

*SUMMA ABSOLUTAQUE NATURAE RERUM CONTEMPLATIO:*  
A CLOSE STUDY OF PLINY THE ELDER'S *NATURALIS HISTORIA* 37

by

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## ABSTRACT

The focus of modern scholarship on Pliny the Elder's *Naturalis Historia* tends towards two primary goals: the placement of the work and the author within the cultural context of late 1<sup>st</sup> century CE Rome and, secondly, the acknowledgement of the purposeful and designed nature of Pliny's text. Following this trend, the purpose of this study is to approach Book 37, in which Pliny lists and categorizes the gems of the world, as a deliberately structured text that is informed by its cultural context.

The methodology for this project involved careful readings of the book, with special attention paid to the patterns hidden under the surface of Pliny's occasionally convoluted prose; particular interest was paid to structural patterns and linguistic choices that reveal hierarchies. Of particular concern were several areas that appealed to the most prominent areas of concern in the book: the structure and form of the book; the colour terminology by which Pliny himself categorizes the gems; the identification of gems as objects of *mirabilia* and *luxuria*; and the identification of gems as objects of *magia* and *medicina*. These topics are all iterations of the basic question of whether gems represent to Pliny positive growth on the part of the Roman Empire, or detrimental decline. The results show the text is deliberately written and structured according to a contradictory narrative that defines gems as both beneficial and detrimental, agents of cure and contamination, expressions of expansion and decline. Pliny's final purpose in Book 37, then, is to acknowledge gems as the embodiment of *diuina Natura* and to describe their usefulness to humankind, while simultaneously cautioning the Roman audience against the corruption and destructive power of the outside world.

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Introduction: Background on Pliny the Elder and the *Naturalis Historia*

The attitude and worldview of an author, who is always an individual member of a certain society situated in a particular time period, cannot help but influence any work he or she produces. This is particularly true in the case of an author such as Pliny the Elder, whose primary goals were to compile information gathered from his personal experience and to compile information gathered from written sources, from which he made careful selections. In a case such as Pliny's, the text is controlled not only by his culture's understanding of the subject matter at hand but also by wider cultural attitudes and traditions concerning the organization, selection, and relative importance of information. Trevor Murphy makes this point particularly cogently in his introduction to his book *Pliny the Elder's Natural History: The Empire in the Encyclopedia* when he argues that the classification and sequencing of material reveals how a culture "made sense of the world" (2004 1).

What little is known and can be guessed about the life and career of Pliny the Elder has been gleaned primarily from three letters of his nephew, Pliny the Younger (*Ep.* 6.16, 6.20, and 3.5) as well as a short biographical passage written by Suetonius. Several scholars have made valiant efforts to reconcile the information from these sources with details garnered from the *Naturalis Historia* and with the events and changes that are known to have occurred during Pliny's lifetime. In particular, Ronald Syme, building primarily on Friedrich Münzer's 1897 study *Beiträge zur Quellenkritik der Naturgeschichte des Plinius*, attempted to map out the entirety of Pliny's career in his 1969 article "Pliny the Procurator." Building, further, on Syme's study, Trevor Murphy provides a concise but comprehensive outline of Pliny's life in the introduction to *Pliny the Elder's Natural History: The Empire in the Encyclopedia*.



Pliny lived through the reigns of nine different emperors and witnessed life under the Julio-Claudian dynasty, the civil war of CE 68-69, and the beginning of the Flavian dynasty.<sup>1</sup> Although Pliny tends to be associated with the Flavian dynasty in modern scholarship, since it was during the reign of Vespasian that the *Naturalis Historia* was published in CE 77-79, his writing, and at least his research, may very well have begun before Vespasian stepped into office in CE 69. Pliny's encyclopedia, then, must be seen as a reflection of the conditions, both social and political, of Flavian and pre-Flavian Rome (Naas 2002 69). As Anthony Boyle points out, the Romans viewed the Flavian dynasty as a distinct period in their own history; Pliny's nephew even discusses the *diuersitas temporum* that was the fallout from Domitian's reign (2003 2).<sup>2</sup>

The travelling that Pliny undertook during his military and political careers undoubtedly provided him with the majority of the first-hand knowledge with which the *Naturalis Historia* is furnished (Syme 1969, 202). Although Trevor Murphy is most likely correct in his argument that the majority of the encyclopedia was written based on literary tradition and the collection of anecdotes from other authors rather than on Pliny's own inquiries and personal experiences, there is no reason to think that Pliny's extensive travels did not provide him with any empirical evidence of the phenomena described in his text (2004 4). His work as a procurator and advisor in the provinces would have given him a close look at how Roman power structures and elements of imperial authority functioned and were sustained far away from the centre of the empire (2004 5). Certainly his other works, especially the *Bella Germaniae* and his treatise on the art of throwing a javelin would have benefitted from the military experiences he underwent in the western provinces. The *Naturalis Historia* too is filled with facts and claims based on what Pliny

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<sup>1</sup>The emperors under whom Pliny lived included those of the Julio-Claudian period (Tiberius (CE 14-37), Caligula (37-41), Claudius (41-54), Nero (54-68)), the period of the civil war (Galba (68-69), Otho (69), Vitellius (69)), and a large portion of the Flavian dynasty (Vespasian (69-79), and Titus (79)).

<sup>2</sup>For context on the political background of the Flavian period, see Boyle, A.J. and W.J. Dominik (eds). *Flavian Rome: Culture, Image, Text*. Leiden: Brill, 2003.

witnessed, that was local people, animals, plants, or even stones. The vast collection of facts that he gleaned from written sources and included in the *Naturalis Historia* cannot be denied and will be discussed in a subsequent chapter; however, it must also be noted that the particular details of Pliny's life certainly would have provided first-hand knowledge that helped shape the encyclopedia.

Pliny was born in Comum in CE 23 into a wealthy family of equestrian rank. He owned land in Transpadane Italy and travelled through much of the western provinces of the Roman Empire during his career in the military service and later as an advisor to the emperor and as a procurator. Syme concludes that his career in the equestrian service involved three stages, spanning from CE 46-58: a period in Germania Inferior, a period in Germania Superior, and a return to Germania Inferior (1969 205-7). By CE 59 it seems clear that he had returned to Italy, possibly holding a procuratorship, but otherwise avoiding a public career until the end of Nero's reign (Syme 1969 208; Murphy 2004 4). After the advent of the Flavian era Pliny held several procuratorships from CE 70-76 and eventually returned to Italy where he took up the position of personal counselor to both Vespasian and his eldest son Titus. In addition, he managed to obtain the position of commander of the fleet at Misenum (Syme 1969 211; Murphy 2004 4). This role in particular, Syme argues, would have been especially sought after and afforded Pliny a higher social status that translated into a more secure and privileged standing for future generations of his family, including his nephew (1969 227). Pliny died during the eruption of Vesuvius in CE 79 when, according to a famous letter written by the younger Pliny to Tacitus, he insisted on venturing closer to the site of the destruction rather than away from it for the benefit of his scientific inquiry (6.16).

According to Mary Ann R. Burns, Pliny was an example of the "soldier-statesman-scholar" ideal prevalent in Roman ideology (1964 253). He fulfilled his duty as a soldier and statesman by serving in the equestrian army and as a procurator, but he is most well known, of

course, for his scholarly pursuits. Other than the *Naturalis Historia*, Pliny wrote a treatise on the art of throwing a javelin on horseback, a history of the wars in Germany, a biography of Pomponius Secundus, a handbook on how to be a successful orator, an eight volume work entitled *Dubius sermo*, and a continuation of Aufidius Bassus' history (Pliny the Younger *Ep.* 3.5). It is only the *Naturalis Historia*, however, that survives to this day. This ancient encyclopedia, the earliest that remains from the ancient world, has been referred to as the "Encyclopedia Britannica of the ancient world" and is a compendium of information on a multitude of different subjects, including geography, the history of mankind, the nature of animals, fish, birds, insects and plants, descriptions of remedies from different sources, and accounts of various metals, paintings, pigments, and stones (Carey 2003 7).

The *Naturalis Historia* does not have a reputation for being a well-wrought piece of prose. Pliny's lists of facts and his categorization of various natural phenomena leave little room for ornamental writing; the fact that it is a compilation means that the work will never rank amongst the most admired works of literature and, as Sorcha Carey points out, it is "consulted often but rarely read" (2003 1, 10). However, besides the fact that the work would be valuable for its insight into the Roman perspective on the natural world even as a dry compilation of information, I believe Harold Axtell is correct in his assessment that Pliny's style as a writer and as a scholar is more artful and less one-dimensional than has often been acknowledged (1926 105). His lists of facts and figures are cushioned by anecdotes and, quite often, humorous expressions of personal opinion, disbelief, and outrage. Writing a glamorous piece of rhetoric was surely not his highest priority, yet his prose is heavy but succinct and his word choice is lofty but exact. However, ever since Pliny's own era the prejudice against compilations, as well as against any Silver Latin writing in general, has resulted in a considerable lack of academic and artistic interest in this work (Axtell 1926 105). This is not to say there has been no interest in the encyclopedia at all. The

interest has simply been focused on areas that do not allow for any appreciation of Pliny as an author or for the *Naturalis Historia* as a piece of literature.

In Pliny's own era, scholars and scientists did not hesitate to make use of the information Pliny laid out in the work (Nauert 1979 74). Where the prose style of Pliny—considered a “compiler” rather than a prose artist—has not been admired, his scholarship has, even in cases where, today, it would be considered distinctly questionable. Even after the Roman institutional systems broke down, the information in the encyclopedia was accepted, and sometimes continues to be accepted, as scientific fact (Steiner 1955 142; Nauert 1979 74).

Charles Nauert's article on the shifting approaches to scholarship on Pliny details the reception of the *Naturalis Historia* starting in the Middle Ages. Throughout the Middle Ages, the work gained popularity as a reference book and sourcebook for various facts, although these facts were often taken out of context and used for purposes specific to the medieval scholars' own time period (Axtell 1926 104-5; Nauert 1979 74). Again, it was Pliny's information rather than his authorial style that was of interest (Nauert 1979 74). However, the scholarly interest in the work shifted during the Renaissance from a focus on his scientific data to a focus on the text itself, as a manuscript in need of improvement and polishing. In addition, the text benefitted from the invention of the printing press, which allowed it to be distributed more widely, even, for a time, as a textbook (Nauert 1979 76-80).

During the modern period, most of the interest in the encyclopedia has revolved around identifying the sources Pliny used for his information (Carey 2003 9). The first systematic study of Pliny's sources was Friedrich Münzer's *Beiträge zur Quellenkritik der Naturgeschichte des Plinius*, written in 1897 (Carey 2003 9). This approach has continued for much of the modern era, and, unfortunately, has resulted in an under-appreciation of Pliny's contributions to his own text (Carey 2003 10). Beginning in the 1970s, however, interest in Pliny as an author began to

increase, although, even still, there is a need for more refined and detailed study on his scholarship (Carey 2003 12).

I believe that today the value of the text lies in its ability to reveal the customs, traditions, and preconceived notions inherent in the imperial Roman mindset. Pliny has attempted to collect information about the natural elements of the world outside of the structured and comprehensible *urbs* and the Roman structure and laws applied to it. In other words, Pliny—in many ways the embodiment of the imperial Roman *uir*—is attempting to reconstruct the uncivilized, natural world according to Roman standards of categorization and prioritization. Assuming this was the goal, or at least an unintentional result, of the structure of the work, the *Naturalis Historia* can help us understand the Roman perception of everything that was particularly un-Roman. In the case of Book 37, this includes gemstones: the luxurious products of the uncultured wilderness contained within the provinces.

Although I would agree with Sorcha Carey that to divide the *Naturalis Historia* into “modern notions of categories” is not the most valuable approach to the text, it cannot be forgotten that Pliny himself did divide the text into distinct books (2003 10). While imposing false and artificial divisions on the text would not reflect the true shape of Pliny’s narrative, it is perfectly valid to focus precisely on one of the categories Pliny himself constructed, since he himself must have considered this a unique area of study. I intend, then, to focus on Book 37, which contains Pliny’s discussion of gemstones, as a complete category distinct from, yet necessary to a full understanding of, the rest of the *Naturalis Historia*. I will consider how Pliny’s attitude and style are reflected in this book and how they provide a glimpse into the Roman perception of the empire as a whole.

Chapter One: Structure and Form in Book 37 of the *NH*

The term ‘encyclopedia’ has become associated with, as Healy argues, a work of multiple volumes that deals with “the whole range of human knowledge” (1999 37). When divorced from all labels the *Naturalis Historia* is a compendium of knowledge on the natural world and is an attempt on the part of Pliny the Elder to encapsulate the entirety of the world’s knowledge in one work. For this reason the *Naturalis Historia* is almost ubiquitously referred to as an encyclopedia. Yet the question of the degree to which the *Naturalis Historia* can be defined as an “encyclopedia” has been the subject of several inquiries, and although it is not the purpose of this chapter to define the genre of Pliny’s work, it is worthwhile to review the basic arguments on this front in order to gain a general understanding of the structure of the work. Although Pliny himself states in his preface that he will be writing *quae Graeci τῆς ἐγκύκλιου παιδείας uocant*, “those things which the Greeks call an *enkuklios paideia*,” the term is not synonymous with the English “encyclopedia” (14).<sup>3</sup> Literally, the Greek ἐγκύκλιος can be translated as “ordinary,” “everyday,” or “general,” and παιδεία as “teaching,” “education,” or “learning”; Murphy argues that, for Pliny, the *enkuklios paideia* is simply “the totality of human knowledge” (2004 33). Therefore, while Doody acknowledges that Pliny’s work was “‘encyclopedic’ in the sense of wide-ranging,” it is dangerous to apply this modern terminology—anachronistically, as Murphy claims—to an ancient text (2009 2; 2004 11). Indeed, the idea of encyclopedias as they are today did not exist during Pliny’s lifetime (Doody 2009 3). This is probably at least partially to do with the constraints of formatting. Although Pliny did include an innovative and nearly unique “table of contents” as the first book of his work, this would have been of little use considering the difficulty of finding a precise location in a large scroll (Small 1997 16-17).<sup>4</sup> In other words, any text written in a wholly

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<sup>3</sup>All translations are the author's.

