Two Notes on the Hippiatrica

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I. Versions of Pelagonius

DELAGONIUS' BOOK on horse medicine, a main source of Vegetius' *Mulomedicina*, was composed around the middle of the fourth century. It was later incorporated in the Greek collection of hippiatric texts known as the *Hippiatrica*.² When a Latin manuscript of Pelagonius (originally copied in 1485 on behalf of Politian and bearing his subscriptio³) was discovered and edited in the early nineteenth century, a dispute arose as to whether Pelagonius had written in Greek or Latin. Blunders and misunderstandings in the Greek version enabled Karl Hoppe, one of the modern editors of the Hippiatrica, to demonstrate the priority of the Latin text.⁴ Apart from a small palimpsest fragment traceable to Bobbio, the tradition rests on the Ms. copied for Politian. Since the text it offers is not marred in any serious way (except for a major lacuna), the importance of the Greek version (and, incidentally, of Vegetius) lies not so much in any critical contribution that it could make to the Latin text but in preserving a number of passages that have perished in the Latin version.⁵

But, on the other hand, the Latin version of Pelagonius is of considerable value for the textual history of the *Hippiatrica*. This collection survives in four (or possibly more) distinct versions that all

¹ Pelagonii artis veterinariae quae extant, recensuit praefatus commentatus est Maximilianus Ihm (Leipzig 1892). My new Teubner edition is scheduled to appear in 1980.

² edd. Eugenius Oder et Carolus Hoppe, 2 vols. (Leipzig 1924–1927). The *Hippiatrica Berolinensia* are contained in the first volume, the rest (*Hippiatrica Parisina*, *Cantabrigiensia* etc.) in the second.

³ The text of the *subscriptio* can also be found in L. D. Reynolds and N. G. Wilson, *Scribes and Scholars*² (Oxford 1974) 129.

⁴ Karl Hoppe, "Die Commenta artis medicinae veterinariae des Pelagonius," Veterinärhistorisches Jahrbuch 3 (1927) 216–19; id., "Pelagoniusstudien. II. Die griechische Übersetzung des Pelagonius," Veterinärhistorisches Jahrbuch 4 (1928) 1–6.

⁵ The numbering of fragments (sections 471ff) differs in my edition and Ihm's, since some more passages have since been attributed to Pelagonius.

differ in content (there are individual omissions and additions) and wording, so that the original collection (which, after Björck, I shall call A) cannot be reconstructed with certainty.⁶ Nevertheless, the Paris version (=Hipp.Par., represented by a single Ms., M) is a much more reliable representative of A than the Berlin version (=Hipp. Berol.), whose redactor (seemingly a layman) often introduces linguistic improvements and cuts out some redundancies.

Of all the authors represented in the *Hippiatrica*, Pelagonius is unique in surviving and being available in a version going back beyond the compilation of the *Hippiatrica*, and so can be exploited for elucidating the relationship of the *Hipp.Par*. and the *Hipp.Berol*.

Gudmund Björck has shown that the compiler of the *Hipp.Berol*. added to the text of A, using the book of Tiberius and the anonymous

⁶ Oder, who was entrusted with the task of editing the *Hippiatrica* in the 1890s, took the Berlin version as basis, perhaps because the conviction that he was dealing with a de luxe copy made for the imperial court led him to believe that the text of such an edition would also be superior. Since the *Hipp.Berol*. are his basis, he and Hoppe print only those parts of the other versions that are not contained in the Hipp. Berol., where they give the variant readings of the other versions in the apparatus criticus. The picture that emerges from this procedure is by no means clear, and one is often at pains to come to a conclusion about the reading of a particular Ms. or about its completeness. A new edition of the CHG will, I think, have to print all versions in full. Oder and Hoppe had the misfortune of picking the most corrupted Ms. for their edition of the epitome (called Excerpta Lugdunensia after the Ms. they used). Also, they do not make use of all Mss. known to them, and they overlooked some interesting material in cod. Par.gr. 2244. The account of the Hippiatrica given by Herbert Hunger, Die hochsprachliche profane Literatur der Byzantiner II (Handbuch der Altertumswissenschaft XII.5.2, München 1978) 268 & 306, is misleading and, in parts, quite wrong. One should instead consult the works of Gudmund Björck (Zum Corpus Hippiatricorum Graecorum [UppÅrsskr 1932.5, Uppsala 1932]; Apsyrtus, Julius Africanus, et l'hippiatrique grecque [UppÅrsskr 1944.4, Uppsala 1944]; and "Le Parisinus grec 2244 et l'art vétérinaire grec," REG 48 [1935] 505-24) and Klaus Widdra, "Das Corpus Hippiatricorum Graecorum als Quelle für die Geschichte der antiken Veterinärmedizin-Gedanken zu seiner Erschliessung," Tierärztliche Umschau 29 (1974) 50-53.

