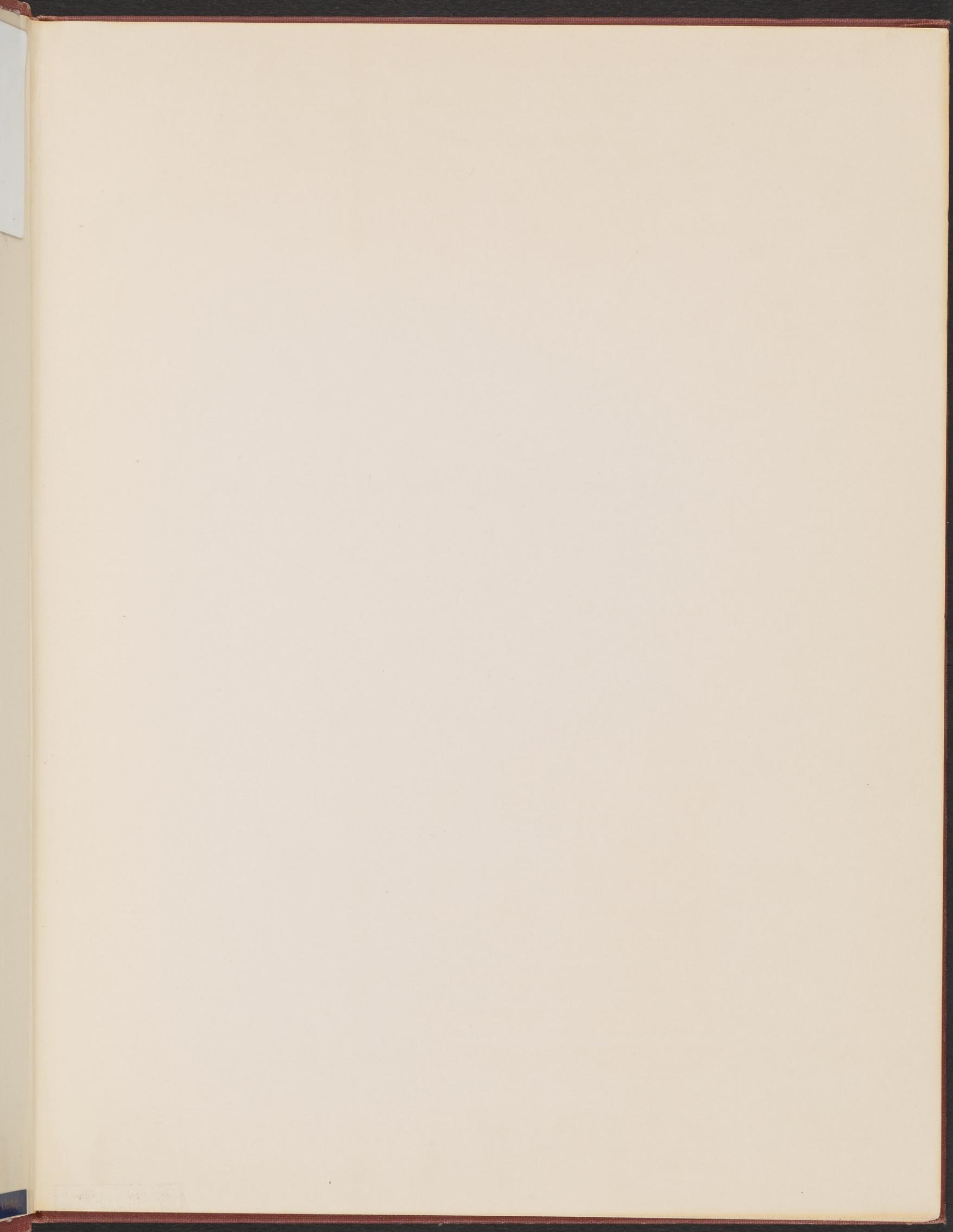
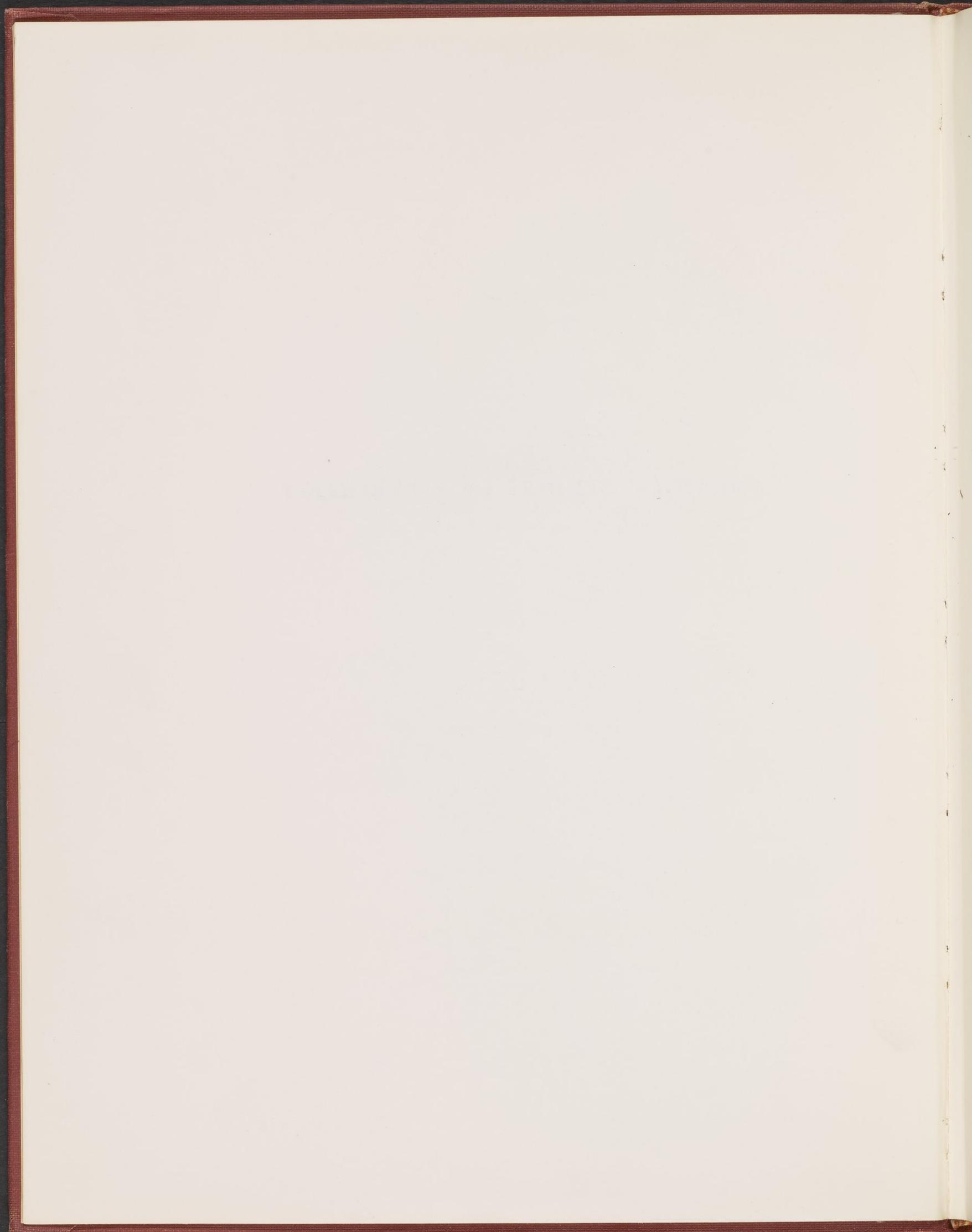


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AMERICAN STUDIES IN PAPYROLOGY



AMERICAN STUDIES IN PAPYROLOGY  
VOLUME FIVE

*/ EURIPIDES PAPYRI /*  
*I: TEXTS FROM OXYRHYNCHUS*

BRUCE E. DONOVAN

THE AMERICAN SOCIETY OF PAPYROLOGISTS  
NEW HAVEN AND TORONTO • MCMLXIX

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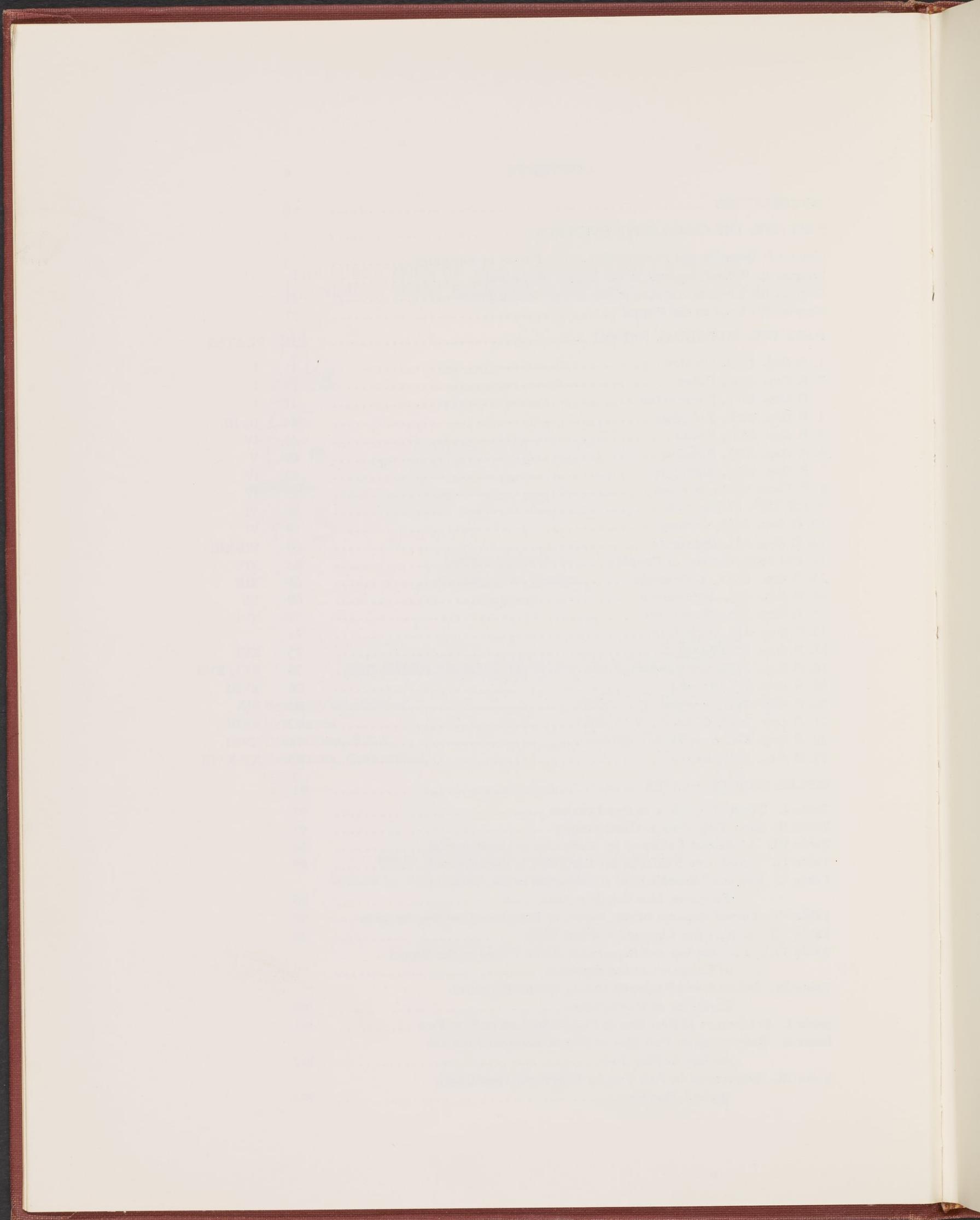
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## INTRODUCTION

This study comprises a consistent and thorough review of those twenty-three papyri of Euripides which in the second edition of R.A. Pack's catalogue, *The Greek and Latin Literary Texts from Greco-Roman Egypt*, share secure identification as texts found in Oxyrhynchus.<sup>1</sup> The analysis of this selection is the first step in a continuing investigation which will ultimately involve the Euripidean fragments from all of Greco-Roman Egypt. The primary aim of this study is to obtain as precise information as possible on the varieties and numbers of Euripidean texts from ancient Egypt and, more particularly, to collect as many bibliographical details as may be extracted from the papyrological remains.

Section I of this study has been divided into four chapters to reveal most clearly the results of the detailed investigations contained in Section II. In the first chapter, which treats of the actual numbers of texts and the specific plays which are attested, Oxyrhynchus is shown with great probability to provide a microcosmic view of the conditions which obtained in the rest of Greco-Roman Egypt. In the second, raw data is accumulated from the total selection of Section II and details are assembled on the formal aspects of the papyri—internal and external measurements of the original texts, their layout, the evidence for lectional aids. In the third chapter questions of a more literary nature are introduced, i.e. dealing with such matters as the quality of the preserved texts, with some comments on the processes of correction and the relationships of the papyri one with another and/or with the medieval manuscripts. In the final chapter an attempt is made to determine the purpose or audience for which the original texts might have been designed.

The choice of Euripides as prime focus of this study was prompted by the demonstrable popularity which he enjoyed in the post-Classical period, a popularity evident from other studies but which is yet more strongly established by

1. On the problem of 'provenance' and the distinction between "place of finding and place of writing of a text" cf. E.G. Turner, *Greek Papyri: An Introduction*, p. 49. Only those texts entered in Pack's catalogue are included in the statistics of this study. As Euripidean fragments continue to appear sporadically it seems best to provide a definite if arbitrary *terminus ante quem* for those pieces considered, so that the calculations might have some semblance of completeness and a standard point of reference.

the exclusively papyrological investigation conducted here. Nevertheless, it is likely that the information gleaned from this limited series of texts will be relevant to consideration of other dramatic works and perhaps other genres as well.

Through further limiting the study to analysis of texts from only one site, it was hoped to isolate peculiarities of book usage and/or production in one particular area. Oxyrhynchus was an obvious choice.<sup>2</sup> The Euripidean corpus was here of manageable size for the sort of detailed study desired and, further, in an impressive and stimulating series of articles E.G. Turner has already told much about the site in its cultural and socio-economic aspects.<sup>3</sup>

The method employed in reviewing individual papyri demands further comment. The readings of each text have been checked and points of dispute among former editors considered. An effort has also been made to capture from the simple fragments some idea of the original rolls or codices. This attempt has in every case involved extrapolation, not, of course, a new process in working with papyri but one which may here seem more striking as it is central and basic to the investigation. This procedure might be justified by Kenyon's oft quoted claim—"Any scrap of papyrus sufficiently large to make it possible to ascertain the character of its text is evidence of the existence of a complete manuscript at the time when it was written".<sup>4</sup> The validity of this assertion may be challenged—perhaps it ought to be challenged—yet these procedures are in the main tradition of contemporary papyrology.

The chief terminological difficulty involves the terms 'book-text' and 'literary text', 'reading text' and occasionally simply 'text', which have been used interchangeably to describe things non-documentary and have been applied more specifically, with the exception of the *Cresphontes*, to works used for pleasure and/or scholarly purposes and not to works of a more technical nature, e.g. lexica, *hypomnemata*, or manuals of one sort or another. One other term may require clarification if only for the sake of the lay reader. When the 'truth' of a particular reading is evaluated, such judgment refers only to the basic sense and coherence of any fragment within the limits of what we know of Euripidean style and usage; nothing is claimed for what might actually and absolutely have appeared in a Euripidean autograph copy. The Oxford text of Murray is consistently employed as a traditional, acceptable, and convenient standard of reference.

It is regretted that only when revision was in its last stages Professor Tur-

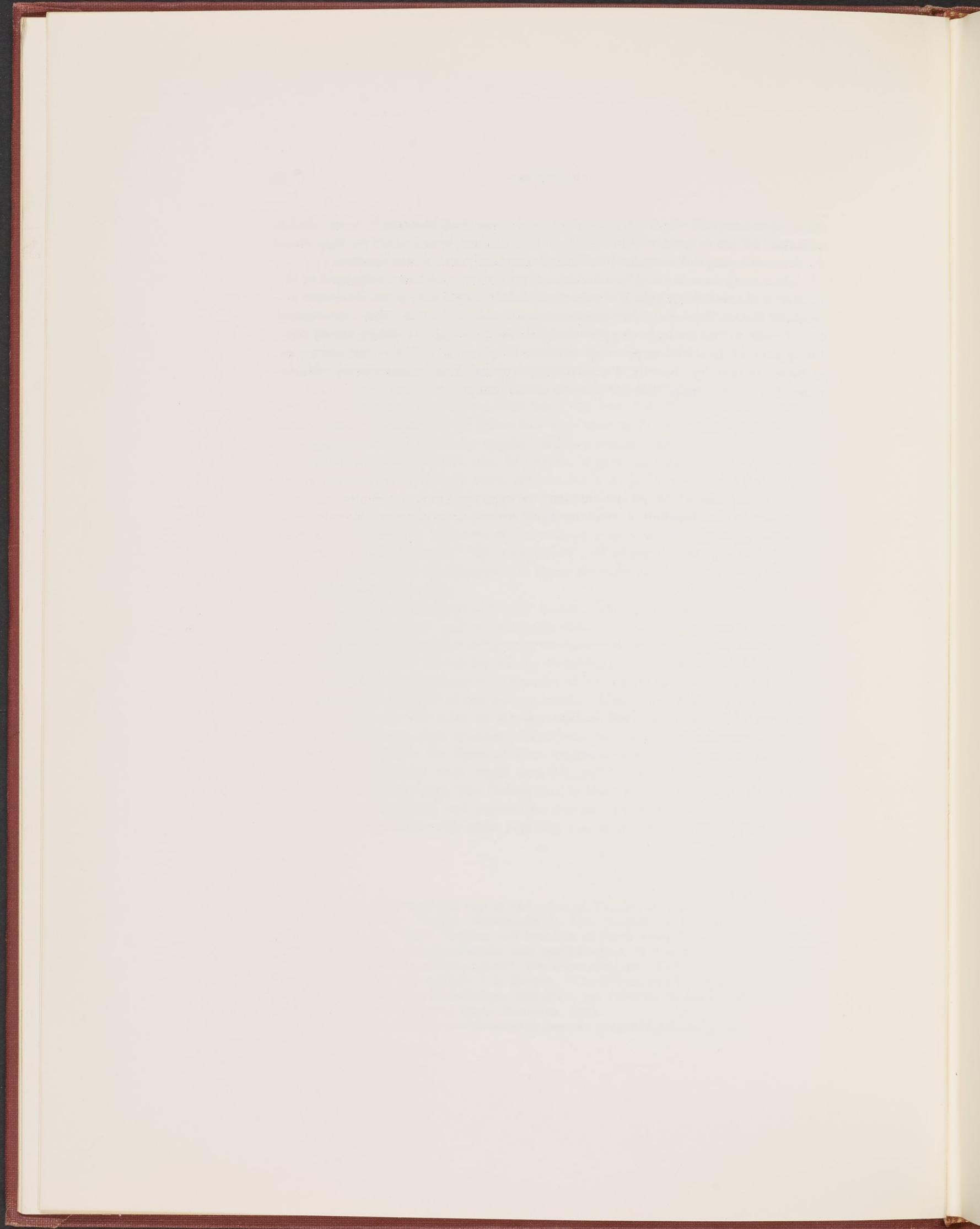
2. For the dangers of this sort of limitation cf. Turner, *op. cit.*, p. 45.

