



The Validity of a Recipe within Chapter 23 of Book XX in Pliny the Elder's the Natural History

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Abstract: My paper introduces a recipe against asthma which Pliny mentions in chapter 23 of Book XX within his *The Natural History*.

One aim of my text is to announce that the formula which the Naturalist introduces there is valid; after applying its prescriptions to myself, it cured a breathing disorder that had afflicted me for ten years.

Now what is needed is a verification of its beneficial effects on a greater scale. After publishing this text which reflects the present state of my research on the effect of Pliny's formula, I will cooperate with my colleagues in Oxford to do further experiments towards an official recognition of the healing properties of the concoction. When the beneficial effects of the recipe will be verified with positive effects on a larger sample of people, it will become an authorised medicine.

The other aim of the presentation is to add to the increasing appreciation of Pliny's work. That was mainly treated in negative terms between the sixteenth century and the late 70's of the twentieth century, and even now there are critics who do not value enough *The Natural History* – this rather from not sufficiently understanding the purpose which the author had in mind when writing it. The scholars who have thoroughly researched this compendium have praised it.

1. INTRODUCTION

Gaius Plinius Secundus, known as Pliny the Elder (AD 23/24 -79), dedicated *Historia naturalis* (*Naturalis Historia*) /*The Natural History* to his friend Emperor Titus Vespasian, a member of the Flavian dynasty (39 –81 AD; reigned from 79 to 81). As we know, the Roman author was a naturalist and a philosopher of nature as well as a naval and army commander of the early Roman Empire. He incorporated in his collection of 'books' on various topics almost all the knowledge of his time. A significant part of the information this work contains has proved to be accurate.

My research has focused on various concoctions and treatments based on the plants Pliny listed in 'book' XX of his oeuvre. I will present in particular one of the formulae he introduces (which is in chapter 23 of this latter 'book') because I have tested it on myself and noticed that its content is valid, i.e. the mixture combats asthma, as the Roman naturalist assumed.

2. LITERATURE REVIEW

But for the moment I will carry out a literature review on some of Pliny's work, even though there are no substantial publications that specifically focus on Book XX. (There is a chapter by Aude Doody dedicated in part to the Naturalist's medical knowledge in her volume *Pliny's Encyclopedia: The Reception of the Natural History*, but 'book' XX does not constitute its main focus. Other publications speak about *Pliny the Elder on Science and Technology* and "Pliny as scientist" but, again, not about 'book' XX in particular). Certainly, there is no article or volume to focus strictly on the recipe my paper considers.

I intend to publish another version of the article after we test the content of the formula on more people; for the moment my chief preoccupation is to introduce it within its proper context.

Among the famous personalities that had copies of Pliny's *The Natural History* are Plutarch (46 –c. 119), Nicholas of Cusa (140 –1464), and Cosimo de' Medici (1389 –1464); given their thirst for culture, they certainly read it. Francis Bacon (1561–1626) and Denis Diderot (1713–1784) not only owned copies of this collection of texts, but commented on the work of the Roman Naturalist and adopted very articulated positions vis-à-vis its content. Also Dr. Samuel Johnson alludes to a fragment of Pliny's *The Natural History* in *The Rambler* no. 4 testifying thus that he read the text. Doody considers that until the sixteenth century Western science 'functioned' mainly on the basis of the methodology used by the Elderly Pliny, which was "booked-based"; I agree with her on this. After that stage of scientific development, once the investigative research began to be practiced, the work of the Naturalist fell into neglect. Particularly Francis Bacon's negative opinion about it contributed

the “ousting” of Pliny “from his place in the scientific pantheon”. (This, except for the uncertainties Niccolò Leonicensis, 1428-1524, had about the existing translations of Pliny's texts in his time). Bacon, in his *The Advancement of Learning*, expresses the opinion that Pliny's work, (along with that of “Cardanus, Albertus, and divers of the Arabians”), is “fraught with much fabulous matter, a great part not only untried, but notoriously untrue, to the great derogation of the credit of natural philosophy with the grave and sober kind of wits.” But, as implied above, the attitude of the English Philosopher was not adopted by everyone.

