of which pepper was told to have a siccative effect on tissues), cf. Galen *De simplicium medicamentorum temperamentis ac facultatibus*, 97, 7 – 16, vol. 12. Other effects and properties of pepper are scattered throughout the first five theoretical books of his work. The findings by Dioscorides and Galen later formed the basis for the theory applied by Byzantine physicians, reflected in the works of Oribasius (*Collectiones medicae*, XII, π, 7, 1–12; XV, 1:16, 12, 1 – 15, 1 etc.), Aëtius of Amida (*Iatricorum libri*, I, 316, 1–5 etc.), and Paul of Aegina (*Epitome*, VII, 3, 16, 27–31 etc.).

⁶⁷ Pliny, *Historia naturalis*, XII, 30, 1–3. On cloves, cf. B. Lauriou, *Spices*, p. 43–75; A. Dalby, *Siren...*, p. 138–139; idem, *Dangerous*, p. 50–52; idem, *Food*, p. 89; P. Faas, *Around*, p. 165; A.-M. Talbot, *Mealtime in Monasteries: The Culture of the Byzantine Refectory*, in: *Eat, Drink, and Be Merry (Luke 12:19) – Food and Wine in Byzantium Papers of the 37th Annual Spring Symposium of Byzantine Studies, in Honour of Professor A.A.M. Bryer*, eds L. Brubaker, K. Linardou, Aldershot–Burlington, VT 2007, p. 118; E. Lev, Z. Amar, *Practical*, p. 151–153. Cloves in Anthimus' times, cf. B. Lauriou, *Spices*, p. 62.

⁶⁸ For instance, they were an ingredient of the perfume called *νάρδος* – Aëtius of Amida, *Iatricorum libri*, I, 131, 35–43 (cloves – I, 131, 36). On teachings and practice of Aëtius of Amida, cf. H. Hunger, *Die hochsprachliche profane Literatur der Byzantiner*, vol. 1, München 1978, p. 294–296; V. Nutton, *From Galen to Alexander. Aspects of Medicine and Medical Practice in Late Antiquity*, “Dumbarton Oaks Papers” 1984, vol. 38, p. 1–14; J. Scarborough, *Early Byzantine Pharmacology*, “Dumbarton Oaks Papers” 1984, vol. 38, p. 224–226; A. Garzya, *Aetios v. Amida*, in: *Antike*, col. 19–20; V. Nutton, *Ancient*, p. 295.

⁶⁹ For instance, Alexander of Tralles, *Therapeutica*, I, 611, 25 – 613, 5. On the physician, cf. P. Bouras-Vallianatos, *Clinical Experience in Late Antiquity: Alexander of Tralles and the Therapy of Epilepsy*, “Medical History” 2014, vol. 58, no. 3, p. 337–353; P. Kripouri, D. Filippou, *On the Work of Alexander of Tralles*, “Acta Medico-Historica Adriatica” 2019, vol. 17, no. 2, p. 295–304.

⁷⁰ Paul of Aegina, *Epitome*, VII, 3, 10, 86–90. On Paul of Aegina, cf. H. Diller, *Paulos (23)*, in: *Realencyclopädie der classischen Altertumswissenschaft*, ed. K. Ziegler, vol. 18.4, Stuttgart

Ginger was a popular spice and medicament. In the 1st century AD, it cost between 5 and 10 denarii per pound⁷¹, while in the early 4th century AD, a libra⁷² of dried ginger⁷³ was sold for as much as 250 denarii⁷⁴. The high price and its reputation of being an aromatic must have lasted for centuries, since ginger was listed, by Theophanes the Confessor, among the war booty found in Khosrow II's palace of Dastargerd⁷⁵. Dioscorides' *De materia medica* proves that the properties of the plant were described in detail as early as in the 1st century AD, as the author writes that ginger has a warming effect, delicately softens the gastrointestinal tract (i.e., stimulates the excretion of faeces), is beneficial for the stomach, and affects the body in a similar manner to pepper⁷⁶. Interest in ginger as a medical substance was keenly held by subsequent generations of physicians⁷⁷.

Costus was yet another aromatic commodity imported from distant lands⁷⁸. Pliny accounted that its roots were sold for 5,5 denarii per pound⁷⁹, while *De pretiis rerum venalium* contained information that a libra of costus was priced at

1949, col. 2386–2397; P. Pormann, *Paulos v. Aigina*, in: *Antike*, col. 681–682; idem, *The Oriental Tradition of Paul of Aegina's Pragmateia*, Leiden 2004, *passim*.