3. E.G. Turner, "Roman Oxyrhynchus", *The Journal of Egyptian Archaeology*, XXXVIII, 1952, pp. 78-93; "Scribes and Scholars of Oxyrhynchus", *Mitteilungen aus der Papyrussammlung der Österreichischen Nationalbibliothek*, V Folge, 1956, pp. 141-146; "L'érudition alexandrine et les papyrus", *Chronique d'Egypte*, XXXVII, 1962, pp. 135-152. Other studies of the site include: F.G. Kenyon, "The Library of a Greek at Oxyrhynchus", *The Journal of Egyptian Archaeology*, VIII, 1922, pp. 129-138; H. MacLennan, *Oxyrhynchus: An Economic and Social Study*, Princeton, 1935.

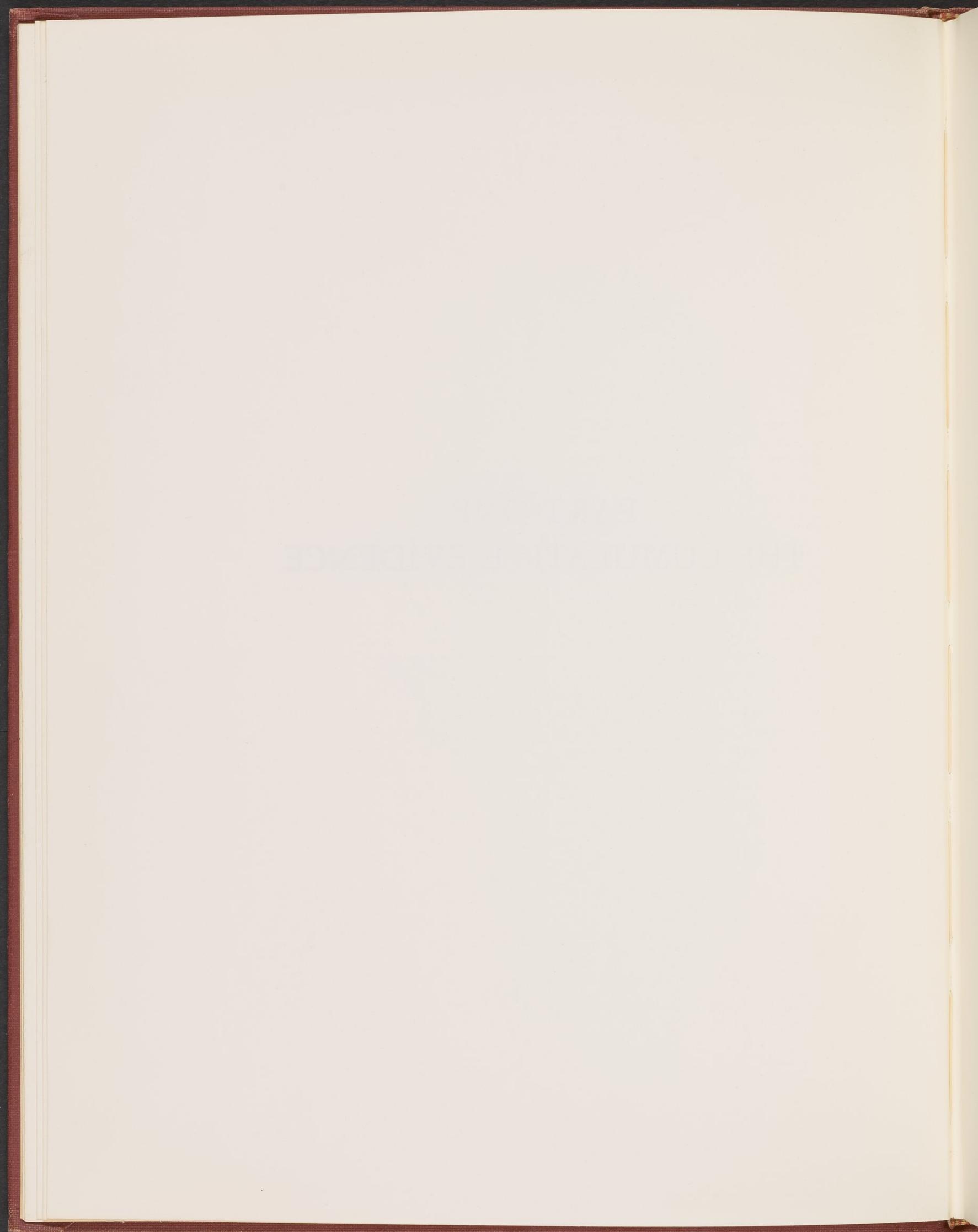
4. F.G. Kenyon, *Books and Readers in Ancient Greece and Rome*, p. 30.

ner's useful volume *Greek Papyri: An Introduction* was published. I am glad to note that we are in general agreement. I have tried as best I could to indicate in the footnotes material contained in Turner's modestly titled *Introduction*.

This study is a revised version of a dissertation originally submitted to the faculty in Classics of Yale University. Special thanks are given Professor C. Bradford Welles for kindly, untiring, and invaluable guidance. The comments of E.G. Turner have also been of great use. All faults and shortcomings are my own. For grants of financial support gratitude is expressed to Yale University and to Brown University. Finally, I acknowledge special indebtedness to my wife for many things, but especially for patient understanding.



PART ONE  
THE CUMULATIVE EVIDENCE



## CHAPTER I

### QUANTITY AND DISTRIBUTION OF THE PAPYRI OF EURIPIDES

#### *Extant and Lost Tragedies at Oxyrhynchus*

There will surely always be doubt as to the number of tragedies actually written by Euripides.<sup>1</sup> More significant, however, for any consideration of the popularity of his plays at Oxyrhynchus, is the number of plays which with some right we may assume to have been transmitted after the work of Aristophanes of Byzantium. Wilamowitz listed sixty-seven tragedies which were known in and survived this period, a number since commonly accepted.<sup>2</sup> Possibility of change even in this figure still exists, however, as demonstrated by a pair of Oxyrhynchan fragments which attest two separate Euripidean tragedies entitled *Phrixus*; this evidence raised the figure suggested by Wilamowitz, who acknowledged only one *Phrixus*, to sixty-eight.<sup>3</sup> Of these sixty-eight plays only eighteen, or slightly less than one-fourth, are extant. As can be seen from Table I, eight of these extant tragedies are attested by fragments from Oxyrhynchus; nine of this same group are attested at other sites as well. A pronounced coincidence exists between the plays preserved both at Oxyrhynchus and beyond. The *Andromache*, *Bacchae*, *Hippolytus*, *Medea*, *Orestes*, and *Phoenissae* occur in each list, and each is attested by no fewer than three fragments. Five other presently extant tragedies occur in one or the other category: *Hecuba*, *Helen*, *Heracles*, *Iphigenia in Tauris*, and *Rhesus*. Of these, none but the *Hecuba*, which is attested twice at Oxyrhynchus, is found in more than one fragment. There is no evidence for book texts of *Alcestis*, *Electra*, *Heraclidae*, *Ion*, *Iphigenia in Aulis*, *Suppliants*, or *Trojan Women*. Certain plays were apparently popular at Oxyrhynchus and throughout Greco-Roman Egypt as well.

Tabulation and discussion of evidence for plays no longer extant requires

1. For a discussion of the evidence for the number of plays written by Euripides, whether ninety-two or ninety-eight, see W.M. Bates, *Euripides: A Student of Human Nature*, Philadelphia, 1930, p. 15ff.

2. Wilamowitz, *Analecta Euripidea*, Berlin, 1875, p. 131ff. T.B.L. Webster, *The Tragedies of Euripides*, London, 1967, excludes the *Rhesus* and thus sets the number of plays at 66.

3. For this judgment see Wilamowitz, *op. cit.*, p. 158. For mention of the two *Phrixus* plays see *P. Oxy.* 2455 and 2456, and concerning the former, E.G. Turner, "Euripidean Hypotheses in a New Papyrus", *Proceedings of the IX International Congress of Papyrology*, Oslo, 1961, pp. 1-17.

particular care. Identification of a fragment even of a known play is not easy, as fragments are often exiguous and wretchedly preserved. With a lost play, however, these difficulties are complicated by the fact that a lost play is sometimes known only by title, description of its plot, or through brief quotation. The hard evidence for attribution, in short, is limited. Further evidence of Euripidean dramaturgy probably exists among the tragic adespota, which in Pack's catalogue total over forty, and among these potentially identifiable plays the proportion of lost to known works is probably not small. Some of these plays were, of course, available in Oxyrhynchus. Table II illustrates the frequency of such works at Oxyrhynchus and at other sites. This data, if less striking, is not dissimilar from that for extant tragedies. Thirteen lost works are listed. Those works which are attested both at Oxyrhynchus and beyond occur only once in each category except for the *Telephus*, once attested at Oxyrhynchus, thrice outside. Except for *Phaethon*, which occurs twice outside Oxyrhynchus, all plays listed occur in one or the other list only once.

In short, fragments, both of those plays which we know and of those plays which we do not, seem to indicate a common popularity for certain tragedies both at Oxyrhynchus and throughout Greco-Roman Egypt.<sup>4</sup>

#### *Additional Evidence for Euripides at Oxyrhynchus*

In working with the papyri it is of crucial importance to remember the chance nature of the evidence for any given author or for the esteem accorded his work. In a study of this sort, for example, one must use as a corrective papyrological evidence other than simple book texts. Thus, to amplify the information provided in Tables I and II, Table III lists plays for which there is evidence aside from book texts. Supplementary evidence from Oxyrhynchus is supplied by two collections of hypotheses and by a third detailed hypothesis of a section of the *Electra*.<sup>5</sup> From beyond Oxyrhynchus the evidence is more varied: hypotheses, anthologies, one commentary and one scholion, and pieces classified as "school exercises." From this material comes testimony for a knowledge at Oxyrhynchus of fourteen tragedies not attested in the book remains. Three tragedies extant today—*Alcestis*, *Electra*, and *Trojan Women*—are included in this total, along with eleven more of the lost plays. From other sites there is evidence for four extant tragedies—*Electra*, *Hecuba*, *Alcestis*, and *Trojan Women*—and six more lost plays. It is again worthy of note that the evidence of Oxyrhynchus is similar to that of other sites.

#### *Cumulative Total of Evidence for Euripides*

Under two separate headings in Table IV appear those plays for which there is evidence from either text fragments or from other papyrological remains at Oxy-

4. Cf. *infra* on the supposed unique popularity of Euripides after the fifth century.

5. P. Oxy. 2455 and 2457. For the hypothesis of *Electra* see P. Oxy. 420.

rhynchos and at other sites. In these cumulative lists, as in the first three tables, one may note a common core from those eighteen tragedies extant today: *Alcestis*, *Andromache*, *Bacchae*, *Electra*, *Hecuba*, *Hippolytus*, *Medea*, *Orestes*, *Phoenissae*, and *Trojan Women*. *Helen* is attested only at Oxyrhynchos, and *Heracles*, *Iphigenia in Tauris*, and *Rhesus* only at other sites. No evidence survives for the *Heraclidae*, *Ion*, *Iphigenia in Aulis*, or *Suppliants*. There is a similar shared core of lost plays—*Alcmene*, *Archelaus*, *Cretans*, *Hypsipyle*, *Phaethon*, *Phrixus I*, and *Telephus*—while the other twenty-two plays which are included occur only in one or the other category. The basic similarity in the evidence of both categories justifies the merging of the two lists and a consequent assumption that what was known beyond Oxyrhynchos was also known in that city. As further justification for this fusion of data one may cite the continuing importance of Oxyrhynchos from Ptolemaic times through at least the fourth century A.D. It is unlikely that a city of this importance, a city for which there is evidence for cultural interest and activity aside from the literary texts, would not have possessed a significant sampling of any available literary corpus.<sup>6</sup> Evidence of the association between the scholarship of the city and that in Alexandria exists in the aforementioned list of tragic hypotheses and in the names of scholars known to have had connections with literary activity in Alexandria. Such men as these were probably involved with Euripidean tragedy.<sup>7</sup> The continuing use of Euripidean themes and motifs by other writers also indicates the popularity of Euripides' work.<sup>8</sup> The *Life* by Satyrus, though assuredly part of a larger series, also demonstrates an interest in the tragedian.<sup>9</sup> One must also remember the theatre of Oxyrhynchos and a surviving script of at least excerpts from the *Cresphontes* which may have been used for performances in the city.<sup>10</sup> These various factors suggest considerable interest in Euripides and his work and make credible the assumption that all plays for which there is evidence from the papyri, forty-three in all, were known in Oxyrhynchos itself.

Even with this combination of available evidence only twelve plays attested beyond but not at Oxyrhynchos are added to the Oxyrhynchan total. It seems likely that at least through the second century most of those plays which were arranged and studied at Alexandria were also known at Oxyrhynchos. In short, it appears

6. E.G. Turner, "Roman Oxyrhynchos", *Journal of Egyptian Archaeology* XXXVIII, 1952, pp. 78-93.

7. *ibid.* Cf. also Turner, "L'érudition alexandrine et les papyrus", *Chronique d'Egypte* XXXVII, 1962, pp. 135-152.

8. See *PSI* 1303, which is a revision or reworking of the *Phoenissae*, and *P. Oxy.* 413, the Charition mime. On the latter, cf. D.L. Page, *Greek Literary Papyri*, I, London, 1942, No. 76, pp. 336 f.: "Euripides' *Iphigenia in Tauris* was evidently the model for the story".

9. *P. Oxy.* 1176.

10. *P. Oxy.* 2458. On this fragment in particular and the theatre in general see Turner, "Dramatic Representations in Graeco-Roman Egypt: How Long Do They Continue?", *L'Antiquité Classique* XXXII, 1963, pp. 120-128.

that in Oxyrhynchus there was a far greater familiarity with Euripides than is possible today, though the remains also show that in that city those plays which we possess were most popular.

#### *Relative Popularity of Euripides*

In number of fragments Euripides ranks in frequency fourth or fifth among authors represented at Oxyrhynchus. Homer, expectedly, is most common, followed in order by Callimachus and Demosthenes. Euripides or Aeschylus holds fourth position.<sup>11</sup>

It has been remarked often that of the three major tragedians Euripides enjoyed a unique popularity after his death. Attempts have been made to explain this appeal, chiefly by contrasting Euripides' style and emphasis with those of Aeschylus and Sophocles. Thus, in 1943 Collart wrote:

Certes les pièces d'Eschyle n'étaient pas mortes avec lui, mais la profondeur religieuse et la pompe de son théâtre, perimées, incomprises, n'émuvaient plus les foules. Sophocle assurément gardait encore les admirateurs, mais la logique et la sérénité de ses personnages laissaient indifférents des gens agités et superficiels, incapables de se recueillir, la majorité. Euripide, au contraire, par son ouverture d'esprit, par sa curiosité mobile, par son penchant à la rhétorique et à la morale, par la recherche du pathétique et de l'extraordinaire conservait sa séduction sur la foule et même sur les gens cultivés.<sup>12</sup>

Even Roberts, ignoring his own warnings about the *argumentum ex silentio*, implied a similar conclusion in 1953 when he wrote:

Euripides—easy, fluent, exciting on the stage and in the study, full of psychological interest that would make him acceptable to the readers of New Comedy and the novel—his popularity needs no explaining . . .<sup>13</sup>

The evidence from Oxyrhynchus does not substantiate these generalizations. There are twenty-three text remains of Euripides in comparison with an equal if not greater number of Aeschylus and fifteen of Sophocles. The popularity of Eu-

11. Homer is attested by 155 book remains, 118 from the *Iliad* and 37 from the *Odyssey* (Pack<sup>2</sup>552ff.). Callimachus is attested by 38 book texts (Pack<sup>2</sup>186ff.) and Demosthenes by 28 (Pack<sup>2</sup>256ff.) Pack contains twenty-three book text entries for Aeschylus. Reason for doubt in the total Aeschylean remains is caused by Pack<sup>2</sup>45 (P. Oxy. 2255), "Fragments attributed to various plays".

12. P. Collart, "Les fragments des tragiques grecs sur papyrus", *Revue de Philologie, de Littérature et d'Histoire Anciennes* XVI, 1943, pp. 5-36. Collart here (pp. 25f.) talks of the appeal of Euripides throughout Egypt; nonetheless, it sounds odd coming from a man who a few pages later refers to Oxyrhynchus as "la ville grecque par excellence, la ville de l'élite intellectuelle provinciale et des bibliothèques" (p. 32); in such a place there must have been some individual capable of appreciating the subtler appeal of Aeschylus or Sophocles—as the papyri now reveal.

13. C.H. Roberts, "Literature and Society in the Papyri", *Museum Helveticum* X, 1953, pp. 266 and 268.

ripides cannot be disputed, but neither must the popularity of Aeschylus and Sophocles be denied.<sup>14</sup>

#### Manuscript Divisions

Among the tragedies preserved at Oxyrhynchus there is a sharp contrast in frequency of appearance between attestations of those ten plays known in the medieval MSS as the 'select' or annotated plays, and attestations of the other nine plays which, because of their lack of scholia and because of their presumed alphabetic order by initial, are classified as the 'alphabetic' plays.<sup>15</sup> This contrast is easily seen in Table V, where the Oxyrhynchan remains are grouped according to their MSS divisions and charted according to their appearance by century. Seven of the ten 'select' plays but only one of the 'alphabetic' sequence are attested. Indeed, in frequency the 'alphabetic' plays are not dissimilar from works now lost. Tables I and II show that this proportion is not unique at Oxyrhynchus but is common to the remains of other sites.<sup>16</sup>

The comparable frequency of appearance of individual 'alphabetic' and lost plays has prompted Roberts to conclude, reasonably, that "the survival of these nine [alphabetic plays] was a matter of chance, and we have no reason for thinking that they were more admired or more read than others now completely lost."<sup>17</sup> Most scholars implicitly accept this view, though there is some difference of opinion on the origin and make-up of the collection for which the nine 'alphabetic' plays provide exclusive testimony. Some see these plays as the last trace of a collection of the whole Euripidean corpus modelled on an original edition made by Aristophanes of Byzantium, while others see a less precise basis, with the 'alphabetic' plays as the chance remainder of some less clearly defined and probably less complete late edition of particular Euripidean plays.<sup>18</sup> The evidence from Oxyrhynchus does not help in solving this problem.

14. For evidence of the shifting fortunes of Greek authors in the papyri see W.H. Willis, "Greek Literary Papyri from Egypt and the Classical Canon", *Harvard Library Bulletin* XII, 1958, pp. 5-34.

15. This explanation follows the terminology of A. Turyn, *The Byzantine Manuscript Tradition of the Tragedies of Euripides*, Urbana, 1957, p. 19. The 'select' plays are studied, unless otherwise noted, only through collation with MSS MABV and LP; these last two MSS, of course, alone carry the alphabetic plays. The *Bacchae* is included with the 'select' plays though scholia for it are not extant; for this placement and the evidence for it cf. Zuntz, *An Inquiry Into the Transmission of the Plays of Euripides*, Cambridge, 1965, pp. 110ff. The ninth of the alphabetic plays is *Cyclops*, which, as a satyr play, has been excluded from this analysis, but which in any case does not appear among the papyri from Oxyrhynchus.