In contemporary times, the appreciation of Elderly Pliny's *The Natural History* has become increasingly noticeable after the international Colloquium that took place in 1979 at Como to celebrate 1,900 years from Pliny's death. The most known scholars who have shown recently the value of Pliny's work are Mary Beagon, Aude Doody, Michael D. Reeve, Tyler T. Travillian, Gian Biagio Conte, and also Valérie Naas. Beagon indicates that Pliny's *Natural History* was from the beginning a well-defined and organized project and not simply an amassing of data. Doody wrote the above-mentioned substantial book in which she explains that *The Natural History's* originality consists in the simple fact that it is a description of nature as a totality of various realities; she argues that Pliny's collection is not a philosophical overview of the world. In the first century AD such a descriptive and taxonomic approach was new since before Pliny's time the intellectual landscape was dominated by the existence of comprehensive philosophical systems. Reeve has listed most of the manuscripts of *The Natural History*. His long study supplements Doody's since the latter does not include the manuscript tradition within her book. Reeve continues his work with regard to the rest of the manuscripts concerning the ‘anthology’ of the Roman author. His focus on the Book VII of *The Natural History*, which he translated and edited, offers Travillian the opportunity to emphasize Pliny's position vis-à-vis humans and their condition within the world: they constitute the peak of creation as well as one of the most vulnerable beings within it. This author also qualifies Pliny's works as valuable for the glimpses it allows into the ethos of the historical period in which it was produced. Naas introduces the cultural and the political context in which Pliny's compendium was created, compares the information it contains with that from historical, textual, and archaeological sources, and concludes that it is representative for the culture and the ideology of the Roman Empire. Naas considers *The Natural History* to be representative for the imperial ideology (with its various aspects: ethical, epistemological, artistic, etc.), but thinks that while describing the achievements of the Roman Empire, Pliny considers them to be also attainments of the world as a whole. The latter idea is very well illustrated by Book XX of the Naturalist's collection, where the knowledge he refers to is shown to originate in Rome as well as in India, Syria, Egypt, etc. Conte considers that *The Natural History* belongs to the environment in which it was compiled because “An attempt to systematize knowledge is evident in all Roman culture of the early Roman Empire, and it finds expression particularly in works of a hand-book nature...of which Pliny the Elder's gigantic work of erudition is the fullest realization of these tendencies.”

My opinion is that when a critique of Pliny and of his *The Natural History* is carried out the scholar involved needs to bear in mind the purposes which the Naturalist had in mind when writing his oeuvre: the first one was the description of a state of affairs. (For example, he implied that people observed empirically –and often by pure accident– that the ingestion of some mixtures of plants is beneficial for their wellbeing, and then they repeat the process by design; Pliny did not remark either that he agreed or disagreed with such a practice, but just described what people do). The Naturalist's second purpose in penning such a massive tome was to aid his readers to expand the limits of their culture (the implication here is that such an enterprise has always positive consequences). With respect to an analysis of the Book XX within Pliny's *The Natural History* the researcher engaging with it should remember, again, that the Roman never said that he personally believed in what various people (whom he sometimes identifies – usually by their ethnicity and profession) assumed the effects of various concoctions or potions are; he just introduced these and occasionally stated that some people trust that their content is useful for their health.

To conclude the paragraph about the scholarly reception of Pliny's work: as especially Naas has demonstrated and my current paper indicates, a satisfactory quantity of information within *The Natural History* passes verification. It is good that Pliny's oeuvre is still an important subject for academic discussion today; only recently, in October 2021, Professor Richard Saller from Stanford

University delivered a lecture in Wolfson College, Oxford entitled “The elder Pliny’s Roman economy: the consequences of empire”.

