

The language of Pliny the Elder

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1. Introduction

Gaius Plinius Secundus (ca 23 A.D. – 70) was a prolific writer of whom *Naturalis Historia* ('an account of natural phenomena' – OLD s.v.) is the only surviving complete work¹. It was composed between 48/9 – (cf. *Nat.* 10.121) and 77. In his dedicatory preface to the future emperor Titus Pliny explains his aims and methods clearly, though perhaps more modestly and in a more topical fashion than he actually looked at his task himself (Howe 1965). He claims to be the first to present a work of this kind² and observes that such a work has its own requirements and limitations³, especially with the kind of audience in mind he is writing for⁴ and his endeavour to write a work that may be consulted in a convenient way⁵, manifested by cross-references, repetition of topics that are examined from different angles, and the table of contents in book 1⁶.

Although Pliny's own observations on linguistic features of his work play a role in studies of his language (for example in Gaillards work on *breviloquentia* (1904)) and in Önnersfors' (1956) first chapter) the verdicts on his style are primarily based on a comparison

¹ There are also fragments of his *dubii sermonis libri*, collected in A. Mazzarino's *Grammaticorum Romanorum Fragmenta* (1955)

² 'Nemo apud nos qui idem temptaverit, nemo apud Graecos qui unus omnia ea tractaverit.' (*praef.* 14).

³ 'Nam(libri) nec ingenii sunt capaces, quod alioqui in nobis perquam mediocre erat, neque admittunt excessus aut orationes sermonesve aut casus mirabiles vel eventus varios, iucunda dictu aut legentibus blanda sterili materia: rerum natura, hoc est vita, narratur, et haec sordidissima sui parte ac plurimarum rerum aut rusticis vocabulis aut externis, immo barbaris etiam, cum honoris praefatione ponendis.' (*praef.* 12-3). (See Howe 1985). For similar remarks cf. *Vitr.* 5 *praef.* 2-3 and Wenskus (1998: 229), who may be to cynical in referring to 'praefatio-Topik'.

⁴ 'Tum possem dicere: 'Quid ista legis, Imperator? humili vulgo scripta sunt, agricolarum, opificum turbae, denique studiorum otiosis.' (*praef.* 6) (See Nikitinski 1998)

⁵ 'Equidem ita sentio, peculiarem in studiis causam eorum esse, qui difficultatibus victis utilitatem iuvandi praetulerint gratiae placendi, id que iam et in aliis operibus ipse feci et ...' (*praef.* 16).

⁶ Pliny refers to Valerius Soranus as his predecessor in offering a table of contents (*praef.* 33). Tables of contents were common in Latin agricultural manuals (Cato, Varro, Columella). See Christmann (2003: 133-6). For Columella see Fuhrmann (1960: 164, n.1). On the organizational qualities of Pliny's work see Naas (2002: ch. 4 'La mise en forme de l'inventaire').

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with Ciceronian and similar standards⁷. So: “Pliny is ... an aspirant to style who could hardly frame a coherent sentence” (Goodyear 1982: 670, continuing Norden’s famous judgment [1909: I, 314-8] “Plinius hat es einfach nicht besser gekonnt”). More sympathetic are specialists on Pliny like Campbell (1936), Healy (1987, 1999: 79-99), Schilling (1978: 273, n.3), Serbat (1986), but also von Albrecht (1994: II, 1003-11).

Recent time has shown a reappraisal of the aims, requirements, and merits of types of texts whose main function is descriptive or expository⁸. In Hoffmann *et al.* (edd.) (1998), for example, there is a chapter (V) on the “postulates” for “Fachsprachen: languages for special purposes”, including the need to be factual and accurate (Exaktheit), to be not too precise or technical (Vagheit), to be explicite (Explizitheit), to be brief (Ökonomie), to be anonymous (Anonymie), and to be clear (Verständlichkeit), which all have to do with the interaction between the author and his audience. Clearly, some of these postulates were in the mind of Pliny and other “technical” authors in the Greek and Roman world (see also Fögen [2003]⁹), with the exclusion, most conspicuously, of the postulate of being anonymous. The elder Pliny is present throughout his work, for some modern scholars another source of irritation¹⁰. “Technical Latin” has received considerable attention during the last decades with De Meo’s survey (1983) of the various disciplines and excellent monographs like Adams (1995) and Langslow (2000). The emphasis in such studies is on vocabulary and terminology. For a – still rather programmatic – integrated approach Van der Eijk’s article (1997) deserves mentioning.

Abstract postulates such as mentioned above, which are not all unique for texts like Pliny’s, together with the properties of the specific subject matter, translate into specific linguistic features¹¹ like – in the case of Pliny – the relative lack of periodic structures. Such structures are ideal when there is a high degree of continuity and coherence of the actions or processes dealt with and of the participants involved, but useless when, for instance, aiming at an orderly description of the localities around the Mediterranean. Who would prefer to have

⁷ Introducing his section on syntax in his prolegomena to his monumental edition of Lucretius Bailey (1947: I, 89) writes: ‘The influence of Cicero in stereotyping the Latin language has been so strong and so lasting that modern students of Latin have been apt to regard his syntax as normal and regular and charge other writers with ‘irregularities’ when they deviate from the Ciceronian norm’.

⁸ An early example of this renewed interest is Huddleston (1971).

⁹ Fögen rightly corrects Wenskus (1998: 300) statements on this issue.

¹⁰ For the use of the first person singular in legal authors and other attitudinal phrases see Honoré (1982: 58-65).

¹¹ See chapter VI in Hoffmann *et al.* (edd.) (1998) for “Systemeigenschaften von Fachsprachen”.

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the four geographical books in Ciceronian periods, especially when pressed for time, instead of in the compact form Pliny has written them in, as in the following example?

- (1) Dein Phoenice; intus autem Samariae (v.l. Samaria) oppida Neapolis, quod antea Mamortha dicebatur, Sebaste in monte, et altiore (*scil.* monte) Gamala. (Plin. *Nat.* 5.70)

The aim of this contribution is to take Pliny seriously in his own right and illustrate a few characteristics of his language in the light of his general aims.