⁷¹ Pliny, *Historia naturalis*, XII, 28, 6. On ginger, cf. B. Lauriou, *Spices*, p. 43–75; A. Dalby, *Siren*, p. 138; idem, *Dangerous*, London 2000, p. 21–26; idem, *Food*, p. 159; P. Faas, *Around*, p. 164–165; E. Lev, Z. Amar, *Practical*, p. 174–176.

⁷² Libra = 0.327 l.

⁷³ The term most likely referred to dried ginger rhizomes. As fresh rhizomes were prone to go off quickly in transport, they had to be either pre-dried or stored in brine within earthenware vessels. In the latter case, both ginger and the liquid were to be consumed. Cf. Dioscorides, *De materia medica*, II, 160, 1, 6–8.

⁷⁴ *Edictum Diocletiani de pretiis rerum venalium*, 36, 102 (Lauffer); 34, 56 (Crawford, Reynolds).

⁷⁵ Theophanes the Confessor, *Chronographia*, 322, 6.

⁷⁶ Dioscorides, *De materia medica*, II, 160, 1, 1–12 (properties of ginger – II, 160, 1, 9–12).

⁷⁷ Galen discusses ginger as a spice in *De alimentorum facultatibus*. These extracts confirm that the physician of Pergamon shared Dioscorides' belief on the similarity of properties between ginger and pepper, cf. Galen, *De alimentorum facultatibus*, 572, 6–12, vol. 6; 703, 12 – 705, 14, vol. 6. In the same treatise, we can also read that ginger (together with white pepper and vinegar) was added to a medicament based on honey and apple juice and served to anorexics (Galen, *De alimentorum facultatibus*, 603, 6–8, vol. 6), which implies that ginger was thought to increase appetite. A description of ginger from the perspective of *materia medica* can be found in *De simplicium medicamentorum temperamentis ac facultatibus* (880, 9 – 882, 4, vol. 11). Physicians of early Byzantium continued to rely on the findings by Dioscorides and Galen, for instance cf. Oribasius, *Collectiones medicae*, XI, ζ, 2, 1–7; XV, 1:6, 1, 1 – 6, 1; Aëtius of Amida, I, 153, 1–4; Paul of Aegina, *Epitome*, VII, 3, 6, 5–8.

⁷⁸ On putchuk, cf. B. Lauriou, *Spices*, p. 63–64; A. Dalby, *Dangerous*, p. 85–86; idem, *Empire*, p. 197; idem, *Food*, p. 105; E. Lev, Z. Amar, *Practical*, p. 157–158.

⁷⁹ Pliny, *Historia naturalis*, XII, 41, 5–8.

250 denarii⁸⁰. The reputation it enjoyed, and in consequence, its high prices at the turn of the 6th and 7th centuries AD, is evidenced by the spice being among Ἰνδικαὶ καρυκεία⁸¹ to be given as a form of tribute to the Avars by the Roman general Priscus⁸². Costus was analysed in detail by Dioscorides, who described its flavour as δηκτικὸς καὶ πυρώδης, i.e., sharp and burning. The scholar of Anazarbus claimed that the spice had a warming and diuretic effect⁸³. Writings by Galen and early Byzantine physicians show that the plant was also used in medicine in later times⁸⁴.

The list of sauce ingredients culminates in the phrase worded ...*spicanardi vel folio*. The first noun refers indubitably to the spikenard⁸⁵. Growing in the Himalayas and the Hindu Kush, spikenard had to travel a long and dangerous route before it was delivered to centres of the Greco-Roman civilisation. Pliny accounted that the price for one pound of the so-called ears (*spicae*) of nard could reach 100 denarii, while its most valued type of leaves – 90 denarii⁸⁶. Although no information about its prices is contained in Diocletian's *De pretiis rerum venalium*, we can assume that nard was still an expensive commodity in the early 4th century AD, because the source reports that a libra of essential oil made from the plant

⁸⁰ *Edictum Diocletiani de pretiis rerum venalium*, 36, 47 (Lauffer); 34, 1 (Crawford, Reynolds).

⁸¹ On the term καρυκεία, cf. M. Kokoszko, *Some Technical Terms from Greek Cuisine in Classical and Byzantine Literature*, "Eos" 2008, vol. 95, p. 269–283.

⁸² Theophylact Simocatta, *Historiae*, VII, 13, 5, 3 – 6, 5. Cf. A. Dalby, *Flavours of Byzantium*. Blackawton–Totnes 2003, p. 43; idem, *Tastes*, p. 43.

⁸³ Dioscorides, *De materia medica*, I, 16, 1, 1 – 2, 11 (note on the properties of costus – I, 16, 1, 6–7).