In order to appreciate the work of the Naturalist in all its value a scholar should keep in mind that he was not only a very well informed person (he read intensely and travelled considerably with the army), but a very rigorous and erudite intellectual, a Grammarian, a Rhetor and a writer about Rhetoric, as well as a Historian with knowledge of Philosophy and art. Hence if one considers the time in which Pliny lived, his work does not contain as much “fabulous matter” as Bacon reckoned. As we know, before authoring *The Natural History* Pliny published the 20 volumes of *Bella Germaniae* (“The History of the German Wars”).

Before going into the details of the recipe I announced at the outset of the article, I shall make some general remarks concerning Book XX of Pliny’s work.

2.1. Wild Varieties of Plants Pliny Mentions in Book XX of the Natural History

The first comment on this issue is that Pliny mentions the effects of plants both wild and cultivated (when he only refers to the ‘wild’ variety the obvious implication is that a cultivated one also exists). I have decided to present plants which have a wild variety (sometimes called by the Naturalist ‘erratic’) because most of the readers might not be aware that they exists. These are: cucumber (called ‘erratic’ cucumber in chapter 3; and ‘anguine’ cucumber in chapter 4); gourd/colocynthis (in chapter 8); thyme (chapter 9) “sea-cabbage”; rape (chapter 10); radish (chapter 12); carrot (in chapter 16, footnote 2 gingidion is called ‘wild carrot’); parsnip (“staphylinos, or, as some persons call it or ‘erratic’ parsnip) in chapter 15); skirret (chapter 17); endive (chapter 29); lettuce (chapter 25); asparagus called corruda by some people (chapter 43); buselinon or “ox-parsley” (in chapter 47); nasturtium (chapter 50); rue (chapter 51); mint (chapter 52); pennyroyal (chapter 55); marjoram (chapter 55); cummin (chapter 57 refers to both varieties of this plant, but elaborates on the wild cummin at some length; chapter 58 is about another plant “known to the Greeks as ‘ammi’”, but that is considered by some to be “the Æthiopian cummin); poppies (chapter 76); “lapathum” (chapter 85; this wild lapathum is known by some as oxalis); mallow (chapter 84); fennel (chapter 96); and sisymbrium (chapter 91).

In chapter 44 Pliny makes the mention that parsley is both male and female (the latter has curly leaves); throughout *The Natural History* he indicates other cases of plants that exist in both genders.

2. The second remark about Book XX within *The Natural History* is that Pliny indicates in its text a multitude of countries and geographical areas in which the plants that he discourses about originate; for marks of those see the map in fig. 1.

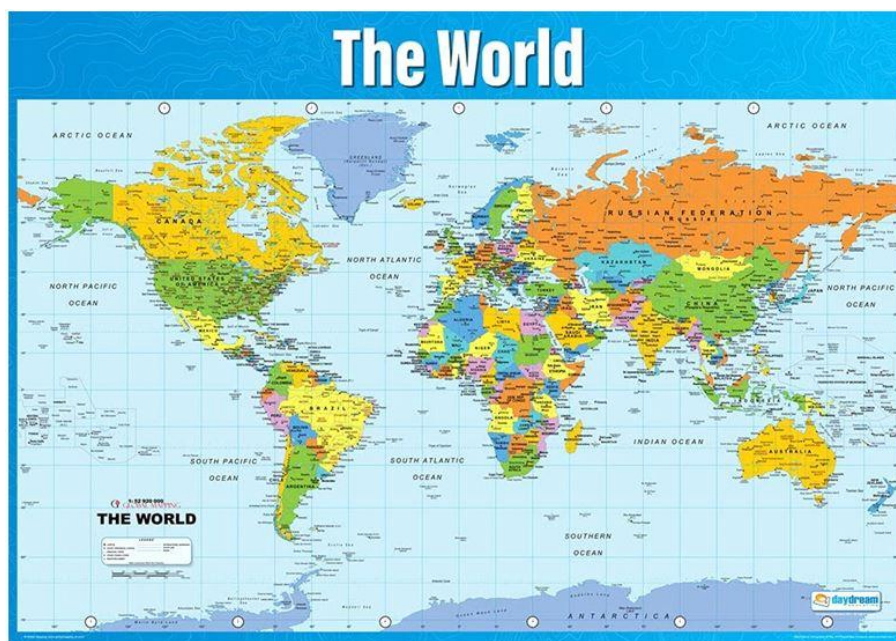


Fig1. The places in the world to which Pliny refers in the Book xx of the *The Natural History* are marked in black (most of them are locations from where the plants the Naturalist mentions come from). Source: <https://www.mapsinternational.co.uk>.

