NOTES ON PLINY, NATURALIS HISTORIA 33-7

The following modern editions are referred to: Sillig (1851); Jan (1860); Mayhoff (1897); Bailey (K. C.), *The Elder Pliny's Chapters on Chemical Subjects* (1929–32); Loeb editions (Rackham, Books 33–5 [1952]; Eichholz, Books 36–7 [1962]); Budé editions (Zehnacker, Book 33 [1983]; Le Bonniec, Book 34 [1953]; Croisille, Book 35 [1985]). Abbreviations include: Urlichs¹ = K. L. Urlichs, *Chrestomathia Pliniana* (Berlin, 1857); Urlichs² = K. L. Urlichs, *Vindiciae Plinianae* ii (Erlangen, 1866).

33.1. quippe alibi divitiis foditur [sc. tellus], quaerente vita aurum argentum electrum aes, alibi deliciis, gemmas et parietum †digitorumque† pigmenta.

The second sentence is parallel to the first: alibi deliciis foditur, quaerente vita (=hominibus, as often in Pliny) gemmas etc. It might seem that digitorum is either misplaced or corrupt. It has been proposed to change the word order so that it can be construed with gemmas; others have suggested emending it to lignorum (the most favoured correction), pictorum, tignorum, or signorum. Neither solution is satisfactory. There is really no reason why gems should be restricted to those worn on the fingers, or paints to those used for walls (or for walls and beams, if we adopt lignorumque). One might well conclude that parietum digitorumque is a gloss (in which the order of the two nouns has been reversed) on gemmas et pigmenta.

33.1. persequimur omnes eius [sc. telluris] fibras vivimusque super excavatam, mirantes dehiscere aliquando aut intremescere illam, ceu vero non hoc indignatione sacrae parentis exprimi possit.

We are surprised at the earth opening up or trembling, as though it were not possible that these are her ways of showing anger at the maltreatment we inflict upon her.

If the paradosis is sound, hoc is nominative, meaning dehiscere aut intremescere (we might rather have expected the plural haec) and exprimi means 'explicari' (Hardouin), 'be explained', whereas the natural meaning of the word is 'be expressed'. What is expressed is earth's anger; so Bergk's change of indignatione to indignatio is essential. Bailey's objection that such a corruption is unlikely can be refuted by 33.18 (where indignatio, preserved by B, has been corrupted in the other manuscripts to indignatione), 33.48 (where origo has been corrupted in B to origine), and similar passages. Bailey's own reading indignationes (combined with possint) is a rare plural (TLL 7.1.1180.24ff.) which is practically never used of 'bursts of anger' on the part of a single agent.

If *indignatio* is adopted, *hoc* will be ablative neuter. This I cannot refute, but I strongly suspect that we should read $hoc \langle modo \rangle$.

33.5. turba gemmarum potamus et zmaragdis *teximus* calices, ac temulentiae causa *tenere Indiam* iuvat: et aurum iam accessio est.

Bailey and Zehnacker argue that *teximus* must be a present tense, to correspond with *potamus*. But the two verbs are not on the same footing; the meaning is 'we drink from cups which we have covered (perfect of *tego*) with emeralds'; *texere*, 'entwine', is quite inappropriate in sense.

Zehnacker explains *tenere Indiam* as 'tenir entre nos mains toutes les richesses de l'Inde'. This is undoubtedly on the right lines, but perhaps one can be more specific: the reference may be to drinking-cups with ivory handles. For India as a source of ivory see Virgil, G. 1.57, Pliny, N.H. 8.7.

33.11. cum corona ex auro Etrusca sustineretur a tergo, anulus tamen in digito ferreus erat aeque triumphantis et servi *fortasse* coronam sustinentis.

Not even a general celebrating a triumph wore a golden ring; he had an iron one, like the slave who rode behind him holding a golden crown above his head.

'Fortasse offre un sens excellent: car il n'est sûr du tout que l'esclave placé derrière le triomphateur ait porté une bague; mais s'il en portait une – et c'était peut-être le cas – elle était en fer comme celle de son maître' (Zehnacker). He who believes that would believe anything. But Zehnacker's argument against Mayhoff's emendation prae se is convincing, and no other has been proposed. There remains the possibility of a lacuna; I suggest servi fortasse (barbari). Since the slave was there to prevent the triumphator from getting an exaggerated idea of his own importance (Juvenal 10.41f., 'sibi consul / ne placeat'), a derogatory expression with servi is appropriate.