⁷ The work of Theomnestus survives in Arabic (for known MSS., cf. Manfred Ullmann, Die Medizin im Islam [Handbuch der Orientalistik, Abt. I Ergbd. VI.1, Leiden-Köln 1970] 221) but has not been edited. The passages from Anatolius in the Hippiatrica can be checked against the Geoponica, as Björck has pointed out (in the first book mentioned supra n.6, p.16). The text of the Mulomedicina Chironis, which is also mentioned by Björck in this connection, is frequently in such a desperate state that much caution must be exercised; it is difficult to say in how far it preserves the work of Apsyrtus (or rather passages from it) in the original form, since we can only compare the Apsyrtus of the Hippiatrica. The two books of Hierocles on horse medicine extant in a few Greek and Latin MSS. (also in an Italian translation, purporting to be the work of Ypocras [=Hippocrates] and Damascenus) do not go back to the original but were extracted and reconstituted from the hippiatric collection (see Björck [supra n.6] in REG 48 (1935) 509-10).

Προγνώσεις καὶ ἰάσεις, and that the compiler of the Hipp.Par. probably drew on a magical work by Apsyrtus.⁸ When comparing the Greek text of Pelagonius with the Latin original, I often felt that the text given by the Hipp.Berol. and the Hipp.Par. differed in more than just points of style and that the Hippiatrica may reflect at times two, rather than one, Greek versions of Pelagonius.⁹ I shall try to prove this assertion by examining the Greek versions of Pelagon. 26. This passage happens to occur twice in the Hipp.Berol. and once in the Hipp.Par., and the double occurrence in Hipp.Berol. suggests to me that the compiler of the Hipp.Berol., in addition to Tiberius and the Προγνώσεις καὶ ἰάσεις, also had access to a Greek text of Pelagonius independent of A, which I assume to have been a second translation.

Pelagon. 26 occurs, in the first instance, with other parts of the chapter Ad maciem (ch. 2 of our Latin text), and its heading is given, quite correctly, as $\tilde{\alpha}\lambda\lambda o \pi\epsilon\rho i i c\chi\nu \delta\tau\eta\tau oc$. It is translated again in the pharmacopoeia of Hipp.Berol. 129 (§33), and the text preserved there agrees closely with the corresponding section of the Hipp.Par. (790).¹⁰ But now it is called $\Pi\epsilon\lambda\alpha\gamma\omega\nu io\nu \pi\epsilon\rho i \dot{\alpha}\nu\alpha\xi\eta\rho\alpha\nu\theta\dot{\epsilon}\nu\tau oc$ $\delta\epsilon\rho\mu\alpha\tau oc$, and there is no connection between the symptom (dry skin) and the diagnosis (macies).¹¹

Moreover, it is strange that in the Hipp.Par., Pelagon. 26–27 are separated from the other sections on macies taken from Pelagonius (found in Hipp.Par. 91–97). The explanation for this separation must be sought in the corruption ἀπὸ καυμάτου (instead of καμάτου, which is the reading of Hipp.Berol. 68.13 and the Latin text [labore]) and the absence of a subheading which would have allowed grouping this section with the rest of the chapter on macies (Hipp.Par. 91–97). The compiler of the Hipp.Berol., when copying section 129.33, did not notice that he had copied a somewhat different version of the same prescription previously in Hipp.Berol. 68.13 and also felt provoked to 'correct' the obvious fault καυμάτου—by writing καύματος! 12

⁸ Björck, Zum CHG (supra n.6) 30.

