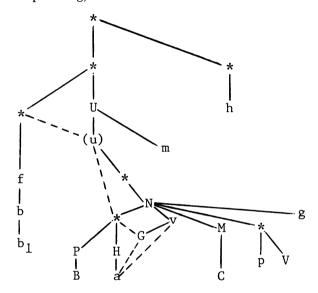
THE MANUSCRIPTS OF THEOPHRASTUS' HISTORIA PLANTARUM*

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HE ten Greek manuscripts of HP, together with Theodorus Gaza's Latin translation (G), the first Aldine (a), excerpt h, and the series of excerpts f m g, are related as follows:



In CP the relation is the same, but pV and the excerpts are wanting.2

- U Vatican City, Urbinas graecus 61; eleventh (?) century; HP and CP. The sheet comprising the folios now numbered 72 and 79 is misbound,
- * Cf. N. G. Wilson, "The Manuscripts of Theophrastus," Scriptorium 16 (1962): 96-102. For the identification of the scribes, see D. Harlfinger, Die Textgeschichte der pseudo-aristotelischen Schrift ΠΕΡΙ ΑΤΟΜΩΝ ΓΡΑΜΜΩΝ (Amsterdam, 1971).
- 1. HP is the Historia plantarum, CP the De causis plantarum, Pl the pseudo-Aristotelian De plantis. I have collated f from the MS and examined CP in U; for the rest I use microfilms and photographs. My thanks are due to the custodians of the MSS and to the kindness of Professor Aubrey Diller, Mrs. E. K. Ritter, and Mr. John Rogers, who have preserved me from errors of commission and omission.
- 2. B. de Montfaucon in his Diarium Italicum (Paris, 1702), p. 64, and Bibliotheca bibliothecarum manuscriptorum nova (Paris, 1739), 1: 480, mentions a MS in the "museum Domini Antonii Capelli" at Venice: "Theophrasti de Historia plantarum. Ejusdem de causis plantarum. Ejusdem Metaphysicorum." The MS appears to be lost. The only MS now containing the Metaphysica of Theophrastus with HP and CP is B, but B also contains the rest of the minor works together with Pl.
- 3. O. Regenbogen (s.v. "Theophrastos" in RE, Suppl. 7 [1950]: 1435. 19) says: "S. X oder XI"; J. Irigoin ("Survie et renouveau de la littérature antique à Constantinople," CCM 5 [1962]: 301) assigns it to the second half of the ninth century; and T. W. Allen ("Greek Palaeography" [The Year's Work in Classical Studies, 1934], p. 71) says: "I venture to doubt if Urbinas 61 . . . is as old as 'IX-X.'"

having been transferred from its original gathering (now numbered 9) to the following one (now numbered 10). The correct order of the folios is: (gathering 9) 65–67, 72, 79, 68–70; (gathering 10) 71, 73–78, 80. Of the original quire numbers the following have survived the binder: $\lambda\beta$ (71^r); $\lambda\theta$ (129^r); $\mu\varsigma$ (185^r); $\mu\eta$ (201^r). Twenty-two gatherings, presumably quaternions, must once have preceded the present contents, that is, some 176 folios in addition to the 269 that now contain HP and CP.

Two contemporary hands alternate, the one more angular, the other more round. The round hand has written 71^{rv} , $73^{\text{r}}-78^{\text{v}}$, $80^{\text{r}}-208^{\text{v}}$, $213^{\text{v}}-218^{\text{r}}$ line 17 (through $\epsilon l \nu a \iota$ near the end of CP 4. 11. 4), $248^{\text{r}}-251^{\text{v}}$, $256^{\text{r}}-269^{\text{v}}$.

- $\mathbf{U}^{\mathbf{d}}$ The *diorthotes* of U, who supplies some omissions in HP. I have not noticed the hand in CP.
- u The fifteenth-century corrector (or correctors) of U. Some of these corrections were taken from a lost collateral or ancestor of f:

HP 5. 6. 1 ψοφεῖν U: ψόφοις f u. HP 7. 4. 5 πλατειῶν Athenaeus: πλατεων U fles; πλαγίων ft u.