In some cases I inserted within the paper complete quotations from Pliny's texts concerning various places, especially when a city or town of Late Antiquity is not very well known. I have done the same with respect to the comments the translators made in footnotes in order to clarify some of Pliny's statements. Sometimes I inserted maps of the cities from that period of which location is not easy to identify today. The references by Pliny to places from where the plants he describes came, ordered alphabetically, are presented further in the paper.

2.2. Places from where the Plants Pliny Describes Came

Aethiopia

- Aethiopia is presented as a country in chapters 18 and 57
- "The cummin of Aethiopia" is mentioned in chapter 57
- "Aethiopian cummin" is mentioned in chapter 58; in the same chapter also in footnote 2.
- "Seseli of Aethiopia" is mentioned in chapter 18, footnote 3.

Africa

Africa is mentioned in chapters 48 and 57

"Arabia"

- "Arabia" is mentioned in chapter 3. Pliny's words about it are thus: "Those persons who magnify the praises of the wild cucumber say that the very best is that of Arabia, the next being that of Arcadia, and then that of Cyrenæ: it bears a resemblance to the heliotropium."
- "the Arabic [language]" is mentioned in chapter 29; actually the Arabic name for endive
- "the Arabian [language]" is mentioned in chapter 29 thus: "The name 'endive' comes from the Arabian 'hindeb;' but whether that was derived from the Latin 'intubum,' or vice versâ, is uncertain."

"Babilonia"

- "Babilonia" is mentioned in chapter 50

Europe

- "South of Europe" is mentioned in chapter 43, footnote 2

Italy:

- Italy itself is mentioned in chapters 12, 59, 75, and 94; footnote 1 in chapter 75. Within chapter 12 it is written: "We have already said,¹ that there is also a wild radish. The most esteemed is that of Arcadia, though it is also found growing in other countries as well. It is only efficacious as a diuretic, being in other respects of a heating nature. In Italy, it is known also by the name of 'armoracia'."
- The Italians are mentioned in chapter 51, footnote 1
- Rome is spoken about chapter 15, footnote 6
- "The Romans" are mentioned in chapter 51, footnote 1
- Sardinia is mentioned in chapter 45
- The "School of Salerno" is mentioned in chapter 8, footnote 3
- "The ladies of Naples" are mentioned in chapter 51, footnote 1
- The **Latin** [language] is mentioned in chapter 29, footnote 2 thus: "The name 'endive' comes from the Arabian 'hindeb;' but whether that was derived from the Latin 'intubum,' or vice versâ, is uncertain."

Greece and "the Greeks"

- The expression "Among the Greeks" is used in chapter 45
- "The Greeks" are mentioned as such in chapters 1 (the 'Introduction'), 6, 8, 11, 25, 49, 55, 59, 71, 99