16. Cf. also W.S. Barrett, *Euripides, Hippolytus*, Oxford, 1964, p. 52.

17. Roberts, *op. cit.*, p. 271.

18. D.L. Page follows Wilamowitz in the belief that the nine 'alphabetic' plays are part of a copy of a complete collection ultimately traceable to the original edition of Aristophanes of Byzantium. (Page, *Actors' Interpolations in Greek Tragedy*, Oxford, 1934,

Pertusi, who alone has a markedly divergent theory on the origin of that collection from which the 'alphabetic' plays derive, posits a selection, around the turn of the third and second centuries B.C., of thirty-one plays "appunto per la loro tradizione di riconosciuta eccellenza teatrale"; the remains of this selection of theatrical gems are supposedly preserved in LP.<sup>19</sup> It has been convincingly argued, however, that Pertusi's list of plays looks suspiciously as though it had been so formulated as to include the 'alphabetic' plays and the list also seems to depart from Pertusi's own laudable collection of literary and archaeological evidence for the popularity of Euripidean tragedy.<sup>20</sup> The Oxyrhynchan evidence does little to support Pertusi's view. The site, for example, gives no evidence for the *Suppliants* (which Pertusi includes) but does produce a text—and that an acting text—of the *Cresphontes* (which Pertusi does not include). In short, Pertusi's theory is less convincing, although more precise, than the more simple and equally reasonable theories held by the great majority of scholars.

The appearance in the MSS of the 'select' plays with their scholia has also puzzled scholars and has been explained in different ways. Perhaps the commonest view is that of Wilamowitz, who claimed that the selection which these plays attest was originally made in the second century by someone who provided these plays with commentary after choosing them, in company with certain plays of Aeschylus and Sophocles, as the basis of a school curriculum.<sup>21</sup> Analysis of the papyri from all of Greco-Roman Egypt has shown that a hypothesis of arbitrary selection of this sort may not be needed to explain either the abiding popularity of the 'select' plays or, indeed, their scholia.<sup>22</sup> The evidence from Oxyrhynchus supports the results obtained from the papyri at large, and the evidence of a single site is here of particular value as the popularity of a given play over a period of time can be better tested without the possibility of misleading figures introduced by abundant remains from a particular early or late site, e.g. Hibeh or Antinoopolis. In Table V it can be seen that the 'select' plays were

pp. 3ff.) G. Zuntz (*op. cit.*, p. 277) accepts this idea and pursues it with vigor. Barrett (*op. cit.*, p. 51) is less precise about the origins of the edition, as is Roberts (cf. Note 17, *supra*). Turyn also speaks only of "some collection with titles alphabetically arranged". (Turyn, *op. cit.*, p. 241.) On the actual arrangement see Bruno Snell, "Zwei Topfe mit Euripides-Papyri", *Hermes* LXX, 1935, pp. 119-120. Cf. also Turner "Euripidean Hypotheses in a New Papyrus", p. 4; and Pertusi *Dioniso* XX, 1957 "Addendum", pp. 119-120; and Barrett, *op. cit.*, p. 51.

19. A. Pertusi, "Selezione teatrale e scelta erudita nella tradizione del testo di Euripide", *Dioniso*, XIX, 1956, p. 202.

20. Cf. Zuntz, *op. cit.*, p. 260.

21. Wilamowitz, *Einleitung in die Griechische Tragödie*, Berlin, 1921, pp. 196ff. Wilamowitz was followed by L. Meridier in his Introduction to the first volume of the Budé *Euripide* in 1925.

22. Barrett, *op. cit.*, p. 52 and Roberts, *op. cit.*, pp. 270-271. See also Zuntz, *op. cit.*, p. 256 who forms the same conclusion, though not through such careful investigation as that of Barrett or Roberts.

popular both before and after the second century. This continuing popularity supports the suggestions of Roberts and Barrett that the 'select' tragedies were popular from early times onward and that the scholia of the MSS may not derive from a peculiar and precise act such as Wilamowitz suggests, but rather may result from cumulative commentaries, perhaps originating in Alexandria, which established the popularity of these several plays early and later perpetuated it.<sup>23</sup> While the schools may well have reenforced the popularity and promoted the preservation of these plays, it seems unnecessary to assume for them a peculiar and formative role in the creation of the medieval 'Selection.' More likely the 'Selection' is the end result of a continuing preference for certain plays, perhaps given permanent form in the late years of antiquity by its adaptation to the codex.<sup>24</sup>

Pertusi again departs from the majority of scholars, who share either the Wilamowitzian view or the more 'casual' hypothesis most clearly set forth by Barrett, and once again connects the selection of these plays with their popularity as acted drama. His theory for the 'select' plays, unlike that for the 'alphabetic', involves two separate acts of selection. The 'select' pieces were originally included with the 'alphabetic', and some other plays now lost, in that first selection of the third or second century B.C. These plays were not annotated, however, until the fifth century A.D. The scholars who were responsible for the second selection and who provided commentaries were not guided by any pedagogic principles but by "criteri...di tradizione teatrale", and therefore chose those plays "piu rappresentati, piu amati, piu applauditi" through the past centuries.<sup>25</sup> Pertusi's insistence on the living theatre as an important element in preserving the fame and popularity of Euripides is commendable if extreme; once more his hypothesis, though interesting and not wholly incredible, seems to confuse a problem more easily solved by less complicated theories.

#### *Chronological Grouping of the Papyri*

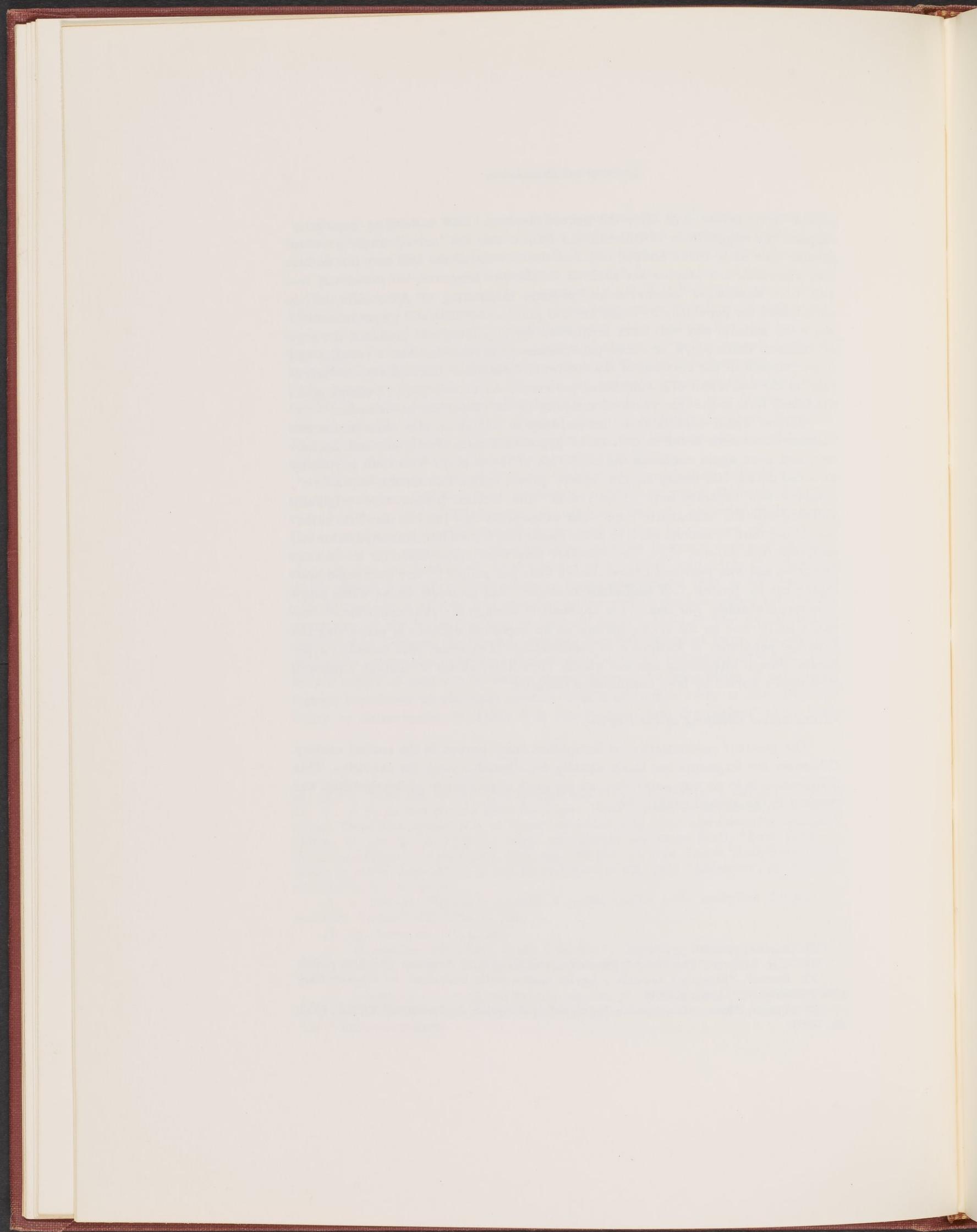
The greatest concentration of Euripidean texts occurs in the second century. Otherwise the fragments are fairly equally distributed through the centuries. This distribution is in no way surprising, as the peak of prosperity of Oxyrhynchus was reached in the second century.<sup>26</sup>

23. Barrett, *op. cit.*, pp. 52-53.

24. C.H. Roberts, "The Codex", *Proceedings of the British Academy* XL, 1954, p. 203.

25. Pertusi, "Selezione teatrale e scelta erudita nella tradizione del testo di Euripide", *Dioniso* XIX, 1956, p. 208.

26. Turner, "Roman Oxyrhynchus", *Journal of Egyptian Archaeology* XXXVIII, 1952, pp. 78-93.



## CHAPTER II

### FORMAL ASPECTS OF THE PAPYRI OF EURIPIDES

#### *Rolls and Codices*

Of the twenty-three texts of Euripides, twenty are in roll and three are in codex form. The rolls range in date from the end of the second century B.C. to the fourth century and are all of papyrus. The codices, two of papyrus and one of vellum, are all dated to the fifth century. This chronological distribution is wholly in line with results obtained from broader studies of the papyri.<sup>1</sup>

Eleven of the twenty rolls carried the literary text on the recto, eight on the verso; for one fragment this information cannot be provided.<sup>2</sup> In no instance is text continued from one side of the roll to the other. The versos of those papyri bearing the tragic text on the recto were apparently not used after the literary transcription was made. Of the eight texts written on the verso, seven rectos had surely been used previously and of these, six had apparently been used for public documents, while one, number 10, was written on the verso of a private account of receipts and expenditures. Number 14, the eighth text written on the verso, shows no trace of writing on the recto.<sup>3</sup>

1. On the development of the codex and the comparative frequency of roll and codex cf. C. Roberts, "The Codex", *Proceedings of the British Academy* XL, 1954, pp. 169-204. Roberts is also instructive on the relationship between papyrus and parchment. Cf. also his comment, p. 203: "The roll still survived in the fourth century although it was rapidly losing ground." There are also useful figures on the development of the parchment codex in R. Devreese, *Introduction à l'étude des manuscrits grecs*, Paris, 1954, pp. 11-13. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second edition, Oxford, 1951, p. 87ff. is also helpful.

2. The one exception is number 16, which has been destroyed, was published without plate, and is not described in the original publication as having appeared on recto or verso.

3. Cf. *P. Oxy.* 1228 and in this study number 11 and perhaps 14 for examples of literary texts preserved on the verso where the recto is blank. As there are no sure fragments of sizable dimension which preserve a literary text on the verso of an otherwise unused papyrus, it is perhaps likely that the preserved example chanced to be written on a sheet of which the recto at this particular point bore no writing.

As the distinction between texts written on the recto and those written on the verso has often been cited as a decisive point in determining a text's intended worth or function, it will be useful and instructive to note the distinction in considering and comparing other formal aspects of the preserved texts.

None of the Euripidean codices is preserved complete, and in only one instance can we say anything certain about original layout. The formation of the very poorly preserved vellum codex, number 21, is a complete mystery, as is that of the papyrus codex, number 22. As regards number 23, one may say with certainty only that it was not a single quire form so arranged that recto consistently preceded verso or verso recto in either the first or second half.<sup>4</sup>

Number 23 contained at least two complete plays. Although it is impossible to know how many plays were contained in any of the codices, it is not unlikely that each contained more than two.<sup>5</sup>

#### *Dimensions and Format of the Preserved Texts*

In Table VI the papyrus rolls are classified as recto and verso texts and charted, together with the codices where appropriate, with reference to overall dimensions and certain other variable aspects of their finished appearance.

Only two recto texts are so preserved that their original height is known precisely. One is dated to the late first century and the other to about 200. In each the height was originally 23.5 cm. In three instances where almost a total height is preserved – numbers 1, 2, and 12 – the height of the roll probably did not exceed 23.5 cm., and the heights of the other recto texts probably did not much exceed or fall short of this measurement. Thus, each recto text, at least insofar as height is concerned, would be classed by Kenyon as "a book of moderate pretensions", which he defined as a roll about ten inches tall.<sup>6</sup>

There are also only two verso texts, each dated to the late second century, wholly preserved in height, and here the difference in heights is great and the variation instructive. Number 11 is 37.1 cm. tall while number 13 measures only about 18.0 cm. in height. These figures respectively exceed and fall short of Kenyon's norm of ten inches. Kenyon further claims that "a work of Greek literature...rarely, if ever, exceeded 13 by 9 inches."<sup>7</sup> Acknowledging that *P. Teb.* 268, thirteen inches tall, is an anomaly, he explains that this is a verso text and

4. For various possibilities in codex formation, cf. Kenyon, *op. cit.*, pp. 106ff., and W.H. Willis, "New Papyri at the University of Mississippi," in *Proceedings of the IX International Congress of Papyrology*, Oslo, 1961, pp. 381-392. Cf. now, E.G. Turner, *Greek Papyri: An Introduction*, Princeton, 1968, p. 15.

5. Cf. Kenyon, *op. cit.*, Chapter IV, "Vellum and the Codex", pp. 87-120, *passim* and Roberts, *op. cit.*, p. 203. The various theories for the preservation of the 'alphabetic' plays, of course, are based on the probable assumption of codices which could contain five, six, or even more plays.

6. Kenyon, *op. cit.*, p. 51.

7. *ibid.*

that such texts "not infrequently exceeded the height measurements of literary manuscripts."<sup>8</sup> Number 11 below is another example of the same phenomenon. The height of number 13 can probably also be explained through its being written on used papyrus: for lack of other material or for reasons of economy the scribe evidently used an available roll and not one expressly intended for a literary MS. The only other verso text for which we can estimate a total height, number 14, was not much greater than 26.5 cm. tall, but still exceeds the general height of the recto texts. In height of roll, then, the Euripidean recto texts seem more uniform than those on the verso, a situation comparable to that found among the papyri in general.

The only codex for which we have a fairly secure estimate of height is number 23, the height of which is 35.5 cm. The vertical dimensions of the two remaining codices, which include estimates of upper and lower margins, are 22 cm. and 30 cm. These dimensions also accord with Kenyon's findings.<sup>9</sup>

Evidence for roll length is derived in every case from extrapolation; no Euripidean roll from Oxyrhynchus is preserved complete in its horizontal aspect. Overall comparisons of roll length between recto and verso texts are obviously pointless, as individual plays vary considerably in length and, as a result, so may the rolls on which they were written.

Rolls range in estimated length from 375 cm. for number 3 to 1087 cm. for number 15. This range is defined, interestingly, by two texts of the *Phoenissae*; the minimum and maximum lengths occur respectively in verso and recto text. The measurements of these two texts are by Kenyon's standards extreme for normal book production, although certain rare and isolated exceptions occur beyond these two limits.<sup>10</sup> There are also two texts of the *Andromache*, both written on the verso, for which we have length estimates. Here the lengths are relatively short, but closer to equality than in the case of the *Phoenissae*. Number 13 measures 431 cm., number 14 392 cm., and both texts are attributed to the late second century.

The papyrus required for the same play in roll and codex may also be compared.<sup>11</sup> The complete text of the *Medea* as written in roll form in number 5 would have required 53 columns and a length of 555 cm. In number 23, a codex, the same play would have occupied 39 columns or about forty pages. Similarly, in number 1, a roll, the *Orestes* would have required 71 columns and a length of 700 cm., whereas in number 23 the play would have required 45 columns or about forty-six pages. In each instance the codex has columns containing greater numbers of lines than those of the rolls, a factor which of course reduces the number of columns needed for a complete text. It is obvious, however, that should a manufacturer have wanted to economize on the use of papyrus, the codex form,

8. *ibid.*

9. *ibid.* p. 109.

10. *ibid.* p. 53ff.

11. On the questions of the capacity of roll and codex cf. Roberts, *op. cit.*, *passim*.

even with short columns, allowed a saving in papyrus: each sheet was used on both sides and was thus able to contain twice the amount of text as the comparable surface in a roll.

The number of lines contained in a single column was apparently a matter of taste, perhaps limited only by the dimensions of the papyrus employed.<sup>12</sup> Since recto texts are of a more standard size than those written on the verso, it follows that the range of lines per column is smaller in such cases than in verso texts. Verso columns hold as many as sixty-two lines in number 1 or as few as twenty-seven in number 5. In recto texts the variation is slighter; the maximum number of lines per column is thirty-three, but twenty-five represents a more common figure. The shortest columns, in number 12, contain only twenty lines. Thus, a standard format is more obvious in recto texts, but even here there is variation, and there seems no consistent or customary figure for lines per column.

Measurable column height is of course dependent on the number of lines contained in individual columns. Obviously, the range is greater in verso texts — from 15 cm. to 32.5 cm. — though in recto texts there is also variety, from about 12 to 18.7 cm. Again, there seems no set criterion for the number of lines per column. Even in rolls of the same height, the writing surface was apparently used as the scribe desired and/or to suit the tastes of the scribe's clientele. Roll height did not determine the inner proportions or layout of the text, except in the broadest sense.

The columns of the preserved codices contain 36-38 lines, but differ more markedly in measurable height. The vellum codex, number 21, has columns 17.2 cm. in height, whereas in number 22 the same number of lines is found in a column 25 cm. tall. The second papyrus example, number 23, contains differing numbers of lines in its columns, 37 or 38; the columns probably measured about 25.5 cm. in height. These are normal measurements for codex columns.<sup>13</sup>

The evidence for measurements and proportions of upper and lower margins is slight, as the unprotected outer edges of a papyrus are most likely to break away from the preserved section. It can be noted, nonetheless, that the preserved margins fall considerably short of the examples presented by Kenyon. Complete upper margins on recto texts range from only 0.4 cm. in number 1 to 4.6 cm. in number 15. Of the verso texts, the largest and still incomplete upper margin, in number 4, measures upwards of 2.3 cm., but in this cursive work it is unlikely that this margin approached the maximum height of other preserved upper recto margins. Lower margins, as one might expect from the figures set forth by Kenyon, were larger than upper.<sup>14</sup> On the recto, lower margins range from 3.8 cm. in num-

12. Kenyon, *op. cit.*, pp. 58-59, lists "Lines in Column" but draws his evidence only from prose works.

13. Cf. the description of the Chester Beatty Biblical codices in F.G. Kenyon, *The Chester Beatty Biblical Papyri*, Fasiculus I, London, 1933, p. 6ff.

14. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, p. 60.

ber 15 to 6.5 cm. in number 12; on the verso the difference is between 1 cm. in number 11 and 5 cm., again in number 4.

In number 23, the one instance in which both margins of a codex are preserved, the lower margin is also larger than the upper, with lower margins varying slightly between 5.1-5.5 cm. and the upper measuring 4.3 cm.