- An ancient editor (Andronicus?) appended to HP an earlier version of 9. 8. 1-9. 19. 4: Wimmer calls it U*. U* bears the title περί δυνάμεως ριζών κ.6 Except for H PB all the manuscripts indicate a new book at the join between the two versions. H and P combine them. The scholar responsible for the common source of H and P imported readings from U (including U⁰ and U*) into a manuscript derived from N. He probably entered these readings into the margin: both H and P, sometimes separately, sometimes in concert, have variants in the margin, sometimes from U⁰ or U*, sometimes from N⁰ or N*. One may guess that this original had only the fragment of the text of N* that still remains, and that the reading of U* (or U0) was entered into the margin of the text of No when N* was missing. The distinction into two separate versions became inconvenient, and was dropped. Our editor has a strong sense for sequence and more than once alters the order of words by conjecture. The rest call a root "thick and sweet"; for him it is "sweet and thick" (9. 12. 1); "cattle, sheep, and mules" become "cattle, mules, and sheep" (9. 18. 2); the two readings "differences" and "differences and potencies" become "potencies and
- 4. This differs from the accounts of C. Stornajolo (Codices Urbinates Graeci Bibliothecae Vaticanae [Rome, 1895]) and A. Colonna ("Per una edizione critica del De causis plantarum di Teofrasto," BPEC, n.s. 14 [1966]: 5). The first says: "Hunc [sc. codicem] duae manus exscripserunt, prima di 1-72, secunda 73-78, redit prima manus fol. 79, inde ab 80 secunda iterum ad finem usque..."; A. Colonna says: "il primo [sc. copista] ... ha scritto i fogli 1-72 e il foglio 79r; il secondo ... ha scritto i fogli dal 73 alla fine (eccetto il 79r)...."
- 5. F. Wimmer, Theophrasti Eresii Historia plantarum (Breslau, 1841), p. 310. I call the corresponding portions of N v (and the rest) N^*v^* (and so forth) and distinguish the text of the parallel version as $U^0 N^0 v^0$, etc.
- 6. The books of HP and CP, together with the Topics, Physics, History of Animals, Metaphysics, Nicomachean Ethics, Eudemian Ethics, and Politics are indicated by letters, not by letter-numerals: so Book 6 is ζ (not s), 9 is ι (not θ), 10 is κ (not ιa). This older practice (it is found for the books of the Iliad and Odyssey) may well go back to the library at Scepsis and to Theophrastus himself.

differences" (9. 11. 4), and the readings "punish" and "chasten and punish" become "punish and chasten" (9. 18. 4). It is perhaps this sense of priority and order that leads him to unite the two versions and crown the work with a conclusion pieced together from the introductory remarks to the two separate versions. He has only to say "these points have been dealt with" instead of "we shall deal with these points."

The Aldine was printed from H and follows it closely. But v was then (as now) at Venice and could be borrowed. In \mathbf{v}^0 we find a cross in the margin at the beginning of 9. 8. 2^0 (where the opening passage of \mathbf{v}^0 ceases to differ appreciably from the corresponding passage of \mathbf{v}^* and H) and eighteen pages later a mark of separation (like a Γ with a prolonged horizontal bar) at the passage of \mathbf{v}^* (9. 8. 2^*) where the three versions, \mathbf{v}^0 , \mathbf{v}^* , and H (the last now lost, but inferable from aP) again become sensibly the same. From \mathbf{v}^* the Aldine took the title $\pi\epsilon\rho l$ $\delta\nu\nu\dot{\alpha}\mu\epsilon\omega s$ $\dot{\rho}\iota\zeta\dot{\omega}\nu$, $\kappa\dot{\alpha}\pi\pi\alpha$ (altering the kappa to K to suit his own style), some modifications of the text of H, and the final six lines, which end with $\dot{\rho}\iota\zeta o\tau\dot{\sigma}\mu\sigma\iota$, the word indicated by the cross in \mathbf{v}^0 and the Γ in \mathbf{v}^* .

The Aldine editor was led to take these measures because he consulted Gaza's translation, where the stump of Book 10 is also found.

It was not in Aldus' interest to publish a text noticeably shorter than the one Gaza had rendered, and the insertion of alterations and supplement from v* yielded a tenth book and the same conclusion as the celebrated translation. The *editio princeps* of Gaza (1483) and the Aldine (1497) each conclude with a note:

Theophrasti Liber decimus cuius paucula quaedam habentur. & quod apud graecos habetur: id Thedorus [sic] traduxit.

Ταῦτα μόνα τοῦ δεκάτου ἐν τοῖς ἀντιγράφοις [that is, in H and v] εὐρήκαμεν εἰ μὴ ἄρα τῷ ἐννάτω συγκέχυνται τὰ λοιπά.