33.14. sed quod accessit [sc. aurum] ex Gallorum praeda fuit detractumque ab iis in parte captae urbis delubris; Gallos cum auro pugnare solitos Torquatus indicio est.

The translators follow Hardouin's paraphrase 'in ea parte urbis quam ceperant'. This is wrong. The correct interpretation is that adumbrated by Urlichs¹ (p. 274), which takes in parte as the equivalent of partim and captae urbis with delubris. The extra thousand pounds of gold came from booty taken from the Gauls, partly gold which the Gauls had stripped from Roman temples under their control and partly gold ornaments which (as the story of Torquatus shows) the Gauls were in the habit of wearing in battle.

33.15. Illud quoque obiter indicari convenit..., aedituum *custodiae eius* conprehensum fracta in ore anuli gemma statim expirasse et indicium ita extinctum.

The suicide of a temple-keeper destroys evidence about the theft of gold from the temple of Jupiter Capitolinus in 52 B.C.

All editors have accepted *custodiae*, which Urlichs¹ (p. 275) describes as 'beschreibender Genitiv'; this seems a difficult construction, and it is not made easier by the second genitive *eius*. I suggest that *custodem* would greatly ease the construction, but perhaps *aedituum* \(praepositum \) would be more probable. In any case *eius* is the gold, not (as Rackham and TLL 4.1555.61) the temple.

33.77. aurum arrugia quaesitum non coquitur sed statim suum est.

Gold mined by the arrugia method does not need to be melted but is pure straightaway.

Hardouin explained *suum* as 'sui quasi iuris, iam purum, integrum', and *OLD* (sense 10c) lists this passage with three others from Pliny under the rubric 'containing no other elements'. In these other passages, however, in which *suus* agrees with a noun like *vena* or *colos*, it can have the sense of 'characteristic', 'peculiar', or 'appropriate'; ours is the only one of the four in which *suus* is a self-contained predicate. Is *suum* a corruption of *purum*? This is certainly the word we should expect, as at 33.84, 'ipsum [sc. aurum] purum et incorruptum'; 33.99, 'purum relinquit aurum'. The corruption of p to s could be due to perseveration from the first letter of *sed* and of *statim*.

33.82. aurea statua prima omnium nulla inanitate et antequam ex aere aliqua *modo* fieret, quam vocant holosphyraton, in templo Anaetidis posita dicitur.

modo B: illo modo cett.

It is not surprising that this instance of *modo* stands isolated in *TLL* 8.1299.29. Sillig was responsible for ousting the vulgate *illo modo*, and he has been followed by all later

editors; it should be restored, but some repunctuation is necessary: nulla inanitate (et antequam ex aere aliqua illo modo fieret), quam vocant etc. This will prevent any attempt to construe quam vocant with illo modo.

33.105. vis eius [sc. scoriae] adstringere et refrigerare corpora †acre dies† additur emplastris, ut molybdaena etc. acre dies B^1 : hac re B^2 : om. cett.

Mayhoff lists six conjectures, of which only two are worth mentioning: quare his and hac de re, both beginning a new sentence. It is possible, however, that part of the obelized passage goes with what precedes; I suggest corpora ac $re\langle s \rangle$; ideo additur etc.

33.120. hoc ergo [sc. secundario minio] adulteratur minium in officinis sociorum, †et uiuis† Syrico. quonam modo Syricum fiat suo loco docebimus; sublini autem Syrico minium compendi ratio demonstrat.

et uiuis B: item cett.

Two inferior substances that are used for adulterating the true minium of Sisapo. Neither Jan's et ubivis nor Mayhoff's et vilius is clearly right as an emendation of

et uiuis. I suggest et (t)utius, which is palaeographically very easy. Adulteration with Syricum is 'safer', i.e. more difficult to detect; and Pliny goes on to mention how it can be detected (compendi ratio demonstrat).

33.121. probatur [sc. minium] auro candente; fucatum enim nigrescit, sincerum retinet colorem. invenio et calce adulterari, ac simili ratione, ferri candentis lamna si non sit aurum, deprehendi.

Methods of testing minium for purity.

'If gold is not available' (Bailey). Should sit be adsit?