⁹ Such suspicious passages are Pelagon. 7, 36, 51, 68, 353, 487.

¹⁰ However, ἐκάςτου τὸ ἴςον is omitted by Hipp.Par. and in our Latin text of Pelagonius.

¹¹ I am convinced that *macies* must be understood as a nosological term rather than as a symptom (as we would assume). But ancient notions differed considerably: all doctors knew the illness 'fever'!

¹² Incidentally, the compiler of Hipp.Par. must also have thought that καυμάτου was

It seems safe to conclude that Hipp. Berol. 68.13 must originate from an uncorrupted text which had καμάτου in place of καυμάτου, since we would expect that otherwise the compiler would have introduced a correction in both passages. Moreover, the theme of Hipp. Berol. 68.13 is identifiable as $\pi \epsilon \rho \lambda$ icχνότητος, whereas the heading of Hipp. Berol. 129.33 sounds decidedly makeshift but is vouched for by Hipp.Par. Therefore, while everything points to a common origin for Hipp. Berol. 129.33 and Hipp. Par. 790, Hipp. Berol. 68.13 reflects a different source. These observations can be accounted for by two alternative hypotheses. Either the compiler of the Hipp. Berol. had access to an independent version of Pelagonius (i.e. either a different translation, or the same translation that was incorporated in the archetype of our hippiatric collections [A], transmitted independently and offering a better text than A), or he used two descendants of A which had been corrupted to different degrees. I favour the first hypothesis.¹³

On a different level, the variation in choice of Greek equivalent for the Latin compositio may be seen as additional proof. compositio is usually rendered as $\kappa\alpha\tau\alpha\kappa\kappa\epsilon\nu\dot{\eta}$. 14 cuy $\kappa\alpha\tau\alpha\kappa\kappa\epsilon\nu\dot{\eta}$ (where the cuv- is obviously inspired by the com- of compositio) is employed just once. In two passages $\pi\rho\sigma\dot{\eta}$ is met with instead, and it fits the context well. $\kappa\kappa\epsilon\nu\alpha\dot{\kappa}\dot{\iota}$ is used once. In another two sections, compositio is rendered as $\kappa\dot{\iota}$ which is of course a perfect synonym of $\kappa\alpha\tau\alpha\kappa\kappa\epsilon\nu\dot{\eta}$. It is remarkable, however, that the subheading compositio emplastri appears once as $\lambda\dot{\iota}$ $\kappa\dot{\iota}$ $\kappa\dot{\iota}$ $\kappa\dot{\iota}$ appears once as $\lambda\dot{\iota}$

the same as or a mistake for καύματος, since he goes on to copy Pelagonius' remedies against καύςων (Hipp.Par. 792-95/Pelagon. 191, 192, 186, 187).

¹³ In Italy, several texts were translated twice from Greek into Latin (Oribasius being the most prominent example), so that would not be unparalleled.

¹⁴ Pelagon. 320/*Hipp.Berol.* 130.29=*Hipp.Par.* 844; Pelagon. 323/*Hipp.Berol.* 130.87= *Hipp.Par.* 946; Pelagon. 338/*Hipp.Berol.* 130.86=*Hipp.Par.* 945; Pelagon. 344/*Hipp.Par.* 290; Pelagon. 390/*Hipp.Berol.* 130.172; Pelagon. 446/*Hipp.Berol.* 130.33=*Hipp.Par.* 857.

¹⁵ Hipp.Berol. 96.15=Hipp.Par. 1002. The only other instance of cυγκατακευή that has come to my notice is the one given by Lampe 1269 from Chrys. Hom. 3.3 in II Thess. There, it is a variant reading of κατακευή (Lampe translates 'accompanying preparation') and different in meaning from compositio.