<sup>4</sup>This section is, in terms of its function, not identical to the modern table of contents. As Small points out, Pliny only included it to help assist his dedicatee, Titus, in locating sections of interest to him so that he would not need to read the work in its entirety (1997 17).

non-narrative format would not be useful, and so this format was not often employed. The elements of the reference format that appear in the *Naturalis Historia* are there primarily for the sake of convenience and ease of use. Indeed, although the work is, in general, structured as a list, it is nevertheless written in the form of a narrative, with one point leading to another, and with one category introducing the next (Doody 2010 26, 92). In addition, Pliny's use of the term *enkuklios paideia* does not indicate a connection between his work and the works of Cato, Varro, and Celsus, who are often associated with Pliny as the forerunners of the encyclopedic genre, but whose topics were far more specialized (Doody 2010 42-43). In fact, as Murphy points out, in terms of structure, Pliny follows more closely in the footsteps of Ovid and Aelian, who embraced "bravura transitions" and "baroque frames of tales within tales," despite the fact that these authors lacked Pliny's pragmatic outlook (2004 39). In terms of understanding the structure of the *Naturalis Historia*, then, the term "encyclopedia" should be considered useful only so far as it reminds us that Pliny's goal was to amass a vast amount of knowledge ranging over many topics.<sup>5</sup>

Now that the basic framing of the *Naturalis Historia* is understood, it is necessary to consider several of the most prominent of the arguments in scholarship concerning the complex structure of Pliny's work. There is quite a large range of contrasting opinions on the structure of the *Naturalis Historia*, even concerning such basic questions as whether or not Pliny's work is unique or derivative and how this relates to his organization, whether or not the work is well-organized, and whether or not the work is focalized around a unifying principle. I will first consider the arguments as they have been made about the work as a whole before we consider what conclusions can be drawn about Book 37 specifically.

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<sup>5</sup>It is worth pointing out that even today, with the advent of Wikipedia and online resources, our definition of "encyclopedia" is ever-evolving, as are our approaches to the acquisition of knowledge. Just as the scroll format directed and defined Roman access to knowledge and the understanding of texts, the transition from printed books of reference to instantly accessible and searchable online databases is and will be altering the modern perception and understanding of knowledge. However, this is an area of research outside the bounds of this project.



The question of Pliny's originality is only relevant to this chapter because the organization of knowledge is what marks the work as unique rather than purely derivative, considering Pliny's primary purpose was to report established knowledge rather than seek out undiscovered information. For Pliny, the purpose of a writer was to arrange information rather than create it (Murphy 2003 310; Boyle 2003 38; Conte 1994 71). In terms of Book 37 we can see this concept playing out: Pliny quotes extensively from a variety of literary sources concerning stones from all over the Roman Empire. Yet, even if each of these sources remained available to us, the value of Book 37 would remain intact due to Pliny's ability to compile the information in such a way that unique connections are made and insight is gained into both his mind, the minds of his elite readers, and the workings of the empire as a whole.

The basic question in scholarship concerning the quality of the organization of the *Naturalis Historia* seems to be whether the work is well-organized with the illusion of disorganization, or whether it is disorganized with the illusion of organization. The truth is there is a variety of structural paradigms at work in the *Naturalis Historia* and that at times they compete with one another. The work is divided up carefully by subject, but within each book the structure is broken by unexpected digressions and connections that seem, at times, unrelated. As Small points out, the organization of the information is, at times, not understandable according to the sensibilities of a modern mind and, as Conte notes, there are "latent cultural paradigms" at work that inform Pliny's organization of information, but the organizing principles are not so strict as to withstand Pliny's desire for digression (1997 18; 1994 100-101). More specifically, the perspective on Pliny's structure that is most appropriate for Book 37 is that of Doody, who labels

the work as essentially a list that functions hierarchically and in which—though there is no “rigid and consistent ordering system”—each item on the list informs the next (2010 26-27).<sup>6</sup>

Finally, the question has been raised of whether or not the *Naturalis Historia* is structured around any central purpose. While Conte believes that the work lacks any “theoretical center that could function as a unifying principle,” Murphy, on the other hand, understands the central purpose of the work as an expression of Roman *imperium* (1994 103; 2004 211).<sup>7</sup> As we will see in later chapters, this concept is a major driving force in Book 37, as Pliny deliberately casts certain gemstones as examples of the *luxuria* of foreign nations. However, a related, yet broader and more extensively applicable purpose has been articulated by Andrew Wallace-Hadrill, who reads the work as coherently centralized around the history of nature in terms of its relationship both in concert and in conflict with human culture (1990 81-82; Beagon 1995 118; Beagon 1992 55-59). It is man’s relationship with nature that determines the organization of information: the elements are often divided by their usefulness and practicality for humans (Conte 1994 100). We can see this perspective playing out in Book 37: it is humanity’s relationship to nature that defines the organization of the book rather than any unbiased method of scientific arrangement.

Now it is necessary to take a closer look at the organization of Book 37. In the chart below I have illustrated the organization of the book. The bolded sections are those in which the gemstones are listed according to some discernible order.

§1-2: The introduction, which Pliny calls, in his index, the *origo gemmarum*, “the rise of gemstones.”

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<sup>6</sup>Murphy’s argument that the text is not organized tightly, but is organized appropriately under the basic standard of establishing contrast between opposing principles and concepts is not applicable to Book 37 specifically, although this argument can be applied to the work as a whole (2004 29-30).

<sup>7</sup>This is an expansion on Beagon’s 1992 argument that the *Naturalis Historia* is an imperialistic text.

- §3-20: Criticism of famous men of the past and the famous gemstones they owned
- §21-53: *deliciae* that cannot be considered gemstones
- §54-91: **Gemstones organized by praiseworthiness**
- 55-84: Arranged according to preference of women
  - 85-91: Arranged according to preference of men
- §92-138: **Gemstones organized by colour**
- §92-106: Red
  - §107-118: Green
  - §119-120: Blue
  - §121-125: Purple
  - §126-138: Yellow, white and multi-coloured
- §139-185: **Gemstones organized alphabetically**
- §186-192: **Gemstones organized by source of name**
- §186: Named after body parts
  - §181-7: Named after animals
  - §188: Named after objects (*rerum*)
- §193-195: Unnamed stones
- §196-197: Shapes of stones
- §198-200: Methods of detecting authenticity
- §201-203: Assessment of nations of the world and *laudes Italiae*
- §204: Overview of nature's products
- §205: Closing invocation

First of all, despite the tendency towards digressions that Pliny exhibits, Book 37 is very clearly organized according to not only discernible schemes, but schemes that Pliny himself articulates. If

we focus primarily on the sections in which gemstones are organized, the first category contains gems that are organized *ab laudatissimis orsi*, “beginning with the most praiseworthy” (54). These are the stones that, though products of nature (*rerum natura*, 1), are the most beneficial to humans. He describes the first stone in this category, *adamas*, as *maximum in rebus humanis*, “the greatest amongst human goods” (55). The second place is given to the *margarita*, which he previously discussed in Book 9, and which he describes as valued as an extreme luxury within high society (112-114, 117-124). The third highest-ranking stone, *smaragdus*, is given this rank due to the fact that *nullius coloris aspectus iucundior est*, “the sight of no other colour is more pleasing [than that of the *smaragdus*]” (62). Likewise, the following two stones, *berullus* and *opalus*, are also accorded their high position due to their pleasing appearance (76-79; 80-82).

When describing these high-ranking stones, Pliny occasionally indulges in diversions. For example, he describes Emperor Nero observing gladiatorial battles refracted through a *smaragdus* (64), and in his section on the *opalus* he recounts the story of Antony proscribing a senator, Nonius, due to his possession of an *opalus* worth 2,000,000 sesterces (81-82). Though his digressions inform the reader little about the properties of the gems, we can see that such diversions do inform the reader about the gems’ positions amongst the most popular gemstones: they are objects of extreme luxury.

Pliny points out that, up to this point, the ranking has been determined by the judgment of women. He uses the significant term *senatusconsultum* here, perhaps ironically, to describe the “official decree” women have made concerning each stone (85). The remaining stones of the highest-ranking category he organizes according to the judgment of men. He claims that there is less sure consensus amongst men as to which of the remaining stones are supreme, since men experience *libido*, desire, for specific objects based on the desire of other men for these objects, and, furthermore, the desire to rival other men (85). The next stone listed, then, is *sardonyx*, due to the fact that the elder Africanus was the first to make use of this stone (85). Here we see how

politics and relationships between men—rather than the innate natural properties of the gems— influence the hierarchy and imbue the stones with a level of *auctoritas* that mirrors that of the great men who utilize these stones.<sup>8</sup>

Next, Pliny categorizes a group of stones according to their colours. A closer discussion of colour as an organizational tool is included in a later chapter; for now it is important to establish that organization according to colour is the next logical step in the systematic organization that Pliny is employing. As Carey points out, such a systematic organization is useful for promoting the “authorial agenda,” which, in the case of the organization of this book, consists of arranging the material according to its usefulness or applicability to humankind since, as Beagon noted in *Roman Nature*, “man is, loosely speaking, very often the measure of all things for Pliny” (2003 19; 1992 34-35). Pliny begins with a systematic organization that displays what he considers most important about the stones: the esteem in which they are held by society. Arranging the stones by colour seems to be the next logical step, since colour is a property observable by humans, and since Pliny is able to arrange the stones based on the quality of the colour of each stone.<sup>9</sup>

Finally, Pliny finishes with the *principales gemmae*, the principal gems, and arranges the remaining stones according to their names, beginning by categorizing the largest group *per litterarum ordinem*, “in alphabetical order” (138). This is an unusual method of categorization in Roman literature; Small concludes that Latin was a primarily aural rather than visual language,

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<sup>8</sup>As we will see, the *auctoritas* Pliny attributes to these stones does not imply that he personally approves of any of the stones or of gems in general. As will become clear in later chapters, Pliny considers gems to be components of the great crisis of Eastern *luxuria* and its corruption of Roman society. He cannot deny, however, the great esteem in which gems are held by the general public.

<sup>9</sup>See Chapter Three, “Colour Terminology in Pliny's *Naturalis Historia* 37.” Roman colour terminology does not have a precise one-to-one relationship with English colour terminology. It is difficult to find a semantic equivalent, or know what the semantic equivalent is, for many of the terms (cf. Bradley's discussion of the difficulties of translating *flavus* in the introduction to *Colour and Meaning Ancient Rome* (2009): 1-12), as well as Robert J. Edgeworth's article, “Does ‘Purpureus Mean ‘Bright’?” (1979)). Therefore, the sections organized according to colour will not necessarily align exactly with modern perceptions of colour.

and for this reason alphabetization, which relies on visual arrangement, was not often a first resort (1997 62-63). In fact, we can see that Pliny only turns towards alphabetization once he has exhausted the forms of classification that are most directly relevant to the minds of his readers. He does, however, make a brief switch back to a slightly more systematic form of classification after his alphabetized section, when he lists a brief number of stones according to the etymology of their names. Even this section seems to be arranged hierarchically, as he first describes the stones whose names are derived from human body parts, then the stones whose names are derived from animals, then the stones whose names are derived from inanimate objects.

Now that we have taken a brief look at the overall structure of categorization, we must consider the language Pliny uses to reinforce the hierarchies of his classifications. Pliny uses the following words most often to describe rank and categories:

- I.a.i.1. *auctoritas*: perceived “position of rank” or “esteem”
- I.a.i.2. *genus*: type of gemstone within a class, a class in general, or a variety of a particular gemstone
- I.a.i.3. *locus*: position, in terms of rank (implies no particular high or low rank)
- I.a.i.4. *principatus*: “rank” or “preference”
- I.a.i.5. *ordo*: a broad category of gemstone

We will be considering Pliny’s use of *auctoritas* and *principatus* amongst the confirmed gemstones (*gemmarum confessa genera*), since these are the terms with which Pliny describes positions of high rank within his categories (54). First of all, it is noteworthy to say that both these terms are fairly loaded and imply, in particular, political honor of the sort that is afforded to great and powerful men. Pliny uses *auctoritas* to mean “esteem” or “repute,” as in *OLD* s.v. *auctoritas* 13. Yet it cannot be divorced from the connotation of “the right to exercise authority,” as in *OLD* s.v. *auctoritas* 6. The inherent implication is that the influence these stones wield over humankind is not slight. Furthermore, Pliny uses *principatus* to mean “chief or leading position,” as in *OLD* s.v. *principatus* 1. Yet it cannot have gone unnoticed that this word innately means “the rule of the

*princeps*.” The overwhelming use of these words imbues the stones they are applied to with the same sort of honor in Rome to men of great rank and honour.<sup>10</sup>

We can see that these words, *auctoritas* and *principatus*, are used deliberately and in places where Pliny wishes to emphasize the honor that society has bestowed upon a particular stone. As Pliny opens his section on the most praiseworthy stones, he tells us that the name of the highest ranking stone, *adamas*, carries *auctoritas* (58). The next stone he discusses, skipping over *margarita*, is *smaragdus*, to which he grants *tertia auctoritas*, “the third level of esteem,” (62). He precedes, as he tends to do for the most prominent stones, to rank all the varieties of *smaragdus* of which he is aware; he writes that the best type of *smaragdus* amongst those found in copper-mines *principatum...optinent*, “occupies the leading position” (66).

Among the stones ranked according to colour, Pliny only uses these loaded terms primarily for the highest ranking stones. He states that *carbunculi*, the best red stones, *principatum habent*, “have the leading position” (92); he writes that *callaina*, the second best green stone after *topazos*, lacks the *auctoritas* of *topazos*, being only similar in appearance (110); he claims that *amethysti*, the best purple stones, *principatum...tenent*, “hold the leading position” (121). Amongst the white stones, he does claim that *asteria*, the second-ranking stone, *principatum habet*, “has a leading position,” but only after acknowledging the top-ranking stone, *paederos*, or “favourite,” as *candidarum dux*, “the leader of the white stones” (129).

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<sup>10</sup>It is my belief that Pliny, at least at times, uses these words with a certain amount of irony, considering the derision that he is unafraid to heap upon the most well-regarded stones during his frequent digressions on the over-indulgence of gemstone owners. Again, we must keep in mind that the hierarchies Pliny constructs seem to be an attempt to reflect the opinion of Roman society as a whole rather than Pliny’s personal opinion. Indeed, Pliny uses the term *auctoritas* multiple times to describe the *deliciae*, “luxuries” that are not gemstones (*murrine*, *crystallum*, and *sucina*), despite the fact that he holds these substances in very poor regard.

It is also worth pointing out that the use of terms signifying rank and the superiority of one substance over another is indicative of a type of organization uncommon in modern encyclopedic texts. Pliny’s structure does not function according to modern organizational principles.

Following the stones ranked according to colour, Pliny ceases using the term *auctoritas* altogether, except twice in his description of the first alphabetically ranked stone, *achates*. He claims a particular variety, the Cyprian *achates*, has gained *auctoritas* due to its ability to ward off scorpions (141). Yet at the opening of his discussion of the *achates*, he claims that the stone no longer retains the *magna...auctoritas*, “great esteem,” it once held (139). The term *principatus*, on the other hand, is not used again to describe any stone in particular. It is, however, used when he makes a general note of what he has done in this book: *illa quae in principatu cuiusque generis priuatim diximus*, “I have discussed those which are in the leading positions and, individually, those of each type” (198). His final use of this term occurs at the closing of the entire book during what is often called Pliny’s *laudes Italiae*—the description of the great bounty and benefits of the land of Italy. He states that Italy is the most noble of lands because of *quae...principatum naturae optinent*, “those things which hold the ruling position in nature” (201). Those natural phenomena that are held in the highest esteem amongst humankind, then, all serve to grant Italy the highest position in the hierarchy of nations.