The Aldine editor saw that H had combined the two versions seen in v. Gaza no doubt stops here because the major discrepancy between the two versions has come to an end: from here on the two versions practically coincide (v⁰ being at times slightly fuller than v*) until the point is reached where v* breaks off (9. 10. 3*).

This tenth book of the Aldine survives in the Basel edition of 1541 and in D. Heinsius' of 1693. In Bodaeus' posthumous edition (Amsterdam, 1644) it is silently omitted, though promised in the title ("De HISTORIA PLANTARVM LIBRI DECEM"). J. Stackhouse, who generally follows Bodaeus, prints it at the end of his notes on Book 9 (vol. 2 [Oxford, 1814], p. 435), citing it from the Aldine. The admirable J. G. Schneider cites it (evidently from Heinsius) in his notes (vol. 3 [Leipzig, 1818], p. 841); in his text he returns to the reading of H (which he found in the conclusion of P, jotted down by Ezechiel Spanheim in the copy of Heinsius' edition in the royal library at Berlin), printing it in square brackets (which with him indicate an

addition) as part of 9, 20, 6, F. Wimmer (Breslau, 1842; Leipzig, 1854-62; Paris, 1866) follows Schneider, but lets 9. 20. 6 coincide with the text taken from P and omits the brackets. Hence the difficulty of referring briefly to the readings of U*: the references by book, chapter, and section are the same for both U⁰ and U* because the printed texts depend ultimately on H, where the versions are united.

N Florence, Laurentian Library, desk 85, 22; fifteenth century; CP, Pl. HP. For a guess about the scribe see Harlfinger, Textgeschichte, page 224, note 1, and page 417.

N* breaks off at HP 9. 10. 3 with ois [sic]. The word is the last of a full line on a full page (269^v): the last leaf of a quinion (and anything that followed) has been lost. The missing part of the appended version would have filled about eight leaves in N; the surviving part of N* fills about five. MC v p all end like N with ois (ois p), but in them the last page is never filled. They therefore all derive from N. HP was bound last in N to facilitate the insertion of further leaves in the event of the discovery of the missing conclusion; even in U* the concluding passage (9. 19. 4 through γίνεσθαι in Wimmer's text) is evidently incomplete.

N descends from U through a lost intermediary:

HP 1. 1. 5 άναλογον (-νά- u) U (which is perfectly legible): a blank in N MC v V p PB a (of 9, 15, 7, 5, 10, 10, 3-4, 8 letters respectively; H is wanting).

HP 3, 4, 1 ἐνιαυτοφορεῖν U (with a line break after ένιαυ) MC v V p Ha P(-αὐ- B): ένιαυτο-φορείν N (no line break).

HP 4. 2. 7 ἀπλοῦν u M² P(ἀπνοῦν B) Ha: ἀπλοῦν U (perfectly legible) V; ἀ a blank oûv N v M1 C p (of 3, 3-4, 4, 7, 2 letters respectively).

HP 4. 4. 13 εἰ προσράνειέν ego: εἰ προσραίνειέν U (-ν now erased): a blank (of 8, 10, 11, 10–11, 12, 10, 7–8 letters respectively) followed by ϵ (ϵ p) Nv MC V p P; no blank and & B; a blank of 6-7 and 5 letters respectively Ha.

HP 6, 4, 3 (after οὖτος) οὐ U PB a (H is wanting): δ N MC v p (V is wanting). In U the long tail of the ξ of $\delta\nu\delta\pi\nu\xi$ os in the preceding line appears to cross out the v.

The scribe of N or of his lost original was a Latin (perhaps both were):

HP 1. 10. 4 πλατύφυλλα U (-ττ- f) PB Ha N² v MC: πλαθύφυλλα N¹ p V.

ΗΡ 4. 2. 2 ταριχεύουσιν U (-σι u MC PB Ha): ταρικεύουσι N v p V.

HP 4. 14, 13 ἐκπήξεις Schneider: ἐκπλήξεις U PB a (H is wanting); ἐκπλήσεις N MC v p V.

HP 6, 8, 1 βολβοῦ U MC p PB a: βουλβοῦ N (first v expunged) v.