2. Subject matter and linguistic features

Pliny's work covers a broad range of topics, some of which were more accessible for his audience than others, some of which were known in more detail at his time than others, and in some of which human participants were more involved than in others. Apart from Pliny's personal interventions, which are relatively easy to understand for modern readers, it is interesting to compare the treatment of the metal gold in book 33 (mainly a – continuous – story of mankind's use of gold) with the lesser known metals, and his elaborate treatment of the elephant in book 8 (clearly dear to Pliny) with other animals. It therefore might have been more appropriate to use "the languages of Pliny" as the title for this contribution. The important influence of the subject matter on the linguistic features of the text can be illustrated by the internal variation in the *Naturalis Historia* itself, as it appears from the use of certain particles, subordinators, and adverbs in his geographical books (3-6) and in his two books on stones (36-37). It will not surprise that the adverbs *dein* and *deinde* are relatively frequent in the geographical books and relatively rare in the books on stones (out of a total of 430 for the whole of Pliny, 142 are in the geographical books and 22 in the books on stones): it follows from the content of the geographical books and the way in which Pliny decided to arrange the data. Example (1) above illustrates this use¹². Pliny uses *dein* more often than *deinde* (228 : 202), and, interestingly, this is even more marked in his geographical books (87 : 55). Tacitus, by the way, is the only Latin author with a stronger preference for *dein*. See TLL s.v. *deinde*, 407 for frequency data on other authors¹³. The geographical books do not lend themselves very much to particles, adverbs and subordinators that explicate logical or causal relations between succeeding clauses, sentences and paragraphs or invite the reader to consult his pre-existing knowledge of the matter at stake or to agree with the conclusions of the author.

¹² For the iconic presentation of data in geographical accounts see Janni (1984).

¹³ The cd-rom of Bibliotheca Teubneriana Latina has a few instances of *dein* less than the TLL.

Enim is an interactional particle that appeals for “consensus” between an author and his reader (‘you know’) (Kroon 1995: 202ff.). There is not much room for such a kind of appeal in a description of mainly unknown cities, rivers, countries, etc. Hence only 12 instances of *enim* in the geographical books (on a total in the *Naturalis Historia* of 605). Since every Roman had at least some knowledge of stones the 45 instances of *enim* in the books on stones are not surprising. The low frequency (11 in the geographical books out of 199) of *ergo*, also an interactional particle (Kroon 1989, Krylová 2001), is not surprising either. Along similar lines the relatively low frequency in the geographical books of the intersentential connectors *nam* (12 out of 252) and *igitur* (2 out of 35) can be understood as a consequence of the subject matter and the way Pliny organized it, and so can the low frequency of the causal adverb *itaque* (6 out of 160) and of the causal subordinators *quoniam* (15 out of 504) and *quia* (8 out of 141)¹⁴.

Although Pliny views nature clearly from the perspective of its meaningfulness for human beings, his text is nevertheless the largest, mainly non-anthropocentered work in Latin¹⁵, and therefore a welcome source for statistically “deviant” linguistic structures. Just two examples: The most frequent, and therefore best known, instances of the so-called sympathetic dative involve human beings being affected physically or mentally, often by some other human being. An example is (2).

(2) actor *mihi* cor odio sauciat (Pl. *Bac.* 213)

Pliny, however, has instances like the following, with non-human and non-animate entities affected (see also Önnersfors 1956: 44-5)¹⁶.

¹⁴ It is interesting to see that the mainly adversative particles *sed* (75 out of 1350) and *verum* (12 out of 173) are under-represented in the geographical books as well, as is *tamen* (39 out of 489). *Autem*, which has a different function (Kroon 1995: 269ff.) occurs with average frequency (112 out of 986). *Quidem*, a backward and forward “linking device” (Kroon & Boessenkool forthc.) does not fit well within the type of text of the geographical books either (21 out of 603). The words discussed in this paragraph are also infrequent in Pomponius Mela (BTL-cdrom).

¹⁵ In this context it is relevant to mention the essential difference between Pliny’s books on medicine and those of authors like Celsus. Pliny is mainly descriptive, Celsus rather prescriptive and being prescriptive implies involving human beings.

¹⁶ It is interesting to see that a number of the datives noted by Bailey (1947: I, 92-3) as instances of Lucretius’ remarkable use of the dative instead of the genitive are of this type, e.g. At nitidae surgunt fruges ramiq[ue] virescunt / *arboribus*, crescunt ipsae fetuq[ue] gravantur. (Lucr. 1.251-2)

- (3) (elephanti) Amnem transituri minimos praemittunt, ne maiorum ingressu atterente alveum crescat *gurgiti* (*gurgitis* rec.¹⁷) altitudo. (Plin. *Nat.* 8.11)
- (4) (herbae) *quibus* flos antequam caules exeant (Plin. *Nat.* 1.69)
- (5) Rostra *iis* (*scil.* porphyryonibus) et praelonga crura rubent. (Plin. *Nat.* 10.129)

Likewise Pliny offers us a remarkably broad spectrum of so-called possessive datives, as is shown by the following examples.

- (6) *Tergori* tanta duritia, ut thoraces ex eo faciant. (Plin. *Nat.* 8.124)
- (7) *Tarandro* magnitudo quae *bovi* est, caput maius cervino ... (Plin. *Nat.* 8.124)

3. Economy of expression

I shall now turn to a few features of Pliny's language which are not, or are less, determined by the subject matter he is dealing with. The first one is the omission of in principle obligatory elements from a clause or sentence, because they can be understood from the preceding context. This is a common feature of Latin and especially common for subject constituents that can be retrieved from the preceding clause(s). The following example (8) (if we accept the reading as printed here, with a full stop after *tradidere*) shows this phenomenon ("zero-anaphora", marked by an asterisk *) for an object constituent, but goes further than we are accustomed to in classical authors, because of the intervening relative clause *quem quidam C'C' circuitu tradidere*¹⁸. See also (9), where *Hispaniam* or *eam* must be understood with *comprimentibus*. But really difficult is (10), where *capite* has to be understood twice as part of an ablative absolute construction.