Kenyon, although helpful in so many aspects of text format and production, gives an incomplete picture of column width in dramatic texts. He explains that "in the case of poetical texts the width of the column is fixed by the length of the lines"; and this is, of course, partially true.<sup>15</sup> In the few examples which he discusses he also mentions the size of script as another determinant but does not connect size of script with other broader aesthetic considerations, such as, for example, the depth of lyric indentation. Indeed, only in the most basic sense is it true that line length determined width of a column.<sup>16</sup> A scribe or his superior could modify the expansiveness of a text simply by altering the space of any indentation. For example, in number 15 the column is widest at a point where a line contains only twenty letters but, as part of a lyric passage, is indented 2.8 cm. Again, in number 13 the lyric indentation of 1.8 cm. increases the total length of a thirty-three letter verse to only 12.5 cm. In number 8 the trochaic tetrameter of forty letters, which establishes the widest point in the column, measures only 13 cm., less than the previously mentioned twenty letter line of number 15. A glance at Table VII will show what range could be attained in the length of individual lines; generalities on the width of dramatic columns remain hazardous. It is curious that, with the exception of number 1, in the preserved Euripidean papyri lines of equal letter length are always longer in codex than in recto texts, and longer in recto than in verso texts.

These lyric indentations, which can have such an effect on column width, do not seem to follow any pattern of depth. Although it is well known that choral passages in tragic papyri were usually set off by indentation, there seems to have been no set rule as to how deep such indentation should be.<sup>17</sup> In number 3, a verso text, there is almost no indentation, whereas another verso text, number 4, has indentations of 2.5 cm., the maximum indentation in the papyri studied. The range in recto texts is just as striking; number 13 has indentations of only 0.8 cm., while in number 15 they measure 2.2 cm. It would seem that lyric indentation is treated similarly in both recto and verso texts.

The widths of intercolumniations also vary, between less than 0.5 cm. on both recto and verso, and more than 3.5 cm. in a recto text, number 12. The maximum sure intercolumniation on a verso text occurs in number 5 and measures 2.0 cm.

15. *ibid.*, p. 55.

16. The confusion arising from Kenyon's wording is obvious if one compares the disparate lengths of the two texts of the *Phoenissae*, Numbers 3 and 15, as listed in Table VI.

17. Cf. Andrieu, *Le Dialogue Antique*, Paris, 1954, p. 267 and Schubart, *Das Buch Bei Den Griechen und Römern*, Leipzig, 1961, p. 60ff.

### *Indication of Speaker and Lectional Aids*

Most commonly, distinctions between speeches in the papyri are marked by the paragraphus. The paragraphus appears early, in number 1, and late, in number 23, and is found in recto, verso, and codex texts. It is similarly found in the plain, cursive transcription, number 4, and the calligraphic example, number 12. When a change takes place at the end of a complete verse, the paragraphus usually projects into the left 'margin' between the two speeches to be set apart. In number 4 the paragraphus may also have been used within the column to show division of a single verse between two characters. This is the only example in this study where a single verse is divided between two speakers and the two parts of the verse written on one line.

Although knowledge of the speaker's identity is fundamental to the comprehension of a dramatic text, paragraphi, which actually indicate only the alternation of speeches and do not truly identify the separate speakers, are not inserted with particular care or consistency. In number 7 the paragraphus is wholly omitted; in number 23 the paragraphi have been inserted by a later hand, and in number 22 the paragraphi are also probably attributable to a corrector.

The paragraphus is often used alone—in numbers 1, 3, 4, and 22—but is sometimes combined with more precise means of identifying actual speakers, generally some abbreviation of a character's name. In number 13 paragraphi and character notation are always correlated. In numbers 7 and 23 both techniques are also used, though not always simultaneously; as if to clarify the original system, character notations have here been added by correctors. Finally in number 15 a character notation has been added, again by a corrector, where paragraphi were originally omitted.

Another form of notation, again coordinated with paragraphi, is found in acting scripts. In this class of texts, roles assumed by individual actors—not individual characters within the drama—are marked with alphabetical sigla. Number 18 presents an example of such a system.

Paragraphi also marked the beginning of choral passages and were used within stasima to mark strophic divisions; examples of this use are found in numbers 10, 11, and 12. In 12 the paragraphus is accompanied by a coronis, a second and more commanding indication of a choral passage.

The evidence of the Euripidean texts from Oxyrhynchus accords well with what is known of character indication and change of speaker in the papyri generally.<sup>18</sup> Some have seen a greater variety in the means of indicating the alternation of speakers than has been discovered in this study; the systems discussed here, however, seem to have been better established and more widely adopted than some modern writers are willing to admit.<sup>19</sup>

18. Cf. Andrieu, *op. cit.*, p. 263ff. and Schubart *op. cit.*, p. 79ff.

19. Cf. *infra* the discussions of indication of speaker and alternation of speeches in numbers 2, 3 and 23.

That lectional signs were infrequently written in the papyri has long been a cause of no small wonderment.<sup>20</sup> It is perhaps true that the ancient reader, through force of habit and custom, read his texts with an ease comparable to that which, with texts fully punctuated, the modern reader enjoys.<sup>21</sup> In any case, both in the actual scarcity of such signs and in the general chronological sequence in which these aids appear, the Euripides papyri from Oxyrhynchus parallel the papyri at large.<sup>22</sup> Aside from the one exception of number 4, in which we find two forms of stop, along with acute and circumflex accents, breathings, long and short marks, and apostrophes to indicate elision, none of the texts prior to 100 has markings other than stops. Indeed, even stops, which occur only on two verso texts, are not common. Dating on the basis of these signs, however, is hazardous. It is helpful to discover parallels for the use of a particular sign in any given period — a similar procedure to that used in dating hands, — but one must observe that number 15, dated around 200, is not unlike the earliest texts studied in its employment of reading aids. In short, there seems no consistent rule for the adoption of lectional signs, nor does their use follow strict chronological development.

Eleven of the seventeen texts in which punctuation might be expected preserve some form of stop. Ten of these examples preserve high stops, four have middle stops, and in five there are low stops. Twelve of the twenty-three texts preserve some form of accent, but no form of accent is written with complete thoroughness. Acute accents appear in eleven texts, circumflex in nine, and in six cases the grave is employed. Rough breathings are far more common than smooth; as with accents, however, neither form is particularly common. Elision, which is itself observed only sporadically, is also marked with inconsistency. Crasis and aphaeresis, for which the present evidence is extremely limited, are never marked with apostrophe. A few additional marks are written with even less frequency. These include diaereses, marks of quantity, hyphens to clarify compounds, and signs of syllabic division.

#### *Evidence for Dictation or Visual Copying*

A basic question concerning ancient book production, and one which is difficult to answer from most papyrological remains, involves the method of copying any given text, by oral dictation or visual copying of an exemplar.<sup>23</sup> Both pro-

20. Cf. Kenyon, *op. cit.*, pp. 67ff.; Schubart, *op. cit.*, p. 74ff.; and Thompson, *An Introduction to Greek and Latin Palaeography*, Oxford, 1912, p. 61ff.

21. So Schubart, among others, *op. cit.*, p. 74. The argument that even in the fifth century "les anciens lisent un écrit qui pour eux est vivant, directement intelligible, et qui éveille le souvenir de la représentation scénique" seems less convincing; cf. Andrieu, *op. cit.*, p. 206.

22. Cf. *supra*, note 20.

23. Cf. the helpful and informative article by T.C. Skeat, "Use of Dictation in Ancient Book Production", *Proceedings of the British Academy* XLII, 1956, pp. 179-208, wherein Skeat argues for dictation and reviews the scholarship on the problem.

cesses were no doubt employed; from an accumulation of evidence, however, one might hope to determine which procedure was the more common.<sup>24</sup>

Perhaps the most complete discussion of this problem is that of T.C. Skeat, who in 1956 reviewed the scholarship on the question and established certain guidelines for analysis of evidence. Skeat's main criterion for determining whether a particular text was copied by dictation is the presence in it of certain peculiar errors which might demonstrate "a lack of liaison between scribe and dictator", i.e., blunders resulting from miscomprehension on the part of the scribe of what he had heard read aloud.<sup>25</sup> For a text to be analysed meaningfully in this way, it must meet certain requirements. The work must be of good length and must contain errors; the work must also be fully and completely collated so that even phonetic errors can be studied. Even when all of these conditions have been met, distinction and judgment are not simple: "The scribe copying visually may commit visual errors through misreading the exemplar, or audible errors through self-dictation. The scribe copying from dictation may reproduce visual errors of the dictator, or himself commit phonetic errors through faulty hearing. In short, both types of copying are liable to both species of error."<sup>26</sup>

In the present sample of papyri none meets all requirements for a significant investigation of this question. Each text has been rather fully collated and almost all preserve error, but most are of such abbreviated length that no sizeable sample of possible scribal errors and peculiarities can be accumulated. Several cases at first seem promising, even in small compass, but each proves disappointing in final consideration.

Number 1 preserves several odd readings, including two instances where final *-ous* is written *-oīs*; but since in one of these cases the medieval MSS may preserve *-oīs*, no ready assumption is possible that this is not the faithful record of an ancient if incorrect variant. Again, *σωθηθ* of the MSS is written *σωθη* which might easily be considered an aural error. There is also an instance of needless assimilation: *οσογ γε* is written for *οσον γε* of the MSS. Finally, *που* occurs for *του* or *τοῦ* of the MSS; this might also point to aural error. Each of these possible slips may perhaps be explained as results of Skeat's "lack of liaison between scribe and dictator", but the possibility that these are errors of self-dictation must not be excluded. One other reading in this same text is worthy of mention. *κακα* is written for *ταξεργασμένα* of the MSS; again, if, as the original editor suggests, *κακα* "was perhaps originally a gloss on *ταξεργασμένα* and afterwards made its way into the texts", shall we hold this to be a visual error on the part of the scribe or the possible dictator? In short, the evidence of this fragment is

24. *ibid.*, p. 179.

25. *ibid.*, p. 208. For a fuller description of these errors — both phonetic and of other sorts — cf. Skeat, *op. cit.*, p. 192 and pp. 197ff. Also helpful is Milne and Skeat, *Scribes and Correctors of the Codex Sinaiticus*, London 1958, pp. 51-59.

26. Skeat, *op. cit.*, p. 207.

tempting but inconclusive; it is unfortunate that the preserved papyrus is not of greater length.

Again, Number 6, of more suitable length, presents wide deviation from the medieval MSS. This fragment preserves a section of the *Bacchae*, however, which is transmitted only by P, and there are several points where it is unclear whether the readings of the papyrus or those of the MS are better. Some of the errors are of such a senseless nature, however, that one thinks first of those errors which Skeat defines as more peculiar to a dictated transcription. Sparse medieval testimony, however, obviates any conclusive judgment.

Two further examples are relevant to these considerations; numbers 3 and 5 are notable for their crowded words and letters at the ends of lines. Turner has reasonably conjectured in another context that such a phenomenon "seems more natural when explained as due to the scribe following the lay-out of his exemplar by eye rather than to his writing down a dictated oral section".<sup>27</sup> The evidence is once more slight, and might be explained as the result of a scribe's effort to maintain a preconceived column width, regardless of whether he wrote from dictation or through visual copying.

#### *The Hands and Dates of the Texts*

Each of the Euripides texts was written by a different scribe: there are no collections of texts in one hand such as we possess for the plays of Aeschylus.<sup>28</sup> There is a considerable variety in the styles represented; distinct styles of course parallel one another chronologically, but the basic picture is uncomplicated. Evidence for the development of the monumental style, for example, is provided by number 2, an early piece, and later developments can be seen in numbers 7 and 8. Again, early evidence for the Biblical Uncial is found in number 15 and a later specimen in number 21. The severe style is represented in number 12 and its eventual development perhaps seen in 23. More beautiful scripts appear in recto texts, though even here beauty is not everywhere in evidence: the hands of numbers 1 and 18 are not truly attractive. The only text in a well-defined business cursive occurs on the verso in number 4. Particulars of the various hands and their styles are discussed in reference to the separate texts.

The dating of twenty-two of the papyri can be reviewed in photographs or through published plates, and in most instances the original dating has been confirmed. In six instances a date originally assigned by century has been placed more precisely within that century. In three other instances earlier dates have been assigned, while in two cases dates have been assigned which are later than those originally proposed. In no instance has a revision of more than

27. Turner, "Scribes and Scholars of Oxyrhynchus", *Mitteilungen aus der Papyrus-sammlung der Österreichischen Nationalbibliothek*, V Folge, 1956, p. 145.

28. Cf. *P. Oxy.* 2245-2255.

fifty years been suggested.<sup>29</sup> Those pieces for which changes are urged do not all come from early publications, as might be supposed and as was expected, but come from publications between 1899 and 1954.

29. A change of fifty years may seem insignificant. Yet in studies of an author's popularity and fame through the centuries, published dates are, of course, assumed valid; in such studies and in those of an even more inclusive nature such apparently slight changes as here suggested might markedly alter the conclusions. For examples of studies of this sort, see W.H. Willis, "Greek Literary Papyri from Egypt and the Classical Canon", *Harvard Library Bulletin* XII, 1958, pp. 5-34; P.J. Sijpesteijn, "Les parchemins et les papyrus de Demosthene trouves en Egypte", *Chronique d'Egypte* XXXVIII, 1963, pp. 297-305 and "Die Platon-Papyri", *Aegyptus* XLIV, 1964, pp. 26-32.

### CHAPTER III

#### LITERARY ASPECTS OF THE PAPYRI OF EURIPIDES

##### *Origin of the Texts*

As I have shown in Chapter I, the availability in Oxyrhynchus of those texts which were known and studied in Alexandria is all but certain. A further bit of evidence is provided by the fact that all of the Euripidean texts which preserve lyrics preserve them in metrical arrangement, not merely undistinguished from dialogue as is commonly supposed to have been customary prior to the researches of Aristophanes of Byzantium.<sup>1</sup> That Alexandrian texts were current in Oxyrhynchus, however, need not mean that the remains which we now possess are wholly derived from Alexandrian exemplars nor that the papyri do not preserve readings from texts other than the Aristophanean.<sup>2</sup> Indeed, it has been well argued against those who claim that the Aristophanean text achieved an immediate supremacy and that other texts were driven from circulation by its appearance, that other texts were surely available at the time Aristophanes produced his 'authoritative' edition and that these additional texts probably continued to circulate and be copied. Unfortunately, no Euripidean text from Oxyrhynchus is of sufficiently early date to justify conclusions on the strength of traditions other than that initiated by Aristophanes. The earliest Oxyrhynchan fragment is dated around 100 B.C., and in its readings is no more eccentric than texts centuries later.<sup>3</sup> It is highly likely that although the Alexandrian tradition was dominant, some variant readings in the papyri derive from non-Aristophanean texts.

Even were the text of Aristophanes to have enjoyed some sort of supreme position immediately upon its 'publication', ancient means of book-production were not such that its integrity could for long be completely preserved. Where books were reproduced by hand, error of all sorts crept into the best of texts. Simple and least troublesome were errors of orthography: the spelling of words by the scribe according to the phonetics of his period and not as they were pre-

1. For the work of Aristophanes, cf. Cohn, *PWRE* 2, p. 944ff.

2. For an eminently sensible account of the Alexandrian and post-Alexandrian text traditions, cf. Barrett's Introduction to *Hippolytus*, p. 45ff. and p. 439. (*Euripides, Hippolytus*, Oxford, 1962). Now, cf. the comments of Turner, *Greek Papyri*, p. 106ff.

3. Barrett, *op. cit.*, p. 45ff.

sumably spelled at the time of original composition. There were visual errors which resulted from the misreading of the exemplar and errors of deletion and dittography. Under such conditions any edition might be perverted and changed subtly, if not indeed fundamentally.

#### Correction

Zuntz, one of the most recent proponents of the argument that the Alexandrian edition "or its descendants rapidly eclipsed all other current texts of the most popular dramatists" still admits the difficulties in preserving the pure text of Aristophanes.<sup>4</sup> He does, however, stress the process of correction as safeguard of the tradition:

Responsible βιβλιοπῶλαι would check the work of their employees, and careful readers their own copies, against a text considered authoritative; authentic ἐκδόσεις – i.e., copies made from, and collated with a standard manuscript in one of the main libraries – were available to those who could not consult the models and were used to check and annotate current copies (as especially the papyri of Pindar's *Paeans* and Sophocles' *Ιχνευταί* show.) Thus the constant threat of corruption was checked and the genuine Alexandrian tradition, in the main, upheld.<sup>5</sup>

Correction was not as consistent nor as universal as Zuntz implies. In some instances the only correction was apparently undertaken by the text scribe himself, as in numbers 4 and 10. In other instances there are corrections by a second hand, as in numbers 15 and 21. Still further, in number 23 there is evidence for correction by a greater number of hands. This codex also reveals a different procedure for correction in each of the two plays which it contains. In the *Medea* the corrector is responsible for the majority of diacritical marks, whereas in the *Orestes* these marks are generally inserted by the original scribe. The extent of correction also varies from text to text. Numbers 2 and 14 have no evidence of correction. In number 1 it is of a minor nature, and numerous imperfect readings are preserved; in number 15 correction is also incomplete. The most complete correction was effected in number 11, a verso text written in a fairly unattractive hand. Here alone extensive corrections were apparently inserted in the (lost) upper margin, indicated by the sigla ↓ and the notation ανω opposite a troublesome portion of the text. These sigla are unique in the present texts, among which there is considerable variety in the actual signs of correction. In number 15, for example, letters to be deleted were set off by dots placed at the top of the line of writing on either side of the letters in question; in number 18 a letter is deleted within a word both by a dot above it and by its cancellation by means of

4. Zuntz, *An Inquiry Into the Transmission of the Plays of Euripides*, Cambridge, 1965, p. 252. For a good but brief statement on correction, cf. Turner, *Greek Papyri*, p. 93.

5. Zuntz, *op. cit.*, p. 253.

a short dash. In short, neither the use nor extent nor mechanics of correction was universal, nor did its presence guarantee conformity to our received text. Indeed, rare is the evidence for the sort of extensive correction which might be inferred from Zuntz's account.

#### *Comparisons of Identical Passages in Different Papyri*

The evidence for the obtaining of texts in Alexandria by residents of Oxyrhynchus does not apply specifically to works of Euripides, and there is, unfortunately, no criterion for determining whether the present texts were copied or purchased in Oxyrhynchus itself. But comparison of passages from the same play as they appear in different texts reveals something about the nature of the text tradition within the city. There are four instances where such comparisons can be effected, and two cases involve only texts found in Oxyrhynchus.

Numbers 9 and 15 each contain parts of *Phoenissae* lines 1033-1042. These copies are similar in their physical aspects: both are written in attractive hands and are handsomely arranged in lay-out. There is, however, despite an overwhelming and expected similarity between the two texts, notable difference in their readings. In two instances the papyri agree in error with the MSS; in two further instances the papyri agree against the MSS, once where the MSS reading is clearly wrong and once where there is little choice between the papyri and the medieval testimony. In the cases of eight further readings where variants are recorded the two papyri disagree with each other, with first one, and then the other of the papyri correctly in agreement with the MSS; discrepancies here are probably all due to scribal errors and not deep-seated differences in exemplars.