⁸⁴ The lack of information on costus within *De alimentorum facultatibus* implies that it was not commonly used as a spice. On the other hand, numerous remarks on its therapeutic applications in Galen's pharmacological treatises indicate that the plant was far more frequently made use of by physicians. Galen's most comprehensive description of costus (concordant with Dioscorides' account) can be found in *De simplicium medicamentorum temperamentis ac facultatibus* (40, 10 – 41, 6, vol. 12). The two authors' teachings became part of the canon of early Byzantium, for instance cf. Oribasius, *Collectiones medicae*, XI, κ, 31, 1–9; XV, 1:10, 65, 1–3; Aëtius of Amida, *Iatricorum libri*, I, 219, 1–12; Paul of Aegina, *Epitome*, VII, 3, 10, 306–315.

⁸⁵ *Nardostachys jatamansi* (D.Don) DC. On nard, cf. A.N. Jannaris, ΝΑΡΔΟΣ ΠΙΣΤΙΚΗ or 'SPIKENARD', "The Classical Review" 1902, vol. 16, no. 9, p. 459–460; W.H. Schoff, *Nard*, "Journal of the American Oriental Society" 1923, vol. 43, p. 216–228; F. Weberling, *On the Systematics of Nardostachys*, "Taxon" 1975, vol. 24, no. 4, p. 443–452; B. Laurioux, *Spices*, p. 45, 54, 62–64; A. Dalby, *Dangerous*, p. 86–88; A. Dalby, *Empire*, p. 196–197; E. Lev, Z. Amar, *Practical*, p. 289–293; M. Kokoszko, *Nard* (νάρδος; *Nardostachys jatamansi* [D. Don] DC), in: *Lek roślinny*, vol. 6, *Rośliny w lecznictwie, w środowisku naturalnym i w krajobrazie kulturowym*, eds B. Płonka-Syroka, A. Syroka, Wrocław 2017, p. 31–51.

⁸⁶ Pliny, *Historia naturalis*, XII, 43, 6 – 44, 4.

cost 75 denarii⁸⁷. We owe a detailed description of nard's properties to Dioscorides⁸⁸, who stressed that the spice had a warming, desiccant, and diuretic effect⁸⁹. For that reason, when drunk⁹⁰, it slowed down the gastrointestinal processes and counteracted diarrhoea⁹¹. Served in cold water⁹², nard helped patients suffering from nausea, heartburn, bloating, jaundice, and liver as well as kidney diseases⁹³. It could also be an ingredient of antidotes⁹⁴. Remarks by Galen and early Byzantine physicians show that nard was used in therapeutic procedures⁹⁵.

Anthimus ends his recipe for sauce with ...*vel folio*. Mark Grant, who translated *De observatione ciborum* into English, believes that *folio* refers to nard, suggesting that the recipe required the use of its ears or leaves⁹⁶. In doing so he relies on a version of the Latin original proposed by Valentin Rose (and reading, ...*spicam nardi et folium*)⁹⁷, and on Rose's understanding of the noun *folium* printed in his glossary to the second edition of Anthimus' work⁹⁸. Accordingly, the two scholars imply that the genitival qualifier *nardi* refers to both nouns, i.e. *spica* and *folium*. Interestingly, the same interpretation of the text is found in Edward Liechtenhan's German translation⁹⁹, even though the Latin version of the original postulated

⁸⁷ *Edictum Diocletiani de pretiis rerum venalium*, 36, 98 (Lauffer); 34, 52 (Crawford, Reynolds).

⁸⁸ Dioscorides, *De materia medica*, I, 7, 1, 1 – 4, 9.

⁸⁹ *Ibidem*, I, 7, 3, 9.

⁹⁰ As a brew, or an infusion.

⁹¹ Dioscorides, *De materia medica*, I, 7, 3, 9–10.

⁹² Presumably, what the author has in mind is a nard infusion diluted with cold water.

⁹³ Dioscorides, *De materia medica*, I, 7, 4, 1–3.

⁹⁴ *Ibidem*, I, 7, 4, 7.

⁹⁵ The lack of data on nard in *De alimentorum facultatibus* indicates that it was sporadically used in cooking during Galen's times. However, remarks on the plant in his other works prove that it was quite commonly applied in his medical practice. The most exhaustive account on the therapeutic properties of nard can be found in *De simplicium medicamentorum temperamentis ac facultatibus* (84, 11 – 85, 3, vol. 12). This extract, together with Dioscorides' description of the effect nard had on the human body, were the basis for its application modes among physicians of early Byzantium, for instance cf. Oribasius, *Collectiones medicae*, XII, v, 1, 1–23; XV, 1:13, 1, 1 – 2, 1; Aëtius of Amida, *Iatricorum libri*, I, 289, 1–8; Paul of Aegina, *Epitome*, VII, 3, 13, 5–9.