- (8) Ostracine Arabia finitur, a Pelusio L'X'V' p. mox Idumaea incipit et Palaestina ab emersu Sirbonis lacus, quem quidam C'C' circuitu tradidere. Herodotus Casio monti *adplicuit* *, nunc est palus modica. (Plin. *Nat.* 5.68)
- (9) Pyrenaei promunturio Hispania incipit, angustior non Gallia modo, verum etiam semet ipsa, ut diximus, inmensum quantum hinc oceano, illinc Hiberico mari *comprimentibus* *. (Plin. *Nat.* 4.110)
- (10) Invalidissimum urso caput, quod leoni firmissimum. Ideo urgente vi praecipitaturi se ex aliqua rupe *manibus cooperto* * iaciuntur ac saepe in harena *colapho infrecto* * exanimantur. (Plin. *Nat.* 8.130)

Zero-anaphora is a very common feature of Pliny's language and one of his means to avoid *longiloquentia*. Two other techniques, well-known in other "technical" authors up to the present time are the use of nominalisations as in (11) and the substantival use of

¹⁷ The accepted reading is the only possible one. *gurgiti(s)* is a variation on *Amnem* and therefore contains topical ("known") information. With the genitive reading its position in front of its head noun would be difficult to explain, since in that position it would have to be understood as salient, unexpected information.

¹⁸ This clause itself deserves some attention as well. Either we have to assume that *esse* or *fuisse* has been omitted from an AcI construction in which *C'C' circuitu* is a subject complement, as is quite common, or we have to assume that Pliny uses *tradere* as a three place verb with an object complement - or: "predicative accusative" as the OLD *s.v.* 10.c calls it. In either case *C'C' circuitu* is uncommon, though fully grammatical.

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adjectives and present participles, as in (12), a relatively common instance of a “*dativus iudicantis*”, and in (13)¹⁹ and a passive perfect participle in (14).

- (11) Ab hac Aegina liberae condicionis X'V', cuius X'V'TTTT' *praenavigatio* est. (Plin. *Nat.* 4.57)
- (12) Dein *petenti* Melana sinum portus Coelos et Panhormus et supra dicta Cardia. (Plin. *Nat.* 4.49)
- (13) Peracto ambitu Europae reddenda consummatio est, ne quid non in expedito sit noscere *volentibus*. (Plin. *Nat.* 4.121)
- (14) Rabies canum sirio ardente homini pestifera, ut diximus, ita *morsis* letali aquae metu. (‘ Rabies in dogs, as we have said, is dangerous to human beings in periods when the dog star is shining, as it causes fatal hydrophobia to those bitten in such circumstances’ – translation Rackham - Liv. *Nat.* 8.152)

Less easy to understand for the modern reader, but still manifesting the same endeavour to be as economical as possible are the following instances (in addition to the first example with *altiore*) :

- (15) Existimantur in urina attollere crus fere semenstres; id est signum consummati virium roboris. Feminae *hoc idem* sidentes. (Plin. *Nat.* 10.178)
- (16) Mirum esset habitum corpori tam multiplicem dari, mirabilius est *et villo*. (Plin. *Nat.* 8.124)
- (17) Super eam (*scil.* Seleuciam) mons eodem quo alius nomine, Casius, cuius excelsa altitudo quarta vigilia orientem per tenebras solem aspicit, *brevi circumactu corporis* diem noctemque pariter ostendens. (Plin. *Nat.* 5.80)

In (15) understanding a verbal concept, e.g. *faciunt*, will do and in (16) *habitum tam multiplicem dari* can be understood without too much difficulty. More difficult is (17). Here *brevi circumactu corporis* refers to the behaviour of someone who has to be understood with *ostendens* and what goes with it²⁰.

This brings us to Pliny’s use of the cases, which is often difficult to class under the traditional labels. This is partly caused by his endeavour to be as brief as possible, as in ex. (17) above, partly also because the situations he describes are relatively unfamiliar and the use of the cases therefore unfrequent. I start with a number of examples of the ablative.

- (18) ... Zacynthus, aliquando appellata Hyrie, *Cephallaniae meridiana parte* (a C m parte *conj.* Mayhoff) X'X'V' abest. (Plin. *Nat.* 4.54)
- (19) A Peloro mare Ionium ora spectante oppidum Messana civium R. (Plin. *Nat.* 3.88)

In (18) the use of the ablative *parte* with *abesse* instead of the usual prepositional phrase with *ab* is considered suspect. The Thesaurus article (dating from 1900) gives only two

¹⁹ For the substantival use of present participles as a feature of “educated Latin” in general see Adams (1973).

²⁰ A rich source for such instances is Grasberger (1860).

poetic examples of *abesse* with the (separative) ablative in this local meaning²¹. The OLD s.v. 3 ('to be away', 'to be distant') quotes Caes. *Civ.* 3.67.1 *Is locus aberat novis Pompei Castris circiter passus quingentos*. Editors usually add *a*, in the case of Meusel's commentary (1906) even without a comment. In Cic. *Ac.* 1.1 *paulumque cum eius villa abessemus* editors read *ab* with part of the manuscripts (a long defence for *ab* in Reid's commentary of 1886). Instances of *abesse* with an ablative in its meaning 'to be absent from' (e.g. *patria*, so the main manuscripts at Cic. *Tusc.* 5.106) and in its non-literal meanings (e.g. *Id autem tantum abest officio*, so the manuscripts in Cic. *Off.* 1.43) are less unanimously emended, but the overall tendency has been to reject the prepositionless expression in "classical" authors²² or in prose in general. Probably that was one of the reasons for Mayhoff's emendation in his Teubner edition of 1906. Even though Pliny has *abest* with *a(b)* in at least seventy five passages in his geographical descriptions, there are also at least two instances where Mayhoff accepts bare ablatives (5.50 *Inde L'XTT' p. abest Memphis*, 5.114 *Abest Epheso X'V' p., Trallibus eo amplius MMM.*)²³. In Pliny's geographical context, given also the sheer number of expressions, the bare ablative in ex. (18), even though it is perhaps somewhat more harsh than the examples quoted above, need not be considered a real problem and can be accepted²⁴. However, even though this specific instance can be classed to some extent under the traditional label of "separative ablative" it can better be placed in a wider context, viz. the overall variation between bare cases and propositional expressions with bivalent and trivalent verbs, which is much less predictable than the grammarians of the nineteenth century wanted it to be (see Théoret 1982).

In (19) *mare Ionium ora spectante* is translated "on the coast facing the Ionian Sea" by Rackham in his Loeb edition. The normal way for Pliny to say that something is situated "on the coast" is with the preposition *in* (*in ora*, at least some 60 instances). The use of the bare ablative is rare in classical (prose) authors (and often emended, see Kühner-Stegmann [1912: I, 353-4]), and if the bare ablative is used, there is usually some modifier of the noun. I have no parallel for the type of modifier in this text (a participle, governing an object constituent that is separated from its governing participle by the head noun of the phrase and placed in an emphatic position), but there may be no reason to regard this instance as anything else than an extended use of the locative ablative. A completely different line of reasoning could be to say that the whole description is formulated from the perspective of the traveler moving 'along the coast'. The bare ablative is quite normal in such a situation. (The

²¹ TLL s.v. *absum* 208.13 ff. gives only Lucr. 4.408 (unless *nobis* is dative) and Ovid. *Met.* 4.709. Catullus has it 63.59-60 *patria ... abero*?