Number 1 can also be compared, if only in small measure, with 23: each text preserves portions of lines 1337-1342 of the *Orestes*. The first of these texts, a papyrus roll, is unimpressive both in hand and layout; the second is a more attractive codex. Beyond their common and general agreement with one another and the MSS, these texts once agree with the majority of MSS against L and once agree in substance where the orthography of the united MSS ought to be adopted. There are two points of comparison of greater interest. Each text indicates some difficulty with the reading  $\text{ἴθ' εἰς}$  and the elision involved; in both cases there is evidence for the correction or immediate revision of the manner in which these two words were first written. There is no trace of this problem in the MSS. Finally, the earlier text preserves a wholly acceptable reading which appears in the MSS, while the codex preserves a modern emendation commonly accepted by modern editors.<sup>6</sup> It is interesting to note the loss here in a later text of an acceptable reading which ultimately appears in the MSS.

The two remaining comparisons involve texts from beyond Oxyrhynchus. The remains of number 13 are also preserved in *P. Ross. Georg. I.8*, so frag-

6. For a fuller discussion of this reading see number 1, *infra*.

mentary that the evidence here does not allow any significant conclusion. The fourth comparison involves number 5 and *P. Rendel Harris* 38, of unknown provenance. Here the papyri agree on two readings questioned and recorded variously in the medieval texts, but differ in two other instances, probably by reason of scribal error.

These comparisons all illustrate a common, well-defined text tradition but one which was also subject to change by individual scribes.<sup>7</sup>

#### *The Papyri, the Manuscripts, and the Scholia*

The papyri do not in most instances depart from the medieval MSS. In this investigation 168 variant readings have been noted. Of this number 69 are wholly new readings and of these 30 are unacceptable by reason of sense, meter, or orthography. Among the remaining 39 readings which are probably acceptable, nineteen are preserved in number 6 alone; the remaining new and acceptable readings are rather evenly distributed through the other papyri.

It is true that number 6, a section of the *Bacchae*, is preserved by only one medieval MS, P, and that if the medieval testimony were more complete the unique readings might dwindle. However, the variants are of such diverse sorts—orthography, single unique readings, the omission and inclusion of whole verses—that it seems indubitable that considerable change was effected in the text during or after the second century. This phenomenon, as has been noted, makes less valid Page's contention that "those texts of pre-Alexandrian date seem to have differed considerably from our own manuscripts, those of post-Alexandrian date differ very little".<sup>8</sup> Page's statement may be generally true, but there are exceptions to it.

The fragment of the *Helen* in number 2 may be compared directly to that of the *Bacchae*. The *Helen* is preserved in only two MSS, LP, and the readings of the papyrus differ considerably from the medieval testimony. Though Zuntz suggests that this papyrus may preserve a text closer to the 'Alexandrian' than do the MSS, a conclusion which has been tentatively suggested for the *Bacchae*, the preserved papyrus readings show another work in the Alexandrian tradition which also differs rather significantly from the texts which we possess today.<sup>9</sup> This evidence again limits the applicability of Page's view.

7. Cf. now Turner, *Greek Papyri*, p. 126: "... it has not yet proved possible to trace the derivation of one papyrus from another".

8. D.L. Page, *Euripides, Medea*, Oxford, 1952, p. xl. See Barrett's comments on this statement by Page, Barrett, *op. cit.*, p. 56. Pertusi seems to share the view set forth by Page: "E di evidenza palmare che, in generale, i papiri dell' epoca tolemaica si contrappongono per le lezioni al testo tradito dai manoscritti, mentre quelli dell' era cristiana sono assai più vicini . . ." (Pertusi, "Selezione teatrale e scelta erudita nella tradizione del testo di Euripide," *Dioniso* XX, 1957, p. 25).

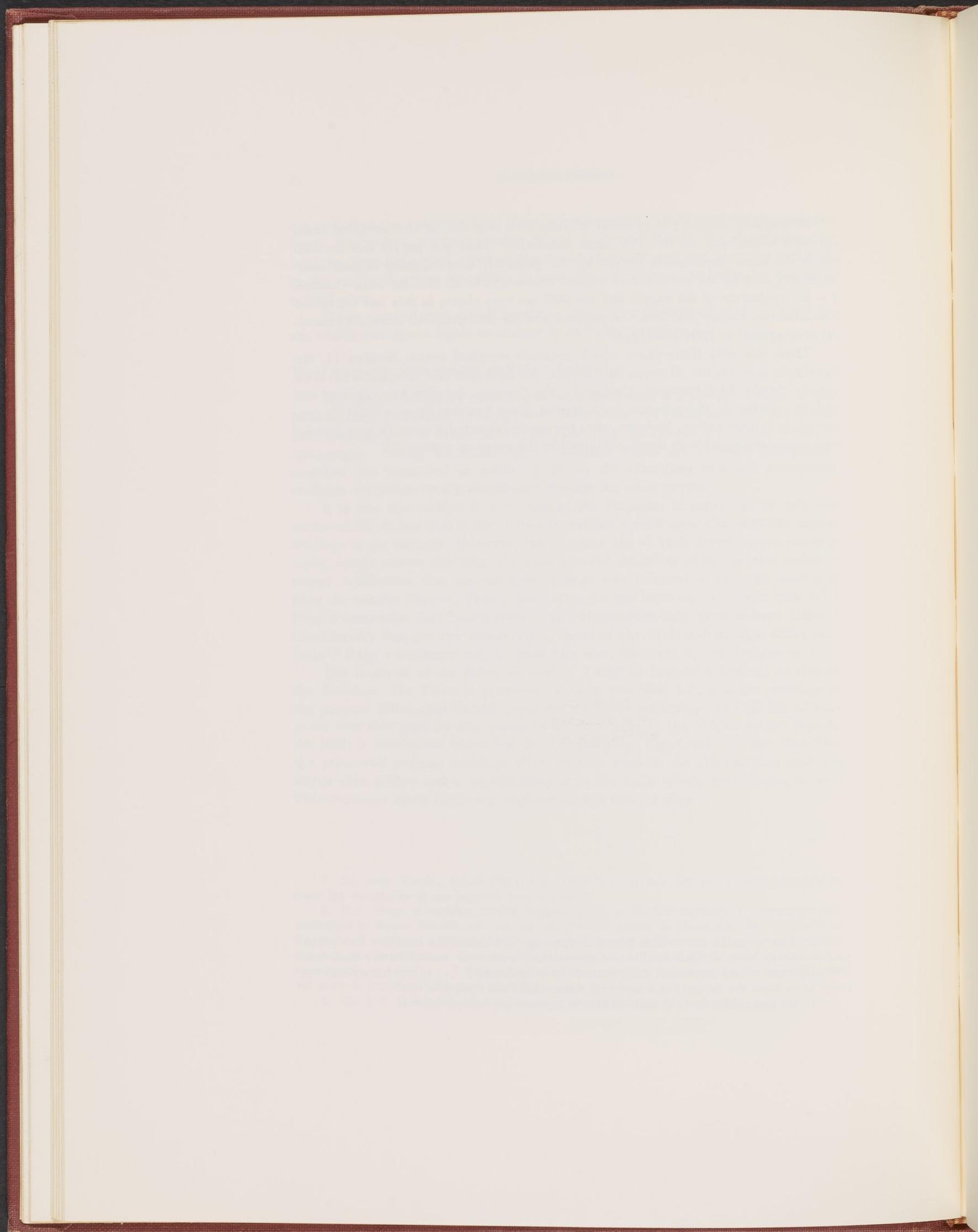
9. Cf. E.R. Dodds, *Euripides Bacchae*, Second Edition, Oxford, 1960, p. lvii.

No papyrus displays a peculiar affinity with any one of the medieval texts nor with either one of the two main families.<sup>10</sup> That the papyri and the MSS are in the same tradition is proven by the generally overwhelming textual similarity and also by the presence of similar colometry. In all but one case – number 3 – the colometry of the papyri and the MSS are very close; in this one exception it is also noteworthy that both the papyrus and the MSS preserve a muddled metrical arrangement of lyric passages.<sup>11</sup>

There are only three texts which preserve marginal notes. Number 11, the *Hypsipyle*, and 12, the *Alcmeon in Psophis*, are both lost and no scholia for them survive. In the third instance, number 23, the *Orestes*, the play has survived and with it scholia. In the papyrus the marginal gloss has not been completely preserved; it is interesting, however, that the medieval scholia carry in an expanded form explanations of both terms explained in the notes to number 23.

10. Turner, again, now writes (*Greek Papyri*, pp. 125-126): "The branches into which textual critics have divided families of manuscripts cannot be traced further back into antiquity than a date later than the papyri in question", and ". . . it has not yet proved possible to trace the descent of a medieval manuscript from a papyrus one".

11. On the colometry of *P. Oxy.* 1177, cf. Barrett, *op. cit.*, p. 84, n.4.



## CHAPTER IV

### USES OF THE PAPYRI

One of the more interesting and challenging questions posed by the present fragments centers on the actual use of those works whose existence they attest. It has been sensibly assumed that there are at least three main audiences for literary texts. J.A. Davison has written:

Speaking quite generally, it may be said that in a fully literate society (by which I mean one in which reading and writing are not confined to the ordinary traffic of official and commercial life) the demand for books comes from three main sources: the school, the living-room, and the study; and the book-trade which is one of the essential features of such a society must be organized to meet these various demands.<sup>1</sup>

This three-fold division does not make allowance for those readers who require, professionally or avocationally, books of a more technical nature. Ironically, the only Oxyrhynchan text of Euripides the use of which can be rather safely classified is just this sort of work. Number 18 has been identified from its marginal sigla as an acting script of the *Cresphontes*, designed for use by a director or perhaps by an actor himself.

The *Cresphontes* fragment illustrates the difficulties and dangers in attempting to discover the use of any given text. The dramatic sigla for individual actors occur in this fragment in the intercolumniation, fortunately preserved, to the left of the column of writing. Were this intercolumniation lost, classification would not be possible, for the alphabetical sigla alone distinguish this fragment from others in this study. The text is written on the recto in a hand undistinguished in style and beauty, and in lay-out is arranged no differently than other fragments. Lectional aids are abundant, but their frequency is paralleled in numbers 4 and 1.

1. J. A. Davison, "The Study of Homer in Graeco-Roman Egypt", *Mitteilungen aus der Papyrussammlung der Österreichischen Nationalbibliothek*, V Folge, 1956, pp. 51-52. Of great interest for the problems treated in this chapter is Chapter VI of Turner, *Greek Papyri*, "The Persons Who Owned the Papyri in Antiquity".

Such an apparent lack of positive and obvious evidence for distinguishing various categories of texts led Davison to conclude, reasonably, if perhaps with some frustration:

...a copy of a classical author, the remnants of which we find wrapped round a mummy or thrown away upon the town's rubbish heap, may have belonged to a schoolmaster and have served him alike as a classroom text, as a work of reference, and as a means of recreation. It may well be perilous, therefore, to argue from the appearance of this or that ancient author among the papyri that there was a reading public in anything like the modern sense for him or her.<sup>2</sup>

Such a conclusion is not incompatible with modern book usage, though there may exist today peculiar characteristics which would distinguish a schoolboy's copy of an author, the same work sumptuously laid out and printed for the collector of fine books, and the scholar's text complete with extensive notation. These differences and the possibility that similar distinctions might be found in ancient books have led to attempts at defining more precisely criteria for identifying different categories of texts.

#### *Scholar's Texts*

In ancient book production a scholar's literary text, as distinguished from many such works today, did not generally encompass, at the time of production, commentary or reference material. Commentary was generally placed in a separate roll and apparently used in conjunction with a standard text. Commentaries of this sort for the works of Euripides do not exist among the remains from Oxyrhynchus; their existence can be easily assumed, however, from their presence at other sites, as well as by the remains of commentaries for other authors at Oxyrhynchus.<sup>3</sup> Their presence at Oxyrhynchus is also, perhaps, suggested by the well-known example of a scholar's text *P. Oxy. 841*, a copiously annotated copy of Pindar's *Paeans*.

In discussing the intellectual activity of Oxyrhynchus, Turner has suggested certain elements which, although not wholly satisfactory criteria, characterize a text used by a scholar:

1. A practiced hand.
2. The occurrence, generally, of text on only the recto.
3. The correctness of the text.
4. The nature and extent of lectional aids — intermittent accents but numerous other diacritical marks.
5. Revision by a second hand.
6. Marginal notes and comments.<sup>4</sup>

2. Davison, *op. cit.*, p. 52.

3. Pack<sup>2</sup>429: Commentary on *Trojan Women*. Pack<sup>2</sup>1536: Commentary on Thucydides (*P. Oxy. 853*).

4. Turner, "Scribes and Scholars of Oxyrhynchus", *Mitteilungen aus der Papyrus-sammlung der Oesterreichischen Nationalbibliothek*, V Folge, 1965, pp. 144-145. Cf. now Turner, *Greek Papyri*, p. 92ff.

Number 11 is one of two "classic examples" of scholar's texts which he cites and it occurs on the verso of a private account. And although "calligraphic hands are suspect in scholar's texts", Turner's first example of such text is written in a fussy, attractive script of the early second century.<sup>5</sup> Despite such exceptions, however, the criteria are helpful and at least focus on potentially significant distinguishing characteristics.

A few of the texts in this study may qualify as scholars' copies. Three of the texts preserve marginal notations: numbers 11, 12, and 23. Number 11, included in Turner's inventory, was written in a practiced, non-calligraphic script, has numerous diacritical marks – including relatively uncommon marking of long syllables –, and has been extensively corrected. As the *Hypsipyle* is no longer extant, the literary quality of the text cannot be judged as adequately as in a case where the MSS can be compared. Taken with other papyri, however, it shows the text to have been of fairly good quality. This copy has stichometrical letters at hundred line intervals, making it unique among the papyri in this study. Is it possible that these letters were written to facilitate reference between text and commentary?<sup>6</sup> Number 11, on the verso of a private account, was perhaps a private copy made for a scholar's use.

Number 12 is a far more handsome text written on the recto in an attractive hand and laid out with broad margins and intercolumniations. This seems to have been a text of considerable quality. Cursive notes, however, provoke the thought that this also was a text used by a scholar, though they may quite conceivably be only the random jottings of a 'lay' reader. The text has been corrected, perhaps by a second hand, and has a variety of lectional signs including the coronis.

Number 23 is the only other text with marginal glosses. This is a relatively handsome codex, again written in a practiced, easy hand. The text is of good caliber and has been amply corrected by a number of hands; lectional aids are generously employed.

In each of these cases it is possible to say only that the text may have been used by a scholar. The only real clue is the presence of marginal writing, and this is in no case of sufficient extent to be conclusive. The question of whether any text was designed especially for a scholarly use cannot be determined.

It might appear that the plays of Euripides were not a popular subject for serious scholarship at Oxyrhynchus. It is dangerous, however, on the basis of the limited evidence to argue that Euripides was popular only with the general reader and not with the scholar.<sup>7</sup>

5. Turner, "Scribes and Scholars of Oxyrhynchus", *Mitteilungen aus der Papyrus-sammlung der Oesterreichischen Nationalbibliothek*, V Folge, 1965, pp. 144 and 146.

6. Cf. Ohly, *Stichometrische Untersuchungen*, Leipzig, 1928, p. 86ff. Turner disagrees with this suggestion. Cf. Turner, *Greek Papyri*, pp. 94-95. In the same section Turner seems less certain than in his earlier work (cf. n.4 *supra*) about the design of the *Hypsipyle* for use by a scholar.

7. Davison suggests this conclusion in considering the texts of Homer, but he was faced with a considerably greater body of evidence (*ibid.*, p. 55: "it is perhaps not unreasonable to see . . . suggestion that Homer circulated rather among readers than students".)

## School and Reading Texts

It is still not uncommonly assumed, though not without hesitation, that texts written on the verso were prepared for use in the schools.<sup>8</sup> Oldfather, perhaps, gave this theory its greatest impetus in 1923 when, in his catalogue of literary papyri, he differentiated school texts from others on the assumption that verso texts were designed for this special audience.<sup>9</sup> The papyri do not support this hypothesis. Though it may be true that verso texts are generally less handsome than those on the recto, the differences between the two categories need not be striking, and it is certainly true that no formal, internal evidence exists for the assigning of all verso texts to schoolroom use. In this study, for example, the rather unattractive hands of numbers 1 and 20, recto texts, are not dissimilar in quality from those of verso texts 13 and 14. Elegance of layout, too, does not seem to depend on the verso-recto aspect of any given work: number 4, a cursive verso transcription demonstrates an unstinting use of the papyrus surface while number 6, in a more elegant hand, illustrates a recto text wherein the writing surface is more economically employed. Again, correction is found in both classes of texts and its absence, likewise, is not restricted to verso copies only. Though it is not unlikely that verso texts, perhaps less costly, were used in the schools, there is no proof of this assumption and generalization remains hazardous.

A warning similar to that issued in the discussion of scholarly texts ought to be heeded here as well. The presence of school texts in this collection is not demonstrable. More conclusive evidence for the use of Euripides in the schools is provided at other sites, however, as mentioned in Chapter I, and similar use can be assumed for Oxyrhynchus.

Reading texts may have been sale or private copies, and some have interpreted the distinction between recto and verso as the difference between these.<sup>10</sup>

Sijpesteijn is not perhaps on as safe ground when he adopts Davison's conclusion in his study of the Demosthenes papyri (P. J. Sijpesteijn, "Les parchemins et les papyrus de Démosthène trouvés en Egypte", *Chronique d'Egypte* XXXVIII, 1963, p. 302.) It is well to recall Kenyon's statement on people "interested in literature" — "not a large proportion of the population of any town in any country or in any century". This being true, the number of serious students of literature should not be expected to be large. Kenyon, "The Library of a Greek at Oxyrhynchus", *Journal of Egyptian Archaeology* VIII, 1922, p. 135.

8. Sijpesteijn, *op. cit.*, p. 302; P. Collart, "Les papyrus scolaires", *Mélanges Des Rousseaux*, Paris, 1937, p. 70, n.2. Cf. also W. H. Willis, "Greek Literary Papyri from Egypt and the Classical Canon", *Harvard Library Bulletin* XII, 1958, p. 9.

9. C. H. Oldfather, *The Greek Literary Texts from Greco-Roman Egypt*, Madison, 1923, *passim*. Even Oldfather, however, notes (p. 69): "There is no touchstone to prove the thesis that all the papyri on the verso were used in the schools".

10. Among those who subscribe to this view, cf. Schubart, *Das Buch bei den Griechen und Römern*, Heidelberg, 1961, p. 144, and Turner, "Roman Oxyrhynchus", *Journal of Egyptian Archaeology* XXXVIII, 1952, pp. 89-90. But cf. also V. Martin, *Papyrus Bodmer I*, Cologny-Geneve, 1954, who discusses a particularly handsome verso text and questions this assumption; similarly, Lameere, *Aperçus de paléographie Homérique*, Paris, 1960, p. 111ff.

Here too evidence of the present fragments is neither strong nor conclusive. Number 4, a verso cursive transcription of the *Telephus*, can perhaps with some confidence be classified as a private copy. This, however, cannot be judged with complete certainty, though the combination of a cursive hand and a verso transcription make this piece the most likely of the present fragments to be so labelled. Unfortunately, in the absence of explicit internal evidence there is no way at present to distinguish a private from a sale copy.