⁹⁶ Anthimus, *On the Observance of Foods. De observatione ciborum*, ed., transl. M. Grant, Blackawton–Totnes 2007, p. 55.

⁹⁷ The version of the original postulated by Valentin Rose was criticised severely by Edward Liechtenhan – E. Liechtenhan, *Ad lectorem praefatio*, in: *Anthimus*, p. X.

⁹⁸ *Anthimi de observatione ciborum epistula ad Teudericum regem Francorum*, ed. V. Rose, Lipsiae 1877, p. 52 s.v. *folium*.

⁹⁹ E. Liechtenhan, *Brief des Anthimus des erlauchten Comes und Gesandten an den ruhmreichen Theoderich, König der Franken, über Speisediät*, in: *Anthimi*, p. 34.

by him¹⁰⁰ does not include any genitival qualifier relating to the form *folio*. What is more, there is virtually no explanation to the mode of translation he adopted except for a short mention of the term *spicanardi* in his *Index Grammaticus*, where Liechtenhan suggests that it is a compound noun, and, in the text, stands for the accusative *spicam*¹⁰¹. All in all, in this respect, Liechtenhan represents the same tradition as Rose and Grant.

There is, however, another possible interpretation of the passage – *folio* (i.e. *folium* in classical Latin, and in Greek φύλλον) should be interpreted as a designate separate from *nardus*, i.e. a phytonym, which is, in fact, *pars pro toto*, since it was derived from this part of the plant it referred to. In preserved Greek and Latin sources, we can find convincing evidence that such a plant existed. A couple of examples will suffice¹⁰². The first is included Galen's teachings, and in an anonymous work entitled *Eclogae medicamentorum*¹⁰³. Galen quoted a recipe for Polyarchus' medicament¹⁰⁴, which included φύλλα μαλαβάθρου¹⁰⁵, i.e. tejpat¹⁰⁶. A similar therapeutic substance named πολυάρχειον can also be found in *Eclogae*

¹⁰⁰ Liechtenhan postulates the Latin version found in G (Sangallensis 762 saec. IX) without Rose's amendments. On Rose's use of the codex cf. E. Liechtenhan, *Ad lectorem*, p. XI.

¹⁰¹ *Idem*, *Index Grammaticus*, in: *Anthimi*, p. 52.

¹⁰² An exhaustive explanation – M. Kokoszko, Z. Rzeźnicka, *Malá bathron (μαλάβαθρον). Kilka uwag o roli Cinnamomum tamala w kuchni i medycynie antyku i Bizancjum w okresie pomiędzy I a VII wiekiem*, "Przegląd Nauk Historycznych" 2016, vol. 15, no. 1, p. 5–42; M. Kokoszko, Z. Rzeźnicka, *Malabathron (μαλάβαθρον) in Ancient and Early Byzantine Medicine and Cuisine*, "Medicina nei Secoli: Arte e Scienza" 2018, vol. 30, no. 2, p. 579–616

¹⁰³ *Eclogae medicamentorum* is an anonymous work often attributed to Oribasius. Arguments in favour of the attribution have been presented recently by Antonella Passabì (*Dagli scritti di Oribasio: l'uso di èγώ e correlati negli excerpta di Rufo e nella testimonianza personale dello stesso Oribasio*, "Rudiae. Ricerche sul mondo classico" 2007, vol. 19, p. 71–138). The summary of debates on the authorship of *Eclogae medicamentorum*, cf. S. Buzzi, *La "forma breve" come paradigma compositivo nella produzione scientifica di epoca tardoantica: il caso di Oribasio*, in: *Forma breve*, eds D. Borgogni, G.P. Caprettini, C. Vaglio Marengo, Torino 2016, p. 195, footnote 8; S. Buzzi, *Polemica e controversia nel Corpus Oribasianum*, "Medicina nei Secoli. Arte e Scienza" 2017, 29, no. 3, p. 965, footnote no. 17; S. Buzzi, I. Calà, *Le ricette cosmetiche nell' enciclopedia mediche tardoantiche*, in: *Collecting Recipes. Byzantine and Jewish Pharmacology in Dialogue*, eds L. Lehmann, M. Martelli, Boston – Berlin 2017, p. 126, footnote 12.

¹⁰⁴ P.T. Keyser, *Poluarkhos (30 BCE – 35 CE)*, in: *The Encyclopedia*, p. 680.