- In chapter 8 the context is a little different from that in other cases: here Pliny statements refer to a particular plant, 'colocythis' that "will cure, it is said, the fevers to which the Greeks have given the name of 'periodic'.
- In chapter 6 there is a discussion about "multipedes, insects known to the Greeks by the name of 'seps'".
- "Greek names" are mentioned in chapter 18, footnote 3, thus: "As the similitude which exists between their Greek names has caused most persons to mistake the one for the other, we have thought it as well to give some account here of sile or hartwort, though it is a plant which is very generally known."
- "The Greeks give the name..." , chapter 41
- "Greek name" for endive in chapter 29
- "Greek appellations" are mentioned in chapter 76, footnote 13
- The statement "known to the Greeks" in chapters 62 and 63
- "the Greek proverb", in chapter 16
- "the Greek writers" in chapters 34 and 71
- "the most ancient Greek writers", chapter 33
- "the Greek [language]" in chapter 26
- The river "Aliacmon" (actually Haliacmon, ch. 51) is in Greece; it originates in Pindus Mountains and goes into the Aegean Sea. As we can see in chapter 51 at the time of Pliny that was Macedonian territory – Pliny mentions in this context Macedonia
- Mount Athamas is mentioned in chapter 94; this is a mythological location in Boeotia (today central Greece).
- "Peloponnus" is mentioned in chapter 18, footnote 3
- Arcadia is mentioned in chapters 3 and 12; in the latter thus: "Those persons who magnify the praises of the wild cucumber say that the very best is that of Arabia, the next being that of Arcadia, and then that of Cyrenæ: it bears a resemblance to the heliotropium..."
- Chapter 12 underlies: "We have already said that there is also a wild radish. The most esteemed is that of Arcadia, though it is also found growing in other countries as well. It is only efficacious as a diuretic, being in other respects of a heating nature. In Italy, it is known also by the name of 'armoracia.'"

Arcadia is in central Peloponnese; see map below, fig. 2.



Fig2. Arcadia; Source: *Ancient Regions Of Peloponnese - Peloponnesus Ancient Greece Map - Free Transparent PNG Download - PNGkey*

Crete

- Crete is mentioned in chapters 69 and 73
- “Agriopastinaca of Crete” (Petroselinum Creticum) is mentioned in chapter 47, footnote 2
- The Cretan “hartworth” is mentioned in chapter 18
- “Seseli of Crete” is mentioned in chapter 18, footnote 3

And perhaps **Cyprus**, if the expression “boxes of Cyprian copper” within chapter 51 refers to this country (no bibliography on this topic)

Cyrene is mentioned in chapter 3 as Cyrenæ within the statement:

- “Those persons who magnify the praises of the wild cucumber say that the very best is that of Arabia, the next being that of Arcadia, and then that of Cyrenæ: it bears a resemblance to the heliotropium”

Cyrenæ used to be in Ancient Lybia; now its site is in Egypt, on the shores of the Mediterranean Sea, no far from Alexandria; see map 3.



Fig3. The antique city of Cyrenæ. Source: Archaeological site of Cyrene (Libya) | African World Heritage Sites

Egypt

- Egypt is mentioned in chapters 26, 29, 73, and 16. In the latter the following state of affairs exists: from a reference to the Greek proverb, ““There is plenty of vegetables in Syria”” the translators of Pliny’s *Natural History* extrapolated in footnote 1 and said “Similar to our proverb, probably, ‘There is more corn in Egypt.’”
- In chapter 29 it is written: “In Egypt, the wild endive is known as “cichorium,”² the cultivated kind being called ‘seris””
- “Egyptian cumin” [a plant] is mentioned in chapter 58
- Alexandria is mentioned in chapters 58 and 75, footnote 1; also in chapter 76
- “The ancient Egyptian” [language] is mentioned in footnote 1 of chapter 71; the statement containing it is as follows: “Fée suggests that its name [NB of a plant], ‘gith,’ is from the ancient Egyptian.”
- “Ammi Copticum” is mentioned in chapter 58, footnote 1

Persia

- Persia is mentioned in chapter 75, footnote 1

Today **Turkey**

- Smyrna, chapter 69 (today this city is Izmir)
- Galatia appears in chapter 51 and 57, footnote 1 [N.B. Galatia is an ancient area in the highlands of central Anatolia, roughly corresponding to the provinces of Ankara and Eskişehir, in modern Turkey].