The great majority of texts probably represents sales copies of different values. Of the texts under consideration those on the verso are less impressive than those on the recto, but the variety is considerable. Number 3 is among the least attractive verso texts. The roll itself was very short and the text so arranged that maximum use was made of the writing surface; margins and intercolumniation are very narrow, and lyric indentation, if adopted at all, is minimal. The hand is crude and unattractive, but is heavily adorned with serifs and is clumsily pretentious. The text itself is uncorrected and only of mediocre quality. In contrast with this unattractive example is number 5, a verso copy of the *Medea*. As in number 3, the scribe here too aimed at an attractive product; he was not wholly successful, but the result is not as unhappy as in the first example. The roll is of average length, and the text laid out neatly with fair-sized intercolumniations and margins. The literary aspects of the text are rather good, though the text shows no evidence for correction. One final example of a rather attractive verso text is number 19, written in a stylish hand and of good literary quality. There is no evidence for correction, but no revision is needed. Texts such as this example would occasion no surprise if they appeared on the recto.

Recto texts display a similar variety and defy easy categorizing. Numbers 10 and 18 are fragments of lost plays and their texts cannot be honestly judged; the hands and lay-out, however, do not differ from those of verso texts. Number 1, a recto text, is not easily distinguishable, apart from the writing surface, from number 5, a verso example. The hand is awkward and unattractive and the text arranged on the papyrus with economical margins and intercolumniations. The text is not good and remained unrevised except for one minor correction. More handsome recto texts include 15, a very long roll of the *Phoenissae* written in a fine, early Biblical uncial; the text is arranged expansively, with wide margins and broad intercolumniations. Though considerable error remains, the text has been corrected. Number 8 was also probably a handsome work. In short, Euripides texts of all sorts were available through the centuries of activity in Oxyrhynchos — handsome rolls, humble rolls, and codices of papyrus and vellum.

#### *Cost of Texts and the Question of Literacy*

Our knowledge of the cost of ancient book production and the purchase price of texts is slight.<sup>11</sup> Cost must surely have involved consideration of the value of

11. Cf. Schubart's representative, if inconclusive discussion of the question, *op. cit.*, p. 139f. For further information on this question cf. the following note and the bibli-

the writing material, the layout and length of the text, the services of the scribe and the quality of his hand, the possible added cost of a corrector, and the literary value of the finished text. Each of these factors doubtlessly varied from text to text and very likely caused a great range of prices. Though we have a document relating to the payment of a scribe and an idea of the fluctuations in the price of papyrus, and some random prices for odd batches of papyrus, relative or absolute costs of ancient books remain a mystery.<sup>12</sup>

Although there is considerable variety among the preserved texts, it is impossible to draw conclusions about the levels of literacy in Oxyrhynchus. As noted, formal distinctions which might help identify the reading level or ability of the reader of a text are in most works lacking. It is possible to say that Euripides was evidently the subject of serious study, was used in the schools, and was fairly popular among general readers; a further breakdown of the reading audience is impossible.

graphy listed by Rostovtzeff, *Social and Economic History of the Hellenistic World* III, Oxford, 1941, p. 1391, n.111. Bibliography is also suggested by Turner, *Greek Papyri*, p. 173, n.22.

12. Turner describes the activities of scribes and makes reference to the appropriate documents in "Roman Oxyrhynchus", *Journal of Egyptian Archaeology* XXXVIII, 1952, p. 90. For a discussion of the difficulties involved in calculating papyrus prices as well as the mention of prices for odd lots of papyrus, cf. N. Lewis, *L'Industrie du Papyrus dans l'Egypte Greco-Romaine*, Paris, 1934, p. 152ff. For the fluctuating price of papyrus cf. also B. van Regemorter, "Le papetier-libraire en Egypte", *Chronique d'Egypte* XXXV, 1960, pp. 278-280.

PART TWO  
THE INDIVIDUAL PAPYRI

1872-1873  
1873-1874

1. P. Oxy. 1178

Orestes 1313-1326, 1335-1350, 1356-1360  
Pack<sup>2</sup> 414

Ca. 100 B.C.  
Papyrus Roll

This papyrus includes four fragments of the *Orestes*.<sup>1</sup> The largest, 11.8 by 8.9 cm., contains remains of two columns with the upper margin intact; the first column contains the ends of lines 1313-1326, the second the beginnings of lines 1335-1350. A second fragment, 5.2 by 4.6 cm., which contains portions of lines 1356-1360 and a lower margin, falls after a lacuna of five lines beneath the second column of fragment 1. The two remaining fragments are smaller and unidentified. The literary text was written on the recto; the original editor does not note what, if anything, appears on the verso.

The original roll was at least 21 cm. tall. Columns originally contained 24 lines and measured roughly 18.7 cm. in height. Lines of writing average 0.3 cm. in height and inter-linear spaces about 0.5 cm. The upper margin, about 0.4 cm. and apparently complete, is unusually small and singularly unpretentious; the incomplete lower margin measures 1.9 cm. at its greatest extent. A complete text of the *Orestes* would have required 71 columns in this format and would have approached 700 cm. in length.<sup>2</sup> A maximum column width of 8.7 cm. can be estimated from line 1321 of fragment 1. Verses divided between two speakers were here written in one line; whether *eisthesis* was employed in the lyric passages of fragment 2 is impossible to determine. The narrowest intercolumniation is a mere 0.4 cm. wide.

The hand is clearly Ptolemaic and may be dated to about 100 B.C. The considerable range in letter width and spacing produces a striking impression of irregularity. The 'line' of writing is also uneven and though most forms are upright, there is an occasional slope markedly to the left. The enlarging of letters at the ends of lines further emphasizes this sensation of unevenness. In general effect as well as in numerous individual letter forms the hand is comparable to *P. Teb. 1*, another literary fragment, and *P. Teb. 10*, a note of appointment; these comparative pieces are dated securely and from external evidence to 118 B.C. and 119 B.C. respectively, and make a late second century B.C. date very likely for the *Orestes*.<sup>3</sup>

This *Orestes* is also similar to *P. Teb. 1* in its almost total lack of lectional aids. In addition to a complete lack of accentuation, none of five possible rough or 15 possible smooth breathings is written. There is no instance where we might judge the writing of the diaeresis. Elision was once effected but was not marked, and in the second possible instance was completely neglected. Crasis was effected but unmarked in line 1345. Assimila-

1. These fragments have now been deposited in The Egyptian Museum, Cairo, which has generously provided a photograph for use in this study.

2. This calculation allows for blank spaces at both beginning and end of the roll, each equivalent to the width of a column. (Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, pp. 60-61.) A similar allowance is made in all other estimates of roll length in this study.

3. *P. Teb. 1* is included by Roberts, *Greek Literary Hands*, 7c. The original publication included a photograph (Plate I) which is more complete and more instructive as a comparative piece than the Roberts illustration.

tion was needlessly effected in line 1345. *Iota* adscript was written with the only form which requires it. One instance of itacism, οικτειρον, occurs in line 1341.

Paragraphi do indicate changes of speaker at the beginning of trimeters. How verses involving ἀντιλαβή were handled is indeterminable, as lines 1345 and 1347 are each broken off before such change might be signified. Each of these verses is followed by paragraphi so that in skimming the text one would know that the two successive lines were spoken at least in part by different characters; this tells us nothing, however, of division within an individual verse. This lack of evidence makes it dangerous to read here (with the original editors) confirmation of Lachmann's conjecture that the last metron of line 1347 was assigned to Electra and not, as in the MSS, to Orestes. Further, the very end of a paragraphus may in fact be visible after line 1348. In short, the arrangement of speeches may have been the same as in the MSS.<sup>4</sup>

One trace of correction occurs in line 1342 where the *epsilon* of εἰς was apparently converted from the second *iota* of ιθι to create elision after that word; this change was evidently effected in the original process of transcription.

The *Orestes* is transmitted in each of the two main MSS families; V, however, lacks lines 1205-1504. There is no peculiar relationship between this papyrus and any MS. Variants follow, in collation with Murray's text.

1315 βροχοις: βροχους codd., Murray.

1320 ...]κακα: τάξεργασμένα codd., Murray.

1335 δομοις: δόμους "primitus B et ut videtur M"; δόμος codd., Murray.

1337 και codd., Murray; om. L.

1345 σωθη: σώθηθ' codd., Murray.

1346 φιλοι codd., Murray; ἄνδρες F.

1350 βαλον[τες ABP; βάλλοντες ML, Murray.

1359 που: τοῦ ALP; του MB, Murray; πυθώμεθα codd., Murray; πυθόμεθα M: corr. M<sup>2</sup>.

1360 τὰς ... τὰς w. M<sup>2</sup>ABLP; τὰ μὲν ... τὰ δ' M, Murray.

Five wholly new readings are here introduced; none is acceptable. In line 1315 the accusative of the MSS is consistent with Euripidean usage. In line 1320 the variant suggested by the original editors as the intrusion of an original gloss is unmetrical. The που of the papyrus in line 1359, and the variants in line 1335 make no sense. Finally, σωθη in line 1345 seems an obvious haplographical error for the MSS reading.

Of those readings shared with some of the MSS, και in line 1337 must be written *gratia metri*. In lines 1346 and 1359 the papyrus sensibly agrees with the majority of the MSS. In two final instances – lines 1350 and 1360 – the variants are not of great significance; in the second instance the reading adopted by Murray is perhaps more precise. In view of these various readings it must be stated that this text was not of high quality.

The *Orestes* is represented by four text remains from Oxyrhynchus and by three fragments from the rest of Greco-Roman Egypt:

P. Oxy. 1370 [23] Pack<sup>2</sup> 402

P. Oxy. 1616 [21] Pack<sup>2</sup> 409

P. Cairo inv. 56224 [8] Pack<sup>2</sup> 412

P. Vindob. G. 2315 Pack<sup>2</sup> 411

P. Columbia inv. 517A Pack<sup>2</sup> 410

P. Geneva inv. 91 Pack<sup>2</sup> 413

Number 23 also includes lines 1334-1345 and does present different readings from those preserved in number 1. A comparison of these two papyri follows, based on differences between the papyri or the papyri and MSS.

4. Cf. the discussion of this point in *Oxyrhynchus Papyri* IX, p. 186.

1	23
1337 και w. MSS; om.L.	1337 και w. MSS; om.L.
1340 αλ[λ] w. MSS, edd.	1340 δγ' w. Weil; δλλ' codd., edd.
1341 οικτειρον: δικτιρον MSS., edd.	1341 οικτειρον: δικτιρον MSS., edd.
1342 "σ of εις was converted from a straight stroke, i.e., probably the scribe at first wrote ιθι unelided." P. Oxy. p.185.	1342 "ιθ was corrected from ωδ apparently". P. Oxy. 1370.

Although the text coincidence is slight, comparison is illuminating. In line 1337 the papyri rightly agree against the peculiar and unmetrical reading of L. In line 1341 the papyri and MSS also agree, though here the MSS spelling is preferable. The papyri and MSS again agree in line 1342, though it is interesting to note that in both papyri there was original variation. Finally, in line 1340 the earlier papyrus preserves the better reading; there is nothing incorrect in δλλ' nor in its repetition so soon after line 1337.<sup>5</sup> This, then, is an instance where the early, correct reading does not appear in a later copy but does reappear in the medieval MSS.

This copy of the *Orestes* was not a product of great quality. The dimensions of the original roll, about 21 by 700 cm., were in all respects average.<sup>6</sup> Although the interlinear spaces were generous and separated clearly the successive lines of writing, intercolumniations and margins were apparently very modest. The hand is also of no great beauty. Finally, the literary text itself, only slightly corrected, is of mediocre caliber. One might guess this to be an undistinguished copy from the book trade.

5. Cf. W. Biehl, *Textprobleme in Euripides Orestes*, Göttingen, 1955, p. 77, who argues for the reading of number 1; he is followed by Chapouthier in the Budé *Orestes*. Pasquale, *Storia Della Tradizione e Critica del Testo*, Florence, 1952, p. 193, prefers the reading of number 23 but does not argue for his position.

6. Kenyon, *op. cit.*, pp. 50-54.

## 2. P. Oxy. 2336

Helen 630-651, 652-674  
Pack<sup>2</sup> 391

Late I B.C.  
Papyrus Roll

Number 2, 15.2 by 8 cm., preserves parts of two columns of the *Helen*.<sup>1</sup> Column I carried lines 630-651, but only the ends of the lines remain. Column II, which originally held lines 652-674, is represented by only the beginnings of several iambic and lyric verses. Parts of both upper and lower margins and the intercolumniation are also preserved. The text was written on the recto; the verso is blank.

1. A photograph of this fragment for use in this study has generously been supplied by the Bodleian Library, Oxford, which now has the papyrus in its possession. A plate of this fragment is now published in Zuntz, *An Inquiry Into the Transmission of the Plays of Euripides*, Cambridge, 1965, as Plate xvi.

The original roll was somewhat taller than the existing 15.2 cm. The writing area in Column I measures 12.5 cm. in height; the writing of the second column appears to end at a slightly lower point on the page, suggesting a slightly taller column of writing. Columns contained 25 lines in a colometry which varies from that of Murray. The first column contains 21 lines of Murray's text, the second twenty-three. Individual lines of writing and interlinear spaces are about 0.2 to 0.3 cm. tall. The incomplete upper margin measures 1.8 cm. at its greatest reach, the lower, 1.0 cm. below column I, 0.5 cm. below column II.

Line 630 contains 31 letters and sets the maximum width of the first column at about 8.5 cm. Lyric verses were indented about 0.8 cm. (the space of three letters), and the intercolumniation at its narrowest also measures 0.8 cm. With these measurements a roll containing all of the *Helen* would have held 68 columns and been about 649 cm. long.<sup>2</sup>

The hand is attractive if somewhat irregular. Individual letters, upright and fairly carefully drawn, vary slightly between 0.2-0.3 cm. in height, and average 0.3 cm. in width. There was an apparent but not always successful attempt at isocephaly, in which only the hastae of *phi* and *psi* consistently break the even 'top' of the lines of writing. Letters also generally rest on a well-defined horizontal, though here again there is some inconsistency and the lines occasionally rise and fall. Decorative serifs are added in the form of short but pronounced leftward strokes at the bases of many verticals, though a repeated letter such as *nu* or *upsilon* may or may not be decorated. There are no ligatures, though letters occasionally touch and at times seem linked together where an extended serif touches an adjacent form; some letters stand 0.1 cm. apart. The scribe displays considerable skill and creates an easily legible and elegant script. The late first century B.C. date assigned this hand by the original editor seems sensible; it is an example of that decorated style not uncommon between 50 B.C. and 150 A.D. Though a more attractive and careful specimen, this hand is very similar to that of *P. Oxy.* 2369, dated palaeographically to the late first century A.D. Each has the same roundness and verticality, and each is easily legible but decorated with the same form of serif. Distinctive letter shapes also link the two pieces. In each, *alpha*, neat and clear, has a rounded apex and a horizontal cross stroke attached in the middle of each side. *Mu* is also similar, with rounded but well-defined saddle, as is *upsilon* with its rounded bowl. Though again less careful, the hand of *P. Fay.* 7, dated to the late first century B.C., may also be compared with the *Helen*.<sup>3</sup> In each piece, again, the decorative elements are similar as are many of the individual letters: *alpha*, *delta*, *tau*, and *upsilon*. In its roundness the *Helen* seems a bit later, but in general style and in the occasionally awkward spacing of forms the hands are comparable. Though debate exists on the

2. The calculation of roll length is based on 68 columns 8.5 cm. wide and two blank spaces of the same size, one at the beginning and one at the end of the roll, and intercolumniations measuring 0.8 cm. in width. The resulting figure of 649 cm. (about 21 feet) falls short of the estimate of Roberts in the original publication of "not less than 40 feet in length" (*P. Oxy.* XXII, p. 107). It is unfortunate that Roberts does not outline his procedure in extrapolation.

3. *P. Fay.* 7 appears in Roberts, *Greek Literary Hands*, 9b, where Roberts dates both *P. Fay.* 6 and 7 to the late first century B.C. and explains: "The only evidence for the date of either of these manuscripts is circumstantial; both were found with a number of documents of the early first century and of the seven that carried dates six were written in the reign of Augustus." He remarks further that *P. Fay.* 7 "may antedate the Roman conquest of Egypt". (*Greek Literary Hands*, p. 9) In the original publication, however, *Fayum Towns and Their Papyri*, p. 92, the dates of these two pieces are set in the first century A.D. "Both it (*P. Fay.* 6) and the following fragments of the *Odyssey* (VII) were found together with a number of early first century documents . . . The two literary papyri are no doubt of the same period, and we thus have a pair of practically contemporary specimens of the literary hand as practiced in the opening decades of the first century". Roberts' dating here is probably preferable; many more papyri were available as evidence for his comments than would have been available to Grenfell, Hunt, and Hogarth in 1900.

dating of this general style and though this hand is not unlike pieces attributed to the first century A.D., the *Helen* is probably datable to the late first century B.C.<sup>4</sup>

The use of lectional aids is comparable to that in other papyri of this period.<sup>5</sup> There is no evidence for punctuation, nor were accents or five possible rough or 11 possible smooth breathings written. Elision is observed in each of three possible instances but is never marked with an apostrophe. There is no instance where we can be sure that *iota adscript* was written. Paragraphi were used to indicate change in speaker.

In line 634 χεῖρας supports Elmsley's emendation and is more acceptable metrically than χεῖφας of the MSS. In line 636 φιλτάτα is preferable to φιλτάτη of the MSS and illustrates again the confused use of Doric forms in tragic papyri. Finally, in line 644 πόσει is probably itacism for πόσι and not a true dative. There is no trace of correction in this text.

L and P are the only two medieval MSS which preserve the *Helen*. Variants follow in collation with Murray's text.

633 ανεπτ]τερωσ[α: ἀνεπτέρωκα LP, Murray.

634 ηδονη: ήδονάν LP, Murray.

635 ]ς ως λαβω: ὃ πόσις, ὃς λάβω Elmsley, Murray: ὃς λάβω, ὃ πόσις LP.

637 [εχω τα του διος λεκτρα ληδας τε w. LP: τῆς Schaefer: Διός τε λέκτρα λήδας Θ' Reisig, Murray: τὰ τῆς Λήδας Διός τε λέκτρα Wilamowitz.

640-643 ωλβισαν ω]λβισαν εμε σε τε ματαν

.....]ν

.....]ν

.....]ν γ ελαυνει θεος.

ωλβισαν ωλβισαν

τὸ πρόσθεν, ἐκ δόμων δ' ἐνόσφισαν θεόι σ' ὅμοῦ

πρὸς ἄλλαν δ' ἐλαύνει: LP

ωλβισαν ωλβισαν

τὸ πρόσθεν ἐκ δόμων δὲ νοσφίσας σ' ἔμοῦ

πρὸς ἄλλαν ἐλαύνει, Murray: *alii alia*.

644 συ]ναγαγεν ποσει (συν]αγαγεν ω ποσει Zuntz): συνάγαγε πόσιν LP Murray. συνάγαγεν, ὃ πόσι Dindorf; πόσι Hermann.

650 εχ]ομεν εχομεν ον εμενον w. LP: πόσιν ἐμὸν [εχομεν] δν [έμενον] ἐμενον Murray.

651 Τροιας πολυετη μολειν w. LP Murray. Τροίας χρόνον πολυετῆ Blass.

655 δ (ο Zuntz): δμως δὲ λέξον Murray, LP.

670-673 ο Δ[ιος

μ[

μ[

-

δ Διός δ Διός, ὃ πόσι, παις μ' ἐπέλασε Νείλω LP.