¹⁶ Pelagon. 288/Hipp.Berol. 129.35=Hipp.Par. 797; Pelagon. 383/Hipp.Berol. 22.54=Hipp.Par. 523.

¹⁷ Pelagon. 257/*Hipp.Berol.* 52.20=*Hipp.Par.* 141.

¹⁸ Pelagon. 340/Hipp.Berol. 130.89; Pelagon. 401/Hipp.Berol. 125.59=Hipp.Par. 820.

¹⁹ Pelagon. 328, 340.

 $\epsilon \mu \pi \lambda \acute{\alpha} c \tau \rho o v^{20}$ and another time as "Αλλη $c \acute{\nu} \nu \theta \epsilon c \iota c \dot{\epsilon} \mu \pi \lambda \acute{\alpha} c \tau \rho o v^{21}$ The same variation exists between $\kappa \alpha \tau \alpha c \kappa \epsilon v \dot{\eta} \lambda \iota \pi \alpha \rho \hat{\alpha} c^{22}$ and $c \acute{\nu} \nu \theta \epsilon c \iota c \lambda \iota \pi \alpha \rho \hat{\alpha} c^{23}$ and finally in two passages now lost from the Latin original and preserved in the Greek version only, $\kappa \alpha \tau \alpha c \kappa \epsilon v \dot{\eta}^{24}$ and $c \acute{\nu} \nu \theta \epsilon c \iota c^{25}$ must be translations of compositio.

It is well known that our aversion to word repetition was not shared by the Greeks and Romans. Furthermore, it seems reasonable to expect that any translator would strive to adhere to the same translation of a word if it occurs again in the same circumstances, especially if it is part of a heading.

But we must not overlook the fact that the problem of the several translations of compositio differs from the case of Pelagon. 26 discussed above: whatever the Greek word employed for compositio, Hipp.Berol. and Hipp.Par. are in agreement, i.e. the variation goes back to A, and it would have been the compiler of A who made use of two different Greek translations (or versions) of Pelagonius. This may appear a fairly remote possibility, but if e.g. the compiler had to use two copies of Pelagonius that were both defective, mutilated or otherwise unsatisfactory, he may have had to go about his task in this way to incorporate all the Pelagonian material he considered useful.²⁶

²⁰ Hipp.Berol. 130.86=Hipp.Par. 945.

²¹ Hipp.Berol. 130.89=Hipp.Par. 948.

²² Pelagon. 346 (there, the title is just *Item aliter*, but the preceding section (345) is headed *Compositio liparae*)/*Hipp.Berol.* 130.167.

²³ Pelagon. 247/Hipp.Berol. 130.124=Hipp.Par. 1050.

²⁴ Pelagon. 491/Hipp.Berol. 129.54=Hipp.Par. 816.

²⁵ Pelagon. 517/Hipp.Par. 961.

²⁶ Another possibility is that the *Pelagonius Graecus* was 'edited' in some fashion and that both the 'edited' and the 'original' version were drawn on for the original hippiatric collection. This would resemble the fate of the Pelagonius Latinus (for details, see the preface of my edition mentioned supra n.1). Of course, a close and careful study of how the Latin of Pelagonius was rendered in prescriptions hypothetically attributable to different versions is needed. But can this be achieved, and will it provide a firm basis for deciding the issue? All versions of the hippiatric texts (Hipp.Berol. etc.) underwent some editing (although I agree with Björck that the Hipp. Par. come closest to the original, as can easily be proved by a comparison of the Berlin and Paris texts of passages from Pelagonius), and all of them add and omit material, so that one faces the impossible task of distinguishing correctly between the effects of editing, textual corruption, contamination and the possible use of different sources. It is also patent that the Latin text of Pelagonius (and its secondary tradition in Vegetius' Mulomedicina; Vegetius is responsible for a considerable amount of reshaping and rearranging), as it is preserved now, cannot have formed the basis of the Greek translation. It must be used with some caution by those who want to compare the Greek.