33.126. his coticulis periti cum e vena ut lima *rapuerunt experimentum*, protinus dicunt quantum auri sit in ea, quantum argenti vel aeris.

Use of the touchstone for identifying metals in an ore.

If the text is right, experimentum must be 'a sample', a meaning which is otherwise unattested (cf. TLL 5.2.1655.20f.). Bailey and Rackham adopt Purser's experi < mento ra>mentum. This is certainly ingenious, but perhaps a simpler emendation will suffice: e vena...rapuerunt \(\lambda in \rangle experimentum \); cf. 9.22, 'praecisa cauda in experimentum', 9.133, 'mergitur in experimentum'. The object of rapuerunt can easily be understood from the context, but perhaps rapuerunt should be raserunt, which would be quite appropriate with ut lima; cf. 33.140, 'interradimus alia, ut quam plurimum lima perdiderit'.

33.132. igitur ars facta denarios probare, tam iucunda plebei lege ut Mario Gratidiano vicatim *totas* statuas dicaverit.

totas vel tota codd.

I do not believe in *totas statuas*, 'full-size statues' (Bailey); the final s of *totas* may well have come from the first letter of *statuas*. On the other hand I am not quite convinced by *tota* (sc. *plebs*). What would fit nicely after *vicatim* is *tota* $\langle urbe \rangle$; cf. Cicero, *Dom.* 129, 'vicatim...tota urbe'; Tacitus, *Hist.* 2.95.1, 'tota urbe vicatim'. Elsewhere (34.27) Pliny says that the statues to Gratidianus were set up 'in omnibus vicis' by the tribes; Seneca (*Dial.* 5.18.1) says 'vicatim populus statuas posuerat'.

33.147. L. vero Crassus orator duos scyphos Mentoris artificis manu caelatos HS \bar{C} [sc. emptos habuit], confessus tamen est numquam iis uti propter verecundiam ausum. †sicut† eundem HS \overline{VI} in singulas libras vasa empta habuisse.

Verecundiam is not (as the translators say) a feeling of shame at his own extravagance but a feeling of respect, awe, at the magnificent workmanship of the cups.

For the corrupt *sicut* Mayhoff substituted *scimus*, and he has been followed by all later editors, although his explanation of the corruption is not very probable. More probable, I suggest, would be *dicit*(*ur*); for the impersonal, instead of the personal, construction see Kühner–Stegmann i.709.

34.2. fit [sc. aes] et ex alio lapide, quem chalcitim appellant, in Cypro, ubi prima aeris inventio, mox vilitas praecipua reperto in aliis terris praestantiore maximeque aurichalco.

It is surprising to read that Cyprian copper became 'of exceptionally low value' (Rackham). It seems probable that *praecipua* should be *praecipue*: it became cheap, particularly after the discovery of better-quality ores elsewhere.

34.56. item [sc. Polyclitus fecit] Mercurium, qui fuit Lysimacheae, Herculem, qui Romae, hagetera arma sumentem, Artemona qui periphoretos appellatus est.

For the mysterious *hageter*, 'leader', see le Bonniec's note (p. 222). To match Mercury, Hercules, and Artemon one might expect a fourth proper name. I suggest *Hectora*; for representations of Hector in art see Roscher, *Ausf. Lexikon der... Mythologie* i.1919 (Hector arming himself, ibid. 1920.10).

34.93. in mentione statuarum est et una non praetereunda, quamquam auctoris incerti, iuxta rostra, Herculis tunicati, sola eo habitu Romae, torva facie sentiensque suprema tunicae.

sentiensque B: sentientique cett.

tunicae \hat{B} : tunica cett.

If B's reading is right, sentiens must (as Sillig says) agree with una statua, sola Romae. Perhaps this should be accepted, but it is very easy to duplicate one letter and read Romae; torva facie(s) sentiensque etc.

34.108. atque haec omnia medici...ignorant. pars maior et nominibus * * *; in tantum a conficiendis medicaminibus *iis* absunt.

pars maior et codd. praeter B: paret B iis B^1 : his cett.

It seems almost certain that pars maior et is the right reading, and that B's paret is due to one of those small lacunae which are not uncommon in that manuscript; if so, we can forget about readings like parent nominibus, 'they are governed by names' (Rackham). But a verb with which nominibus can be construed is missing; I suggest errant or falluntur.