As we can see from the language Pliny uses, his organization is not arbitrary. The book is divided into sections, which are then subdivided; even the stones themselves are divided into varieties ranked according to esteem. If we take a look at a variety of *carbunculus* known as *syrtita*, we can see this clearly. *syrtita* is the second-highest ranking variety of the “male” *carbunculi*. The “male” *carbunculi* are those of a superior quality to the “female” *carbunculi*. *carbunculi* are the highest ranking of the red gemstones. The red gemstones are the first listed of the stones divided according to colour.<sup>11</sup> The division of stones by colour is the secondary type of division Pliny uses under the confirmed gemstones. The category of “confirmed gemstones” is the heading under which he sorts all the gems within Book 37. To make this visually clear:

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<sup>11</sup>The colours do not appear to be ranked hierarchically.



1. **Confirmed Gemstones:** *gemmarum confessa genera* (54)
  - a. Best gemstones
  - b. **Stones divided by colour**
    - 1.b.i. **Red** (*ardentes gemmae*), divided by rank
      - 1.b.i.1. *carbunculus*, divided by varieties
        - 1.b.i.1.a. **male variety**, divided by quality
          - 1.b.i.1.a.i. Those whose fiery colour passes into the purple of an amethyst (93)
          - 1.b.i.1.a.ii. *syrtitae*

Pliny does not make use of each of these subdivisions for each category or for each stone; for example, not every stone has a “male” and “female” variety.<sup>12</sup> However, nearly every stone is divided up according to its varieties, often determined by the location of origin; and nearly every time varieties are provided, they are sorted according to quality. The entire book can be expressed as a series of hierarchies couched within larger hierarchies. The text has its fair share of digressions, of course, but these serve only to connect one point to another, or justify the position of a stone within a particular category. And it is worth noting that digressions in Roman literature were not considered inappropriate, and were often expected to be included in order to emphasize moral arguments, hold the reader’s interest, and add variation to the narrative. It is the discursive style of Pliny’s writing that disguises the carefully laid out scheme of Book 37 to such a degree that it is understandable that Small would describe the *Naturalis Historia* as “not arranged in any order” (1997 18); yet when the content, at least of Book 37 is broken down, it is clear that the organization is deliberate and precise, although convoluted. Effectively, each gem is sorted according to how it is useful to, valued by, or a benefit for humankind.

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<sup>12</sup>The male variety is always superior to the female variety.



The purpose of this chapter is twofold. The first goal is to identify the broad implications and justifications for Pliny's choices of specific colour terms, which will be accomplished by observing the colour terms and colour comparisons Pliny uses. The second goal is to determine the extent to which it is possible, valid, and worthwhile to utilize Pliny's chromatic descriptions of the gems in Book 37 to identify the modern equivalents of the specific gems or the category of gems which Pliny is describing. Mark Bradley has provided an eloquent chapter on Pliny the Elder's treatment of colour in the *Naturalis Historia* in the third chapter of his book *Colour and Meaning in Ancient Rome*. Bradley explores how Pliny uses colour as a key component of his classification of nature, which functions as a *speculum* for the reader that reveals insights into both nature itself and into the material corruption of the Roman Empire. As Bradley points out, the word *color* appears 113 times in Book 37 and is the basic feature Pliny uses to organize and identify gems. Indeed, Pliny himself divides a significant portion of Book 37 by colour categories; §92-138 are divided thus:

§92-106: Red stones

§107-118: Green stones

§119-120: Blue stones

§121-125: Purple stones

§126-138: Yellow, white and multi-coloured stones

Pliny's categorization of his stones introduces us to some problematic implications concerning his use of colour terms. Although Pliny claims that he has gone through the principal gems according to their colour categories (*per genera colorum*), he only specifically makes note of the introduction of the red and purple categories, with these statements (138):

*ardentium gemmarum indicanda natura* (91)

“the nature of fiery-red stones must be pointed out”

and

*alius ex hoc ordo purpureis dabitur aut quae ab iis descendunt* (121)

“Next another category is provided for purple stones or those that descend from them.”

Therefore, the other categories must be distinguished by the reader based on the different colour terms Pliny employs. For example, in sections 119 and 120, Pliny stops using the adjective *purpureus* and begins to use the adjective *caeruleus* instead, thus indicating the shift into the section on blue stones. Yet he makes no mention of a shift in category. However, this method of discerning the categories is not fail safe. The stone *iaspis* falls between the “green” and the “blue” category, at sections 115-118. At the beginning of his description of this stone, he notes that *uiret*, “it is green,” yet he follows with the statement that the Cyprian variety is *glaucus*, “blue-grey,” the Persian variety *aeri similis*, “looks like the sky,” and the variety from Thermodon is *caeruleus*, “dark-blue” (115). Should this stone be considered the final stone in the green category, or the first stone in the blue category? While the exact placement of this stone is not important, this example illustrates the difficulty of delineating the precise meanings of both colour categories in the ancient world, as well as, in general, other forms of organization formed from structures and classes based on cultural paradigms outside our own.

The most influential work of the 20<sup>th</sup> century in the scholarship of anthropological linguistics of colour has been Brent Berlin and Paul Kay’s *Basic Color Terms* (1969), in which the researchers divided colour terms between basic and specialized terms, making use of data from a variety of modern languages. Berlin and Kay argue that basic terms are lexically simple, in common use, and not restricted only to certain contexts (1969 6-7; Lyons 1999 50). This theory has had a profound effect on the field of the anthropological linguistics of colour, and is used by many scholars to determine an objective and constant set of basic colour terms for a language. However, Liza Cleland notes, in her after-paper to the 2004 *BAR International* conference, *Colour in the Ancient Mediterranean*, that this can be a dangerous trend if the agent and process of

perception are ignored (2004 141). Therefore, although we will compare Pliny's use of colour terms to the set of basic colours hypothesized by Sir John Lyons, we will keep in mind that, provided Lyon's assumptions are correct, these terms have been determined based on a finite amount of written evidence that is not necessarily reflective of either the entire corpus of Latin literature nor the colloquial speech of Rome in the first century CE. In his paper "The Vocabulary of Color With Particular Reference to Ancient Greek and Classical Latin," Lyons presents his hypothesis regarding what colours we can consider the basic colour terms, referred to as the BK-basic terms, of Latin according to Berlin and Kay's paradigm. This does provide a valuable starting point for a discussion of colour terms in Latin literature. Lyons chooses five terms that he finds to be most common, simple, and broad in Classical Latin, and he offers *caeruleus* as a possible sixth (1999 65):

*niger* - black  
*albus* - white  
*ruber* - red  
*uiridis* - green  
*flauus* - yellow  
[*caeruleus* – blue]

According to Berlin and Kay, colour terms that are lexically complex, limited to only a certain class of objects, not in common use, or specific varieties of a more broad colour category are considered "specialized colour terms" (1969 5-7). Therefore, it is valid to say that, while there are several other candidates for BK-basic colour terms in Latin, it is likely none are as appropriate as these six, which appear frequently in literature and have broad applications to various subjects. If we list the terms Pliny uses most commonly for these same categories, however, we can see that the list differs for the colours white, red, and yellow:

*niger* - black  
***candidus* - white**  
***sanguineus* - red**  
*uiridis* - green  
***aureus* - yellow**

### *caeruleus* - blue

For half of the basic colour categories, then, Pliny chooses to use a more specialized term. This will not prove surprising when we observe the reasons behind his choices for each term. In fact, it will become clear that Pliny, in his discussion of gems, favours colour terms that are 1) specific 2) vivid and 3) evocative of not only hue, but also lustre.

### Pliny's Colours: Colour Terms

#### **Black** (fig. 2)

Although Pliny does not provide a separate section on black stones, he describes stones as black more often than any other colour except for white. It is unclear exactly why Pliny does not offer a separate category for black stones, despite using the term so often, however it is possible that this is because there are few stones in Book 37 that are purely black; there are more stones for which black is a secondary colour. It is also possible that none of the purely black stones were considered important enough or of high enough quality to warrant an entire section of the book devoted to them. Indeed, Pliny uses the term *niger* fairly rarely until he reaches the sections organized alphabetically (138-185) and the sections organized according to the derivations of the names of the stones (186-192).<sup>13</sup> As was discussed in Chapter Two, the stones organized according to these schemes are not considered as important as those organized hierarchically by rank.

As is clear from fig. 1, Pliny uses only the BK-basic term, *niger*, or variations of this term (the superlative, *nigerrimus*, or the comparative, *nigrior*). The only other colour term that could possibly compete with *niger* for the role of a BK-basic term for black is *ater*. André describes *ater* as black in its purest state—matte and sober, and necessarily negative (1949 57). The term

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<sup>13</sup>Previous to these sections he uses *niger* in reference to *sardonyx* (87, 89), *onyx* (90-91), *carbunculus* (93, 95-97), *ceraunia* (135), and *leros* (138).

*niger*, however, tends to be used of objects with brilliance or shine, such as the feathers of crows, or hair (Petr. 43.7; Ap. *Met.* 2.9.2). This word, then, is a more appropriate choice for Pliny's description of gemstones than *ater*. Although *ater* may be a more specialized term, it is less appropriately descriptive than the BK-basic term *niger* for the description of precious gems.

### **White (fig. 3)**

In the case of white stones, Pliny chooses to use a specialized term, *candidus*, almost twice as much as the BK-basic term *albus*. Pliny makes of the adjective *candidus*, or forms of the adjective, fifty-three times, more than any other colour term in all of Book 37. This has more to do with the innate versatility of the term than the number of white stones.<sup>14</sup> André argues that *niger* is to *ater* what *candidus* is to *albus*. In other words, *candidus* is a bright, shining white, whereas *albus* is a dull white (1949 26, 33-35). Just as Pliny uses *niger* to capture the lustre of black stones, he uses *candidus* to capture the brilliance of white stones. Indeed, the basic, root meaning of *candidus* is “radiant,” “clear,” or even “illuminated” (*OLD* s.v. *candidus*). Therefore *candidus* is used to describe not only stones that are pure white (*chalazias*, 189; *Iouis gemma*, 170), but also stones that shine from external radiance either reflecting on the surface or through the body of the stone (*asteria*, 131; *astrion*, 132; *ceraunia*, 134, *solis gemma*, 181). The term *albus*, however, is used exclusively for stones which are not described as possessing any lustre (*Aegyptilla*, 148; *dendritis*, 192; *leros*, 138). In addition, the terms *albus* and *candidus* are only used once in reference to the same stone, except in reference to two difference varieties of the same stone

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<sup>14</sup>Pliny may also be more willing to use the term *candidus* due to its positive connotation; not only is the term used in literature to express brightness both literally and figuratively (*OLD* s.v. *candidus* 1), but it also can express religious and moral purity (*OLD* s.v. 4a, c-e, 7-8). For example, Livy uses the phrase *candida toga* to refer metonymically to the office of the consulship (27.34.12). In addition, *candidus* was a term used often to indicate beauty, due to the desirability of a fair complexion (*TLL* s.v. *candidus* B 1a; *OLD* s.v. *candidus* 5; *candor* 3).

(*sardonyx*, 86-89; *onyx*, 90-91; *carbunculus*, 94-97).<sup>15</sup> The one case in which Pliny uses the terms *albus* and *candidus* to refer to the same stone is his description of the stone *ceraunia*. He uses the term *candidus* to indicate that it is a member of the category of white stones, and he follows this with a reference to Zenothemis, who *fatetur albam esse*, “admits that it is dull white” (134). Yet Pliny carefully distinguishes the *albus* sections of the stone from those that have more lustre; he states that there is a *stellam coruscantem*, “glimmering star,” within the dull white casing of the stone (134). The one indication in the entirety of book 37 that *albus* may, at times, be used in reference to a lustrous white colour is in Pliny’s description of the rings on the Indian variety of *sardonyx*, when he states that these *circuli albi* can have *quaedam...caelestis arcus anhelatio*, “a certain rainbow play of colour” (89).<sup>16</sup> However, this is an unusual exception. In general, the indication is that, due to the overwhelming use of *candidus* in this book, this term is more indicative of lustre than the term *albus*. Indeed, the term *candidus*, in its positive degree alone, is used forty-seven times in book 37. In book 36, on stones less precious (and presumably less lustrous) than gemstones, the term is used fifteen times, and in book 35, on pigments, the term is used thirteen times.

## Red (fig. 4)

Pliny uses a richer variety of adjectives to describe red stones than the stones of any other colour. Latin was endowed with a fertile vocabulary for describing red colours, especially since the actions associated with the colour red—burning, bleeding, etc.—provide a generous supply of participles that can be used to describe colour. Of the most common terms used to describe red in

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<sup>15</sup>In all three of these cases, the term *albus* is used only in reference to marks on the stone: *circuli* (rings) and a *zona* (band) on the *sardonyx* (89), *zonae* (bands) on the *onyx* (90), and *maculae* (spots) on the *carbunculus* (97).

<sup>16</sup>It is also worth noting that this is the only known use of the term *anhelatio* to mean “play of colour;” in general this word means “breath” or “panting” (*OLD* s.v. *anhelatio*) The indication is that the glimmer on this stone is very subtle.



Latin—*ruber*, *rufus*, *russus*, and *rutilus*—Pliny uses the most basic of these, *ruber*, the least. *Ruber* is also the least descriptive and broadest term denoting the colour red. As André explains, it is the semantic equivalent, and descendant, of Gk. ἐρυθρός, which also indicates a red with no specific shade (1949 75; Valpy 2010 410). Every other colour with the value of “red” had an original meaning linked to a specific shade of red that broadened over time (André 1949 76). Pliny uses the word *ruber* only once in book 37 in reference to stones,<sup>17</sup> (although he uses *rubescens* and *rubens* as well), and he uses it to describe the Indian variety of *sarda* (105). It is difficult to determine why he uses this basic term in the description of this stone alone; it is possible simply that there was no need to emphasize this particular variety of *sarda*, since it would not be mentioned again. *rubescens*, also used only once, describes the stone *myrrhina*. Pliny uses it to modify another adjective, *lacteus*, milky-white. In other words, the colour he is describing is “milky-white turning red” (21). Finally, Pliny uses *rubens* to describe *sardonyx* (89), a variety of *ceraunia* (134), the veins of the *apsyctos* (148), and the spots on the *Dionysias* (157). These participles are naturally more vivid than *ruber*, since they are derived from verbs, and the action inherent in the verbs reflects the play of light within or upon the stones.