TWO NOTES ON THE HIPPIATRICA

II. New Words from Apsyrtus

The Greek veterinary surgeon Apsyrtus 1 is the author of the most detailed account on dentition in the horse that has been handed down from antiquity.² After describing the shedding and replacement of the first and second incisors,3 he says φύειν δὲ δοκεῖ καὶ τοὺς κυνοδόντας τότε (i.e. at $3\frac{1}{2}$ years 4). ετέροις δὲ μηςὶ δυοκαίδεκα τὸν καταρτιςμὸν φύει. τελειώς ας δὲ πέντε ἔτη καὶ τοῦ εκτου επιλαβόμενος καὶ πληρώς ας τὸν ενιαυτόν, εξει ιςα τὰ ἀνιςώματα, καὶ οὐκ ἔςτι ράδιον ἐπιγινώς κες θαι τῶν ἐτῶν τὸν λοιπὸν χρόνον. "At that time, common opinion has it that the canines are grown. In another twelve months, he grows the *katartismos*. When he ends five years and starts the sixth, (...) and finishes this year, he will have the anisomata equal, and hereafter it is not easy to recognize the years (of age)." καταρτιεμός occurs twice more in our chapter in the phrase ἀπὸ τοῦ καταρτιζμοῦ (Hipp. Berol. 95.2 and 95.3). There, it is obviously used as a point of reference, i.e. 'from the katartismos onward' or

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¹ I agree with Gudmund Björck, Apsyrtus, Julius Africanus et l'hippiatrique grecque (UppÅrsskr 1944.4, Uppsala 1944) 7-12, that Apsyrtus must be dated earlier than the first quarter of the fourth century, the date traditionally advanced. However, the grounds put forward by Björck for assigning him to A.D. 150-250 still seem to need corroboration.

² Corpus hippiatricorum Graecorum, edd. E. Oder and C. Hoppe, I (Lipsiae 1924) ch. 95= pp.323-25.

³ I1 and I2, called centrals and intermediaries. The facts about dentition are set out in The Merck Veterinary Manual4 (Rahway [N.J.] 1973) 78-81 [hereafter, MERCK] and Black's Veterinary Dictionary¹² ed. Geoffrey P. West (London 1976) 213-17 [hereafter, BLACK's], which the curious reader should consult. I have given a fuller account of dentition in the horse in the introduction to an edition of a hitherto unpublished Byzantine treatise (K.-D. Fischer and J. A. M. Sonderkamp, "Ein byzantinischer Text zur Altersbestimmung von Pferden, aus Ambrosianus H 2 inf.," Sudhoffs Archiv, forthcoming).

⁴ This is at least half a year too early by our reckoning, cf. Black's 214. Merck even opines that the canines are grown at $4\frac{1}{2}$ -5 years, Merck 79. The discrepancy cannot be explained away by blaming the not uncommon confusion between canines and corners (I3), which seems to be at the root of the trouble in Columella 6.29.4.

⁵ I suspect a lacuna in which Apsyrtus told us about the cups. Varro, Rust. 2.7.3 incipiunt nasci, quos vocant columellares (= κυνόδοντες). quinto anno incipiente item eodem modo amittere binos, cum cavos habeat tum renascentes, ei sexto anno inpleri, septumo omnes habere solet renatos et (et perhaps to be deleted) conpletos. Bertha Tilly, Varro the Farmer (Foxton 1973) 260, is mistaken if she thinks "These new teeth are hollow when they first grow but are gradually filled in with ivory." The translation in the Loeb edition of Varro (p.383), "has a full set of permanent teeth," is as wrong as the reference to Xenophon, On Horsemanship ch. 1; perhaps Simon §11 (his fragments in CHG II [Lipsiae 1927] Hipp.Cant. 93.1-11 pp.228-31) was intended.