After *medicaminibus* we do not want either *iis* or *his*, but *ipsis* would be very acceptable, to emphasize the contrast with *nominibus*.

34.108. iam pridem facta emplastra et collyria mercantur, tabesque mercium *aut* fraus Seplasiae sic †cexatetur†. pridem *vett*.: quidem *codd*.

cexatetur B^1 : exteritur cett.

The subject of *mercantur* is incompetent doctors who cannot make up their own plasters and salves.

No convincing sense can be extracted either from exteritur or from any of the emendations which have been proposed, exsiccatur, excitetur (or excitatur), exhibetur, adteritur. Perhaps extollitur, 'is given a boost'; aut I take in the sense of aut potius.

34.116. quod vitium ut emendetur, duae partes *quam fuere* aceti miscentur urina pueri inpubis.

fuere B: fiere cett.

Editors have tortured this sentence, changing vitium to vitiatum, quam to quae, and urina to urinae. The only word which is corrupt is fuere; we want an expression like quam acerrimo, which Pliny has just used of the vinegar employed in making the preparation he is describing. The obvious expression is quam asperrimi, an adjective which is used of vinegar at 20.97 (quam asperrimi) and 34.175.

34.131. sed quodcumque genus [sc. spodi] lavando fit utilius; ...et media vis est eius quae vino lavatur.

Media ('moderate' or 'mediocre') does not suit the context, and Mayhoff's eximia is not convincing palaeographically. The obvious emendation is $medi\langle c \rangle a$; the expression vis medica occurs at 10.12, 20.18, 36.202, 37.58. All kinds of 'ash' are made more useful by washing, but it is ash washed in wine which has medicinal properties; and Pliny proceeds to mention its medical applications.

34.138. ut ocius mors perveniret ad hominem alitem illam fecimus pinnasque ferro dedimus. quam ob rem culpa *eius non naturae* fiat accepta.

Man's use and abuse of iron.

Eius is ferri, not (as Bailey and Rackham), hominis (a dative, not a genitive, is required with fiat accepta). Hence non naturae demands the insertion of a preceding dative with which naturae can be contrasted. The best word is nobis; this could easily have fallen out before non, and it is (I think) confirmed by the fact that, to describe the uses of iron, Pliny has just used nine verbs in the first person plural (beginning with scindimus and ending with dedimus). This insertion of nobis is due to an anonymous scholar reported by Dalecampius (1587); the last editor who thought it even worth mentioning was Sillig.

35.7. aliae foris et circa limina animorum ingentium imagines erant adfixis hostium spoliis, quae nec emptori refigere liceret, triumphabantque etiam dominis mutatis †et me† domus.

The symbols of a triumph remained in the house of the triumphator even after it was sold.

Of the various attempts to emend et me (e.g. ipsae, emptae, tamen) the most favoured has been Mayhoff's aeternae, which is not convincing either palaeographically or in point of sense. Yet is is quite probable that we want a feminine plural adjective, preferably one ending in -mae; I suggest inanimae, a word which was liable to suffer abbreviation. I compare Tacitus, Ann. 4.69.3, 'etiam muta atque inanima, tectum et parietes'; id., Hist. 1.84.4, 'vos pulcherrimam hanc urbem domibus et tectis et congestu lapidum stare creditis? muta ista et inanima' etc.

35.13. scutis enim, qualibus apud Troiam pugnatum est, continebantur imagines, unde et nomen habuere clupeorum, non, ut perversa grammaticorum subtilitas voluit, a cluendo.

Pliny rejects the false etymology of *clupeus* but, as the text stands, he gives no very clear indication of what he regards as the true one (from $\gamma \lambda \dot{\psi} \phi \epsilon \iota \nu = caelare$); $\langle insculptae \rangle$ imagines would make his meaning clear.

35.48. sunt etiamnum novicii duo colores e vilissimis: viride quod Appianum vocatur et chrysocollam mentitur, ceu parum multa *dicta* sint mendacia eius.

Dicta would be an odd way of saying 'have been mentioned by me', even if it were true (which it is not) that Pliny has mentioned many bogus imitations of chrysocolla. Mayhoff's ficta is tautologous with mendacia. I suggest $\langle e \rangle dita$, 'have been produced'.