The term *rufus*, which can be lexically linked to Gk. πυρρός, is often described in scholarship as the colour of the hair and beard of red-headed people (Telesio 1528 §7; Osborne 2001 142; André 1949 82). André defines it as a dull, unpleasant colour, citing its use to describe the colour of barbarian hair by Vitruvius and Seneca (Vitr. 6.1.2.10; Sen. *De ira* 3.26.3; André 1949 83). *rutilus* has a similar application, often being used in the description of hair colour, although it is somewhat more vivid; Varro writes that *rutilus* hair is the same as *aureus* hair, although he then goes on to explain that women with *rufus* hair are referred to as *rutilae* (Varro *Ling.* 7.83). Pliny

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<sup>17</sup>He uses the word *ruber* four other times in book 37, all in reference to *Mare Rubrum*, the Red Sea (24, 108, 136, 173).

uses *rufus* to describe the rust that forms on *crystallum* (28), certain varieties of *chryselectra* (127), *aphrodisiaca* (148), *thelyrrhizos* (183), and *Veneris crinis* (184). Of these, *rufus* is most vivid and appropriate when applied to *Veneris crinis*, since *rufus* is often used particularly in describing hair.<sup>18</sup>

We can determine that there was a certain range of overlap between the terms *ruber*, *rufus*, and *rutilus*. The exact parameters of acceptable application of these terms is difficult, if not impossible, for non-native speakers to grasp. Regardless, we can safely claim that *ruber*, *rutilus*, and *rufus*, despite their occasional application to particularly appropriate nouns, are less evocative than those adjectives linked more directly to their original concepts: *igneus*, *flammeus*, *testaceus*, and *sanguineus* (fire-coloured, flame-coloured, brick-coloured, and blood-coloured). Pliny uses *sanguineus* and *igneus* more than any other adjectives with the value of “red:” ten and nine times, respectively. *Sanguineus* can be seen as a more descriptive equivalent of *ruber*, which Telesio describes as the colour of *animantium sanguis*, “the blood of living things” (Telesio 1528 §8). Yet *ruber* does not necessarily have an implication of depth, sheen, and play of light the way *sanguineus* must have had. Likewise, *igneus* recalls the play of light within transparent stones—an attractive quality in a stone, it is likely, in a world without electric lighting. Even today, gemologists use the term “fire” to describe dispersion of stones. Dispersion in gemology is the effect that allows the observer of a stone to perceive multiple colours, due to the refraction of white light as it passes through the stone. It is likely, however, that Pliny’s fondness for fire terminology for stones was due more to the scintillation and brilliance of colour of a stone rather than the variety of colours it displayed, especially since dispersion is dependent on refraction, which in turn is enhanced phenomenally by the modern faceting techniques that were unavailable

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<sup>18</sup>The stone Pliny refers to as *Veneris crinis* is most likely a different stone than the stone popularly called “Venus hair quartz” today. This stone is properly referred to as “rutilated quartz” due to the presence of rutile crystals within the stone. The word rutile, derived from *rutilus*, lives on today, in a way, as an adjective to describe hair.

to the Romans. Nevertheless, *igneus* is an appropriately vivid adjective to describe the colour of red stones. It is likely that the only reason Pliny uses *flammeus* so much less often than *igneus* is simply because *flammeus* is a less common word than *igneus*.

Pliny does not tend to use participles derived from fire-related verbs to describe colours of specific stones. He uses *ignescens* and *ardens* only three times together in Book 37. *ignescens* is employed once to describe *murrina* (21). The participle is used here because Pliny is describing the transition of *purpura* into a fiery colour. Therefore the participle is not used to increase the vivacity of the image as much as to capture the active transition of one colour bleeding and shifting into another. This is appropriate since *ignesco* is an inchoative verb and means “to take fire,” not “to burn.” In other words, the colour, in this case, is not settled, otherwise Pliny would have used *igneus*. Instead, it is in the active process of transitioning into *igneus*.

Pliny uses *ardens* only once to describe a specific stone, and even in this case the description is separated somewhat from the stone—he states that *opali* resemble to some the *sulpuris ardentis flammae*, the flames of burning sulphur (81). The other two occurrences of *ardens* are used to classify the category of red gems as a whole, the *gemmae ardentes*, or *genus ardentium*, that is, the category stones that can be individually described with fire-related adjectives (91, 103).

### **Green (fig. 5)**

Pliny uses primarily the BK-basic term *uiridis* to describe green stones. Latin does not have as large a variety of common terms for green as it does for other colours, such as red or yellow. However, Pliny is careful to choose terms for green that convey a sense of vibrancy appropriate for precious gems. Each of the terms he uses is evocative of plants, except for *smaragdinus* (*smaragdus*-coloured), which he applies to *Thracia*. There is little variety in the imagery conveyed by “green” adjectives in Latin. Pliny uses the terms *pampineus* (vine-coloured),

*porraceus* (leek-coloured), and *herbaceus* (grass-coloured). In addition, the primary meaning of *uiridis* is the green of “growing plants, foliage, and sim.” (*OLD* s.v. *uiridis* 1). However, this does not detract from the illustrative force of Pliny’s descriptions; Just as there is little better than fire for red stones or gold for yellow stones, there no common phenomenon or object in the natural world that is more appropriate to describe the vibrancy of precious stones than young, living plants. In addition, the term *uiridis* can be used easily for other objects with a sheen, such as olive oil (Cato *Agr.* 65.1; Suet. *Jul.* 53), or the sea (Ov. *Ep.* 5.57).

### **Yellow (fig. 6)**

Pliny treats yellow stones in a similar fashion to red stones. He, for the most part, ignores the most common terms for yellow: he uses the BK-basic term *flauus* only once, *fuluus* only four times, and the fairly common terms *croceus* and *luteus* not at all, although he does describe four stones as the colour of *crocum*, saffron. *flauus* tends to imply a pale yellow or golden colour, and is another term often applied to hair (*OLD* s.v. *flauus*). Pliny uses it only once to describe *melichlorum*, which is partly *flauus* and partly *melleus* (191). *fuluus*, on the other hand, means “dark yellow,” “tawny” or “brown” (*OLD* s.v. *fuluus*). According to Aulus Gellius, it can also rank amongst the shades of red, although this is not the most common use (Gell. 2.26.11; André 1949 132-3). Like *flauus*, *fuluus* does not naturally imply any sort of brilliance. Pliny uses it more often than not to describes varieties of *sucina*, which is most certainly the modern amber (33, 34, 47). The other specific use of *fuluus* is to describe the briefly mentioned *oica* (176). Pliny uses *fuluus* once more in Book 37, though not to refer to a specific stone. Instead, he mentions that “xuthos,” a nickname for the stone *haematitis*, is a term often used by the Greeks to describe *fuluus* stones (169). He thereby equates *fuluus* to Gk. ξουθός, a colour between ξανθός<sup>19</sup> (yellow) and πυρρός

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<sup>19</sup>Also often equated with *flauus* (Ernout and Meillet 426).

(flame-red), when it is used for stones. Pliny also uses the term *luridus*, “a sickly yellow colour” (*OLD* s.v. *luridus*). This is another colour that André notes as having no lustre (1949 137). In most cases this would not be an appropriate adjective to apply to a precious stone, yet Pliny uses it to good effect. He uses it only three times, all in reference to *icterias*, a stone named after ἰκτερός, “jaundice” (170).

The remaining adjectives that Pliny uses for yellow stones, *melleus* and *aureus*, along with the related participle, *auratus*, occur much more often than the more basic and general terms. The term *aureus* is evocative of both the colour and the lustre of gold, and *melleus* is evocative of the colour, sheen, and transparency of honey—in both cases, these adjectives are much more descriptive than their BK-basic counterparts and are therefore used multiple times for a variety of yellow stones. *Auratus*, on the other hand, is used only twice, and only in reference to the markings on the stones rather than the stones themselves: the veins (*uenae*) on *lysimachos* and spots (*guttae*) on *pontica* (172, 179). The perfect passive participle is appropriate here to convey the image that the stones have been “gilded” or “ornamented” with these gold patterns.

## **Blue** (fig. 7)

Pliny alternates between using two terms for blue, *caeruleus* and *cyanus*, although he uses the more common of the two, *caeruleus*, more often. Both these terms are appropriate for gemstones, since they both often have implications of sheen or lustre. The most basic Latin word for blue is *caeruleus*, which is derived from *caelum* (sky). However, *caeruleus* can apply to a wide variety of hues, including sky blue, blue-green, blue-grey, dark grey, or even black. *cyanus* is a term borrowed from Gk. κυανούς (dark-blue, glossy blue). Both *caeruleus* and *cyanus* are used to describe stones that are either lustrous (*cyaneus*: *astrapaëa*, 189; *caeruleus*: *ceraunia*, 134), or stones for which lustre or lack of lustre is not mentioned specifically (*cyaneus*: *sappirus*, 120;

*caeruleus: cyanus*, 119).<sup>20</sup> The only other word for blue Pliny uses is *liuidior*, the comparative of *liuidus* (lead blue), which he uses to describe *icterias* (170), for which, as mentioned earlier, he also used the term *luridus*, a dull yellow colour.<sup>21</sup>

### **Colour Terms in book 37: Concluding Thoughts**

Pliny tends to use vivid adjectives that describe not only the hue of the stone, but also its transparency, the depth of its hue, and the play of light on and within the stone. His adjectives are particularly vivid in red and yellow stones, since these stones recall fire, blood, gold, and honey—other natural phenomena that display a similar transparency or glow to that of precious stones. In every case in which there is a distinction available between lustrous/specific and neutral/basic colours (therefore, for red, yellow, white, and black), Pliny leans towards selecting adjectives that imply lustre or brightness.

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<sup>20</sup>It is interesting that Pliny chooses to use *caeruleus* to describe the stone *cyanus*. Perhaps this was merely to avoid redundancy, however, it may be indicative of a synonymous relationship between the terms *caeruleus* and *cyaneus*.

<sup>21</sup>*icterias*, derived from Gk. ἰκτερος, “jaundice,” was called by this name because, according to Pliny, it was considered a cure for jaundice (170).

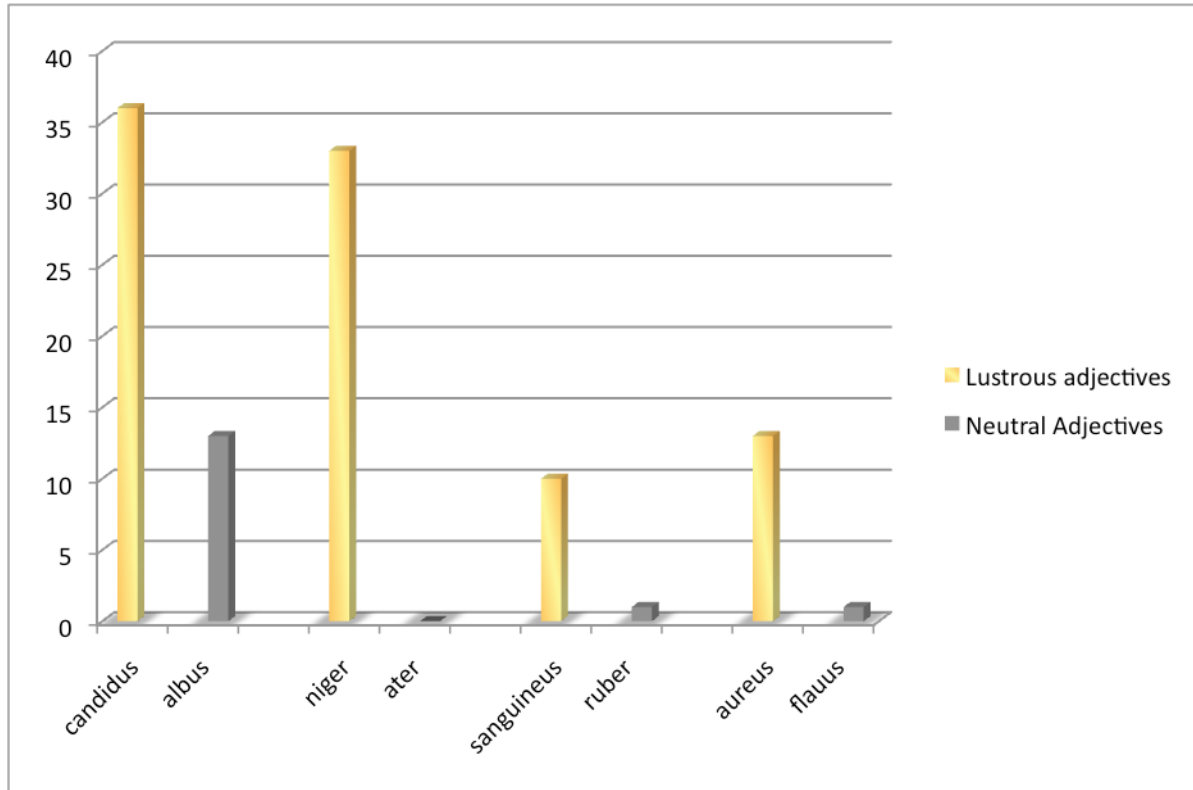


Figure 1: Lustrous/specific vs. neutral/basic colour terms in Pliny's Book 37

The cool chromatic colours (blue, green, and purple) cannot be expressed, in Latin, with as wide or specific a selection of terms, and there are pairs of terms for green, blue, or purple that allow for a clear comparison between lustre and neutrality.

It has been argued in the past that Pliny's style is less than artful (Carey 2003 1). However, it is clear that Pliny makes deliberate and specific choices when it comes to choosing descriptive adjectives. Pliny's word choice, even when he does use adjectives that denote dullness or a broad range of shades, characterizes his style as purposeful and precise—the appropriate lexical personality for an encyclopedia in which a vast number of similar gems must be distinguished from one another.