¹⁰⁵ Galen, *De compositione medicamentorum secundum locos*, 185, 8 – 186, 8, vol. 13 (μαλάβαθρον – 185, 16, vol. 13).

¹⁰⁶ *Cinnamomum tamala* (Buch.-Ham.) T. Nees & Eberm. On tejpat, cf. A. Dalby, *Empire*, p. 198–199; A. Dalby, *Dangerous*, p. 41–46; idem, *Food*, p. 206; E. Lev, Z. Amar, *Practical*, p. 444–445.

medicamnetorum, but the author of the of the work mentions in the formula no φύλλα μαλαβάθρου but only the term φύλλον¹⁰⁷. Since the ingredients and the intended use of the two medicines are analogical, there is no doubt that both authors had in mind the same plant, and thus in the first formula tejpat is termed φύλλα μαλαβάθρου (which means ‘leaves of μαλάβαθρον’), while in the second, it is simply called φύλλον, i.e., ‘leaf’. The second example comes from the works by Aëtius of Amida. Among the essential oils he describes there is one called φύλλινον or μαλαβάθρινον (φύλλινον ἤτοι μαλαβάθρινον)¹⁰⁸. Since the title of the recipe implies that the terms φύλλινον and μαλαβάθρινον mean the same perfume (μύρον), we may conclude that the name of the oil was derived from the word φύλλον (listed in the formula¹⁰⁹), which, in this case, doubtlessly meant the leaves of μαλάβαθρον, as such meaning is reflected in the alternative name (i.e., μαλαβάθρινον) of the oil.

It is equally noteworthy that the term *folium* appears in *De re coquinaria*¹¹⁰. In three recipes, the nouns *folium* and *malabathrum*, however, are used one next to another¹¹¹, which may imply that each has a separate *designatum*. Notwithstanding, there is evidence indicating that all the recipes within *De re coquinaria* that contain the word *folium* refer to the application of *malabathrum*, i.e., tejpat. A significant class among alcoholic beverages described in ancient and

¹⁰⁷ *Eclogae medicamentorum*, 51, 8, 1–9, 1 (φύλλον – 51, 8, 4).

¹⁰⁸ Aëtius of Amida, *Iatricorum libri*, I, 133, 1–7 (μαλάβαθρον – I, 133, 2). Admittedly, Diocletian’s *De pretiis rerum venalium* contains no information on φύλλινον, but the chapter on prices of aromatic substances lists a similar fragrant ointment called φολιᾶτον, which was made with an addition of tejpat leaves, as proved by *Eclogae medicamentorum* (73, 31, 1–7), and Aëtius of Amida (*Iatricorum libri*, XVI, 131, 4–17). On the other hand, it must be stated that source texts also speak of another perfume under the same name that had no tejpat among its ingredients. Galen mentions it as a luxurious commodity on numerous occasions (*De sanitate tuenda*, 427, 3–5, vol. 6 etc.), providing proof of its alternative name of σπικᾶτον, which implies that it was derived from spikes of nard. A recipe for the product was preserved, *inter alia*, by Pliny (*Historia naturalis*, XIII, 15, 4 – 16, 1), who accounts that yet another name of the perfume was *nardinum*. A series of similar recipes were incorporated by Aëtius of Amida into Book 16 of his treatise – Aëtius of Amida, *Iatricorum libri*, XVI, 130, 22 – 132, 4. A libra of φολιᾶτον cost 1,000 denarii (*Edictum Diocletiani de pretiis rerum venalium*, 36, 88 [Laufer]; 34, 42 [Crawford, Reynolds]), while the same amount of unwashed leaves of tejpat – 60 denarii (*Edictum Diocletiani de pretiis rerum venalium*, 36, 49 [Laufer]; 34, 3 [Crawford, Reynolds]).

¹⁰⁹ The term μαλάβαθρον is not listed in the recipe.

¹¹⁰ Apicius, *De re coquinaria*, I, 1, 3; I, 27; I, 29; VI, 5, 4; VII, 6, 8; VIII, 2, 6; IX, 1, 3; IX 7; IX, 8, 2; IX, 8, 3.

¹¹¹ Apicius, *De re coquinaria*, I, 29; IX, 1, 3; IX 7.