²² Kühner-Stegmann (1912: I, 353-4) has a number of disputed instances.

²³ In Classical Latin the preposition *ab* is normal with *abesse* when the distance is explicitly indicated (see Kühner-Stegmann 1912: I, 478).

²⁴ Rackham, in his Loeb edition, keeps the manuscript reading in ex. (13), but adds *ab* in 5.114, with very little support from the manuscript tradition.

modifier is still odd, however). A second alternative is to take the phrase as some sort of ablative absolute 'with the coast facing the Ionian sea'. Faced with the need to say something about the coast itself (its orientation: *ora spectat mare Ionium*) and about its function within the sentence as a whole, and the need to be as brief as possible, Pliny formulated it as a participial clause and used the case par excellence for marking adverbial constituents: the ablative. Pliny is very fond of the ablative absolute and uses it in an enormous range of interpretations (Cova 1986). In this analysis, the position of *mare Ionium* is understandable: from Pelorum one might also follow the coast facing *mare inferum/Tyrrhenum*.

We saw this use of the ablative for any kind of additional specification of a situation already in ex. (14) above. It is even more apparent in the following example. The meaning of the italicized text must be that the coasts are oriented in a South-easterly direction, starting from the West, over a long distance (see Desanges in his Budé edition).

- (20) (Africa) Aegypto finitur, nec alia pars terrarum pauciores recipit sinus, *longe ab occidente litorum obliquo spatio*. ('It is bounded by Egypt. No other part of the earth has fewer bays or inlets in its coast, which stretches in a long slanting line from the west.' – translation Rackham - Plin. *Nat.* 5.1)²⁵

It is difficult to class this instance under the traditional labels of the uses of the ablative. Without *longe* and *ab occidente* one might suggest a Manner interpretation, to go with *finitur* (?) or *recipit* (?), but that is not very attractive. Manner adverbials do not normally occur with situations or events without a human instigator. Here, again, Pliny has transformed what he considered accessory information into an ablative constituent. He could have expressed it as an independent sentence, but for reasons of *breviloquentia* he preferred to express it as some sort of an afterthought in the ablative (in more technical terminology, as a Disjunct). Nutting's term "stenographic ablative" (1930) nicely characterizes the way Pliny uses that case.

I add a few other remarkable uses of the ablative.

- (21) (Delos) cingitur V' passuum, adsurgit *Cynthio monte*. (Plin. *Nat.* 4.66)
(22) Ipsa (Creta) abest *promunturio suo* quod vocatur Criu Metopon ... a Cyrenarum promunturio Phycunte C'X'X'V' ... (Plin. *Nat.* 4.60)
(23) Ritus naturae hominem *capite* gigni, mos est *pedibus* efferri. (Plin. *Nat.* 7.46)

Rackham translates (21) in the following way: "It measures five miles in circumference. Its only eminence is Mount Cynthus". The little island of Delos has indeed only one hill (113 m.) and the information as presented by Pliny can be thought of as an answer to the interested reader who wants to know whether there are mountains

²⁵ Dalecamp deleted *longe ab occidente*. For *longe* 'over a long distance' cf. Plin. *Nat.* 3.53 Tiberis ... ne sic quidem ... *longe* meabilis fertur. TLL s.v. 1645.82 ff. I have no good parallel for *longe* in this meaning in combination with an adjective (as it must be here with *obliquo*).

on Delos. The ablative indicates the way in which Delos rises, one might call it an *ablativus modi*, of the type one finds in Virgil, e.g. *Insequitur cumulo praeruptus aquae mons*. (Verg. A. 1.105). Another author in another form of exposition and with more detailed attention for the *mons Cynthius* might have chosen something like *in ea /ibi assurgit Cynthius mons*. But Pliny hurries on to the next island.

In (22) *promunturio suo* specifies ‘at which point’ the distance between Crete and (the promontory of) Cyrene is 125 miles. The same expression is used twice in the immediately following part of the sentence to specify the distance between Crete and Malea, and between Crete and Carpathus (similarly 3.84). The ablative can be labeled *ablativus loci*, answering the question word *ubi*, but it is a remarkable instance of it (see the discussion of ex. 18, above). By maintaining Crete as the subject of the coordinated clauses the information can be given in a very condensed, and still fully understandable, form.

If a sentence such as (23) were given to a modern reader as a translation exercise, it would probably take him a while to realize that this is about being “born feet foremost” (Rackham’s translation). It is also not simple to find a label for this use of the ablative. Still as the closing statement of a section on this phenomenon, introduced by *In pedes procidere nascentem contra naturam est* (see below, ex.30), it is perfectly clear.

In his section “de poetico genere scripturae” Önnersfors (1956: 61-2) deals with Pliny’s frequent and extended use of the *dativus auctoris*. Especially noteworthy is his use of nouns, including some referring to non-animate entities, and other non-pronominal categories.

- (24) Aegaeo mari nomen dedit scopulus inter Tenedum et Chium verius quam insula, Aex nomine a specie caprae, quae ita *Graecis* appellatur, repente e medio mari exiliens. (Plin. *Nat.* 4.51)
- (25) Ab ea X'X'X'V' colonia a Claudio Caesare facta Lixos, vel fabulosissime *antiquis* narrata. (Plin. *Nat.* 5.2)
- (26) *Annalibus* notatum est M. Pisone M. Messala cos. a. d. XIII kal. Oct. Domitium Ahenobarbum aedilem curulem ursos Numidicos centum et totidem venatores Aethiops in circo dedisse. (Plin. *Nat.* 8.131) (see Önnersfors 1956: 61)
- (27) Extra sinum sunt Rhoetea litora, *Rhoeteo et Dardanio et Arisbe oppidis* habitata. (Plin. *Nat.* 5.125) (see TLL s.v. *habito* 2479.77 ff.)