France and the French people

- Massilia (Marseille) is mentioned in chapter 18
- "South of France" is mentioned in chapter 43, footnote 1
- "French ladies" are spoken about in chapter 5, footnote 1. The reference goes as follows: "Fée says that the French ladies esteem pommade of cucumber as an excellent cosmetic; which is, however, an erroneous notion." [NB. The author of the article has checked this information and knows that the cultivated cucumber is beneficial in cosmetics; therefore, the translators of Pliny, *Natural History* are wrong in their opinion].
- Gallia Celtica is mentioned in chapter 57, footnote 4; it was partially what is today France, but it stretched to modern Switzerland, Luxemburg, and the West bank of the Rhine in Germany.
- the town of Vesontio is mentioned in chapter 57, footnote 4; today this is the French town of Besançon, on the border with Switzerland
- The French are mentioned with reference to wild rape in chapter 10, footnote 1, thus: "The Brassica napus, var. *a* of Linnæus, the Brassica asperifolia, var. *α* of Decandolles, the 'navette' of the French."
- the French chemist, Rosier is mentioned in footnote 11 in chapter 76. This is the context in which his name appears: "Poppy-seed, in reality, is not possessed of any soporific qualities whatever. This discovery, however, was only made in the latter part of the last century, by the French chemist, Rosier."
- In chapter 16, footnote 2 it is explained that "gingidion," is the "The Daucus visnaga of Linnæus, the Daucus gingidium of Sprengel, the Visnagha, or Bisnagha of other botanists. It is also known as the 'wild carrot,' or 'French carrot'".
- Gaul ("the Aquitanian Gaul") is mentioned in chapter 57, footnote 4.

"The East"

- "The East" is mentioned in footnote 5, chapter 71 when is said that the plant gith "is esteemed as a seasoning in the East."
- "other parts of the East" appears in chapter 57, footnote 1.
- "Eastern origin" is mentioned in reference to opium, in chapter 76. The statement about this is as follows: "A name, probably, of Eastern origin, and now universally employed".

Germany

- Germany is mentioned in chapter 57, footnote 1

India

- India is mentioned in footnote 1, chapter 4 in Book xx, when Pliny describes 'erratic cucumber'. Here is the context in which this country appears in Pliny's words: "Many authors are of opinion that the wild cucumber is identical with the plant known among us as the 'anguine,' and by some persons as the 'erratic' cucumber." And the translators explain in footnote 1 that: "This has been identified by some writers, Fée says, with the Cucumis flexuosus of Linnæus; but, as he observes, that plant comes originally from India, and it is more than probable that it was not known by the ancients; In addition to which, it is possessed of no medicinal properties whatever. He looks upon it as an indigenous plant not identified."
- India is also mentioned in chapter 48, footnote 1.
- The statement "Perhaps Indian pepper" is to be found in chapter 66.

Macedonia

- Macedonia is mentioned in chapter 51
- The river "Aliacmon" (actually Haliacmon, ch. 51) is in Greece; it originates in Pindus Mountains and goes into the Aegean Sea. As we can see in chapter 51 at the time of Pliny that was Macedonian territory; this is why Pliny speaks about Macedonia.

Spain

- Chapter 76 mentions a town, Babilum, as being in Spain. Footnote 9 explains that "'Bilbilis' has been suggested" as being the respective location, and I assume that is Bilbao of today.

Syria

- Syria and its inhabitants are mentioned in chapter 16 thus: "The Syrians devote themselves particularly to the cultivation of the garden, a circumstance to which we owe the Greek proverb, "'There is plenty of vegetables in Syria'".

2.3. Writers Mentioned or/and Quoted by Pliny

I have listed some of the authors Pliny mentions in *The Natural History*, especially those in Book XX. The most mentioned authors in the latter are Celsus (for instance in chapter 2, footnotes 5 and 6), and Pedanius Dioscorides (in chapter 2, footnotes 1, 4, and 5; and chapter 4, footnote 2). Dioscorides is also mentioned in chapters 6 (footnote 2); chapter 8 (footnote 4); chapter 51 (footnotes 4 and 9), and chapter 15 (in the latter in footnote 2, together with Galen and Athenaeus). Galen is also frequently spoken about – for instance in chapters 2 (footnote 3); chapter 8 (footnote 4); and chapter 15 (footnote 2); and in the body of the text in chapter 75.