Venice, Library of St. Mark 274; copied by Demetrios Sgouropoulos for Cardinal Bessarion at Florence and dated January 3, 1443; HP and CP. The scribe skips exactly two pages of N (163^v and 164^r), passing directly from ὅσκαλσιν (HP 2. 7. 5), the last word on 163r in N, to ὁμοιότητος (HP 2. 8. 4), the first word on 164v. There is no such omission in MC p V PB Ha.

v (like p V) comes from an earlier state of the text of N than does M. The scribe is hasty and not at home in Latin. Thus he neglects certain

^{7.} p adds a note: $\lambda_{\nu}^{\pi'} \phi \dot{\nu} \lambda o \nu \ \tilde{\epsilon} \nu \ \epsilon \dot{i} s \ \tau \dot{\eta} \nu \ \tau \epsilon \lambda \dot{\iota} \omega \sigma \iota \nu \ \tau o \hat{\upsilon} \ \beta \iota \beta \lambda \dot{\iota} o \upsilon$.

longer deletions by N^2 , a Latin who encloses them between two brackets, superscribing va over the first and cat over the second. In the first of them v omits the va and misreads the cat as $\gamma a \rho$:

HP 2. 3. 3 after συμβαίνειν (-νει a) N^2 deletes δὲ οὐκ ὅντων δὲ οὖον ἐλαία ποτ' άποκαυθεῖσα τελέως ἀνε; v alone retains the deleted words (with τελείως for τελέως and ἀνε^{γαρ} for ἀνε^{εαί}).

N¹ omitted the titles and initial letters of each book, leaving them for the rubricator: the guide letters for the initials are still visible in the margin. But no rubricator was forthcoming, and N² inserted the present titles and initials in black.

The scribe of v copied N before N^2 had added the titles and initials. The original scribe, however, left two blank lines for the heading of each book and omitted the initial letters of each, including Books 9 and 10. Bessarion and his scribes extemporized. Guide letters have been inserted by v^2 (those for 1 and 8 are no longer visible; none were inserted for 9 and 10). This hand has also placed nine Greek ordinals ($\alpha \beta \gamma \delta \epsilon \varsigma \zeta \eta \iota$), each surmounted by -os' ($\lambda \delta \gamma os$ being understood) in the margin of the first line of the book, skipping θ (= 9) and leaving Book 9 with an erased Roman IX in the margin. The η for Book 8 has been expunged. Another η , placed in the margin at 7. 11. 1 (where v leaves a blank of 29 letters and a line, punctuating the preceding word with : + as if it ended a book), has been erased.

A third scribe (v^3) has added the titles in all except one of the blanks (that which heads Book 9) left for them by v^1 , and has also supplied the ornate initials. The titles are of the form $\theta\epsilon o\phi\rho\dot{\alpha}\sigma\tau ov\ \tau\dot{\omega}v\ \pi\epsilon\rho\dot{\iota}\ \tau\dot{\alpha}\ \phi v\tau\dot{\alpha}\ i\sigma\tau o\rho\iota\dot{\omega}v$ (modeled on Aristotle's $\tau\dot{\omega}v\ \pi\epsilon\rho\dot{\iota}\ \tau\dot{\alpha}\ \zeta\dot{\varphi}a\ i\sigma\tau o\rho\iota\dot{\omega}v$); each is followed by the name of a letter: $\ddot{\alpha}\lambda\phi a\ (1)$, $\beta\dot{\eta}\tau a\ (2)$, $\gamma\dot{\alpha}\mu\mu a\ (3)$, $\delta\dot{\epsilon}\lambda\tau a\ (4)$, $\bar{\epsilon}\ (5)$, $\zeta\dot{\eta}\tau a\ (6)$, $\dot{\eta}\tau a\ (7)$, $I\dot{\omega}\tau a\ (9)$, $\kappa\dot{\alpha}\pi\pi a\ (10$; that is, where v^* begins). There is no difficulty about Books 1–5. For the rest, a diagram (Table 1) may be convenient.

Hesitation about the marginal numbers begins with $\bar{\eta}^{os}$, which is twice set down and twice deleted (erased at 7. 11. 1, expunged at 8). The number is important because it marks not only the beginning of an eighth book but the end of a seventh, and Galen says that 8. 9. 2 comes from Theophrastus "in the seventh book on plants" ($\dot{\epsilon}\nu$ $\tau\hat{\varphi}$ $\dot{\epsilon}\beta\delta\delta\mu\varphi$ $\pi\epsilon\rho l$ $\phi\nu\tau\hat{\omega}\nu$: De alimentorum facultatibus 1. 11 [CMG, 5. 4. 2, pp. 237. 20–238. 7 Helmreich; 6: 516 Kühn]). Neither placement of the marginal η puts the citation in the seventh book; both put it in the eighth. The placing of the Roman IX (now erased) at 9. 1. 1 looks like a noncom-