## Final Note: Trials of Translation

Colour is universal, but the semantic range represented by a colour term in one language will not be identical to the semantic range of a colour term in another language. For example, I have translated *flauus* as yellow, yet the adjective is used in Latin literature to describe phenomena ranging from grain to the blush on the cheeks (Verg. *G.* 1.73; Ov. *Ep.* 4.72; Bradley 2004 117). When approaching a translation involving colour terms, then, it is important to challenge one's expectations and remember that one's automatic assumptions cannot be necessarily trusted. For example, it is not necessarily adequate to translate the [*iaspis*] *purpurea* of section 115 of book 37 as "purple jasper"—*purpureus* has semantic overlap with our purple, but also with certain shades of red. Indeed, the *Oxford Latin Dictionary* suggests that at times the adjective can mean simply "radiant" or glowing," with the stress on the "sheen" rather than the hue.<sup>22</sup> In addition, Pliny's *iaspis* is unlikely to refer only to the exact variation of chalcedony (microcrystalline quartz) that we call "jasper." The term *iaspis* gives us the English term "jasper," but the distinguishing characteristic of Pliny's *iaspis* is the fact that it *uiret et saepe tralucet*, "is green and often translucent" (115), whereas our jasper is distinguished by its opaque brick-red colour caused by the presence of various materials, including haematite, clay, and goethite (Bonewitz 2008 229; Oldershaw 2009 195). This issue becomes more ambiguous in Book 37 at the points when Pliny defines the colour of a gem according to the colour of another object. On the one hand, this can be a fairly reliable method of conveying the colour of a stone: when Pliny writes that *galactitis* is the colour of milk (162), this is fairly uncomplicated; milk tends to always be the same colour. However, this method can also cause more ambiguity than expected. When faced with the stone *melitis*, which Pliny writes is the colour of a *malum* (191), several questions arise. What type of fruit does Pliny mean by *malum*, which is often translated as "apple," but can also mean any "soft-

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<sup>22</sup>*OLD* s.v. *purpureus* 3. Robert J. Edgeworth argued against this definition in his article "Does 'Purpureus' Mean 'Bright'?" (1979)



skinned tree-fruit,” and at times, even the fruit tree itself?<sup>23</sup> Even in Pliny, the term *malum* appears, in Book 25, to refer to the fruit of the mandrake plant, which is a golden-yellow colour, (8.101; 25.148) and, at another point, the plant birthwort, the flower of which is a violet colour (25.95). If Pliny does mean “apple,” what colour were the apples in Italy in the late 1<sup>st</sup> c CE? Or was he referring to a generally understood archetype of apple colour, just as we tend to imagine apples as deep red, when in fact most apple varieties are a mix of light red and green.<sup>24</sup> Pliny has a total of sixty-four instances in which he describes a stone by the colour of another object, including *batrachites*, described as the colour of a frog (149; What colour were Italian frogs? Does this include toads?), *carcinias*, described as the color of a crab (187; Does Pliny mean the brown colour of a live crab’s shell? The red colour of a cooked crab’s shell? The colour of crab meat?), and a variety of *iaspis*, described as the colour of *caelum autumnale matutuinum*, “an autumn sky at morning” (116; Is this a cloudless sky? A cloudy sky? The various colours of a sunrise?). Overall, the important point is not that we must define each of these terms exactly according to the precise hue Pliny had in mind, but that we must remember that the cultural context for each concept, word, and phrase. Placing the text within the proper cultural context allows for a more nuanced and accurate interpretation and, therefore, translation.

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<sup>23</sup>OLD s.v. *malum* 1, 3

<sup>24</sup>This stereotype about apples evolved from the popularity of the Red Delicious apple during the 1960s-80s. In fact, the Red Delicious, a sport of the Delicious Apple developed at the end of the 19<sup>th</sup> century, is a physically and visually unique variety that only grows in certain areas that provide it with the cool nights and warm days it needs (Higgins 2005).

Figures 2-7: Frequency of color terms in Book 37. The columns for the BK-basic terms of each colour, according to Lyons' hypothesis, are coloured dark grey. Note that Pliny only uses these basic terms most frequently when there is no other colour term that is more suggestive of lustre.

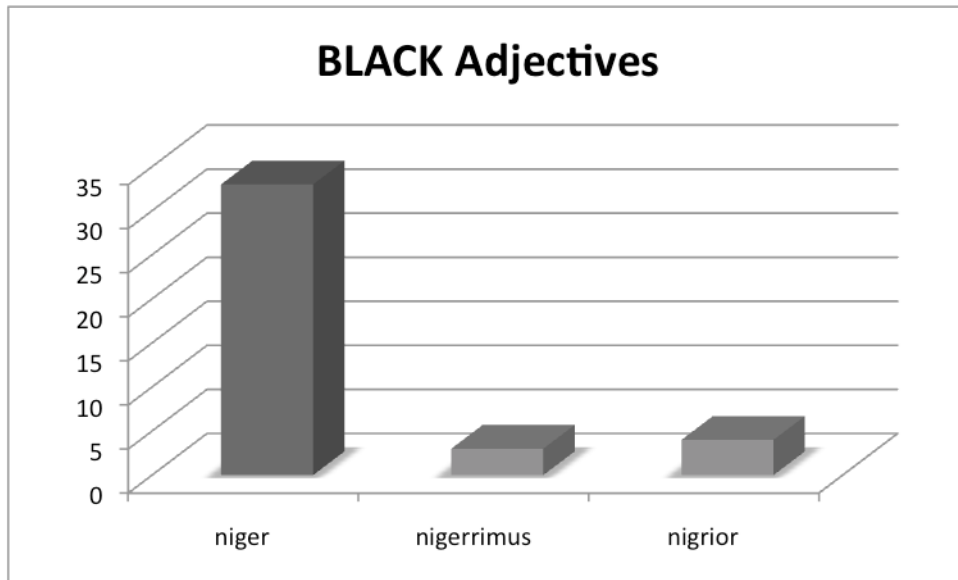


Figure 2: Frequency of "black" adjectives. *Niger* is the BK-basic term, and is most indicative of lustre.

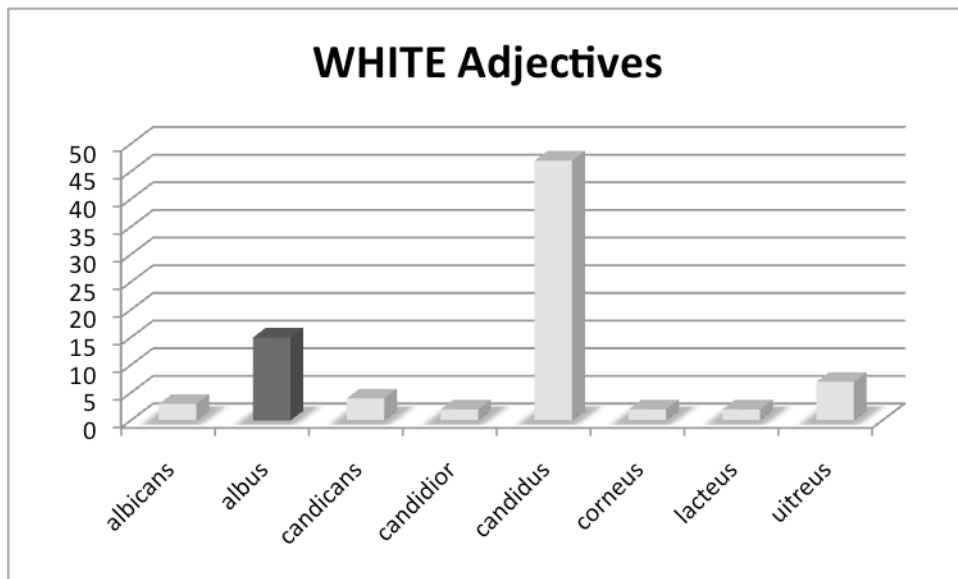


Figure 3: Frequency of "white" adjectives. *Albus* is the BK-basic term, but *candidus* is more indicative of lustre.

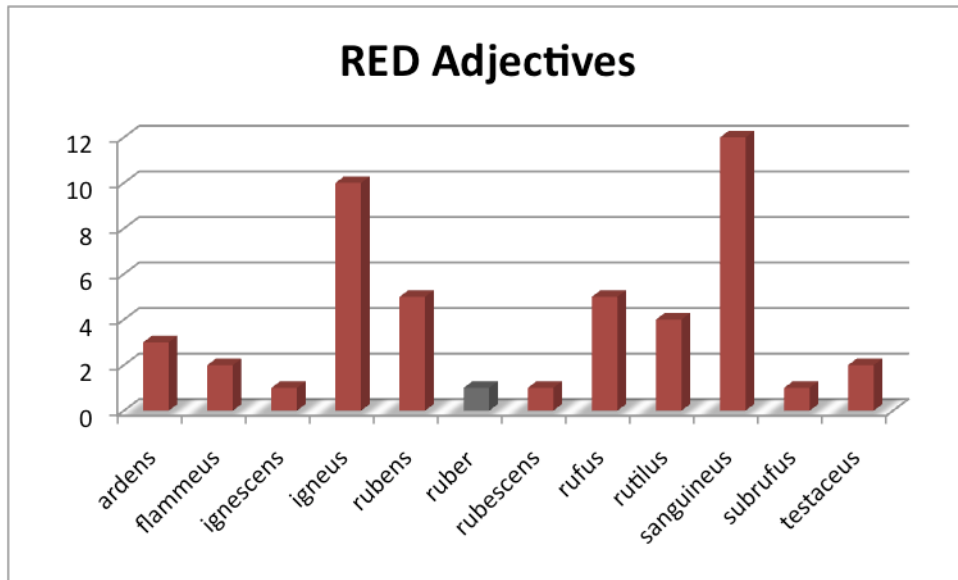


Figure 4: Frequency of "red" adjectives. Ruber is the BK-basic term, but igneus and sanguineus are more indicative of lustre.

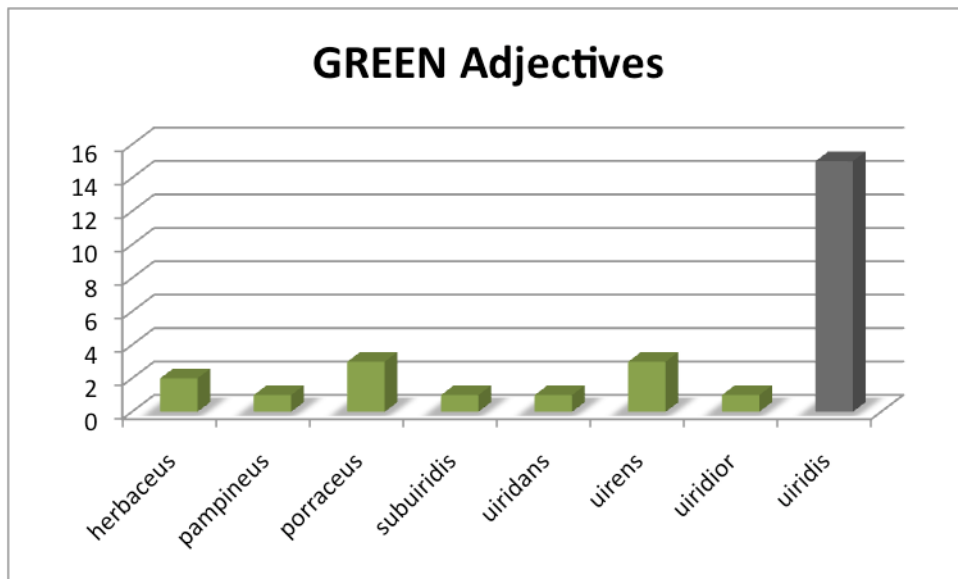


Figure 5: Frequency of "green" adjectives. None of these colour terms is particular indicative of lustre.

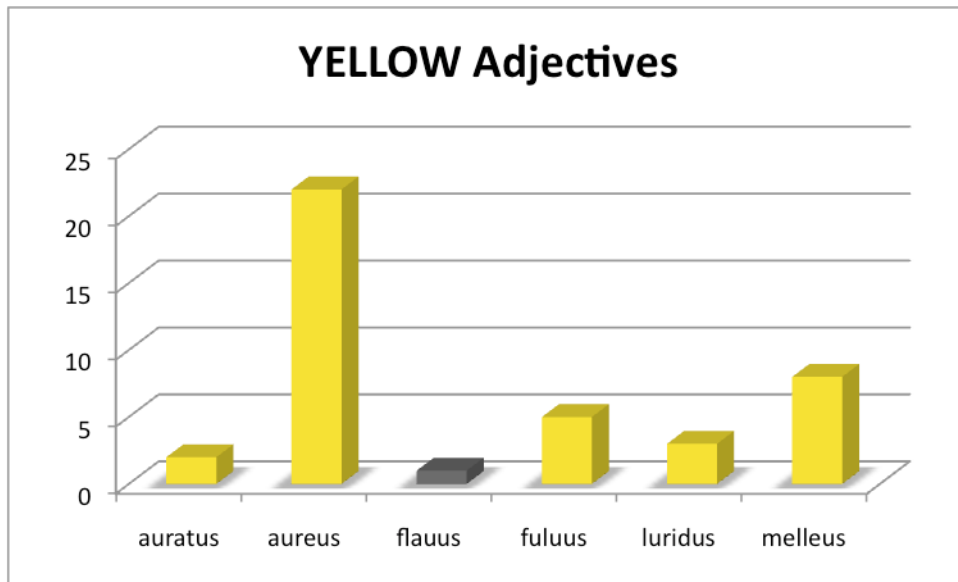


Figure 6: Frequency of “yellow” adjectives. Flauus is the BK-basic term, but aureus is more indicative of lustre.

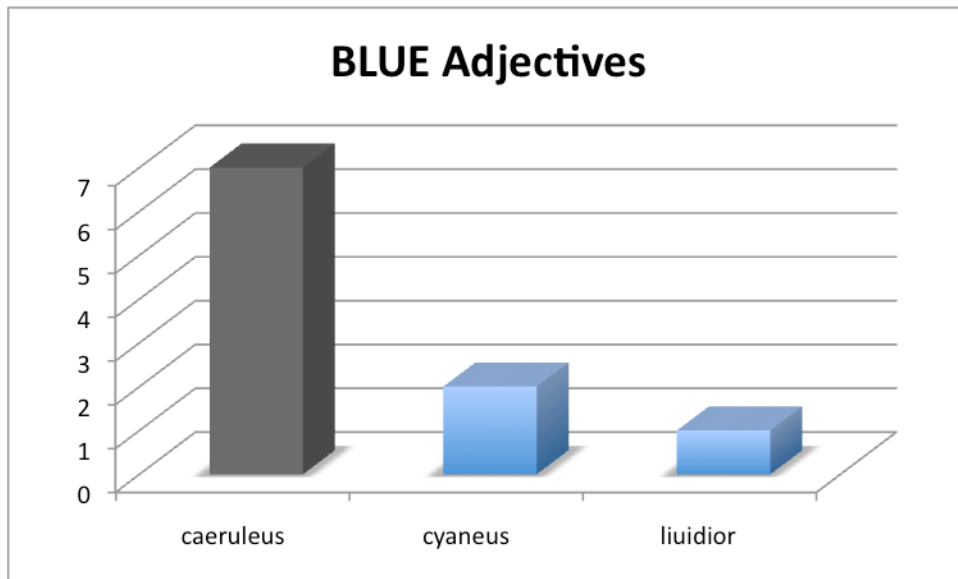


Figure 7: Frequency of "blue" adjectives. None of these colour terms is particular indicative of lustre.