35.66. fertur et postea Zeuxis pinxisse puerum uvas ferentem, ad quas cum advolassent aves, eadem ingenuitate *processit* iratus operi et dixit 'uvas melius pinxi quam puerum' etc.

Processit, 'strode up to the picture' (Rackham), 'il s'avança' (Croisille). These translations show that something is amiss. I should take processit in OLD sense 12, as if Pliny had written 'eo ingenuitatis processit ut diceret'. But processit in this sense needs some support; I suggest \(\langle \langle \text{longius} \rangle \text{processit},\) quite a common phrase (TLL 7.2.1646.79ff.). The comparative longius will refer to the story which immediately precedes (§65), in which Zeuxis behaved 'ingenuo pudore'.

35.72. ergo [sc. Parrhasius], magnis suffragiis superatus a Timanthe Sami in Aiace armorumque iudicio, herois nomine se moleste ferre dicebat.

Only Urlichs¹ (p. 352) comments on magnis: 'magnis statt multis, weil in suffragiis die Bedeutung der Stimmenmehrheit enthalten ist'. I find this difficult to believe and would substitute multis, noting that at 36.27 multitudo, correctly preserved by B, has been corrupted in the other manuscripts to magnitudo.

35.102. huic picturae quater colorem induxit [sc. Protogenes] contra subsidia iniuriae et vetustatis.

Gronovius suggested (a) that subsidia may be taken in the sense of insidias, an unexampled meaning, (b) that it could be emended to obsidia. Although both of these solutions have been adopted by one editor or another, neither deserves much consideration. Mayhoff's substitution of ceu tria for contra is ingenious, but tria subsidia does not square with the singular colorem. Yet Mayhoff, I think, put his finger on the ailing spot: for contra I would read comparans, explaining the corruption (a) by the p/t confusion, (b) by the loss of final s before the first letter of subsidia.

35.105. erat tunc Protogenes in suburbano suo hortulo, hoc est Demetrii castris.

It is impossible to equate Protogenes' 'little garden' with the camp of Demetrius. Urlichs² (p. 772) wanted to delete *hoc...castris*; Mayhoff proposed to emend *hoc est* to *non procul a*, but that would be very unusual corruption. Much more probably a supplement is required: *hoc est*, *non* [or *haud*] *procul a* Demetrii castris.

35.115f. decet non sileri et Ardeatis templi pictorem (praesertim civitate donatum ibi et carmine quod est in ipsa pictura his versibus...; eaque sunt scripta antiquis litteris Latinis), non fraudando et Studio divi Augusti aetate, qui primus instituit amoenissimam parietum picturam etc.

No feature of Pliny's style is more striking than his fondness for trailing ablatives absolute; cf. J. Müller, *Der Stil des älteren Plinius* (Innsbruck, 1883), pp. 27–31. We can therefore accept *non fraudando Studio* (if that proper name is right) without qualms, especially as it bears a close resemblance to 18.35, 'non fraudando magnitudine hac quoque sua Cn. Pompeio'. But it can be accepted only if the whole passage is punctuated as above, with a long parenthesis about the painter of the temple at Ardea, so that the ablative absolute about Studius follows both grammatically and logically on *decet non sileri* etc. (and not, as in every edition I have seen, on *eaque sunt scripta* etc.). Moreover, *fraudando* seems incomplete: 'cheated of his due' (Rackham) requires the insertion of something like *sua gloria*; cf. 11.76, 'mulier... non fraudanda gloria excogitatae rationis'; 32.62, 'ne fraudentur gloria sua litora'.

35.175. tertio quoque generi [sc. sulpuris] unus tantum est usus ad lanas suffiendas, quoniam candorem [tantum] mollitiamque confert (egula vocatur hoc genus). quartum †caute† ad ellychnia maxime conficienda. cetero tantum vis est ut morbos comitiales

deprehendat nidore inpositum igni: lusit et Anaxilaus eo, addens in calicem vini prunaque subdita circumferens, exardescentis repercussu pallorem dirum velut defunctorum effundente in conviviis.

The fourth kind of sulphur is used especially for lamp-wicks. Instead of caute we want a word with which the ad phrase can be construed. Isidorus (16.1.10) may have found aptum in his text of Pliny (he says 'quartum ad lychnia maxime conficienda aptum'), but he may instead have found another word which he rendered by aptum, e.g. $ut\langle il \rangle e$, which would correspond to unus est usus used in the preceding sentence of the third kind of sulphur. Perhaps then quartum autem utile ad etc.