Frequent and extended use of the *dativus auctoris* is a well-known feature of poetry and, later, of Tacitus. Whether in Pliny it has to be regarded as a poetic element, as Önnersfors suggests, remains to be seen. Önnersfors (1956: 69) observes that Pliny has an “*insignem ... varietatem stili, qua appareret eum nec a tecnico et vulgari neque omnino a poetico et oratorio genere dicendi fuisse alienum; quin etiam interdum genera illa composuisse variandi causa.*”, which comes next to saying that he was an individualist choosing whatever suited him best. Scientific texts and

poetry have in common that content words are more important than function words. In poetry there is moreover a certain dislike of monosyllables. These two factors together result for poetry in a relatively low percentage of prepositional expressions. In a text of comparable size Virgil has a relatively high percentage of nouns and pronouns, and 11% of the nouns and noun phrases are marked by a preposition. In Caesar this is 24%. Pliny, in a piece of text dealing with human birth – and therefore more anthropocentered than much of his work – has 18 %²⁶. Since in Latin prepositions are mainly used for optional constituents that are not required by the verb, it follows that an author either has to limit the number of optional constituents and/or use the cases Latin uses mainly for such constituents (ablative and dative) more intensively or find alternative expression types (participles and adjectives, for example). Seemingly poetic elements in Pliny may therefore rather be a result of his sharing with poetry the same communicative goal: concentrate on content.

4. Sentence structure

Periodic structures are very attractive for describing events with a high degree of continuity, as I said above. Take the following transformation into one long period of an entire episode in Livy.

- (28) Quibus (medicamentis) in forum delatis et ad viginti matronis, apud quas deprehensa erant, per viatorem accitis, duae ex eis, Cornelia ac Sergia, patriciae utraque gentis, cum ea medicamenta salubria esse contenderent, ab confutante indice bibere iussae ut se falsum commentam arguerent, spatio ad conloquendum sumpto, cum summoto populo in conspectu omnium rem ad ceteras rettulissent, haud abnuentibus et illis bibere, epoto medicamento suamet ipsae fraude omnes interierunt. (Liv. 8.18.8)

Here ablative absolutes, finite temporal clauses and predicative participles follow each other in the order of the events. The sentence ends with what ultimately proves to be the main clause *suamet ipsae fraude omnes interierunt* with the finite verb in final position.

Pliny is different. Not that he does not make long sentences. See how he expands the information *Nilus originem in monte inferioris Mauretaniae habet* with all sorts of details.

- (29) *Nilus*

²⁶ For Caesar and Virgil see Pinkster (1990a: 42). The section examined in Pliny is 7.43-62 (1005 words). 79 prepositional noun (phrase)s: 349 prepositionless noun (phrase)s. The percentage of nouns and pronouns in Pliny is also in between Caesar and Virgil.

incertis ortus fontibus
 ut per deserta et ardentia et inmenso longitudinis spatio ambulans
 famaque tantum inermi quaesitus sine bellis,
 quae ceteras omnes terras invenere,
originem,
 ut Iuba rex potuit exquirere,
in monte inferioris Mauretaniae
 non procul oceano
habet
 lacu protinus stagnante,
 quem vocant Nilidem. (Plin. *Nat.* 5.51)

There is no chronological order, not necessarily because Pliny was not capable or not interested, but simply because this is a description and not a piece of narrative. The details are filled into a well arranged “main frame” when there is a need for it, at least in Pliny’s eyes. This “main frame” with its subject (*Nilus*) in its required (topical) initial position and the finite verb (*habet*) at the end, is then once more extended with what in Tacitus is called in German a “Satznachtrag”, or in French a “rallonge”, another good example of the “stenographic ablative” (see the discussion of ex. [20]) above)²⁷. Predicative participles, relative clauses, and coordination are the main instruments for the expansion of the main clause. Another technique can be seen in the following example in which lots of details are inserted into a basic sentence *is* (Agrippa) {by various forms of bad luck} *luisse augurium praeposteri natalis existimatur*. The basic sentence is again clearly structured with the subject in the expected (almost) initial position and the finite verb at the end. The various forms of bad luck are asyndetically juxtaposed. Most are in the form of ablative noun phrases; there is one *per*-expression and one so-called dominant participle construction (*exercito aevo*). Note the explicit coordination (underlined) of members belonging to different categories. Twice apposition is the form for further explanations (“What was wrong with Gaius and Domitius?”, “How short did he live?”). Again, there is no room for a chronological structure of all the details.

- (30) (In pedes procidere nascentem contra naturam est, quo argumento eos appellavere Agrippas ut aegri partus (v.l. aegre partos), qualiter et M. Agrippam ferunt genitum, unico prope felicitatis exemplo in omnibus ad hunc modum genitis) – quamquam *is* quoque
 (a) adversa pedum valitudine, (b) misera iuventa, (c) exercito aevo inter arma (d) mortisque adeo obnoxio (v.l. mortesque ac noxia) accessu, (e) infelici terris stirpe omni, sed (f) per utrasque Agrippinas maxime, quae Gaium, quae Domitium Neronem principes genuere totidem faces generis humani,

²⁷ This technique is exploited to a much higher degree by Ammianus Marcellinus. See Bitter (1976: 171-91) and Debru (1992).

praeterea (g) brevitae aevi,
 quinquagensimo uno raptus anno
 in tormentis adulteriorum coniugis socerique
 prae-gravi servitio,
luisse augurium praeposteri natalis existimatur. (Plin. *Nat.* 7.45-6)

The information in these two examples is presented in a very compact form. The building blocks for the sentences are relatively short. They could be produced (and dictated) in one breath and probably could also be interpreted without difficulty when read aloud. The noun phrases in these two examples have a straightforward constituent order, the only - unobtrusive and pragmatically motivated - instance of discontinuity being *quinquagensimo uno raptus anno* in ex. (30). This technique of sentence building might be called “cumulative sentence building”, using a term of Spilman (1933).

Pliny deserves special mention by his remarkably free use of coordination between “building blocks” with different syntactic functions, but with more or less the same type of information²⁸. Just two examples.

- (31) (hippopotamus) Depascitur segetes {destinatione ante, ut ferunt, determinatas in diem} *et* {ex agro ferentibus vestigiis}, ne quae revertenti insidiae comparentur. (Plin. *Nat.* 8.95)
- (32) Dictamnum herbam extrahendis sagittis cervi monstravere {percussi eo telo} {pastuque herbae eius eiecto [*scil.* telo]} (Plin. *Nat.* 8.97)

5. Constituent order

Pliny’s noun phrases are normally “compact”, without intervening constituents not belonging to the noun phrase²⁹. A good example of a complex but still compact noun phrase is (33).