Pliny's discussion of the geography of the world, in Books 3-6, has provided fertile ground for scholars interested in the Roman perception of the empire of the 1<sup>st</sup> century CE. Along with attempts to map the Roman Empire according to Pliny, there has been a wealth of scholarship devoted to interpreting Pliny's books on geography.<sup>25</sup> Likewise, there is a long history of reading the whole of the *Naturalis Historia* as a list of wonders meant to glorify the empire and, as Carey argues, transform his description of the known world into "an account of the world as empire" (2003 43). Mary Beagon was amongst the first to recognize the *Naturalis Historia* as a text praising both the *mirabilia* of nature and the Roman Empire as a civilizer of nature in *Roman Nature: The Thought of Pliny the Elder* (1992), and this perspective has provided the basis for much of the contemporary scholarship on the work. Drawing from this perspective, the wonders that Pliny describes in each book have been read as either *mirabilia* that glorify the empire or examples of *luxuria* that situate the empire within a narrative of decline (Carey 2003; Murphy 2004; Fear 2011; Naas 2002, 2011). Due to the fact that Pliny's discussion of the geography of the world in Book 37 is less descriptive than his chapters dedicated to geography, there has been little research into the overlap between *mirabilia*, *luxuria*, and the discussion of the empire in Book 37. Yet, in this book Pliny, by introducing each gemstone with a description of its original provenance, provides a finite list of the locations that stretch from North to South from Britain to Ethiopia, and East to West from India to Portugal. The massiveness of the empire described in Books 3-6 is combined with gemstones, symbols of *luxuria*, to show not only how large and wealthy the empire is, but also how Rome's expansion benefits itself and other nations. On the other hand, parallel to the narrative of improvement is a narrative of decline: as Rome imports gemstones, it imports *luxuria*, a concept which is consistently connected to deterioration in the

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<sup>25</sup>Cf. *inter alia*: Shaw, Brent D. "The Elder Pliny's African Geography." *Historia* 30 (1981): 424-471; Hoyos, B.D. "Pliny the Elder's Titled Baetican Towns: Obscurities, Errors and Origins." *Historia* 28 (1979): 439-471; Dihle, A. "Plinius und die geographischen Wissenschaft in der Römischen Kaiserzeit," in *Tecnologia, economia, e società nel mondo romano* (1980): 121-137.

*Naturalis Historia*.<sup>26</sup> The goal of this chapter is to explore the parallel narratives of improvement and decline implicit in Book 37 as they are connected to the geography of the empire.

### **Pliny's Paradoxical Literature: *mirabilia* in Book 37**

Herodotus' exploration of the world's *thaumata* paved the way for future paradoxical literature, in which authors consolidated strange and unique facts for the entertainment and edification of the reader. The influence of paradoxical literature can be seen in the *Naturalis Historia*. Pliny betrays a fascination with *mirabilia*, the Roman equivalent of Herodotus' *thaumata* (Healy 1999 63; Naas 2011 57).<sup>27</sup> Yet we can observe a divergence in approach between Herodotus and Pliny: Herodotus isolates outlying lands by ascribing these wonders to them. As Redfield explains, regarding Herodotus' description of the Egyptians:

Herodotus notes points which distinguish this people from others, and especially points which a Greek finds odd, and therefore repellently interesting. Oddity is an ethnocentric principle... (Redfield 1985 97)

In their article discussing the paradoxical tradition of Herodotus, Jacob and Hohl make note of the fact that it is impossible to divorce geographical representation from political discourse (70); although Pliny does not deny the "otherness" of the foreign territories, he establishes these *mirabilia* (which are gems, in the case of Book 37) as discoveries, possessions and even commodities of the Roman Empire. This is a well-established argument in Plinian scholarship. Carey defines the *Naturalis Historia* as a *thesaurus*—a treasure trove of wonders that functions as a "powerful evocation of empire and emperor" (2003 180). This concept was further polished by Naas (2011), who argued that *mirabilia* are a "means of praising imperialism" and that the *Naturalis Historia* is a catalogue of what the Roman Empire "dominates and so possesses" (57).

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<sup>26</sup>Cf. Beagon (1992 190-194), Lao (2011), and Naas (2002).

<sup>27</sup>Rawson prefers the term *admiranda* (1985 250)

In Book 37 the concept of the expansion of empire is implicit in the vast extent of the locations in which the gems are found, and explicit when Pliny describes the benefits of the gemstones to the Roman citizen. Pliny begins Book 37 with this claim:

ut nihil instituo operi desit, gemmae supersunt et in artum coacta rerum naturae maiestas, multis nulla parte mirabilior.

(37.1)

So that nothing is lacking in the work I have started, gems remain, and the greatness of nature, in no other part more wondrous to many, gathered into the tightest boundary.

From the start of the book, then, gems are presented as both *mirabilia* and as a microcosm of the natural world in general. The variety of gemstones encompasses the variety of nature to such an extent that one stone can provide *summam absolutamque naturae rerum contemplationem*, “an ultimate and perfect survey of the natural world” (1). *Natura* in the *Naturalis Historia* and the Stoic tradition to which Pliny is linked is connected with the divine (Beagon 1992 27). However, the sublime nature of gemstones is, as will later be discussed, corrupted when faced with human greed. Yet, when divorced from the vices of humanity, they hold an *auctoritas*, “dignity,” (2) that imbues them at times with a worth *extra pretia ulla taxationemque humanarum opum*, “beyond any price and estimation of human means” (1).<sup>28</sup> From the perspective, then, of gemstones as sublime representations of nature, the Roman possession of gemstones from every corner of the known world represents the Roman possession of nature in every corner of the known world—there being as much praise-worthy *uarietas* between the stones as between the territories from which they originate (1). The expansion of the Roman Empire is beneficial, in one sense, then,

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<sup>28</sup>*auctoritas* was a politically loaded word for the Romans. Appropriate English translations range from “authorization,” “approval,” “right or power to authorize or sanction,” “leadership,” “reputation,” “influence,” and—the meaning Pliny seems to intend—“dignity,” or “esteem” (*OLD* s.v. *auctoritas*). When used in reference to inanimate objects it has some semantic overlap with *grauitas*, “importance,” or “power” (*TLL* IVa). The use of this word in reference to gems implies that, according to Pliny, the influence that gems hold in the Roman world is not merely personal, but political.



because of the Roman exposure to the *mirabilia* of the world, as well as for the exposure of Roman ideals to the rest of the world, for the *salus humana* (Fear 2011 26).

### **Pliny's *laudes Italiae***

Much has been made of Pliny's rendition of Vergil's *laudes Italiae* (G. 2.136-76), which appears at the end of Book 37, after Pliny concludes his discussion of gems (201-202).<sup>29</sup> One of the primary points of praise for both authors is Italy's fecundity. Yet it is notable that Pliny's praises of Italy follow immediately after his discussion of gems, in which Italy's role as a producer is fairly limited (see fig. 8). Only four areas in and around Italy are provided by Pliny as areas from which gemstones originate. In part this may be due to Italy's genuinely low level of gem production. Yet when his sources state that certain gems originate from Italy, Pliny specifically expresses his disbelief. In his discussion of *sucina*, Pliny quotes the Greek sources that explain that the stone, generally thought to be amber, originates from the Po River. Yet he claims that *quod esse falsum Italiae testimonio patet*, 'this is clearly false, from the evidence of Italy' (31). He adds to this that some sources claim there are islands in the Adriatic called the Electridas—from the Greek ἤλεκτρον, 'amber'—from which *sucina* originates (32). But Pliny again claims: *qua appellatione nullas umquam ibi fuisse certum est*, 'it is clear that there were no islands by this name' (32) His unwillingness to allow Italy to be connected to the production of *sucina* is likely due to its role as a luxury item, which will be expanded on later. Likewise, Pliny claims as false the statements that *anthracitis* is found in Liguria, provided it was never found there in the past (99). Overall his message in Book 37 concerning Italy seems to be that, despite her supposed fertility in other products, she is a possessor rather than a producer of gemstones. The majority of Book 37, then, can be read as an expanded *laudes Italiae*—not a praise of the Italian lands themselves, but of the

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<sup>29</sup>Cf., for an analysis of the overlap between the two passages: Bruère, Richard T. "Pliny the Elder and Virgil." *Classical Philology* 51 (1956): 228-246.

lands that Italy has access to and the products they produce. This finally culminates in 201-202 with the praises of Italy specifically. In Pliny's *laudes*, Italy is the *rectrix parensque mundi altera*, 'ruler and second mother of the world,' whose role, Fear argues, is to unite the *uarietas* of nature and allow it to become civilized (201; 2011 24-26). It is worth noting in addition, that *rectrix* is the feminine agency noun from the verb *rego*. The most basic meanings of this verb are "to direct" or "to guide," and it can also mean "to govern (morally)" and "to correct" (*OLD* s.v. *rectrix*). This is a more loaded word than, for example, *regia*, and implies that Italy not only has power over her empire, but that she is responsible for establishing the proper pattern for the rest of the empire to imitate, especially in terms of the civilization of the natural world.

### **Expansion and Decline: *luxuria* in Book 37**

On the one hand, gems represent the expansion of the empire and, therefore, the expansion of Roman value; in this way they are an implicit praise of imperialism (Naas 2011 57). While the expansion of the empire may function, in the *Naturalis Historia*, for the betterment of humankind in general, there is a parallel narrative in the text of this expansion functioning to the detriment of the Roman people. Sorcha Carey argues that the *Naturalis Historia* is a narrative of decline originating from *luxuria* (2003 101). Lao refines this argument with her explanation that, in an inverse relationship, as the resources of the world become more available, the greed and over-indulgence of humanity become more pronounced (2011 36): as Rome possesses more foreign goods through conquest of foreign lands, she likewise possesses more foreign morals and therefore, moral decline (Carey 203 82; Parker 2002 57). If it is the case that the whole of the *Naturalis Historia* is a narrative of decline, then Book 37, as the final book, can be read as an expression of the ultimate *luxuria*.

Gemstones as an object of excess and over-indulgence are connected to lands outside of Italy, particularly Eastern lands. This becomes clear in the introductory sections of Book 37, when

Pliny lists the gemstones that have been most renowned by humankind. The first ring that caused the human *admiratio*, “amazement,” at gemstones to *exarserit*, “become inflamed,” originated from the Caucasus (2). Following this, the human estimation of gemstones expanded *in tantum amorem*, “into such a passion,” that Polycrates, from Samos, was able to expiate his excessive prosperity with the sacrifice of a single gemstone (3). The gemstone most renowned after this belonged to Pyrrhus—presumably the Hellenistic general and King of Epirus—who waged a war against Rome (5). Following his list of these most famous stones, Pliny recounts the story of the *uanitas*, “superficiality,” of a famous Theban pipe-player, Ismenias, who purchased a stone from Cyprus (6).

At the start of Pliny’s narrative on stones, these most famous historical stones are situated to the East of Italy and out of her reach. However, as Pliny moves forward in time, the *luxuria* begins to reach Rome, although it remains connected to the East. The first Roman to own many gemstones was Sulla’s stepson Scaurus. Pliny makes a point of pointing out that a collection of stones such as Scaurus’ is called *peregrino...nomine dactyliothecam*, “by the foreign name *dactyliotheca*” (11).<sup>30</sup> After Scaurus, Pompey the Great is the next to dedicate a ring case, which had once belonged to King Mithridates of Pontus (11). Pliny associates a great deal of *luxuria* with Pompey, whose triumph after his defeat of Mithridates Pliny recounts as a lavish display of over-indulgence (12-17). In an apostrophe to Pompey, Pliny declares:

*e margaritis, Magne, tam prodiga re et feminis reperta, quas gerere te fas non sit,  
feri tuos uoltus? sic te pretiosum uideri?* (15)

[To think] that your likeness is made of pearls, Magnus, so lavish in cost and devised for women, which it is not proper for you to wear. In this way do you seem valuable?

Pliny treats Pompey’s *luxuria* as a stepping stone to the future *luxuria* of the empire; the *luxuria* of future emperors, such as Gaius and Nero, seemed *innocentior*, “more harmless,” in comparison to Pompey’s, thus making the decline into excessiveness easier for the people of Rome to accept

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<sup>30</sup>*dactyliotheca* = ἡ δακτυλιοθήκη (ring case).

(17). Likewise Pliny connects the Roman possession of Eastern goods made possible by Pompey's triumph to the introduction of *myrrhina*, a type of stone, possibly fluor-spar, that was used for making vessels. Pliny points out that *oriens myrrhina mittit*, "the East sends us *myrrhina*" (21). However, this stone passed from foreign possession into aristocratic Roman possession into common use, with the result that *crescit in dies eius luxuria*, "the indulgence in this increases day by day" (18). *myrrhina*, in addition, causes such a subversion of normal behavior that one Roman consul would gnaw on the edge of his vessel, *ob amorem*, "because of his passion [for it]" (18).

Pliny next discusses the several substances considered to be the most valuable, beginning with *crystallum*—generally, rock-crystal—another stone about which he states, *oriens et hanc mittit*, "the East gives us even this," although he does admit it can be found in other locations (23). He states that, for this stone, there is a *furor*, "madness," that, again, causes Roman citizens to spend extravagantly in order to acquire *crystallum* (29). He gives the example of a matron, who was not rich, spending 150,000 sesterces for a ladle made of *crystallum* (29). The next most valuable stone Pliny mentions is *sucina*, which he describes as deserving *proximum locum in deliciis, feminarum tamen adhuc tantum*, "the next place in luxuries, but yet only so much for women" (37.30). Pliny considers *sucina* an example of absolute luxury because it has no purpose, unlike *myrrhina* and *crystallum*, out of which vessels can be made. About *sucina*, Pliny writes:

*in omnibus denique aliis uitiis aut ostentatio aut usus placet: in sucinis sola deliciarum conscientia.*

(37.49)

in all other vices, then, the appearance or use makes it pleasing to us. In terms of *sucina*, there is merely the awareness of its luxuriousness.

This stone, as previously discussed, was reported by Pliny's Greek sources, Aeschylus, Philoxenus, Euripides, Nicander, and Satyrus, to originate in Italy. Rather than seizing this as an opportunity to discuss Italy's fecundity, however, Pliny takes this as *occasio...uanitatis*

*Graecorum detegendae*, “an opportunity to reveal the falsity of the Greeks” (31). He discredits his sources and declares that he does not trust the reports that *sucina* originates from Italy.

After discussing *sucina* Pliny launches into his general list of gemstones. The stones all originate from various locations in and outside of the Roman Empire. A look at fig. 8 will reveal that most of Pliny’s gemstones originate either from the far east, outside of the Roman Empire, or the Eastern provinces of the Roman Empire. After this, Greece and then Africa are the most abundant in gemstones, followed by the Western Provinces and Italy. This characterization of *luxuria* moving in an East-West direction is typical of the Roman belief in orientalism: the degeneration of society through the influence of Eastern over-indulgence and feminine *mollitia* (Parker 2002 57-58, 84). The location producing the most individual types of stone is the furthest east location, India. India was considered by Curtius Rufus in his *Historiarum Alexandri Magni Macedonis* to be so wealthy in precious stones that it caused those native to the area to devote themselves *ad luxum magis quam ad magnificentiam exulta*, ‘to extravagance more than to loftiness of living’ (8.5.3).<sup>31</sup> In contrast to India, as previously mentioned, Italy is the least abundant in stones. Yet she is the final destination of all the stones Pliny mentions, which are all ranked and evaluated from a Roman perspective and according to Roman values.