People subject to epilepsy can be detected when they smell the fumes of burning sulphur, and these fumes cast a ghastly pallor on the faces of people who are close to them. Editors either tolerate vis as the genitive singular, a form which is otherwise unknown outside the grammarians and legal Latin (cf. Neue-Wagener, Formenlehre i.743f.), or else they accept the facile change of tantum to tanta (so already in the text of Isidorus). Neither expedient is either attractive or necessary; instead, read cetero (non) tantum (non could easily have been omitted after cetero). Pliny might have said 'non tantum vis est ut morbos comitiales deprehendat sed etiam pallorem dirum vultibus inducit'; instead of the latter general statement he gives us a particular example (Anaxilaus handing round fuming sulphur at dinner-parties) which illustrates that general statement.

35.176. aufert et lichenas faciei cum terebinthi resina et lepras; 'harpax' ita vocatur a celeritate *praebendi*, avelli enim subinde *debet*.

praebendi B: praeuelli (by anticipation of avelli) cett.

Sulphur is a cure for affections of the skin.

Rackham translates celeritate praebendi by 'the speed with which it has to be applied', but both harpax ('the snatcher') and commonsense suggest that the meaning ought to be 'la rapidité de son effet' (Croisille), i.e. the speed with which it removes lichens and leprae. Instead of praebendi we want a word of the same sort of meaning as auferendi. I think that Jan found the answer when he made the suggestion (which, according to Sillig, he later withdrew) prehendendi; I should prefer prendendi as more likely to have been corrupted to praebendi. The Latin gerund prendendi is then a translation of the Greek $\dot{\alpha}\rho\pi\dot{\alpha}\zeta\epsilon\nu$. Jan adduced 37.37, where Pliny says that in Syria women call amber 'the snatcher' (harpax) because of its powers of attraction: quia folia paleasque et vestium fimbrias rapiat; in that passage rapere corresponds to celeriter prendere in ours.

If the four words which follow *praebendi* are correctly transmitted, the subject of *debet* must be *sulpur*: the sulphur ought to be removed *subinde* (either 'immediately', as Rackham, or 'from time to time', as Croisille), presumably because it is so drastic in its action. But this is no sort of reason (note *enim*) for sulphur being called *harpax*. Surely it is the lichens and leprae which ought, under normal circumstances, to be removed immediately (*subinde*) by the action of the sulphur; if so, for *debet* read *debent*.

36.54. signis e marmore poliendis gemmisque etiam scalpendis atque limandis Naxium diu placuit ante alia; ita vocantur cotes *in Cypro* insula genitae.

Eichholz changes in Cypro to in supra (dicta) (meaning the previous line), a violent and unsatisfactory procedure which is, however, intended to solve a real problem: why give the name 'Naxian' to whetstones found in Cyprus? The answer will be found in H. Blümner, Technologie und Terminologie der Gewerbe und Künste (Leipzig,

1875–87), iii.199: 'Da...die Insel Naxos bekanntermassen heute noch einen vortrefflichen, weithin verführten Smirgel liefert, so ist wohl nicht zu bezweifeln, dass auch das *Naxium* der Alten ursprünglich von dorther kam und dass man nur später auch andern, von Cypern, Kreta u. s. kommenden Smirgel ebenfalls so benannt hat.' Our text can be brought into line by reading *(etiam)* in Cypro.

36.67. ceciderat eum [sc. obeliscum] Necthebis rex purum, maiusque opus in devehendo statuendove †multum† est quam in excidendo.

multum B: multo cett.

Urlichs² (p. 791) saw that what is required is an aorist passive ending in *-tum est*; he proposed *inventum est*, and has been followed by the majority of later editors. But I think that this can be improved upon both palaeographically and in point of sense: read *motum est*, 'was put in hand', 'undertaken' (*OLD* sense 11). It is also probable that we should read $statuendo\langle q \rangle ue$.