The original editor wrote of this transcription: "...the text differs widely from the LP tradition; if lines 640-644 had alone survived, they could scarcely have been recognized as belonging to the play".<sup>6</sup> Zuntz, however, in *An Inquiry Into the Transmission of the Plays of Euripides*, has suggested that a clearer relationship exists between the papyrus and LP than is immediately apparent; this view seems strained. In line 635 the aorist is at least as acceptable as the perfect and may be preferable.<sup>7</sup> In line 634 the original editor suggests

4. For a discussion of the dating of the decorated style cf. Lobel's comments on P. Oxy. 2298.

5. Cf. P. Fay. 6 and 7.

6. P. Oxy. XXII, p. 109.

7. Cf. Zuntz's comments on the tense sequence in this passage and his preference for the aorist, *op. cit.*, p. 224. But cf. Lloyd-Jones in his review "The Transmission of Euripides", *Classical Review*, n.s. 16, 1960, pp. 156-159 and esp. p. 157 where he writes that between the two readings "there is not a pin to choose".

ηδονη as a possible error for an accusative or dative form; Zuntz claims that LP preserves the correct and necessary accusative object of λαβω.<sup>8</sup> The original editor sees support in this text for Elmsley's alteration of the word order in line 635; not so Zuntz, who claims insufficient space in the papyrus for Elmsley's transposition and who inserts ω πόσις in line 636, its position in LP. Zuntz's insistence in this case seems unwarranted.<sup>9</sup> In line 637 the text agrees with LP. Reisig's emendations must be accepted, however, for both sense and meter, while the emendations of both Schaefer and Wilamowitz are unnecessary.<sup>10</sup> In lines 640-643 lies the greatest discrepancy between number 2 and LP. The original editor concludes "all that can safely be said" is that number 2 was markedly different from the MSS and the texts of modern editors.<sup>11</sup> Zuntz restores the papyrus so as to yield good sense, working on the assumption that the more expansive MSS reading incorporates marginal glosses on a concise reading such as that probably written in the papyrus.<sup>12</sup> In line 644 Zuntz, in a reading challenged by Roberts and Turner, sees an omega before ποσι; Zuntz's reading is hazardous, though it is not unlikely that the papyrus preserves the acceptable vocative form.<sup>13</sup> In lines 650-651 number 2 shares acceptable if difficult readings with LP. In line 665 Zuntz again questions the reading offered in the original publication and with his new reading restores at least the beginnings of the line as recorded in LP and Murray.<sup>14</sup> Finally, in lines 670-673 Zuntz restores the text in such a way that the sense is good and the rather vague reading of LP improved.<sup>15</sup>

Paragraphi indicate change of speaker, and although Zuntz suggests the use of marginal character notations, this is highly unlikely.<sup>16</sup> Several paragraphi can be seen in Column II, sensibly placed and wholly in accord with the assignment of speeches in LP and Murray. Attempts at recovery of the use and placement of paragraphi in Column I necessarily involve speculation and subjective interpretation.<sup>17</sup> It is unfortunate that the two lines which may have contained division of speeches within a single verse, 636 and 640, are broken off after

8. *P. Oxy.* XXII, p. 108 and Zuntz, *op. cit.*, p. 226. A. M. Dale, *Euripides, Helen*, Oxford, 1967, p. 171 makes no choice, wisely: "without the first word of 635 we cannot judge the phrase." Lloyd-Jones, *op. cit.*, makes no comment.

9. *P. Oxy.* XXII, p. 108 and Zuntz, *op. cit.*, pp. 218-219 and 226-227; it does not strengthen Zuntz's argument that he must still print a lacuna in line 635 after his juggling of the text of Number 2. Dale, *op. cit.*, p. 108 and 171, sees lines 636-636a a "muddle" which she cannot elucidate. Lloyd-Jones, *op. cit.*, p. 157 is not convinced by Zuntz.

10. Cf. Zuntz, *op. cit.*, p. 236ff. and p. 244; Dale, *op. cit.*, p. 109; Lloyd-Jones, *op. cit.*, p. 158.

11. *P. Oxy.* XXII, p. 109.

12. For a rather complete reconstruction cf. Zuntz, *op. cit.*, pp. 227-229; Dale, *op. cit.*, p. 171ff. is not convinced, nor is Lloyd-Jones, *op. cit.*, p. 158.

13. Zuntz, *op. cit.*, p. 219. The reading which Zuntz suggests seems dubious in photograph; for the objections of Roberts and Turner cf. Zuntz, "The Papyrus of Euripides *Helena*", *Mnemosyne* XIV, 1961, pp. 122-125.

14. Zuntz, *An Inquiry Into the Transmission of the Plays of Euripides*, pp. 219-220. Compare Roberts' interpretation, *P. Oxy.* XXII, p. 109. Here Roberts' reading of delta does not seem likely, though the omicron which Zuntz suggests (with Turner's support) is also not certain.

15. Zuntz, *op. cit.*, p. 230.

16. *ibid.*, p. 220. Zuntz's one citation of the use of character sigla is not supported by Turner nor does it seem likely from photograph. It is perhaps odd that only one such notation may be attested: there are no other instances of notation in Column II besides this unlikely case which Zuntz discusses. Pope's note, "Changes of Speaker in Papyrus Bodmer IV", *Acta Classica* III, 1960, p. 49) is puzzling and without apparent foundation: "In . . . *P. Oxy.* 2336 . . . the paragraphi may have been omitted and the same function served by outsetting the first letter of the new speech." Paragraphi were not omitted, to judge from Column II. Variations in the margin of Column II are explicable through wholly standard *eisthesis*.

17. Zuntz, *op. cit.*, pp. 230-236. Cf. comments by Dale, *op. cit.*, p. 108ff.; Lloyd-Jones, *op. cit.*, p. 158; and D. W. Lucas, *Classical Review*, N.S. XVIII, 1968, p. 32.

the point at which such division would take place.<sup>18</sup>

The colometry of number 2 differs considerably from that preserved in LP and that established by Murray. The greatest differences between it and LP in this respect lie significantly, as Zuntz points out, in those places where the wording of L has long caused difficulty and speculation. Although Zuntz reconstructs a reasonable colometry for number 2 by combining both papyrus and MSS evidence, there are still passages in which the meter remains a mystery, and there are yet others where reconstruction differs uncomfortably from the available evidence.

There are no other papyri of the *Helen*.

The original roll which contained number 2 was probably an attractive copy of the *Helen*. The text is written on the recto. The relatively high interlinear spaces and dark ink make the text neat and easily legible. The hand itself is also appealing and careful. The dimensions, about 15.2 by 649 cm., indicate a roll that was proportionately long and low. The papyrus was apparently used economically; margins and intercolumniations were not particularly generous, but they are in pleasing proportion to the columns of writing. The literary quality of the text is hard to judge for lack of more ancient and medieval testimonia. In brief, this was probably a reputable sale copy of the *Helen*.

18. Zuntz, *op. cit.*, pp. 230-236.

19. *ibid.*, p. 220ff. Cf. the new verse conjectured by Zuntz, p. 241ff.

### 3. P. Oxy. 1177

*Phoenissae* 171-185, 220-226  
Pack<sup>2</sup> 417

Early I  
Papyrus Roll

Number 3, 11.2 by 7 cm., preserves the bottoms of two columns of the *Phoenissae* and, at some points, what is apparently the full lower margin.<sup>1</sup> The first column contains the ends of lines 171-185, the second, mere beginnings of lines 220-226. The text is written on the verso; the recto bears traces of cursive script and was reenforced by pasting on additional strips of papyrus.

Estimates of column height are especially tentative, since the number of lines per column is most uncertain. In Column I, for example, the portions of a single verse divided between two speakers were written on separate lines. Again, the colometry evident in Column II differs from that of modern editors. If we assume, however, that the same 41 lines of Murray's text occupied 41 lines in the papyrus, we may imagine an original column 25 cm. tall. Lines of writing measure 0.3-0.4 cm. in height; interlinear spaces range between 0.2-0.5 cm. The lower margin, perhaps complete, measures 1.9 cm. at its greatest reach.

If calculation of the length of this roll is based on the assumption of 41 lines per

1. A photograph for use in this study was provided by the Classical Museum of the University of Illinois, which now has the papyrus in its possession.

column, a full text of the *Phoenissae* would have extended to about 375 cm.<sup>2</sup> The longest of the preserved lines contain 30 letters and probably measured about 8 cm. The intercolumniation is almost nonexistent where the longest line in Column I, line 176, approaches the second column. The original editor wrote that "lyrical verses seem to have been distinguished by slight indentation."<sup>3</sup> Such indentation, if indeed effected, was very slight; reconstruction of the preserved lines yields an even margin for both lyric and iambic verses.

The hand, highly irregular in letter heights, inclination, and spacing, is nonetheless richly ornamented. Almost every vertical stroke has a serif reminiscent of those of Rustic Capital: the serifs are heavy, striking, and, considered with the other elements of the hand, suggest that the scribe sought greater elegance than was achieved. *PSI* 1092, an earlier example of this style, is more polished and attractive and shows how far our scribe fell short of his goal. Support for the original editor's dating of the hand to the early first century A.D. comes from similarities in Schubart *PGB* 11a, generally dated to the first century B.C.<sup>4</sup> Another antecedent is provided by *P. Fay. 7*.<sup>5</sup> Internal evidence establishes a *terminus post quem*: there are traces of first century B.C. cursive on the recto, and more important, one of the reenforcing papyrus strips is dated to the reign of Augustus. In short, an early first century date suits this script well.

The use of lectional signs is similar to that in other papyri of this period.<sup>6</sup> Although more punctuation might be expected, only one high stop is written, at the end of line 181. No accents nor three possible rough or six possible smooth breathings were written, and a diaeresis does not appear in the only possible instance, over an initial *upsilon*. One possible elision was neglected. There is no place where *iota* adscript could be expected; a superfluous *iota* was added to *κατω* in line 182, and there is one case of itacism, *ειθυνει*, in line 178. In line 173 the *iota* of *δεσποινα* was omitted.

The nature of the preserved fragment precludes any evidence for the use of paragraphi. Single verses divided between two speakers were written so that each new speech began on a new line. It is apparent from reconstruction of Column I, for example, that *ἔνσπονδος* was not written in line 171 but in a separate (now lost) line which preceded. In the papyrus, then, this word was included in the speech of the paedagogos, as it is in the MSS and Murray, and the first preserved line, wholly attributed to Antigone, thus began with *οὗτος*. A similar point, but one of greater interest, occurs in line 180 where Murray follows Geel in attributing *Καπναεύς* to the servant, while the MSS attribute it to Antigone. A comparison of the arrangement in the papyrus of lines 180 and 172 shows that the papyrus had the word on a separate line, and thus shared the MSS attribution; line 11 of the papyrus, then, wholly assigned to the servant, began with *ἐκεῖνος*.

There is no evidence for correction.

The *Phoenissae* is preserved in each of the two main MSS families. There is no particular relationship between this papyrus and any one MS. Variants follow in collation with Murray's text.

2. This measurement represents the average of estimates of roll length without intercolumniation and with intercolumniation of only 0.5 cm. This procedure was adopted as it is not entirely clear whether *ως* was written at the end of line 176, as in *P. Oxy. IX*, p. 183, or at the beginning of line 177, as in Zuntz, *An Inquiry Into the Transmission of the Plays of Euripides*, Cambridge, 1965, p. 33.

3. *P. Oxy. IX*, p. 1842. Andrieu (*Le dialogue antique*, Paris, 1954, p. 267) apparently accepts the puzzling, reconstructed arrangement of this text as presented in *P. Oxy. IX*, p. 183. "Dans Oxy., IX.1177, du début de l'ére chrétienne, de nombreuses fautes entâchent la disposition, qui d'ailleurs présente la particularité de distinguer les répliques en mettant en saillie non pas le premier vers, mais toute la réplique, la suivante étant en retrait par rapport à la précédente, et ainsi de suite."

4. Cf. Schubart, *PGB*, p. xiii, and Lobel's comments on *P. Oxy. 2298*, p. 60.

5. *P. Fay. 7* is included by Roberts, *Greek Literary Hands*, 9 b.

6. Cf. *P. Oxy. 2309, 2391* and *2435*.

171 τι]ς ποθεν: τίς πόθεν κυρεῖ codd.; τίς κυρεῖ Murray, following Valckenaer.  
 174 φιλαιματοι w. codd., Σ, Murray: φιλαιμάτου LP.  
 175 Αελιου w. codd., Σ, Murray: ἄ Λατοῦς Wecklein, Nauck.  
 176 χρῆσεον κυκλοιν: χρυσόκυκλον V; χρυσέόκυκλον MABLP, Murray.  
 178 ειθυνει: ιθύνει codd., Murray; ιθύνει δρόμον Wilamowitz.  
 180 Καπανεύς; Πα. ἔκεινος w. Valckenaer: Καπανεύς; ἔκεινος ἐπτά codd., Σ: Πα. Καπανεύς; ἔκεινος Geel, Murray. "The lacuna is of the same length as in the next line, and is satisfactorily filled without the addition of ἐπτά which the MSS read after ἔκεινος and which was rejected by Valckenaer" Hunt, *P. Oxy.* IX, p. 184.  
 220 γαμασι: ἀγαλμάσι codd., Murray.  
 226 ω w. Byzantini, Wecklein: ιώ codd., Murray.

Three wholly new readings appear here. In line 171 the variant is sensible and metrical and may represent a true reading. In lines 176 and 220 the readings seem the result of scribal error; in the second instance the first letter of the word may have appeared in the preceding line as in P. There is support for Valckenaer's emendation in line 180 in the exclusion of ἐπτά; the attribution of this line is also shared with Valckenaer and the MSS. In other instances the readings of the papyrus are acceptable. In lines 174 and 175 the papyrus shares readings of the majority of MSS and in 178 no support is given the emendation of Wilamowitz. Finally, in line 226 there is little choice between the two exclamations; that of the papyrus is acceptable.

The colometry does not consistently match that of the MSS or Murray.<sup>7</sup> In lines 175-178 the papyrus and Murray agree, though the papyrus possibly writes ως (Murray line 177) at the end of the second colon. M and P share this structure, except that they place πώλοις in the second colon; L and B depart with a "completely different and obscure layout".<sup>8</sup> In line 182 the papyrus and MSS colon ends with βαρύβρομοι, whereas Murray ends with βρονταί. In the next line MSS and papyrus differ, and themselves differ from Murray: the MSS end line 183 with αἰθαλόεν, the papyrus with αἰθαλό, and Murray with τοι. Finally, in lines 220-226 the papyrus, MSS, and Murray are all at variance.

This is one of three texts of the *Phoenissae* from Oxyrhynchus, and one of five from all of Greco-Roman Egypt:

P. Rain. 3.21 Pack<sup>2</sup> 418  
 P. Oxy. 224 with P. Ryl. 547 [15] Pack<sup>2</sup> 421  
 PSI 1193 [9] Pack<sup>2</sup> 423  
 P. Berol. Inv. 11868 Pack<sup>2</sup> 424

This is a rather odd example of Euripidean text. Roll height exceeds the general average while the length of the roll is considerably shorter.<sup>9</sup> The layout was unattractive, the lines of writing waver up and down, and were not aligned between columns. Intercolumniations may have been dispensed with, and lyric indentations, if they existed, were extremely slight; the margins were also probably relatively small. The hand is unattractive despite a grand attempt at elegance. Here the quality of the literary text, which shows no trace of needed correction, harmonizes well with the physical evidence. Although it is true that several readings compare favorably with those of the MSS, the scribe was not careful; and simple blunders are not uncommon. In short, this was not a text of great value, despite apparent ambition on the part of the scribe. One thinks of a very inexpensive copy.

7. Cf., for a discussion of the metrical data, Barrett, *Euripides, Hippolytus*, p. 85, and Zuntz, *op. cit.*, p. 33 where the basic material of this paragraph is contained.

8. Zuntz, *op. cit.*, p. 33.

9. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, pp. 50-51 and 53-54.

## 4. P. Oxy. 2460

Telephus  
Pack<sup>2</sup> 448

I  
Papyrus Roll

This is a collection of 51 fragments from the *Telephus*; identification rests on the coincidence of fragment 32 with a quotation from Stobaeus, Nauck Fr. 716.<sup>1</sup> A further coincidence, that of fragments 18, 19, and 20, with *P. Berol.* 9908, changes the earlier attribution of the Berlin fragments to Sophocles. The fragments vary greatly in size. Fragment 1, 8 by 6 cm., and fragment 10, 11.5 by 5 cm., are the two largest pieces; others measure a centimeter square or less. The transcription was made on the verso of a tax register of the second half of the first century B.C.<sup>2</sup>

Original column height is unknown. Lines of writing average 0.4 cm., interlinear spaces 0.5 cm. The largest and yet perhaps still incomplete segment of upper margin, 2.3 cm., is preserved in fragment 6. Fragment 15 has a complete lower margin of 5.9 cm., twice the size of the lower margin on the recto.<sup>3</sup> In this text spacing apparently separated dialogue from choral lyric.<sup>4</sup>

Column numbers on the recto afford some idea of the horizontal layout of the roll; numbers μη(48), μζ(47), and μδ(44) on fragments 1, 2, and 6 make clear the relative positions of these fragments.<sup>5</sup> Average column width has been set at about 8 cm.<sup>6</sup> In fragment 20 lyric indentation has been estimated to have equalled nine letters or about 2.5 cm.<sup>7</sup> In no place is it possible to measure an intercolumniation. Blank spaces to the left of text vary between 3 and 0.5 cm. on different fragments, but the first instance may be space to the left of an indented lyric and the other only part of a larger blank area.<sup>8</sup>

The hand is a sloping business cursive. Most letters average 0.2-0.3 cm. in height, though *iota* not infrequently stretches to 0.5 cm. and *phi* to 0.8 cm. The average width is 0.3-0.4 cm., though *mu* at 0.5 cm. is wider. The hand is consistent, but not particularly attractive. The editors suggest comparison with *P. Lond.* 140 and *P. Ryl.* 154 and 161, all documents and all dated a little after the middle of the first century. Such a date for the *Telephus* is not unlikely in light of the late first century B.C. document on the recto.<sup>9</sup>

Letter traces can be easily mistaken for marks of punctuation, but identification of one low and nine high stops seems safe, with one additional occurrence of each type which is uncertain.<sup>10</sup> Middle stops do not appear. For the same reason, accents are difficult to determine, but there is some evidence for both the acute and circumflex. One each of three pos-

1. Prior to inclusion in the series of *Oxyrhynchus Papyri*, these fragments were originally published with plate by E.W. Handley and John Rea, "The *Telephus* of Euripides", *Bulletin Supplement No. 5 of the Bulletin of the Institute of Classical Studies*, University of London, 1957. A photograph for use in this study has been generously provided by the British Museum, which now has the fragments in its possession.

2. The date of the tax register is not included in either publication of these fragments but cf. the review of Hans Strohm, *Gnomon* XXXII, 1960, pp. 600-605.

3. Handley-Rea, *op. cit.*, p. 10.

4. *ibid.*, p. 12.

5. *ibid.*, p. 1.

6. *ibid.*, p. 1.

7. *ibid.*, p. 12.

8. *ibid.*, pp. 10-11. These measurements are for fragments 16 and 17, respectively.

9. Cf. Turner, "Recto and Verso", *Journal of Egyptian Archaeology*, XL, 1954, pp. 102-106.

10. Handley-Rea, *op. cit.*, p. 2.

sible rough and 20 possible smooth breathings are written. Elision is effected and marked with apostrophe in five instances, is effected but not marked once, and is once wholly neglected. Several makrons may have been written; one syllable in fragment 13 is marked short. Two further marks deserve comment. In line 1 of fragment 1, the mark which appears to be a long descender above the last letter is apparently an accidental stroke. In fragment 13 a similar vertical occurs; this may be an *iota* added to correct the preceding form to the dative case.<sup>11</sup> There are no sure instances where *iota* adscript could be expected. The only orthographical point of any interest is the reading σύνλογος in fragment 19, line 3, where *P. Berol.* 9908 preserves σύνλογος.