Byzantine literature were *κονδῖτα* (Latin: *condita* or *piperata*¹¹²), i.e., therapeutic drinks that contained pepper, honey, and a long list of other ingredients. One of them, namely *κονδῖτον νεφριτικόν*, can be found among recipes within *Eclogae medicamentorum*¹¹³, and has its equivalent in *conditum paradoxum*, whose recipe is quoted in Book 1 of *De re coquinaria*¹¹⁴. Both contain terms that mean ‘leaf’, i.e. *folium* in Latin, and φύλλον in Greek. We have already established that the author of *Eclogae medicamentorum* used the term to refer to *μαλάβαθρον*, so there is every likelihood that *folium* included in the Latin formula was used to designate the same plant. What is more, this interpretation is reinforced by Pliny’s remark when he explicitly expounds on the excellent results obtained by adding *malobathrum* to wine¹¹⁵. The second example is *apsintium Romanum*, whose recipe can also be found in Book 1 of *De re coquinaria*¹¹⁶, and which has its counterpart in *ἀψινθάτα*¹¹⁷ used by Oribasius and Aëtius of Amida¹¹⁸. In this case, the Latin term *folium* is also expressly used as the synonym to the Greek φύλλον. In conclusion, we can formulate a hypothesis that since the term *folium* meant a leaf of *μαλάβαθρον* in wine recipes, it must have had the same meaning in other recipes in *De re coquinaria*, and that the appearance of the words *folium* and *malobathrum* in Books 1 and 9 within the collection is nothing more than a mistake of the copyist¹¹⁹. As a result, if the noun *folium* within *De re coquinaria* and the term φύλλον in Greek medical treatises are used to refer to leaves of tejpat, there is no reason why it would have a different meaning in the short text by Anthimus, whose theory of *materia medica* mirrored that of the medical tradition of the period. What must be emphasised is that this interpretation is concordant with the view of Andrew Dalby, who consistently translates the Latin term *folium* and the Greek word φύλλον as *malabathrum*¹²⁰ despite not providing formal proof of this interpretation.

¹¹² Pliny, *Historia naturalis*, XIV, 108, 2–3.

¹¹³ Oribasius, *Eclogae medicamentorum*, 62, 8, 1–9, 1 (leaf [= *μαλάβαθρον*] – 62, 8, 6).

¹¹⁴ Apicius, *De re coquinaria*, I, 1.

¹¹⁵ Cf. the aforementioned passage from *Historia naturalis*.

¹¹⁶ Apicius, *De re coquinaria*, I, 3.

¹¹⁷ Oribasius, *Collectiones medicae*, V, 33, 13, 1–5 (leaf [= *μαλάβαθρον*; cf. nizej] – V, 33, 13, 2).

¹¹⁸ Aëtius of Amida, *Iatricorum libri*, III, 71, 1–4 (leaf [= *μαλάβαθρον* – III, 71, 1]); III, 72, 1–3 (leaf [= *μαλάβαθρον*] – III, 72, 2).

¹¹⁹ Which is not repeated by the author of *Excerpta Vinidarii*. Cf. Ch. Grocock, S. Grainger, *Appendix: A Glossary to Apicius*, in: Apicius. *A Critical Edition with an Introduction and an English Translation of the Latin Recipe Text Apicius*, eds Ch. Grocock, S. Grainger, Blackawton–Totnes 2006, p. 347.

¹²⁰ A. Dalby, *Siren*, p. 192, 306; *idem*, *Food*, p. 206; *idem*, *Tastes*, p. 175, 182 etc.

What is more, medical sources clarify why Anthimus used the conjunction *vel* in his account. In order to comprehend it, let us refer to some preserved descriptions of tejpat's properties. Remarks on the affinity between nard and *Cinnamomum tamala* can already be found in Dioscorides' work, who argues that the latter possesses properties identical to Indian spikenard, when it comes to intensifying the effects of other therapeutic substances. He also adds that both are diuretic and good for the stomach (although tejpat is more effective in respect of both qualities)¹²¹. Galen, in turn, directly lists leaves of tejpat as a substitute to nard in *De simplicium medicamentorum temperamentis ac facultatibus*, stating that the plant has a similar effect to that customarily attributed to nard¹²². Later descriptions of tejpat do not differ from accounts compiled in the 1st/2nd centuries AD¹²³, as evidenced by data provided by Oribasius¹²⁴, Aëtius of Amida¹²⁵ and Paul of Aegina¹²⁶. In conclusion, it seems justified to state that Anthimus, recommended nard or its replacement, i.e. leaves of *Cinnamomum tamala*, to be used for the sauce served with hare. He did so because both spices offered similar properties.

¹²¹ Dioscorides, *De materia medica*, I, 12, 1, 1 – 2, 11 (origins, cultivation, appearance – I, 12, 1, 1 – 2, 2; dietetic characteristics – I, 12, 2, 2–5; pharmacological characteristics and general applications – I, 12, 2, 6–11).