Pliny himself and the translators of the edition of *The Natural History* Perseus project and I use, John Bostock and H. T. Riley, refer very often to Linnæus, and sometimes to Galen and Celsus, as we saw in the notes above. The translators do the same concerning an author named Fée. No substantial information about the latter is available; I reproduce here the first reference to him in the edition Pliny's *The Natural History*: "M. Fée, the learned editor of the botanical books in Ajasson's translation, remarks, that this cannot have been the Platanus of the botanists, and that there is no tree of Europe, which does not lose its leaves, that at all resembles it).

Book XX, as with all the other 'books' within *The Natural History*, at its conclusion (its chapter no. 100) lists the authors whom Pliny quotes or mentions. They are grouped in three categories: Roman authors; foreign authors, and medical authors. But because I have found some inaccuracies in the list within Book XX, I made my own above, with some supplementary information. In any case, I reproduce below the list of the authors in chapter 100.

The Roman authors are the following: Cato the Censor, M. Varro, Pompeius Linnæus, C. Valgius, Hyginus, Sextius Niger ("who wrote in Greek"), Julius Bassus ("who wrote in Greek"), Julius Bassus, who wrote in Greek, Celsus, Antonius Castor. The foreign authors in the same text are thus: Democritus, Theophrastus, Orpheus, Monander (who wrote the "Biochresta", Pythagoras, Nicander.

The medical writers mentioned at the end of Book XX are: Chrysippus, Diocles, Ophelion, Heraclides, Hicesius, Dionysius, Apollodorus of Citium, Apollodorus of Tarentum, Praxagoras, Plistonicus, Medius, Dieuches, Cleophantus, Philistion, Asclepiades, Crateuas, Petronius Diodotus, Iollas, Erasistratus, Diagoras, Andreas, Mnesides, Epicharmus, Damion, Dalion, Sosimenes, Tlepolemus, Metrodorus, Solo, Lycus, Olympias of Thebes, Philinus, Petrichus, Micton, Glaucias, and Xenocrates.

Now we shall introduce the recipe that triggered the writing of this paper.

3. THE RECIPE ABOUT THE TREATMENT OF ASTHMA WITHIN CHAPTER 23 OF PLINY THE ELDER'S THE NATURAL HISTORY, BOOK XX

Book XX within *The Natural History* was written with the purpose of indicating how plants are useful for health. Here I introduced a recipe or rather a suggestion for a possible treatment against asthma; as already indicated, this is found in chapter 23 of the above-mentioned 'book'. This prescription is based on garlic. I had some problems with breathing, especially on the account of hay fever, hence I

decided to try on myself the result of a concoction Pliny suggests. He states about the use of garlic/allium in a particular circumstance: “suspiriosis coctum, aliqui crudum id dedere [...] suspiriosis aliqui et tritu in lacte fdederunt”/“Some persons have prescribed boiled garlic for asthmatic patients; while others, again, have given it raw.”

I decided to put his words at work in a rigorous way, hence I mixed one measure of crashed garlic and three measures of water. I boiled it for seven minutes, and took a spoon of this substance for two weeks twice per day in the morning, before breakfast.

I conclude by emphasizing again that the cure was very beneficial, and I have found that it can be used both to combat the effect of hay fever and asthma itself. The positive result of this treatment should constitute a piece – however small– towards strengthening the argument for keeping Pliny's work at the center of scholarly attention. And perhaps it is good to add here what Conte said “It is necessary to recognize that until our modern encyclopedias brought alphabetic order and other practical aids into general use, the *Naturalis Historia* was one of the best organized and most easily consultable ancient texts.”

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Digitizing sponsor Andrew W. Mellon Foundation; contributor Ontario Institute for Studies in Education, University of Toronto, 2018

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Citation Dr. Elena Ene D-Vasilescu. "The Validity of a Recipe within Chapter 23 of Book XX in Pliny the Elder's *the Natural History*" *International Journal of Humanities Social Sciences and Education (IJHSSE)*, vol 9, no. 1, 2022, pp. 205-215. doi: <https://doi.org/10.20431/2349-0381.0901017>.

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