- (33) Haec sita est a Maleae promunturio V' passuum, *ancipiti propter angustias ibi navium ambitu.* (Plin. *Nat.* 4.56)

In the passage of Pliny used above (see note 26) 14 out of 116 noun phrases consisting of two or more (modifier and head) constituents are discontinuous (12%), which looks modest³⁰. Discontinuity of noun phrases (hyperbaton) in Pliny is normally pragmatically motivated, as it is in Caesar and Cicero (See Bolkestein

²⁸ See Pinkster (1990b) for the rules of coordination in Latin. Bodaeus wanted to delete *que* in ex. (32).

²⁹ I disregard constituents like *enim*, *quidem*, etc. for which specific placing rules hold.

³⁰ Roughly the same percentage is found in the passage 8.1-24 (13 out of 131, 12 of them with the modifier preposed and 5 with a verb intervening). Herman (1985, 2003) gives figures for Cicero *Fam.* (15 – 20%), *Tusc.* (30%), *Caes. Gal.* 25%, *Petr.* (narrative parts) 22%; (freedman) 4%. According to him Plautus is in the range of Cicero’s letters. I am not sure that our techniques are similar. In a count of *Cic. Ver.* 5.86-95 with 108 noun phrases I find only 5 instances of hyperbaton, with the modifier always preposed, two with an intervening verb. Adams (1971: 6) notes a decrease of the use of “verbal” hyperbaton in the course of Pliny’s work, after having used it “at the outset ... as an obtrusive mannerism”.

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2001: 246-54 for a summary of the findings on Caesar and Cicero). The first constituent of a discontinuous noun phrase in Pliny is usually a modifier³¹, as in *quingquagensimo uno raptus anno* in ex. (30), and the first constituent is pragmatically salient in its context. In half of the discontinuous noun phrases in the passage used above the intervening constituent is a verbal form (as in the example just mentioned, cf. ex. [20] above)³².

However, Pliny is notorious for examples of discontinuity as the following (see Müller 1883: 7ff. for more examples [some of which are no longer present in recent editions]).

- (34) ... ad Cyrum amnem, Armeniae confinium *atque Hiberiae* (Plin. *Nat.* 6.39)
- (35) Nec *Caesaris dictatoris* quemquam alium recepisso dorso *equus* traditur, idem que similes humanis pedes priores habuisse, hac effigie locatus ante Veneris Genetricis aedem. (Plin. *Nat.* 5.155)
- (36) *Maximus terrae* memoria mortalium exstitit *motus* Tiberii Caesaris principatu, XII urbibus Asiae una nocte prostratis. (Plin. *Nat.* 2.200)

The normal way for expressing two sides of a border is as in Plin. *Nat.* 5.95: *Ide in confinio Galatiae atque Cappadociae*, with the two regions coordinated and placed next to each other. However, discontinuity of two coordinated members is common in all periods of Latin and popular in postclassical and Late Latin (Szantyr 1965: 693). It is difficult to find a pragmatic explanation for it, such as given above. Much more remarkable is (35). This sentence belongs to the section on horses and, more specifically, on special behaviour of horses of famous persons, with Alexander the Great preceding our sentence. It is just normal to find the next famous person, *Caesaris dictatoris*, in (near) sentence initial position and separated from its head constituent *equus*. This is a principle of textual organization we will see in more detail below. (Instead of translating the phrase *Caesaris dictatoris equus* by the corresponding English construction ‘Dictator Caesar’s horse’ we might try to capture the sentence structure as a whole by something like: ‘As for Caesar the dictator, we learn that no one else

³¹ Adams (1971: 12f.) shows that, whereas Cicero uses postponed modifiers as well, this became much less common afterwards. According to him, hyberbaton became a “decorative mannerism” in educated writing, often without a pragmatic motivation.

³² An exception (1 out of 14) is the following example with preposed *imum*: Antiocho regi Syriae e plebe nomine Artemo in tantum similis fuit, ut Laodice coniunx regia necato iam Antiocho *imum* per eum commendationis regnique successionis peregerit. (‘A man of low station named Artemo so closely resembled Antiochus, king of Syria, that the royal consort Laodice after she had murdered Antiochus successfully made use of him to stage a play of her being recommended for succession to the throne’ – translation Rackham - Plin. *Nat.* 7.53). Laodice’s act was indeed a farce.

was accepted on the back by HIS horse'.) What is remarkable and "unclassical" is the number of intervening constituents (a verb with its object and a closely related adverbial), although there are a few instances in Cicero and Caesar³³. Even more remarkable is (36). In its context (speaking about various types of earthquakes) and given its meaning separating *maximus* from its head constituent *terrae motus* would be very normal Latin (e.g. *maximus exstitit terrae motus*). However, splitting up *maximus terrae motus* in the way the text has it (between *terrae* and *motus*) separating it by more than one constituent, which have moreover no close relationship between themselves (as they have in [35] - *memoria mortalium* is a time adverbial) makes things even more remarkable from the "classical" point of view. How are we to assess this? Pliny's word order is not random, because discontinuity occurs where we might expect it from a "classical" point of view. Are we to assume that Pliny still knew when to use the device, but not how? It seems better to assume that in Pliny the constraints on discontinuity are less stringent than in Cicero and Caesar, but that the factors seem to be more or less the same (See Bolkestein [2001: 254-7], also on Petronius³⁴). I should add that instances like (36) are rare in Pliny as well.

It is difficult to give a generalizing statement on Pliny's constituent order at the sentence level, because, as I said before, there are so many different text types in his work. Compare, for example, ex. (1) with (29) and (30). Just to show that Pliny can be very careful in organizing his sentences, I selected one passage of Pliny's section on the functions of medicines obtained from animals (*medicinae ex animalibus*). In *Nat.* 29.29 ff. he discusses natural products of animals, such as wool and honey. From 29.57 onward he distinguishes various types of animals. From 29.106 onward various diseases and physical defects are discussed. The section I have selected is that on the eyes (29.117-32). The text is printed below in a special graphical form.