¹²² Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 66, 15–16, vol. 12. Interestingly, nard and *μαλάβαθρον* usually co-occur in medical recipes. What is more, Paul of Aegina considered *κασία* and nard to be substitutes for *μαλάβαθρον* – Paul of Aegina, *Epitome*, VII, 25, 12, 1.

¹²³ There were only minor inaccuracies regarding details. There was no doubt that *μαλάβαθρον* had warming properties of the first (cf. Oribasius, *Collectiones medicae*, XIV, 15, 1, 1–5 [*μαλάβαθρον* – XIV, 15, 1, 3]; Oribasius, *Synopsis ad Eustathium filium*, II, 3, 1, 1–3 [*μαλάβαθρον* – II, 3, 1, 2]; Oribasius, *Libri ad Eunapium*, II, 3, 1, 1–4 [*μαλάβαθρον* – II, 3, 1, 5–6]; Aëtius of Amida, *Iatricorum libri*, II, 199, 1–3 [*μαλάβαθρον* – II, 199, 2]), or third degree (Aëtius of Amida, *Iatricorum libri*, II, 201, 1–10 [*μαλάβαθρον* – II, 201, 7]). On the other hand, all physicians who discussed the issue agreed that it had siccative properties of the second degree – Oribasius, *Collectiones medicae*, XIV, 26, 1, 1–16 (*μαλάβαθρον* – XIV, 26, 1, 6); Oribasius, *Libri ad Eunapium*, II, 5, 1, 1–4, 6 (*μαλάβαθρον* – II, 5, 2, 6); Aëtius of Amida, *Iatricorum libri*, II, 211, 1–7 (*μαλάβαθρον* – II, 211, 7).

¹²⁴ The main description of *μαλάβαθρον* within Oribasius' *Collectiones medicae* was derived from Dioscorides' *De materia medica* – Oribasius, *Collectiones medicae*, XI, μ, 2, 1–7. Cf. Oribasius, *Synopsis ad Eustathium filium*, II, 56, 35, 1 – 36, 1 (*μαλάβαθρον* – II, 56, 35, 1–2). Moreover, Oribasius also included Galen's remark on the similar effects of *μαλάβαθρον* and nard from *De simplicium medicamentorum temperamentis ac facultatibus* – Oribasius, *Collectiones medicae*, XV, 1:12, 2, 1–2.

¹²⁵ Aëtius of Amida, *Iatricorum libri*, I, 266, 1; II, 196, 64–68.

¹²⁶ Paul of Aegina, *Epitome*, VII, 3, 12, 6.

There is one more point to make. The sauce for hare appears to be compiled in accordance with the rules which governed dietetics. As the meat in Anthimus' recipe was classified as tough by nature, and thus, heavy and contributing to the production of thick and sticky humours in the body, especially, to the generation of black bile (considered cooling)¹²⁷, it was advisable that it be served with a sauce that contained honey, *sapa* or *caroenum*, because these foodstuffs were said to have warming properties¹²⁸. Not only did they ensure an appropriate temperature within the stomach (required for food to be digested)¹²⁹, but they also prevented the rest of the body from being chilled. Among the listed sweeteners, it was honey that best served the purpose, as it was thought to have a warming, diaphoretic, and also – through its sharpness – a purging effect. Even though it tended to lose some degree of the two latter properties when boiled, it would still remain effective. Anyway, Galen considered it beneficial for the stomach, which meant that – just like other sweet ingredients – it facilitated the functioning of the digestive tract¹³⁰. He explained the action, maintaining that sweet ingredients were made of tiny particles (and thus they were termed λεπτομερῆ¹³¹), which meant that they effectively counterbalanced

¹²⁷ The dietetic properties of hare meat were discussed by numerous ancient and Early Byzantine physicians, cf. *De diaeta* II, 46, 25–26; Galen, *De alimentorum facultatibus*, 664, 4–6, vol. 6 ; Oribasius, *Collectiones medicae*, II, 28, 10, 1 – 12, 1; III, 16, 4, 1 – 6, 1; Aëtius of Amida, *Iatricorum libri*, II, 121, 25–18; II, 253, 8–10; Paul of Aegina, *Epitome*, I, 84, 1, 7–9 etc. An excess of black bile that could stem from the consumption of hare meat was a health risk, which was explicitly stressed by Galen, e.g., in the treatise *De atra bile* (112, 3–5, vol. 5). His catalogue of diseases induced by black bile (*De atra bile*, 114, 9 – 119, 12, vol. 5) included the infamous plague in the times of Mark Aurelius that spread after 165 AD), an illness known as ἐλέφας (elephantiasis), ἄνθραξ-type ulcerations, neoplasms, haemorrhoids, κισός (varicose veins), melancholy (Galen, *Locis affectis*, 179, 18 – 193, 6, vol. 8), and quartan fever (Galen, *Differentiis Februm*, 336, 11–12; 343, 11 – 347, 3, vol. 7, etc.). On Galen's theory on the generation of black bile cf. K.A. Stewart, *Galen's Theory of Black Bile: Hippocratic Tradition, Manipulation, Innovation*, Leiden–Boston 2019, s. 75–93. On ailments caused by the humour cf. *ibidem*, p. 129–144.