^{8.} So in CP the titles are omitted by N^1 (although room is left for them); in \mathbf{v} the third hand (\mathbf{v}^3) adds titles of the form $\pi \epsilon \rho l \ \phi \nu \tau \hat{\omega} \nu \ \gamma \epsilon \nu \epsilon \hat{\sigma} \epsilon \omega s \ \tau \hat{\sigma} \ \tilde{\alpha} \lambda \phi \alpha$ (and so through $\tilde{\epsilon}$), modeled on Aristotle's $\pi \epsilon \rho l \ \zeta \hat{\omega} \omega \nu \ \gamma \epsilon \nu \epsilon \hat{\sigma} \epsilon \omega s$. (Book 5, with which fol. 172° begins in \mathbf{v} , lacks title and number, no blank having been left for them by \mathbf{v}^1 , who failed to notice the blank left by N^1 [later filled by N^2 with the title $\theta \epsilon o \phi \rho \hat{\alpha} \sigma \tau o \nu \ \pi \epsilon \rho l \ \phi \nu \tau \hat{\omega} \nu \ a l \tau \iota \hat{\omega} \nu, \ \tau \hat{\sigma} \ \tilde{\epsilon}$] because it there was the last line of the page.) Gaza gently sets the title right and corrects the number near the close of his Praefatio: "cum in his omnibus Theophrasti libris, tum maxime in his sex quos de generatione sive de causis plantarum addidit . . ." [italies mine].

TABLE 1

Book	Ordinal by v ^{2m}	Letter Name in Title by v ³
6 7 7. 11. 1 ^a 8 8. 9. 2 ^b 9	$\bar{\xi}^{os'}$ (=6th) $\bar{\zeta}^{os'}$ (=7th) $\bar{\eta}^{os'}$ (=8th; now erased) $\bar{\eta}^{os'}$ (=8th; now expunged) [no ordinal] IX (Roman numeral; now erased) $\bar{\iota}^{os'}$ (=10th)	$\ddot{\zeta}$ $\hat{\eta}$ τα (= 6) $\ddot{\eta}$ τα (= 7) [no title or letter name] $I\hat{\omega}$ τα [sic] (= 9) [no title or letter name] [no title or letter name in the two lines left blank by v ¹] κάππα (= 10)

^a The punctuation lets the lacuna appear as an interval between books.

mittal expedient: the "nine" would be $\bar{\theta}^{os'}$ in the style of v^{2m} , $i\hat{\omega}\tau\alpha$ in the Aristotelian style of the titles by v3. We may conjecture that Bessarion knew (perhaps from Diogenes Laertius 5. 46, perhaps from rumor among the learned, who had the news from U or the lost original of N) that HP contained ten books, and decided to attempt to identify the eighth book by figuring backward from the last. He found the beginning of $\kappa \dot{\alpha} \pi \pi \alpha$ v³ = $\bar{\iota}^{os'}$ = 10 easily enough, but his attempt was frustrated by an error of the rubricator (v³), who misread the $\theta \hat{\eta} \tau a$ of his instructions as $I\hat{\omega}\tau\alpha$ (hence the omission of the breathing) and may well have misplaced it, since a $\theta \hat{\eta} \tau \alpha$ (= 8) placed somewhere after 8. 9. 2 would have left the citation in Book 7, where according to Galen it belonged. The correct solution would doubtless have been to lump Books 7 and 8 together into a single book of about twice the usual length, calling it $\hat{\eta}\tau\alpha$ (=7) and then call Book $9 \theta \hat{\eta} \tau \alpha$ (=8) and Book $10 (=v^*) i \hat{\omega} \tau \alpha$ (=9). This was precluded by working backward and designating Book 10 as $\kappa \dot{\alpha} \pi \pi \alpha$: Galen was apparently citing from an edition in nine books, not ten. The confusion however had its uses; it indicated that the division of books in the tradition was wrong.