## **Conclusion**

Pliny wrote the *Naturalis Historia* during the reign of Vespasian, at a time when, according to Elizabeth Ann Pollard, the emperor was attempting to pacify and unite his disjointed and conflicted empire (2009 312). It is natural then that Pliny, a friend of Vespasian and his son Titus, to whom he dedicates the *Naturalis Historia*, would focalize his text from an imperialistic

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<sup>31</sup>This reference is from Parker (2002 46). In addition, Parker points out that there is an overlap between Curtius Rufus’ and Pliny’s texts: Curtius Rufus’ list of precious stones found in India is based on Book 37 of the *Naturalis Historia* (2002 46).

perspective (Pollard 2009 313; Naas 2011 57). However, the imperialistic perspective of Book 37, in which gemstones are represented as *mirabilia*, is balanced by a parallel narrative of decline, in which gemstones are represented as examples of *luxuria*. Gemstones, according to Pliny's perspective, are both embodiments of *diuina Natura* and objects that have a tendency to incite greed and over-indulgence, and their introduction into Italy from the outside world provides for the Roman world both sublime exposure to *mirabilia* as well as potentially dangerous exposure to detrimental *luxuria*.

Table 1: Gemstone Provenance in *Naturalis Historia* 37

REGION	STONE (*best stones found in this region)
<b>FAR EAST/PARTHIAN EMPIRE/RED SEA</b>	
Bactria	Smaragdus
Carmania	Asteria *Astrion Callaina Ceraunia *Myrrhina
Caspian	Iaspis
Caucasus	Callaina
Beyond India	Callaina Sucina
Dahae	Callaina
India	Adamas *Amethystus Asteria Berullus Carbunculus Chrysolithus Crystallum Iaspis Melichrysus Nilion Opalus *Paederos Prasius Sandasros Sarda Sardonyx Sucina Xuthos
Island in Red Sea	Iris Topazos
Island of Cytis	Topazos
Island of Necron	
Media	
Patalene	
Parthia	Myrrhina
Persia	Iaspis Sappirus Sarda
Island Serita	Sucina
Topazos Island	
<b>EASTERN PROVINCES</b>	
Alabanda	Carbunculus

REGION	STONE (*best stones found in this region)
Arabia	Adamas Callaina Chrysolithus Paederos Sandastros Sarda Sardonyx
Asia Minor	Crystallum
Assos	Sarda
Armenia	Sardonyx
Black Sea	Berullus
Cappadocia	Iaspis
Chalcedon	Iaspis Smaragdus
Cyprus	Adamas Amethystus Cyanus Crystallum Iaspis Paederos
Galatia	Amethystus Paederos
Lesser Armenia	Amethystus
Miletus	Carbunculus
Petra	Amethystus
Pharon	
Phrygia	Iaspis
Pontos	Chrysoelectrum Paederos
Sardis	Sarda
Scythia	*Cyanus Sucina
River Thermedon	Iaspis
Thrace	Paederos
<b>AFRICA</b>	
Carthage	Carbunculus
Coptos	Smaragdus
Egypt	Amethystus Carchedonia Cyanus Paederos Sarda Sucina
Ethiopia	Adamas Carbunculus Chrysolithus Sucina
Garamantic	
Nasamones	Carchedonia



REGION	STONE (*best stones found in this region)
Nile	Nilion
Numidia	
Sicyon	Sucina
Syrtis	Carbunculus
Thebes	
<b>GREECE</b>	
Attica	
Chios	Carbunculus
Corinth	Carbunculus
Crete	
Levas	
Macedonia	Adamas
Orchomenos	Carbunculus
Paros	Sarda
Philippi	
Siberus River	Nilion
Sicyon	
Taygetos Mnts.	
Thasos	Amethystus Paederos
Thesprotia	Anthracitis
Thoricus	
Trachis	
Troezen	Carbunculus
<b>ITALY</b>	
Alps	Crystallum
Adriatic	Sucina
Liguria	Anthracitis Sucina
Po	Sucina
<b>WESTERN PROVINCES</b>	
Ammaeensian mnts.	Crystallum
Britannia	Sucina
Germania	Sucina
Lisbon	Carbunculus
Massalia	Carbunculus
Prussian Coast	
Spain	Chrysoelectrum
<b>FAR NORTH</b>	
Island Glaesaria (and other northern islands)	Sucina



In this chapter I will explore the intersection between medicine, magic, and gems in Book 37 of the *Naturalis Historia*. In order to introduce this topic, I must first establish how the Romans perceived magic and medicine and how this affects Pliny's perspective. In Latin Literature, the line between *medicina* and *magia* is often ambiguous and flexible. As attitudes towards magical practices shifted from era to era and from author to author, medicine was variously considered either a separate practice from magic or a branch of magic more reputable than erotic magic or *ueneficium*. In the republican era, *mala carmina* that caused harm to individuals and their property were considered separate from the magic that intended no harm;<sup>32</sup> yet by the first century CE Pliny was using the term *magia* to denote magical practices, a Greek term that refers to the combination of medicine, astrology, and divination (Graf 1997 53, 56). Pliny argues that magic *natam...e medicina*, "was born from medicine," yet it incorporated—*blandissimis desideratissisque promissis*, "with the most seductive and hoped for promises"—the practices of *religio* and *mathematica*, for, he adds, everyone desires to learn his own future (30.2.1-2, 4-10). Pliny, then, characterizes magic as the unfortunate result of humankind's desires for quick cures and easily accessible answers; this is an inevitable outgrowth from medicine, particularly herbal *remedia*, which were often accompanied by ritual incantations that, Pliny states, *in uniuersum...credit uita*, "humankind believes in universally" (28.10.8-9). Indeed, despite the theoretical moral difference between *magia* and *medicina*, it is, on a practical level, difficult to distinguish between magical and medical cures, and it is equally difficult to distinguish between the cures Pliny condones and those he vilifies (Rives 2010 62; Richlin 1992 234). As Jones points out, the difference is one of perspective: cures that seem magical from the modern perspective might have appeared simply "part of the cure" to the ancient practitioner (1957 459). Therefore,

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<sup>32</sup>cf. *XII Tabulae* VIII.Ia-b

when we approach Pliny's text from an internal perspective, the strongest method of distinction between a magical and a medical *remedia* is Pliny's attitude towards the *remedia*.

Pliny's attitude towards *magia* is easy to determine. He establishes, from the beginning of his discussions on the subject, that magic is a fraudulent practice, and that the Magi—experts on magical lore—disguise harmful and persuasive magical practices as medicine or religious rites (30.1-2; Dickie 2010 85; Riess 1896 77). Yet despite his attitude towards magic, the *Naturalis Historia* is one of the most rich sources of information on Roman magic, and it is our richest source of information on Roman folk medicine, with the facts, as Scarborough numbers them, reaching over thirteen thousand (1986 62; Jones 1957 460-461). Indeed, as Rives points out, he uses the term *magus* more frequently than any writer before him (2010 61). In addition, despite the skeptical eye with which, we will see, he viewed magic, he regretfully imbues the magical *ars*—a term he is the first to employ in regards to magical practices (Rives 2010 61)—with an unprecedented amount of influence and importance. In his introduction to magic in Book 30, he states, *auctoritatem ei maximam fuisse nemo miretur*, “no one would be amazed that it has had the greatest *auctoritas*” (30.1.6-7). *auctoritas* here is, as often, a loaded word, and can be translated as “influence,” or, more likely, “esteem,” referring to the widespread popularity of magic amongst all nations which he will later discuss. In addition, he writes that the three *artes* encompassed within *magia*—*medicina*, *religio*, and *mathematica*—are the three *imperiosissimae* (“most powerful” or “most commanding”) practices to hold sway over the human mind (30.1.8). This word is also particularly loaded in the *Naturalis Historia*, considering, as we have previously discussed that the text as a whole can be read as a discussion of the world as *imperium* (2003 43). Considering the importance of *imperium* to Pliny, the use of the word *imperiosissimae* here may be an attempt to establish that these *artes* are interpretable as practices important to the establishment of empire; yet these practices become dangerous to humankind when, usurped by *magia*, *inrepsisse uelut altiore[m] sanctiore[m]que medicinam*, “they insinuate themselves as a higher and holier form of

medicine” (30.2). Indeed, Fear argues, Pliny’s praise of the suppression of magic amongst the Druids in 30.13 is representative of his desire to witness the civilizing of mankind (2011 30-31).

Following his introduction to magic as a practice, Pliny relates his understanding of its history. *Magia*, Pliny claims, was passed down from the Eastern *magi*, particularly the Persian master Zoroaster, who, he believes, was responsible for its invention (30.2; Graf 1997 51). This seems to have been the accepted theory; Apuleius, in the *Apology*, as Graf notes, defines *magus* as the Persian word for *sacerdos*, “priest” (2002 93; 26.7). In addition, as Rives points out, Pliny associates *magia* with a great number of locations outside Italy, including areas of Greece, the Near East, and the Western Empire (2010 69; Scarborough 1986 59). Although he acknowledges the presence of magic in Italy and the Twelve Tables, he makes no claims that magic had any Italian origin. While he acknowledges the universality of magic amongst nations unknown to one another (30.13.4-10), his description of the spread of magic moves from East to West, underscoring his claim about the Persian origin of the craft. After his discussion of Persian magic, he explains that learned Greeks, including Pythagoras, Empedocles, Democritus, and Plato, *ad hanc discendam nauigauere exiliis uerius quam peregrinationibus susceptis*, “sailed off to learn the craft, actually going into exile rather than on journeys” (30.9.1-3). From here he acknowledges the existence of magic amongst Italian tribes, followed by description of magic in Britain (30.13). Here we can trace a predominant theme in the *Naturalis Historia*: the inherent power and danger of Eastern practices that compete with Rome and, particularly, the Roman state. *magia* as a practice can be seen as a form of mental, rather than physical, *luxuria*, which, for Pliny, is defined as the perversion of *ratio* and *natura*, a perversion inherent in magical practices (Carey 2003 77).

Thus Pliny establishes in Book 30 the background for the magical practices that comes to be relevant in his discussion of gems in Book 37. Here we encounter the collision, then, of two forms of *luxuria*: gemstones and magic. We can see that, in both the *Naturalis Historia* as a whole

and Book 37 specifically, Pliny has a simple goal in mind when tackling the subject of magic. At the beginning of Book 30 he states this goal in terms of his discussion of magic in general:

**magicas uanitates** saepius quidem antecedente operis parte, ubicumque causae locusque poscebant, **coarguimus** detegemusque etiamnum. in paucis tamen digna res est, de qua plura dicantur, uel eo ipso quod fraudulentissima artium plurimum in toto terrarum orbe plurimisque saeculis ualuit.

(30.1.1-6)

Indeed, in the previous section of my work I often refuted the fallacies of magic, whenever the situation and place demanded it, and I will continue to cover them, although in a few situations the matter is such that more should be said regarding it, even because this most fraudulent of arts holds the most strength in the whole world and in all ages.

And again, in Book 37, he repeats this goal as it specifically pertains to gemstones:

nunc gemmarum confessa genera dicemus ab laudatissimis orsi, nec uero id solum agemus, sed etiam maiore utilitate uitae **coarguemus Magorum infandam uanitatem**, quando uel plurima illi prodidere de gemmis ab medicinae blandissima specie ad prodigia transgressi. (37.54)

Now I will speak about the acknowledged types of gems, beginning from the most praise-worthy, and I will not only do this, but also, for the greater benefit of mankind, I will refute the unspeakable fallacy of the Magi, since they have published many things about gems, crossing over from the most seductive façade of medicine towards the supernatural.

Pliny uses the same verb in these two statements, *coarguo*, “refute,” and he reiterates the phrase *uanitas magorum*—which Rives calls his “leitmotiv” in his discussions of magic (2010 63). This indicates that his attitude towards magic and the Magi will be consistent between Book 30 and Book 37. In other words, he will approach the information gathered from the writings of the Magi with distrust and skepticism. Again he clothes *magia* with a *blandissima* appearance, the same adjective he used to describe the false promises of the Magi in 30.2.4. Likely his choice of this word was deliberate not only to mirror his statement in Book 30, but also to remind his readers

that, like gems themselves, the magical remedies have an attractive façade, but are in reality forms of *luxuria* that offer nothing except *uanitas*: “fallacy,” “emptiness,” “deception.”

Gems in antiquity found their most common magical application in the creation of amulets (Ogden 2002 261). Stones used in amulets were often made into intaglios or inscribed with formulas that were thought to open a connection between the wearer and the magic of the amulet (Cruse 2004 54-55). Pliny, for the most part, lists the magical benefits of stones without specifying how the stone should be used. However, when we consider the stones which he does specify as useful in the form of amulets, we can see a pattern:

Stone	Effect
amethystus as amulet with baboon hairs	protection from spells
aspisatis as amulet with camel dung	cure for enlarged spleen <sup>33</sup>
baroptenus as amulet	is unnatural
chryselectrum as amulet	cure for fever and diseases
galactitis as amulet	results in flow of saliva in babies (important protection against bacteria)
sucina as amulet	beneficial to babies
as liquid or amulet	remedy for strangury and madness <sup>34</sup>

All of these effects are beneficial to the wearer, either as a cure or as protection, with the exception of *baroptenus*, which Pliny specifically states *adalligata proicitur ueluti portentosa*, “is rejected as an unnatural amulet” (150). Presumably, it is not used due to its unfavorable results. In general it seems that the stones used as amulets are meant for the protection of the user. However, amulets tread a thin line between *medicina* and *magia*, and Pliny’s trust in the amulet as an acceptable cure varies. He makes no arguments against *galactitis* or against Callistratus’ claims

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<sup>33</sup>Pliny cites Democritus (ca. 460 BCE- ca. 361 BCE)

<sup>34</sup>Pliny cites Callistratus (unknown)

regarding *sucina* and *chryselectrum*, yet he attributes the supposed uses of *amethystus* to the *Magorum uanitas*. In general, Pliny seems to have been suspicious of amulets, perhaps due to the common addition of inscriptions in the form of magical formulas, which he claimed were useless (28.10; Versnel 2002 106).

The stones that were consumed after being powdered conform to a pattern as well:

Stone	Effect
chryselectrum	
powdered and mixed with honey and rose oil	cures afflictions of ears
powdered and mixed with Attic honey	cures weak sight
powdered or swallowed with mastic in water	cures afflictions of stomach
iritis	
powdered and burnt	cures ichneumon bites <sup>35</sup>
alabastris	
burnt and pounded with rock salt	cures bad breath

Each of these stones is medically useful when applied as a powder. Although, from a modern perspective, some of these cures might appear to fall under the category of folk magic, Pliny does not deny any of these cures outright, and appears to consider them useful as *medicina*, although he never employs this term.

In other cases, the gemstones were applied locally to certain areas of the body in order for an effect to be achieved. *smaragdus* and the Indian *achates* benefit the eyes when they are observed (63, 140); when the Indian *achates* is placed in the mouth it allays thirst (141); *chelonia* and *hyaeniae*, when placed on the tongue, grant the users the ability to predict the future (168, 155). With *chelonia* and *hyaeniae* we see a shift from *remedia* to magical benefits, and with it a shift in Pliny's attitude. He adds the caveat *si credimus*, "if we are to believe this," to his explanation of the powers of *hyaeniae* (168) and, regarding *chelonia*, he claims that his information comes *Magorum mendaciis*, "from the lies of the Magi" (155).