'after the katartismos'. Of the meanings given for καταρτισμός in LSJ and Lampe, 'restoration' (LSJ 910, Lampe 717) and 'perfecting' (Lampe 717) seem to fit best; better still is a direct derivation from καταρτίζω in the meaning 'complete, finish, make perfect' (Lampe 717). The καταρτισμός that is grown at $4\frac{1}{2}$ years must refer to the corners (I3), since the only possible other candidates, the canines, have already been dealt with. The gaps left by the shedding of the milk corners are 'completed', and the set of teeth is now 'perfect' or 'finished'. καταρτισμός, then, means 'completion, perfection (of teeth after shedding the milk teeth)', i.e. 'completion of dentition'.6

The other word that needs defining is ἀνιςώματα. The article in LSJ suggests that it occurs very rarely. Its meaning in our passage becomes clear if we compare another account of dentition, the one falsely ascribed to Apsyrtus (Geopon. 16.1.15–16) τελειώς ας δὲ τὰ δ' έτη καὶ τοῦ ε' ἐπιλαβόμενος τοὺς λοιποὺς ἐκβάλλει κάτωθεν καὶ ἄνωθεν έξ έκατέρου ενα τοὺς δὲ φυομένους κοίλους ἴςχει. ἐμβάντος δὲ εἰς τὸ έκτον έτος άναπληροῦνται τῶν πρώτων τὰ κοιλώματα. ἐπιλαβόμενος δὲ τοῦ έβδόμου πάντας ἴςχει ςυμπεπληρωμένους καὶ οὐδὲν ὅλως ἔχοντες κοίλωμα τούτου δε ευμβάντος οὐκετι δράδιον επιγινώς κειν τὰ ετη. "Ατ the end of four years and the beginning of the fifth, he sheds the rest, above and beneath one on each side; the replacing teeth are hollow. When he starts his sixth year, the cavities of the first ones (i.e. the teeth first shed and replaced=I1) fill up. At the beginning of the seventh year, all the teeth are filled and have no cavity whatsoever. When this happens, it is no longer easy to recognize the years (of age)."

κοίλωμα must refer to the "black cavity or cup in the infundibulum ... (which) is much used in the estimation of age." As the teeth

⁶ The material, if not the exact words, of *Hipp.Berol*. 95.2–3 is reflected in the Latin *Mulomedicina Chironis* (Chiron 775–76), but I cannot detect a Latin noun that renders καταρτιεμός. The difficult passage has been elucidated by Otto Skutsch, "Notes on the Mulomedicina Chironis," *CR* 51 (1937) 56–57. The index of *CHG* II (supra n.5) p.356 declares that καταρτιεμός is also found 'alibi', although this may refer to our chapter (*Hipp.Berol*. 95.2 and 95.3 in *CHG* I [supra n.2] pp.324–25).

⁷ I think it is not impossible that Varro may be the source. All relevant literature on authorship problems in the *Geoponica* can be gleaned from R. H. Rodgers, "Varro and Virgil in the *Geoponica*," *GRBS* 19 (1978) 277–85.

 $^{^{8}}$ οὐκέτι (for οὐκ ἔςτι) is the reading of **M** in the Apsyrtus passage quoted at the beginning, and I am much inclined to prefer it to the less meaningful οὐκ ἔςτι that Oder and Hoppe print from **B**.

⁹ Merck 78.

wear, the cup slowly disappears; it is usually gone from I1 at age 6, from I2 at age 7, and from I3 at age 8. Veterinarians and horse owners will readily agree with the statement that after the disappearance of the cups οὐκέτι ῥάδιον ἐπιγινώςκειν τὰ ἔτη. 10 Since wear is dependent upon management, breed, quality of food and "other factors," 11 it seems reasonable to accept Varro's and Apsyrtus' numbers, all the more so because they both agree on an earlier date than is considered usual nowadays. 12