But we hasten to Bessarion's notes. On the first five pages of v $(2^{r}-4^{v})$ Bessarion cites many of Gaza's versions, sometimes turning Gaza's conjectures into Greek. On the flyleaf (1^{v}) Bessarion has written two long notes, the first dated 1445, the second 1446.9 In the first he calls the book $\dot{a}\delta\dot{e}\sigma\pi\sigma\sigma\sigma\nu$ kal $\dot{a}\nu\epsilon\pi i\gamma\rho\alpha\phi\nu$ (lacking author's name and title), but infers that it is by Theophrastus (as some suppose) because of the Aristotelian character of the style (to be expected in Theophrastus) and because the Latins have all the books of Aristotle that the Greeks have, but lack this one (although they and the Greeks have the *De plantis*, which bears Aristotle's name). In the second note Bessarion announces further proof of the authorship. He has found in Galen's *De alimentorum facultatibus* a passage (*HP* 8. 9. 2) cited expressly as what Theophrastus

b Cited by Galen as "in the seventh book."

c Before v*.

^{9.} Both are cited and translated by L. Labowsky, "Aristoteles *De Plantis* and Bessarion . . . ," MRS 5 (1961): 145-47.

G Theodorus Gaza (or Gazae, as Bessarion has it in the ex libris cited below) translated HP and CP into polished Latin in 1450-51. His chief source was v,¹⁰ but he also had readings from the edition now represented by H and P. The editio princeps was printed at Treviso and bears the date February 20, 1483. It swarms with errors and must often be corrected from the manuscripts, of which eight are known:¹¹

Budapest, University Library 1 (HP, CP).

Cesena, Biblioteca Malatestiana S XXIV 3 (HP, CP). The colophon runs: "Scriptus per me Iohannem antonii de Spinalo pro Magnifico & potenti domino dno Malateste nouello de Malatestis &c." Domenico Malatesta Novello died in 1465.

London, British Museum, Harley 3414 (HP).

New York, Pierpont Morgan Library M 118; about 1470 (HP).

Valencia, University Library 729 (HP, CP through ad aeris [2. 4. 9] with the catchword habitum at the end of a quinion; the rest is lost).

Vatican City, Chigi F VIII 193 (HP, CP).

Vatican City, Urbinas 250 (HP, CP); dated 1520 (finis Deo grās. φ.κ. before the subscription of CP).

Venice, Library of St. Mark 265 (HP, CP); from Bessarion's library. Bessarion became Card. Sabinensis antea Tusculani in October 1468. On an ex libris we find in Bessarion's own hand the following statement in Greek and in Latin (I quote the Latin): "Locus. 31. | Theophrasti de plantis. Translatum per theodorum Gazae.; liber meus. | b. Car(dinalis) Tusculani."

- M Florence, Laurentian Library, desk 85, 3; fifteenth century; HP, CP, Pl; written by Harlfinger's Librarius Florentinus (cf. Harlfinger, Text-geschichte, pp. 223, 417). Near the end of HP 3. 9. 4 N writes $\pi \partial \lambda \lambda^i$ for $\pi o \lambda \lambda \dot{\eta} \nu$, the tachygraphic sign for $\eta \nu$ appearing as a circumflex and being placed too early; it is a besetting fault in N to place accents too early or too late. M^1 did not understand the word and writes πo and a blank of five letters; C follows M, leaving a blank of nine letters; V writes $\pi \delta \lambda \lambda o \nu$ (misreading the grave as the sign for $o \nu$), and M^2 (a late hand) corrects to $\pi o \lambda \lambda \epsilon \ell \nu$.
- C Oxford, Corpus Christi College 113; it contains (inter alia) HP, CP, Pl. It was written by Petros Hypsilas, according to Harlfinger, Text-geschichte, page 412. In HP and CP it is a copy of M.

^{10.} Cf. HP 7. 7. 2 κόρχορος U N MC p a PB: κίχυρος uss; κόρχος v (corchus G [corcus Budapest MS; corcorus (from Pliny) editio princeps]).

^{11.} Cf. C. B. Schmitt, "Theophrastus" (in Catalogus translationum et commentariorum: Mediaeval and Renaissance Latin Translations and Commentaries, vol. 2 [Washington, 1971], p. 268.

^{12.} Cf. A. Diller, "Three Greek Scribes Working for Bessarion: Trivizias, Callistus, Hermonymus," IMU 10 (1967): 408.