This section starts with *glaucomata* in the very first position, just as the next section starts with *Aures purgat* (*Nat.* 29.133). They form some sort of heading of their section and can be introduced into the discourse without any special introductory remarks. Given the overall structure of the argument the reader expects sections of this type. Within the section on the eyes the basic ordering principle is "types of animals". This is not feasible with the first type ("dogs"), because it is at the same time the start of the entire section on the eye, but it is quite straightforward with the other types, each subsection starting with an animal belonging to

³³ Adams (1971: 13) gives a few examples of "long" hyperbaton, e.g. Cic. *Ver.* 4.132 *Mihi credite iudices - tametsi vosmet ipsos haec eadem audire certo scio - cum multas acceperint per hosce annos socii atque exterarum nationes calamitates et iniurias, nullas Graeci homines gravius ferunt ac tulerunt quam huiusmodi spoliationes fanorum atque oppidorum.*

³⁴ All instances quoted from Petronius in Bolkestein's article are found in the narrative parts.

that type: *murium* 29.118; *cocleae* 29.118; *viperam* 29.119³⁵; *aquilae* 29.123; *lacertas* 29.129; *aranei* 29.131. It does not matter what syntactic function these words have in their sentence. *Glaucomata* 29.117, for example, is the subject of an embedded accusative and infinitive clause. *Murium* in 29.118 is the deepest embedded constituent in its noun phrase *murium capitum caudaeque cinere ex melle*, which itself belongs to the substantival dative participle *inunctis*, the indirect object of *restitui*. Within the subsections the animals are often in first position in their sentence, but sometimes a product, body part or organ of the animal is in that position, when the animal is useful for several purposes, because more than one product can be obtained from it. Thus, in 29.124 *gallinae fel* is mentioned. Two sentences ahead *finum* of the same animal is in first position. Similarly, in 29.126, *ova perdicum* is in first position, because *fel perdicum* has already been mentioned in the preceding context (notice also the the word order in the two noun phrases, with the contrastive nouns *ova* and *fel* in first position). In passages in which Pliny is mainly interested in the products and goes into some detail we encounter the usual continuity devices (anaphoric expressions like *Hic sal* in 120; semantically easily inferrable nouns like *Vena autem* in 126, obviously that of a *columba* in the preceding clause). When in such a more elaborate treatment various opinions are reported on how to deal with a certain animal or product we find *Alii* or *Quidam* in first position (e.g. 129-30, in his discussion of the *lacerta*). In such cases we also find finite verb forms in first position to introduce alternative or additional uses of an animal or a product. So *Fit et collyrium e vipera* in 120 and *Laudant et* (124) and *Laudatur et* (125). This order resembles word order in “presentative” sentences. Patients in first position are rare (*Iumentorum* in 119 – a very odd digression – and *Lacrimantibus* in 131). Generally speaking, however, Pliny presents the material consistently from the perspective of the *medicinae ex animalibus*.

Given the accurate use of the first position in sections, subsections and sentences for guiding the reader through the material one may wonder whether the readers received some form of additional optical/graphical support. This would have been very welcome, given the size of the work, which was clearly conceived as a reference work and intended for reading (Dihle 1998). It is generally believed that optical/graphical structuring of “private” written texts did not start before the twelfth century (Raible 1993), but in Pliny’s time it was quite normal in inscriptions, with titles, projection of a word, capitals, and red color (Raible 1985). Cancik (1979) discusses the detailed graphical support in the Didymus papyrus, and Bischoff (1989) and Wingo (1972) have information about the use of special signs for structuring the text. But all this is mere speculation.

³⁵ *Iumentorum oculis* etc. in 29.119 is a strange element in the build up of the section.

5. Conclusion

Pliny the Elder does not make for easy reading. If you think you know Latin, try Pliny. However, it is unfair to rephrase our difficulty of comprehension as incompetence in writing “good” Latin on the part of Pliny. The overall organization of the material is very careful, into the smallest detail, as I hope to have shown in the section on constituent order. In his general endeavour to present his information as compact and as clear as possible he uses small building blocks, puts them together into relatively long sentences, and leaves the semantic relations between these blocks to the interpretation of the reader. He exploits certain devices more intensively than others, notably the use of the dative and ablative cases, and the use of substantival participles. A number of these and other “odd” features also relate to the subject matter.

Appendix: A graphical representation of Plin. *Nat.* 29.117-132

legenda:

DISEASES (PHYSICAL DEFECTS)

animals

natural products or body parts of animals

artificial products (produced by men from animals)

opinions of Pliny

117 GLAUCOMATA dicunt Magi *cerebro* **catuli** septem dierum emendari specillo demisso in dexteram partem, si dexter oculus curetur, in sinistram, si sinister, aut *felle recenti* **axionis**; noctuarum est id genus, quibus pluma aurium modo micat. SUFFUSIONEM OCULORUM **canino** *felle* malebat quam **hyaenae** curari Apollonius Pitanaeus cum melle, item ALBUGINES.

118 **Murium** *capitum caudaeque* cinere ex melle inunctis CLARITATEM VISUS restitui dicunt, multoque magis **gliris** aut **muris silvestris** cinere aut **aquilae cerebro** vel *felle* cum Attico melle. Cinis e *capite* **soricis** cum stibi tritus LACRIMOSIS OCULIS plurimum confert - stibi quid sit dicemus in metallis - , **mustelae** cinis SUFFUSIONIBUS, item **lacertae**, **hirundinis** *cerebrum*.

Cocleae tritae fronti inlitaE EPIPHORAS sedant sive per se sive cum polline sive cum ture; 119 Sic et solatis, id est sole correptis, prosunt. **Vivas** quoque cremare et cinere **earum** cum melle Cretico inungere CALIGINES utilissimum est. Iumentorum oculis *membrana* **aspidis**, quam exuit vere, *cum adipe* **eiusdem** CLARITATEM inunctis facit.