36.135. Varro...tradit...Tusculanum [sc. lapidem] dissilire igni, Sabinum fuscum addito oleo etiam lucere.

'The meaning is uncertain: "will yield a flame even" (Bostock and Riley); "actually gleams" (Bailey); but the former rendering gives an unnatural sense to *lucere*, while the latter statement is not sufficiently remarkable to justify *etiam*' (Eichholz). I suggest *etiam* (noctu) [or (nocte)] lucere, comparing 2.100, 9.82, 11.98, 16.33, and 21.62; or *etiam* (in tenebris) lucere, comparing 9.101.

36.145. infirmiora omnia eadem in eo quem schiston appellant; *in iis* commodior croco similis, peculiaris explendis ulcerum lacunis *etc*.

ulcerum Urlichs2 (p. 801): oculorum codd.

in its yields no sense, since no varieties of 'schistos' have been mentioned in the previous sentence. Mayhoff replaced it with a wild conjecture, oculorum vitiis; all that is needed is in $us\langle u \rangle$; cf. 19.38, 'magnificum in usu'.

36.193. acies tanta est quacumque ut citra sensum ullum ad ossa consecet quidquid *adflaverit* corporis.

The sharpness of molten glass. If adflaverit is not accepted in the sense of 'splutters on' (Eichholz), a better emendation than Mayhoff's adflixerit would be ad- $s\langle u \rangle l \langle t \rangle$ averit ('attacks'), which is quite close to the paradosis.

37.18. quae [sc. murrina] protinus ad hominum usum transiere, abacis etiam escariisque vasis expetitis; et crescit in dies eius luxuria.

eius B: eius rei cett.

The only singular noun in the immediately preceding context is usum, but (despite Mayhoff) eius usus luxuria is not a convincing phrase. Sillig suggested that from the plural murrina we can supply with eius the singular murrini; this is no doubt possible, but it is less attractive than adopting eius rei. If, however, rei is suspected of being an interpolation, I suggest eius (generis); a few lines later we have generis eius.

37.100. cognata est et sandastros †pro natura ut† quam aliqui Garamanticam vocant.

pro natura ut B: om. cett.

Mayhoff reads proxima natura eius quam (and makes two similar suggestions in his Appendix on p. 506). Eichholz prefers transposition, with the change of ut to et (quam aliqui pro natura et Garamanticam vocant). No certain solution is possible, but preferable to these, I suggest, would be pro\(\sigma p \) eadem\(\righta\) natura ut quam etc.

- 37.153. cinaediae inveniuntur in cerebro piscis eiusdem nominis, candidae et oblongae eventuque mirae, si modo est fides praesagire eas habitum maris nubili vel tranquilli.
- 'They have a remarkable effect' (Eichholz). Although *eventu* has never been queried, I think that it should be *inventu*, carrying on *inveniuntur* just above: their discovery is a remarkable event because of their reputed prophetic powers. I compare 22.1, 'mirabiliora inventu'.
- 37.160. eumitren Beli gemmam, sanctissimi deorum, ut * * * Assyrii observant, porracei coloris, superstitionibus gratam.

ut B: sibi cett. observant B: appellant cett.

Mayhoff's emendation of *sibi* to *sui* has been adopted by later editors, who ignore B's ut (although they all prefer B's *observant* to the variant *appellant*). If ut is right, there must be a small lacuna, e.g. $ut \langle sacram \rangle$. Pliny applies sacer to various gems at 37.135, 139, and 179.

37.182. sideritis ferro similis est; maleficio inlata aliquis discordiam facit.

maleficio Mayhoff: amletigio vel sim. codd. (deest B)

The vulgate *litigio*, revived by Eichholz, is on the wrong tack: both Solinus and Isidorus support *malef*-. Mayhoff's text, given above, means 'when introduced into evildoing' (Isidorus 16.15.11 says 'in maleficiis quoquo modo inferatur'), but this is not satisfactory; surely the idea is that the stone itself, like iron, does evil (*maleficus*, says Solinus). So repunctuate: *ferro similis est maleficio* (ablative of respect): *inlata* etc. Pliny has a purple passage about the use and abuse of iron at 34.138ff.

37.201. ergo in toto orbe...pulcherrima omnium est iis rebus quae merito principatum naturae obtinent Italia, rectrix parensque mundi altera, viris feminis, ducibus militibus, (civibus) servitiis, *etc*.

I have added the word which completes the triad of contrasting nouns; the reason for its loss (after *militibus*) is obvious.

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