- V Vienna, National Library, Suppl. 32; fifteenth century; HP through $\gamma \dot{a}\rho \ o \ddot{b}\tau \epsilon$ (6. 3. 2), breaking off after $50^{\rm w}$ (a full page) through loss of the following leaves. A descendant of N.
- **p** Vatican City, Palatinus 162; among its contents are *HP* and *Pl*. Written by Johannes Scutariota in 1442–47.
- **H** Harvard College Library 17; fifteenth century. Among the manuscripts bound together in this volume is one that when intact contained the entire *HP* and *CP*. The Aldine was printed from it. Two mutilated fragments survive, bound in the reverse order:

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HP 9. 16. 8-CP 3. 3. 7 (|\dot{\epsilon}\kappa \sigma o \dot{\nu} \sigma \omega \nu - \dot{\rho} \iota \gamma o \hat{\nu} \nu|); the last three folios of quire \iota \theta are lost (CP 2. 6. 1-2. 9. 6 |\delta \iota \dot{\alpha} - \tau \hat{\omega} \nu|).
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HP 1. 8. 3-HP 4. 6. 5 (|μεῖζον—καὶ ἔ|); the third folio of quire ε is lost (HP 3. 11. 1-HP 3. 12. 1 |προσαγορεύουσι—κρανείας|).

Harlfinger, *Textgeschichte*, page 413, suggests that the scribe was Paulos (Paolo Bombasio?).

- a The fourth volume of the Aldine Aristotle, dated Calendis Iunii M
- P Paris, National Library 2069; fifteenth century; HP, CP, Pl; copied, according to Harlfinger, Textgeschichte, page 413, by Andronicus Callistus.
- **B** Vatican City, Vaticanus 1305; fifteenth century. The second part, originally a separate manuscript, contains HP, CP, Pl. In HP and CP it is a direct copy of P. The scribe (easily the worst of the lot) is Harlfinger's tenth Anonymus (*Textgeschichte*, p. 418).

H and P derive from an ancestor copied from N and containing readings introduced from U.

The Excerpts

f Phillips 3085; fifteenth century.¹³ The extracts (all from HP) were collated by me from the manuscript; I have no photographs. They occupy the last 52 pages and break off (after ἀλφίτου 9. 9. 1) with the loss of the folio (or folios) that once followed. The loss antedates b.

In the Theophrastus there is no second hand. There are numerous corrections by the first hand, so made that it is evident that both text and correction stood in the original (thus the accents are so placed that they do not interfere with the superscriptions). The numerous blanks appear to be mainly due to the scribe's inability to read a difficult hand.

The longest nearly continuous extract is of some seven pages (*HP* 9. 4. 2–9. 8. 1). The excerptor freely omits and paraphrases, especially in the shorter selections. He has no concern for avoiding hiatus or bad quantitative rhythm, and often returns to a more natural phrasing and arrangement of words.

13. Cf. Verzeichnis der griechischen Handschriften der königlichen Bibliothek zu Berlin, pt. 1: Codices ex Bibliotheca Meermaniana Phillipici graeci nunc Berolinenses, p. ix, n. 2; also A. Wartelle, Inventaire des manuscrits grecs d'Aristote . . . (Paris, 1963), p. 60.

The following readings of f do not all appear to be mere accidents or conjectures:

- 1. 3. 2 γιγνομένου f: γιν- U (dot over ν).
- 1. 5. 3 βάμνον Wimmer: βάκνου f; βαλανου U.
- 1. 6. 1 ἔπειτα καὶ f: ἐπεὶ καὶ τὰ U.
- 1. 8. 4 ή άποκοπή f: καὶ ή άποκοπή U.
- 1. 12. 2 έλάτης f: έλει ατης U (έλαίας της u).
- 3. 1. 6 $\dot{v}\lambda\eta s \pi\lambda\hat{\eta}\theta os U: \pi\lambda\hat{\eta}\theta os \tilde{v}\lambda\eta s f$ (avoiding hiatus).
- 4. 7. 7 ἐξείρειν Wimmer: ἐξεί(αι ss.)ρειν f; ἐξαιρεῖν U (-αίρειν u).
- 5. 9. 8 ἄφεδρον Lobeck: ἔφεδρον f; ἔφυδρον U.
- 9 heading: $\ddot{\iota}$ U^m; θεοφράστου περὶ φυτῶν ὁπῶν (in red) f. The title was evidently intended to contrast with the title of U* (περὶ δυνάμεως ῥιζῶν) and shows the presence of the U* text in the MS excerpted.
- **b** Paris, National Library 1823; sixteenth century (?). It contains (inter alia) the excerpts from *HP*. These were once a separate MS, written in a different hand and with its own quire numbers. It is a copy of f.
- b₁ Paris, National Library 1953; sixteenth century; a copy of b (so at HP 1. 6. 12 it drops an exact line of b: οὐκ ἔλαττον τῶν λίνων μίαν γὰρ ρἰζαν ἔχει τὴν κατὰ τὸ βάθος:—).