Viperam vivam in fictili novo comburere addito feniculi suco ad cyathum unum et turis manna una atque ita SUFFUSIONES OCULORUM et CALIGINES inungere utilissimum est; Medicamentum id echeon vocatur. 120 Fit et collyrium e **vipera** in olla putrefacta **vermiculisque** enatis cum croco tritis. Exurit in olla cum sale, quem lingendo CLARITATEM OCULORUM consecuntur et STOMACHI TOTIUSQUE CORPORIS TEMPESTIVITATES; Hic

sal et pecori datur salubritatis causa et in antidotum contra serpentes additur. 121 Quidam et ad OCULOS **viperis** utuntur in cibis. Primum omnium **occisae** statim salem in os addi iubent, donec liquescat, mox IIII digitorum mensura utrimque praecisa exemptisque interaneis discoquunt in aqua, oleo, sale, aneto et aut statim vescuntur aut pane colligunt, ut saepius utantur. Ius praeter supra dicta PEDICULOS e toto corpore expellit PRURITUSQUE etiam summae cutis. Effectum ostendit et per se *capitis* **viperini cinis** - utilissime eo OCULOS inungunt - itemque *adips* **viperinus**. 122 De *felle* non audaciter suaserim quae praecipiant, quoniam, ut suo loco docuimus, non aliud est serpentium venenum. **Anguium** *adepts* aerugini mixtus RUPTAS OCULORUM PARTES sanat, et *membrana* sive *senectus* vernatione eorum exuta, si adfricetur, CLARITATEM facit. **Boae** quoque *fel* praedicatur ad ALBUGINES, SUFFUSIONES, CALIGINES, *adepts* similiter ad CLARITATEM.

123 **Aquilae**, quam diximus pullos ad contuendum solem experiri, *felle* mixto cum melle Attico inunguntur NUBECULAE et CALIGATIONES SUFFUSIONESQUE OCULORUM. Eadem vis est et in **vulturino** *felle* cum porri suco et melle exiguo, item in **gallinacei felle** ad ARGEMA et ALBUGINES ex aqua diluto, item SUFFUSIONES OCULORUM, maxime **candidi gallinacei**. *Fimum* quoque **gallinaceorum**, dumtaxat rubrum, LUSCIOSIS inlini monstrant. 124 Laudant et **gallinae fel** et praecipue *adipem* contra PUSULAS IN PUPILLIS, nec scilicet eius rei gratia saginant. Adiuvat mirifice et RUPTAS OCULORUM TUNICULAS admixtis schisto et haematite lapidibus. *Fimum* quoque **earum**, dumtaxat candidum, in oleo vetere corneisque pyxidibus adservant ad PUPILLARUM ALBUGINES. Qua in mentione significandum est pavones fimum suum resorbere tradi invidentes hominum utilitatibus. 125 **Accipiter** decoctus in rosaceo efficacissimus ad inunctiones OMNIUM VITIORUM putatur, item *fimi* eius **cinis** cum Attico melle. Laudatur et **milvi iocur**, *fimum columbarum* ex aceto ad AEGILOPIA, similiter ad ALBUGINES et CICATRICES, *fel anserinum*, *sanguis anatum* CONTUSIS OCULIS ita, ut postea oesypo et melle inunguantur, *fel perdicum* cum mellis aequo pondere, per se vero ad CLARITATEM. ex Hippocratis putant auctoritate adici, quod in argentea pyxide id servari iubent. 126 **Ova perdicum** in vase aereo decocta cum melle ULCERIBUS OCULORUM et GLAUCOMATIS medentur. **Columbarum**, **palumbium**, **turturum**, **perdicum** *sanguis* OCULIS CRUORE SUFFUSIS eximie prodest. In columbis masculae efficacior putant; Vena autem sub ala ad hunc usum inciditur, quoniam suo calore utilior est. Superinponi oportet splenium e melle decoctum lanamque sucidam ex oleo aut vino. 127 **Earundem avium** *sanguis* NYCTALOPAS sanat et *iocur ovium*, ut in capris diximus, efficacius fulvae. Decocto quoque *eius* OCULOS abluere suadent et *medulla* DOLORES TUMORESQUE inlinere. **Bubonis oculorum cinis** collyrio mixtus CLARITATEM oculis facere promittitur. **Turturis** *fimum* ALBUGINES extenuat, item **coclearum cinis**, *fimum cenchridis*; accipitrum generis hanc Graeci faciunt. 128 ARGEMA ex melle omnibus, quae supra scripta sunt, sanatur. *Mel* utilissimum OCULIS, in quo apes sint inmortuae. **Ciconiae pullum** qui ederit, negatur annis multis continuis LIPPITURUS, item qui **draconis caput** habeat. **Huius adipe** et melle cum oleo vetere INCIPIENTES CALIGINES discuti tradunt. **Hirundinum pullos** plena luna excaecant, restitutaque eorum acie *capita* comburuntur; Cinere cum melle utuntur ad CLARITATEM et DOLORES ac LIPPITUDINES et ICTUS.

129 **Lacertas** quoque pluribus modis ad OCULORUM remedia adsumunt. Alii **viridem** includunt novo fictili et lapillos, qui vocantur cinaedia, quae et inguinum tumoribus adalligari solent, novem signis signant et singulos detrahunt per dies; nono emittunt lacertam, lapillos servant ad OCULORUM DOLORES. 130 Alii terram substernunt **lacertae viridi** excaecatae et una in vitreo vase anulos includunt e ferro solido vel auro. Cum recepisse visum lacertam apparuit per vitrum, emissa ea anulis contra LIPPITUDINEM utuntur, alii *capitis cinere* pro stibi ad SCABRITIAS. Quidam **viridem**, collo longo, in sabulosis nascentem comburunt et INCIPIENTEM EPIPHORAM inungunt, item GLAUCOMATA. 131 **Mustelae** etiam *oculis* punctu erutis aiunt VISUM reverti, eademque quae in lacertis et anulis faciunt; **serpentis oculum** dextrum adalligatum contra EPIPHORAS prodesse, si serpens viva dimittatur. LACRIMANTIBUS sine fine OCULIS *cinis stelionum capitis* cum stibi eximie medetur.

Aranei muscarii tela et praecipue *spelunca* ipsa inposita per frontem ad duo tempora in splenio aliquo ita, ut a puero inpuce et capiatur et inponatur nec is triduo se ostendat ei, cui medebitur, neve alter nudis pedibus terram attingat his diebus, mirabiliter EPIPHORIS mederi dicitur; 132 ALBUGINES quoque tollere inunctione **araneus candidus**, longissimis ac tenuissimis pedibus, contritus in oleo vetere. **is** etiam, **cuius** crassissimum textum est in contignationibus fere, adalligatus panno EPIPHORAS sanare traditur. **Scarabaei viridis** natura contuentium VISUM exacuit; Itaque gemmarum scalptores contuitu eorum adquiescunt.

...

133 AURES purgat *fel pecudis* cum melle, **canini lactis** instillatio sedat DOLOREM, GRAVITATEM *adepts* cum absinthio et oleo vetere, item *adepts anserinus*.

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