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<sup>35</sup>Pliny cites Orus, or possibly Horus, a king of Assyria



As we have seen, the phrase *uanitas Magorum* is common in the *Naturalis Historia* (Rives 2010 63). I have found that this is a variation of a formula Pliny repeats several times within Book 37 alone:

*Magorum* + [noun]

Variations of this formula include *uanitas Magorum* (54, 124), *mendacia Magorum* (155, 192), *inpuentia Magorum* (165), and *insidiae Magorum* (169). In Book 37, according to Pliny, the Magi display “fallacy,” “lies,” “shamelessness,” and “trickery” in order to disguise their *magia* as *medicina*. The adjectives Pliny uses to discuss the opinions of the Magi are telling as well. When he introduces the topic of the *Magorum uanitas*, which we compared to the beginning of Book 30 above, he refers to it as *infandum*, “unspeakable” (54). Employing a paradoxical *praeteritio*, Pliny makes a promise to continue to speak about the (unspeakable) fallacy of the Magi. It is not until section 192 that he decides his job is done. Using the same verb he employed in his introduction to magic in Book 30 and in 37.54, *coarguo*, he claims, *nobis satis erit in his coarguisse dira mendacia Magorum*, “it will be enough that I have refuted here the detestable lies of the Magi” (192.7-8). Like *infandus*, *dirus* is a loaded adjective that connotes perversion of the natural order; the substantive *dirae* was used to refer to bad omens or curses, or even Furies themselves.<sup>36</sup> Again, the perversion of nature and reason inherent in these adjectives connects the Magi to other examples of eastern *luxuria*.<sup>37</sup>

Overall, Pliny has few discursive sections on magic in Book 37. Every mention of the Magi is either in a formulaic phrase such as those we have seen above, or else introduces a claim that the Magi have made regarding the use of a stone.<sup>38</sup> His discussions of the uses of stones in

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<sup>36</sup>*OCD* s.v. *dirae* 1-2; *Dirae*.

<sup>37</sup>See Chapter Three.

<sup>38</sup>Cf 37.135.7, 144.6, 145.6, 147.4-5, 156.2, 185.6.

magical practices are all brief and generally tangential, often accompanied by a claim of disbelief (those entries marked with “F” in fig. 9). Yet Pliny’s discussion of magic in Book 37 is valuable for its very existence—despite his skepticism about the teachings of the Magi, he made the choice to include a great number of magical uses for stones in this book, providing us with a thorough, though not systematic, compendium. Book 37, then, provides us with insight into both the specific uses of gemstones in magic and medicine as well as insight into the categorization of the uses and effects of gemstones. Pliny does not make any distinction between the medical and magical uses of gems, and instead relies on his own judgment, and often falls back on his disapproval of the eastern Magi, to determine the usefulness or truthfulness of the effect.

Regarding the charts below, I have attempted to systematize Pliny’s information according to the effects each stone is said to produce rather than dividing them according to medical or magical uses, since Pliny himself does not make this distinction. The categories of *magia* and *medicina* that I have found consistent in Book 37 are as follows: stones that provide cures, stones that provide protection and benefits, stones that have harmful effects, stones whose effects are preventative, stones that provide prophetic and religious benefits, stones that affect the natural world, and stones that provide political and military effects. These categories bring up some points worth mentioning.

For one, most of these cures and benefits are not specifically exclusive to a particular gender, yet the ones that are specifically relevant to women (*galactitis*, *paneros*, *baroptenus*, and *antipathes*) lack the distinctively unappealing nature that most of Pliny’s cures for women are known for, as Amy Richlin, in her article *Pliny’s Brassiere*, discusses at length.<sup>39</sup> This is possibly due to the concise manner with which Pliny deals with the descriptions of all the medical and

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<sup>39</sup>Cf. Richlin, Amy. “Pliny’s Brassiere.” In *Sexuality and Gender in the Classical World: Reading and Sources*, by Laura K. McClure, 225-252. Oxford: Blackwell, 2002.

magical effects of stones in Book 37, yet there are some further implications. Despite the fact that most of the cures are ungendered explicitly, there are quite a few stones whose benefits are implicitly masculine. Everything under the category of “Politics and War,” and, most probably, in practical application, everything under the category “Prediction, Divination, and Religion” can be seen as specifically beneficial to men. While gemstones in Book 37 are not, on the whole, considered male, they are useful within the male sphere. Pliny’s sources consider them both useful at controlling excessive bouts of masculinity (*androdamas*, “the man-tamer,” 144), as well as encouraging violence and discord (*sideritis*, 182; *ceraunia* 135). In addition, several stones are helpful within the political world, a world relatively unknown to women. *atizoe* is beneficial at the installation of kings, *haematitis* influences lawsuits and trials, as well as battles, and *iaspis* encourages public speaking skills (147, 169, 118). When we look back at the stones that are beneficial to women, we can see they are both related to childbirth: *galactitis* helps the flow of milk in wet-nurses, and *paneros* aids in child-bearing (162, 178). The other two stones mentioned above as relating to women are not specifically beneficial to women: *baroptenus* causes *portentosa*, possibly “unnatural births,” and *antipathes* guards against witchcraft—a female-dominated occupation (150, 145). This is another case in which the paradoxical dichotomies of gemstones becomes apparent: they are symbols of Eastern *luxuria*, yet they contain unparalleled *auctoritas*; they are a subject on which women are considered authorities (85), yet they provide the most benefits to the male sphere.

fig. 9: Stones with medical and magical properties in Book 37

**Cure**

sucina (liquid, amulet)	strangury and madness <sup>40</sup>
chryselectrum	
amulet	fever and diseases
powdered and mixed with honey and rose oil	afflictions of ears
powdered and miced with Attic honey	weak sight
finely powdered or swallowed with mastic in water	afflictions of stomach
lyncurium	
liquid	bladder stones (F)
observed or swallowed with wine	jaundice (F)
adamas	poisons, frenzy, fear
smaragdus	
observed	over-strained eyes
iritis	
powdered and burnt	ichneumon bites <sup>41</sup>
achates	
corolloachates, Sicilian, and Indian achates	spider and scorpion bites
Egyptian and Cyprian achates and achates that resemble lions' pelts	scorpion bites
Indian – placed in mouth	thirst
acopos	
heated with oil and used as anointment	fatigue
alabastris	
burnt and pounded with rock salt	bad breath
androdamas	violence in men
arabica	pain in sinews
aspisatis	frenzy
amulet with camel dung	enlarged spleen <sup>42</sup>
apsyctos	Cold
daphnea	epilepsy <sup>43</sup>
haematitis	diseases of the eyes and liver (F) <sup>44</sup>
icterias	jaundice
tecolithos	
licked	breaks and expels kidney stones
<b>Protection and Benefits</b>	
sucina	benefits babies and good for people of any age <sup>45</sup>
amethystus	

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<sup>40</sup>Pliny cites Callistratus (unknown)

<sup>41</sup>Pliny cites Orus, or possibly Horus, a king of Assyria

<sup>42</sup>Pliny cites Democritus (ca. 460 BCE- ca. 361 BCE)

<sup>43</sup>Pliny cites Zoroaster (unknown)

<sup>44</sup>Pliny cites Zachalias of Babylon, who wrote a book on gemstones with magical properties that was dedicated to King Mithridates (Dickie 2001 119; King 1867 2)

<sup>45</sup>Pliny cites Callistratus (unknown)

amulet with baboon hairs  
achates  
Indian – observed  
unknown type  
amphidanes  
heliotropium  
mixed with the plant and incantations are  
spoken  
galactitis  
amulet  
molochitis  
paneros

### **Harmful Effects**

galactitis  
placed in mouth  
baroptenus  
amulet  
polythrix

### **Prevention**

sucina  
molochitis  
amethystus  
with incantation  
achates  
Persian  
Persian – burnt and attached to hairs of lion's  
mane  
antipathes  
dionysias  
glossopetra  
gorgonia  
dendritis  
buried beneath a tree being felled

### **Prediction, Divination and Religion**

astriotes  
cinaediae  
chelonia  
placed on tongue after mouth is rinsed with  
honey at certain times  
chelonis  
chloritis  
placed in iron bezel  
erotylos  
eumeces

from spells

benefits the eyes  
invisibility in athletes  
increase of gold

invisibility (F)

provides continuous flow of milk in wet-nurses  
flow of saliva in babies  
protects children  
helpful in childbearing<sup>46</sup>

causes memory loss

unnatural births (not used)  
causes one's hair to fall out

tonsillitis and throat problems  
danger  
intoxicaation  
hail and locusts

household discord  
storms and waterspouts

witchcraft  
intoxication  
controls storms  
lightning bolts and whirlwinds

the dulling of axes

possesses magical merits  
predicts sea conditions

ability to predict future

prophesies

miracles  
divination<sup>47</sup>  
causes oracular dreams

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<sup>46</sup>Pliny cites Metrodorus of Scepsis (c. 145 BCE- 70 BCE), a counselor of King Mithridates, who is quoting a poem (King 1867 2)

<sup>47</sup>Pliny cites Democritus (ca. 460 BCE- ca. 361 BCE)

eumithres  
glossopetra  
hammonis cornu  
heliotropium  
    in vessel of water and struck by sunlight  
hyaeniae  
    placed under the tongue  
nebritis  
ombria  
    when placed on altar  
pontica  
zoraniscaea  
anancitis  
  
synochitis

### Natural Effects

achates  
    Persian – burnt and attached to hairs of lion’s  
    mane  
brontea  
    when it falls from thunderclouds  
chelonis  
    type sprinkled with gold when placed in  
    boiling water with scarab beetle  
liparea  
    fumes when burnt

### Politics and War

amethystus  
atizoe  
goniaea  
haematitis  
  
    in an ointment  
iaspis  
sideritis  
ceraunia

used in religious rites  
used by moon-diviners  
causes prophetic dreams  
  
detects solar eclipses  
  
ability to predict future  
sacred to Liber  
  
prevents offerings from being burnt  
regarded as a sacred object  
used by the Magi  
used in water divination to conjure visions of the  
divine  
holds inside it the shades of the dead after they’ve  
been called up from below (*teneri umbras inferum*,  
192).

stops flow of rivers  
  
extinguishes lightning fires  
  
storms  
  
attracts animals from their hiding places  
  
helpful at the supplications of kings  
helpful at the installation of kings  
brings punishment upon enemies  
can influence lawsuits and trials (F)<sup>48</sup>  
helps in battles  
  
provides public speaking skills (F)  
causes people to quarrel when brought to a dispute  
attacks upon fleets and cities

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<sup>48</sup>Pliny cites Zachalias of Babylon

## Concluding Thoughts: Gems as the Embodiment of Nature

Until as recently as the last couple of decades, scholarship on Pliny the Elder was concerned with, primarily, two avenues of research: 1) identifying the accuracy of Pliny's facts and 2) identifying his sources. The underlying attitude demonstrated by the interest in these aspects of the *Naturalis Historia* was that Pliny's work was valuable only as much as it is accurate, and only as much as it provided us with information about the authors whose works Pliny referenced. Recently there has been more interest in examining the value of the *Naturalis Historia* beyond these relatively straightforward pursuits—pursuits that underplay the literary and cultural value of the work. The focus of modern scholarship has evolved towards two new goals: first of all, the placement of the work and the author within the cultural context of late 1<sup>st</sup> century CE Rome and, secondly, the acknowledgement of the purposeful and designed nature of Pliny's text. The leading scholars following this approach, particularly Mary Beagon, Sorcha Carey, Aude Doody, and Trevor Murphy, have provided valuable studies of the *Naturalis Historia* as a whole that focus on the intersection between culture, empire, nature, and text, and how we can read the *Naturalis Historia* as a window onto the outlook and worldview of Pliny in particular, as well as his contemporary Roman elite. Following in the footsteps of these scholars, I have approached Book 37 of the *Naturalis Historia* as a deliberately structured text that is informed by its cultural context.

My methodology for this project involved careful readings of the book, with special attention paid to the patterns hidden under the surface of Pliny's occasionally convoluted prose; I was particularly interested in structural patterns and linguistic choices that reveal hierarchies. I considered in particular several questions that appealed to the most prominent areas of concern for the book:

1. How is Book 37 structured and what does this reveal about the text?
2. What is revealed by the lexical choices Pliny uses to describe the colours of gems?
3. What is the attitude in the text towards the world outside of Rome itself and how does Pliny use his discussion of the importation of gems to express this?



4. What is the attitude in the text towards magic and medicine and how does Pliny use his discussion of gems to express this?

The answer to these questions are as follows:

1. Book 37 is divided carefully according to a series of hierarchies that express each gem's usefulness to mankind.
2. Pliny's colour terminology is deliberate and precise.
3. Pliny uses his discussion of the importation of gems to express his disapproval of the *luxuria* of the empire and its corrupting influence on Rome.
4. Pliny uses his discussion of gems as magical and medical objects to express his disapproval of foreign spiritual and healing practices and, again, of their negative effect on Roman culture.

When we consider the trends in modern scholarship towards understanding the cultural context of the *Naturalis Historia* and towards the recognition of the text as a legitimate and purposeful piece of prose, we can see how the results from these areas of inquiry are relevant. The text is carefully and deliberately written and structured according to a somewhat contradictory narrative that explores gems in terms of their roles as beneficial vs. detrimental, expressions of expansion vs. decline, and agents of cure vs. contamination. These dichotomies, which are relevant throughout the whole of the *Naturalis Historia*, become particularly important in Book 37, since it is the final book of the entire work. Gemstones represent, for Pliny, nature itself. As we have seen, he considers them to be the form *in artum coacta rerum naturae maiestas, multis nulla parte mirabilior*, "into which the greatness of nature is gathered into the tightest boundary, in no part more wondrous to many" (1). Gemstones hold in their narrow limits the entire *maiestas* of nature—a phrase that might imply nature is, in a way, an empire of its own;<sup>49</sup> for this reason they

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<sup>49</sup>*OCD* s.v. *maiestas* 2: "the majesty of the people or state, sovereignty"

are *mirabilior*, “more wondrous,” yet also, as we have seen, more prone to causing corruption when treated as *mirabilia*. Gemstones are, then, an appropriate topic for the final book of the work: they are the ultimate expression of both the best and the worst aspects of nature and culture, and embody what is perhaps the most important theme in the entire book: the interaction between culture and nature—the mutual ability of these forces to both corrupt and benefit one another.

Pliny’s final purpose in Book 37, then, is to acknowledge gems as the embodiment of *diuina Natura* and to describe their usefulness to humankind, while simultaneously cautioning the Roman audience against the corruption and destructive power of the outside world. Gems, Pliny argues, can provide helpful *remedia* and can carry a level of *auctoritas* that imbues them with a value beyond any monetary worth; yet, at the same time, they are foreign objects that can drive men towards unnatural acts of extravagance. As the final chapter in the *Naturalis Historia*, Book 37 concludes the entire narrative by deliberately casting gems, contradictorily, as examples of the most dangerous and, at times, most helpful and sublime aspect of nature.

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