An excerpt from HP 1. 3. 1 by a grammarian is independent of U and is found in four manuscripts:

- h₁ Paris, National Library 2408; thirteenth century; 225^r.
- h₂ Zavorda 95; 76^v col. 2 by the second hand (cf. L. Politis, "Kloster Zavorda und die Photios-Handschrift," *Philologus*, 105 [1961]: 141). I owe a transcription of the passage to the kindness of Dr. Christos Theodoridis of Thessaloniki and the courteous permission of Professor K. Tsantsanoglou.
- h₃ Paris, National Library 1630; fourteenth century; 115°. The passage is printed in J. F. Boissonade, *Anecdota Graeca* (Paris, 1829), 1: 410-11.
- h₄ Vienna, National Library phil. gr. 178; 1429–30; 44^v.

Plethon's excerpts are represented by four manuscripts:

- g Venice, Library of St. Mark 406; 74-76; in Plethon's own hand. The excerpts are very free, and of little or no value for the text. The source was N or a related manuscript, not U: HP 3. 11. 3 φυλλοροεῖν U: φυλλοφορεῖν g Nv MC Vp a(-υλο-PB).
- g₁ Munich, Bavarian National Library 48; 440-441^v; from the preceding manuscript. It was written by Petros Karneades (Harlfinger, *Text-geschichte*, p. 413).
- g₂ Vatican City, Vaticanus 1759; fifteenth century; 246-248^v. It is quoted in full by J. G. Schneider, *Theophrasti Eresii Quae supersunt omnia*, vol. 5 (Leipzig, 1821), pp. 185-88.
- g₃ Paris, National Library 2080; 282^r-286^r.
- m Heidelberg, Palatinus 129; 70°-71; end of the fifteenth century. The excerpts are from HP 1. 1. 9, 1. 2. 6, 1. 3. 1, 1. 3. 2, 1. 5. 3, 1. 8. 2,
 - 14. A. Diller, "The Autographs of Georgius Gemistus Pletho," Scriptorium 10 (1956): 41.

1. 9. 2, 1. 9. 3, 1. 9. 4, 1. 9. 6, 1. 9. 7. They are followed by explanations of some terms. The source is presumably U; it is not N or one of its descendants (including the edition represented by H and P).

The editor of *HP* can ignore the other MSS and excerpts and rely exclusively for the tradition on U, f, and h. He must take care not to confuse U with u, since the readings of u are conjectures, except for the few that were taken from a lost connection of f. He must also take care in using f: an excerptor is not likely to include unintelligible passages, and is apt to abbreviate and paraphrase without warning.

Three common sources of corruption in U are these:

- (1) Breathings and accents are very frequently absent. It is therefore very easy to confuse a superscribed $L (= \epsilon \nu)$ with a square rough breathing and vice versa, and again ϵ and $\dot{\nu}$.
- (2) In an ancestor omitted words and phrases were sometimes not only written in the margin but entered into the text; they thus appear twice.
- (3) A word or phrase is corrected from a parallel passage. Compare HP 2. 8. 1 ἐπὶ 'Αλύκω ego: ἐπὶ φαλύκωι U. The φ came from HP 8. 2. 11 ἐφ' 'Αλύκω ego: ἐφαλύκωι U.
 - HP 8. 4. 5 τοις Πεσσόγγοις ego (here and in the two passages to be cited; cf. τους Πεσσόγγους W. Dittenberger, Orientis Graeci inscriptiones selectae, vol. 1 [Leipzig, 1903], no. 315 A 6): τοις πισσάτοις U; τοις πισσύτοις f.
 - CP 4. 9. 5 $\tau o i s$ $\pi \iota \epsilon \sigma \dot{\alpha} \gamma \gamma a \iota s$ U. CP 4. 11. 6 $\tau a i s$ $\dot{\epsilon} \pi \iota \sigma \upsilon \nu \dot{\alpha} \gamma \gamma a \iota s$ U. One may suppose that $\epsilon \sigma$ is a corruption of $\sigma \sigma$, and that the ϵ , superscribed over $\pi \iota \sigma$, yielded $\dot{\epsilon} \pi \iota \sigma$ -; again, that τ is a corruption of $\gamma \gamma$ (perhaps through $\tau \gamma$, a common way of writing $\tau \tau$); $\upsilon \gamma \gamma$, superscribed over $a \gamma \gamma$, yielded $\upsilon \nu a \gamma \gamma$.

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