There is every reason to believe that κοιλώματα and Apsyrtus' ανιςώματα refer to the same thing, namely the cups, as may also be concluded from the fact that in both instances an almost identical statement about the ensuing difficulty of further estimates follows. The wording ἔξει ἴcα τὰ ἀνιςώματα makes it sufficiently clear that the writer of our passage intended ἀνιςώματα to mean 'unevennesses'. 13 It is interesting to see that the Paris version, represented by the single Ms. **M**, reads εξει πάντας εξιςώματα, and εξίςωμα (neither in LSI nor in Lampe) must surely mean the same as $\epsilon \xi i c \omega c i c$, i.e. 'filling up, levelling'. However, as not infrequently in M, the construction has gone awry, and we have to emend either $\pi \acute{\alpha} \nu \tau \alpha c$ or εξιςώματα. I should like to suggest reading πάντας (sc. δδόντας) έξιςωμένους in accordance with πάντας ςυμπεπληρωμένους in the Geoponica and with Columella 6.29.5 septimo (sc. anno) omnes (sc. dentes) explentur aequaliter et ex eo cauatos gerit, 14 nec postea quot annorum sit manifesto conprehendi potest. And the preceding sentence in Columella, sexto anno quos primos mutauit (= I1), exaequat (which I should like to paraphrase as "at age 6, the cups of the central incisors have disappeared"), supplies the sense required for filling the lacuna that I assume after $\epsilon \pi i \lambda \alpha \beta \delta \mu \epsilon voc.$ ¹⁵

¹⁰ Black's 216.

¹¹ Black's 216.

¹² Roman horses were, as we know, not much larger than our ponies, cf. Robin E. Walker, "Roman Cavalry Rations," Veterinary History 4 (1974–75) 18–19.

¹³ The ἀν- of ἀνιcόω may or may not have a negative meaning, but in ἄνιcος and its derivatives the negative meaning certainly is the more frequent one, cf. LSJ s.vv. ἀνιcάζω—ἀνιcόω and ἀνίcωμα—ἀνιcωτέον.

¹⁴ et—gerit is an erroneous statement.

¹⁵ Προςφυής, which also occurs in Hipp. Berol. 95.3 and 95.4 (CHG I [supra n.2] pp.324–25) is recorded in LSJ as '(pl.) supernumerary teeth'. These small, rudimentary premolars (up to four, cf. Black's 213) are properly called 'wolf teeth' (dens lupinus in scientific terminology). I have discussed another pertinent word from our passage, προπεπτωκότας scil. δδόντας (Hipp. Berol. 95.1), which I take to correspond to Latin brocchus and to refer

Now, to me, the $\pi\acute{\alpha}\nu\tau\alpha c$ of **M** has a genuine ring and does not look like a corruption. If my correction $\emph{έξιcωμένουc}$ is accepted, both versions offer an equally good account of the same underlying fact, ¹⁶ namely that the cups disappear. This makes it tricky to decide which of them may be nearer to what Apsyrtus originally wrote. A reading like **M**'s $\pi\acute{\alpha}\nu\tau\alpha c$ $\emph{έξιc}\acute{\omega}\mu\alpha\tau\alpha$ may well have inspired an emendation. However, the redactor of Hipp.Berol., who as a rule was liable to make mistakes in veterinary matters, does not seem the man to have arrived independently at the completely satisfactory $\emph{\'ica}$ $\tau\grave{\alpha}$ $\emph{\'avic}\acute{\omega}\mu\alpha\tau\alpha$. So one may speculate that the discrepancy between Hipp.Berol. and Hipp.Par. is due to some sort of contamination, perhaps from an independently transmitted Ms. of Apsyrtus that also was not quite faultless. ¹⁷

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to the angle formed by the incisors, in a forthcoming article in *Glotta* ("Three Lexicographical Notes").

¹⁶ A similar instance (Hipp.Berol. 33.6=CHG I p.167.15-17) has been pointed out by Gudmund Björck, Zum Corpus Hippiatricorum Graecorum (UppÅrsskr 1932:5, Uppsala 1932) 17-18.

¹⁷ It would also have omitted the first mentioning of the cups which, I believe, came after $\dot{\epsilon}m\iota\lambda\alpha\beta\dot{\rho}\mu\epsilon\nu o\epsilon$.