¹²⁸ Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 646, 2–5; 785, 6–7, vol. 11.

¹²⁹ Galen described this process as follows: τὸ δὲ γλυκὸ πέττει..., cf. Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 786, 6–7, vol. 11.

¹³⁰ Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 70, 13 – 71, 19, vol. 12.

¹³¹ Such conclusions can be drawn, for instance, from Galen's lecture on the properties of individual substances that create sweet and bitter tastes. The physician writes that bitterness and sweetness are connected, since the humours he calls bitter are formed when sweet juices are diluted through exposure to heat. Therefore, both tastes are evidence that substances with such properties are small-particled and warming. However, bitter ones have smaller

substances that had opposite properties (termed, in turn, παχυμερῆ¹³²), i.e. they were able to attenuate thick and sticky humours, and black bile in particular. The effect of such ingredients was reinforced with spices which, though different as far as their flavour is concerned, had a similar impact on digestion, because all of them were characterised by sharpness¹³³ or bitterness and sharpness¹³⁴ (denoting their warming effect and λεπτομέρεια¹³⁵).

One more aspect of the recipe seems noteworthy. All spices used for making the sauce were redolent. It means that apart from their therapeutic effect, they also had a pleasant fragrance which, in dietetics, was a desired, though not an indispensable, feature. Since they were all imported and expensive, the use of just one of them was enough to consider a dish exquisite (the fact which Anthimus might also have wanted to emphasise when he decided to use the conjunction *vel*, thus offering the cook a choice between pricier nard and slightly cheaper tejpat). All in all, it seems logical to assume that if a single recipe required the use of pepper, cloves, costus, and nard, or pepper, cloves, costus, nard, and tejpat, only Frankish elites could afford such a dish. Last but not least, the recipe for hare in *De observatione ciborum* appears to testify to the fact that the Franks were already refined enough to stop thinking about merely satisfying their hunger, but they also sought pleasant culinary and olfactory sensations.

particles than their sweet equivalents, and they also offer more intense warming effects – Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 698, 4–10, vol. 12.

¹³² Large-particled constitution and thickness as properties of black bile, cf. Galen, *De atra bile*, 111, 5–10, vol. V.

¹³³ Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 670, 12–14; 679, 10 – 680, 3, vol. 11. Cf. ...τὸ μὲν δριμύ πυρῶδες... – Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 785, 4–5, vol. 11; τὸ δὲ δριμύ παραπλησίως ... δρᾶν, κατὰ γὰρ τὸ διαλεπτύνει τε καὶ διακαθαίρει...τὸ δὲ δριμύ θερμαίνειν...τὸ δ' ἐπιπᾶσθαι καὶ διαφορεῖν – Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 785, 13–16, vol. 11.

¹³⁴ Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 646, 9–11, vol. 11; effects of bitter substances – Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 684, 4–7, vol. 11; τὸ δὲ πικρὸν γεῶδες λεπτομερὲς – Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 785, 2–3, vol. 11; ...καὶ τὸ μὲν πικρὸν διακαθαίρει τε τοὺς πόρους καὶ διαρρῦπτει καὶ λεπτύνει καὶ τέμνει τὸ πάχος τῶν χυμῶν ἄνευ φανεράς θερμότητος – Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 785, 17 – 786, 1, vol. 11.

¹³⁵ Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, 653, 1 – 656, 2, vol. 11.

Conclusions

The present discussion has demonstrated that Anthimus' apparently simplified dietetic advice addressed to Theuderic is in fact an epitome of the medicine of Antiquity and early Byzantium. In order to compile the treatise, the physician had to have at his disposal profound competence in the field, and especially in dietetics and *materia medica*. Accordingly, the research corroborates the author's words concerning *De observatione ciborum* being composed on the basis of a theory he acquired from medical authorities galore. Moreover, the analysis included in the article proves that Anthimus' work is an important source for any research into both medical as well as culinary literature as it allows to better understand its system of knowledge.

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