Evidence for the use of paragraphi is obscure. Beneath the last line of fragment 17 a paragraphus may have indicated the beginning of an indented lyric; alternatively, the paragraphus may have been placed at the bottom of one column to signify the introduction of a new speaker at the top of the next. In fragment 10 a paragraphus may have indicated change of speaker within a line, but this possible paragraphus may in fact be a makron. In fragments 9 and 11 the presence of paragraphi is more certain.

There are three instances of correction which are effected, as is the writing of all lectional aids, by the scribe of the text itself. In line 3, fragment 15, an *upsilon* between two dots was inserted above κορας, perhaps to change the original reading to αγκυρας or κουρας.<sup>12</sup> In line 3, fragment 22, *upsilon* between dots was written above ημιν, presumably to yield υμιν.<sup>13</sup> Finally, in fragment 36 δι alone and without dots was inserted above line 4; the significance of this correction is not clear.<sup>14</sup>

The literary quality of this text is difficult to judge. One variant from *P. Berol.* 9908 is introduced:

Fragment 20, line 4

περαινεται

Both readings are metrical; context recommends the Berlin reading.

This is one of four papyri of this play. *P. Ryl.* 482, like *P. Berol.* 9908, has been ascribed to Sophocles, but the editors of the present fragments argue for its Euripidean authorship.<sup>15</sup> In addition to number 4 the *Telephus* is attested by the following fragments:

*P. Berol.* 9908 Pack<sup>2</sup> 449

*P. Ryl.* 482 Pack<sup>2</sup> 450

*P. Med.* 1 Pack<sup>2</sup> 447

Nauck lists thirty-two citations from later authors.

Aeschylus and Sophocles also wrote plays dealing with the *Telephus* legend; neither of these plays is attested by papyrological remains.

This text appears on the verso of a document which was reenforced before receiving the literary transcription, and is written in a cursive hand.<sup>16</sup> The layout, however, is not essentially different from other pieces studied. Interlinear spaces are generous, as are the margins. It is probable that this was originally a private copy, worked with some care and according to the conventions of the book trade.

*P. Berol.* 9908

πορευεται

11. *ibid.*, p. 9.

12. *ibid.*, p. 10.

13. *ibid.*, p. 14.

14. *ibid.*, p. 16.

15. *ibid.*, p. 20ff.

16. It is not, of course, unusual that a literary text be written in cursive. Cf. Roberts, *Greek Literary Hands*, p. xi.

## 5. P. Oxy. 2337

Medea 1149-1163, 1171-1190  
Pack<sup>2</sup> 408

Later I  
Papyrus Roll

The papyrus, 12.7 by 15 cm., preserves the lower parts of two adjacent columns of the *Medea*, as well as a portion of the lower margin. Column I holds the ends of lines 1149-1163, and Column II parts of lines 1171-1190, including both beginnings and ends, with mid-sections lost, of lines 1185-1190. The text is written on the verso; the recto preserves part of a register of contracts dated to the reign of Claudius or Nero.<sup>1</sup>

The original columns contained 27 lines and measured about 15 cm. in height. Lines of writing average about 0.2 cm. in height, with interlinear spaces varying slightly between 0.3-0.4 cm. The lower margin measures 1.5 cm.; the height of the upper margin cannot be calculated.

The original length of this roll was probably about 555 cm. Line 1188, the longest preserved line in Column II, measured about 8.2 cm. and probably set the maximum width of that column. The intercolumniation at its narrowest extent measures about 2.0 cm.

The text is written in a decorated rounded hand. An avoidance of sharp lines is evident in such letters as *alpha*, *lambda*, *mu*, *pi*, *rho*, and *upsilon*, in curls which highlight the scribe's skill in creating graceful forms and which betray his attempt at elegance. Letters average a bit more than 0.2 cm. in height and are fairly isocephalic; there is greater variance in width and individual forms narrow notably at the ends of lines. This narrowing is not the only awkwardness about this script. The spaces between letters also diminish at the ends of lines, and some letters are placed vertically, while others slope more to the right. These several factors keep this hand from being truly attractive and obscure the prettiness of individual letter forms. Roberts rightly sees this script as representative of the same style exemplified by the earlier *P. Oxy.* 1790, a larger, more ornate hand dated to the second half of the first century B.C.<sup>2</sup> Another comparative piece, though again earlier, is *P. Oxy.* 2439, dated on palaeographical grounds before the first half of the first century A.D. This piece shares the shapes of several individual letters and a similar form of serif with the *Medea* text. More rounded and more careful later examples, such as *P. Mich.* 139 and *P. Oxy.* 1810, both of which are dated to the early years of the second century A.D., show the development of the style to which the present example may be assigned. In short, palaeographical comparisons suggest that the present text was written on the verso shortly after 65 A.D., the *terminus post quem* provided by the document on the recto.

The use of lectional signs is similar to that of other papyri of this period.<sup>3</sup> Three middle stops are written, two within and one at the end of a verse. No accents were written, nor was one possible rough or 14 possible smooth breathings. There is no instance where we can judge the writing of a diaeresis. Elision is effected in all five possible instances but is never marked with an apostrophe. The only possible *iota* adscript is written. There is one orthographical point of interest. In line 1180 the papyrus confirms Cobet's emendation δραμ-ημασιν for the MSS δρομήμασιν; either spelling is perhaps possible, though that of the papy-

1. The papyrus is now in the Ashmolean Museum, which kindly provided a photograph for use in this study.
2. *P. Oxy.* XIII, p. 109.
3. Cf. *P. Oxy.* 1806 and *P. Berol.* 6926; this last piece is included in Roberts, *Greek Literary Hands*, 11a.

rus is more probable.<sup>4</sup>

In the only instance of correction, the first *lambda* of πλεπλων in line 1188 has been deleted by a superscripted dot; this revision was apparently effected by the original scribe.

The *Medea* is transmitted in AVB and LP; MS Hauniensis 417, fifteenth century, is also of interest for the readings of this papyrus. There is no particular relationship between this papyrus and any MS. Variants follow in collation with Murray's text.<sup>5</sup>

1150 νεανιδ[ος] w. LPB, Murray; νεάνιδος χόλον AV.  
 1158 παιδας σεθεν w. BP1; σεθεν om. L et, ut videtur, Σ; τέχνα σέθεν AV. παιδας, [σέθεν] Murray.  
 1159 ημπεσχετο w. codd. Murray; ημπισχετο Elmsley (et Haun. ante. corr.)  
 1160 βοστρυχοις w. AVBP, Murray; βοστρύχους L.  
 1161 κομην w. codd., Murray; δέμας V, corr. v.  
 1172 τινοις μο[λειν]; τινὸς θεῶν μολεῖν codd., Murray.  
 1173 κα]τα w. LP; (κατὰ τὸ στόμα προιόντα Σ); διά AVB, Murray.  
 1175 δ: τ codd., Murray.  
 1181-2 Damnat G. Dindorf.  
 1181 ανελκων; ἀνέλκων codd. et Σ, Murray. ἀν ἔλκων Schafer; ἀν ἔρπων Usener. ἀνελ-θών Lenting. κ[ ]ν: κῶλον ἐκπλέθρου Reiske; ἐκπλεθρον L; ἐκπλεθρον AVBPΣ, Murray.  
 1182 α]νθηπ[τε]το w. codd. et Σ; ἀν ἡπτετο Musgrave, Murray.  
 1183 οτ: ḥ δο codd., Murray. ο]μματο[ς] w. codd., Murray; δμματα, Chr. Pat. 906.  
 1184 τηγε[ι]ρετο w. AVB γρ 1, Murray; δπώλλυτο LP.  
 1186 πλοκος w. ABLP, Murray; κόσμος V.  
 1188 πλεπλων yielding πεπλων; πέπλοι codd., Murray. δε w. LP, Murray; τε AVB.  
 1189 λευκην w.B, Hauniensis 417: λεπτήν rell., Murray.  
 1190 πυρουμενος: πυρουμένη codd., Murray.

Aside from the orthographical variant mentioned above, five new readings are preserved here. In line 1172 the papyrus reading is metrically acceptable, but in light of the solid MSS evidence may more easily be explained as a scribal transposition of the reading retained in the MSS. In line 1183 the papyrus, as Roberts suggests, may preserve a 'true' reading; ḥ of the MSS is actually unnecessary and may be explained as dittography from line 1181, while δτε would introduce a clause connected with equal correctness and with greater tightness of construction to what precedes.<sup>6</sup> In the three additional instances of new readings the papyrus is probably in error. In line 1175, τ' is the better connective. In line 1188 the genitive lacks sense, though its presence may find explanation in the several genitives of its context. In line 1190 the feminine participle is required. In most other instances where the papyrus readings are not novel, an acceptable text is preserved. In line 1150 the arrangement is satisfactory, and in line 1158 the papyrus may well preserve the original reading.<sup>7</sup> Again, in line 1159 the MSS are supported against Elmsley's emendation.<sup>8</sup> The dative in line 1160 is wholly acceptable as is κομην in line 1161. κατα in line 1173 may be the original reading though δια seems preferable. Lines 1181-1182 are terribly difficult. The lack of breathings and accents allows no distinction between the readings of the MSS and Scha-

4. Cf. Page's comments *ad loc.*, *Euripides Medea*, Oxford, 1952, p. 160, where no choice is made between the two forms; Page did not have this papyrus, however, for consideration.

5. Roberts' statement that "the effect in this passage is that it is closer to B and P than to any other manuscript" seems insignificant in light of the variant readings. Cf. Roberts, *P. Oxy. XXII*, p. 110.

6. *ibid.*, p. 111.

7. Cf. Page's comments, *op. cit.*, p. 157.

8. *ibid.*, p. 111.

fer; neither Usener's nor Reiske's emendation receives support. The slight evidence of the papyrus, however, a single *nu*, again prevents discrimination between the readings of L and the other MSS. In line 1182 the papyrus is also in accord with the MSS against modern emendation. The very presence of these two lines argues against the severe excision of Dindorf, and in these lines the papyrus bolsters the testimony of the medieval evidence but provides no help in difficult matters of interpretation.<sup>9</sup> Ομματος in line 1183 and ηγειρετο in line 1184 are both acceptable.<sup>10</sup> In line 1186 the papyrus again shares with the majority of MSS a correct reading, and one which echoes neatly the term used by Medea at line 949. For balance of thought and structure δε is appropriate in line 1188 and in 1189 the papyrus again preserves a satisfactory reading.<sup>11</sup>

This text of the *Medea* is one of three from Oxyrhynchus; there are four fragments from the rest of Greco-Roman Egypt:

P. Oxy. 1370 [23] Pack<sup>2</sup> 402

BKT V, 2.97-98 Pack<sup>2</sup> 403

P. Oxy. 450 [17] Pack<sup>2</sup> 404

P. Harris 38 Pack<sup>2</sup> 405

P. Ant. 23 Pack 2 406

Milne, *Classical Review*, 49, p. 14 Pack<sup>2</sup> 407

P. Harris 38 shares with this fragment parts of lines 1156-1160 and 1165-1177; the provenance of the Rendel Harris papyrus is unknown. A comparison of these two texts follows:

Number 5

1158 παιδας σεθεν  
1172 θεων τινο]ς μο[λειν]  
1173 κα]τα στο[μα  
1175 δ

P. Harris 38

1158 ιτα]ιδας σεθεν  
1172 τινο]ς θεων μολειν  
1173 ]κατα στομα  
1175 τ'

In line 1158 the papyri are in agreement and attest the antiquity and probably validity of their reading. In line 1172 P. Harris agrees with the medieval tradition and underscores the likelihood of error in number 5. In line 1173 the two papyri again agree with a reading which may be correct and which is found in some of the MSS. Finally, in line 1175 P. Harris ought to be followed. This limited comparison reveals the inferiority of the Oxyrhynchan piece, but error in each instance seems to be the result of scribal carelessness and not of widely divergent exemplars for the two papyri.

This was not an elegant product. The text was written on the verso of a roll more than 16.5 cm. tall and about 555 cm. in length, no extraordinary dimensions.<sup>12</sup> Intercolumniations and presumably the margins were not scanty, but there is crowding at the ends of lines as though the scribe were somehow eager to conserve his writing surface. Further, the rather frilly hand falls short of being truly attractive through inconsistencies in letter placement,

9. J. U. Powell (*Classical Review* xlvii, 1933, pp. 210-211) argued for Reiske's conjecture in line 181 and has been followed by Page (*op. cit.*, pp. 160-161, where the Powell arguments are summarized). N. Levitt has more recently countered these arguments convincingly (*Classical Review* N.S. xiv, 1964, pp. 1-2) but did not solve problems concerning ἀνέλκων and ἀνθήπτετο. J. A. Davison (*Classical Review*, N.S. xiv, p. 240) has rightly shown the weakness of Levitt's argument for line 1182 by pointing out inconsistencies in the parallels which he cited.

10. Page, *op. cit.*, p. 162.

11. *ibid.*

12. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, pp. 50 and 54.

formation, and spacing. In short, the scribe apparently sought greater elegance than he could achieve. The literary quality of the preserved text is not incompatible with its physical aspects; as a whole the text is good and of significance in the evaluation of the medieval MSS, but scribal error is neither infrequent nor always eliminated by correction.

### 6. P. Oxy. 2223

*Bacchae* 1070-1136  
Pack<sup>2</sup> 386

Late I  
Papyrus Roll

Twelve of the fragments included in number 6 combine to form two almost complete columns from the *Bacchae*; they also preserve an intercolumniation and apparently complete segments of upper and lower margins. The first column contains all but the very beginnings of lines 1070-1104, with lines 1091 and 1092 omitted. Column II, lacking the ends of most verses, begins with line 1104a, a new verse, and ends with line 1136. One other fragment, which remains unidentified, has been thought to belong in the great lacuna following line 1329.<sup>1</sup> The text was written on the recto; the verso is blank.

The original roll was approximately 23.5 cm. tall and the columns of 33 lines approached 16.6 cm. in height. Lines of writing average 0.3 cm.; interlinear spaces vary almost imperceptibly between 0.2 and 0.4 cm. At its greatest reach the upper margin measures 3 cm., the lower 3.9 cm.

The longest preserved verse in number of letters, 33, measured approximately 12.5 cm. The intercolumniation at its narrowest point measures 0.9 cm. If this roll contained a complete text of the *Bacchae* it would have required 42 columns and been about 587 cm. long, figures which make allowance for the lacuna following line 1329.<sup>2</sup>

The hand is rounded and calligraphic, with individual letter forms both attractive and easily read. The letters stand upright and are generally 0.3 cm. tall, and 0.3-0.4 cm. wide, though *rho* is narrower, 0.2 cm., and *mu* and *omega* broader, 0.5 cm. The forms are usually well-spaced; a few touch, but there are no ligatures. With the exception of the sharp and angular *alpha*, sharp angles are consistently avoided. Decorative horizontal dashes are attached to many of the vertical strokes. This is an elegant, easily legible hand written by a scribe of considerable skill. The original editor dated this script to the second century, a date which perhaps ought to be changed to the closing years of the first century. In the forms of individual letters, though not in general impression, the hand is strikingly similar to that of *P. Fay. 6*, a text of *Iliad* XXI, dated to the late first century B.C.<sup>3</sup> Directly comparable are the shape of *epsilon*, a three stroke form with detached center stroke; the deeply rounded *mu*; *upsilon*, a round cup on a straight post; *tau* with broken horizontal; and *alpha*,

1. A photograph for use in this study was obtained from the Ashmolean Museum, Oxford, which now has the fragments in its possession. The transcription presented in the original publication erroneously omits line 1074. Dr. R.A. Coles now believes that the odd fragment contains the beginnings of lines 1072-1075.

2. An allowance of fifty lines is made for the lacuna, following the estimate of Dodds, *Euripides, Bacchae*, Second Edition, Oxford, 1960, p. 234.

3. *P. Fay. 6* is illustrated in Roberts, *Greek Literary Hands*, 9c.

though in the *Iliad* the strokes of this letter are more rounded and its apex projects above the other letters in the line. The *Bacchae* text also shares with first century pieces the use of decorative serifs, just scarcely used in *P. Fay.* 6.<sup>4</sup> The consistent roundness and regularity of the *Bacchae*, as well as its isocephaly and even spacing, look forward to hands of the second century like the more handsome example provided by *P. Oxy.* 20.<sup>5</sup> The affinity of letter shapes with those of early date, however, suggest a revision of the date suggested by the original editor; it is likely that this transcription of the *Bacchae* was made in the later years of the first century.

Lectional aids are sparsely used. There is no evidence for stops or accents. None of six possible rough or 33 possible smooth breathings is written, nor is a diaeresis placed over the only initial *iota*. Elision is effected in 17 of 23 possible instances, never marked with apostrophe. *Iota* adscript is twice written, once omitted; it is interesting that *iota* is written with ἑλατη in line 1110 but omitted from the same word in line 1095. There are several apparent errors in orthography. In line 1096 the papyrus has κρατιβόλους where the MS reads κραταβόλους, both of which are misspellings for κραταιβόλους. In line 1104 the papyrus has the correct form ανεσπάρασσον where the MS reads ἀνεσπάρασον. Again, although the verse is imperfectly preserved, in line 1112 the papyrus has ωμω[ for οἰμώγμασιν written in P. In line 1114 the reading is more troublesome; both P and the papyrus agree in reading ιερεια where Murray prints ιερέα. Murray's reading seems to fit the meter better; either spelling, however, is possible.<sup>6</sup> In line 1126 the papyrus reads πλευροισιν, perhaps correctly, where P records πλευραισιν. Finally, the papyrus has in line 1136 διεσφαιριζε, correctly, where the MS preserves διεσφεριζε.

Correction, which is not visible in photograph, is cited in line 1084 by the original editor: a dot was placed over *pi* to indicate deletion.<sup>7</sup> In the following line a stroke extends into the intercolumniation opposite line 1085; the editor suggests that this mark may have indicated uncertainty about the text, and indeed, a variant from P is found in this place.<sup>8</sup>

The *Bacchae* is preserved only in LP and in the former only lines 1-755 are extant. The numerous variants from P follow in collation with Murray's text.

1071 μεθιεις: μεθιει P, Murray.  
 1078 φωνη w. P, Murray; φωνήν Reiske.  
 1081 τειμωρειτ εμοι: τιμωρεῖσθε νιν P, Murray.  
 1083 σεμνον: σεμνοῦ P, Murray.  
 1085 βρομον: βοήν P, Murray.  
 1087 δικηνεγκαν: διήνεγκαν P, Murray. καρα: κορας P, Murray.  
 1091-2 omitted  
 1094 τα πηδων: τ' ἐπήδων P, Murray.  
 1098 τ' w. Hermann, Murray: δ' P.  
 1100 στοχον w. Reiske, Murray; τ' ὄχον P.  
 1102 καθηστο τλημων: καθῆστο τλῆμον P; καθῆσθ' ὁ τλήμων Musurus, Brunck, Murray. λελημένος w. Musgrave, Murray; λελησμένος P.

4. Cf. examples of decorated hands in Norsa, Tav. 9, particularly *PSI* 1194, dated to the first century.

5. *P. Oxy.* 20 is illustrated in Roberts, *op. cit.*, 12b.

6. Cf. Dodds, *op. cit.*, p. 216, and the note on line 1114. Cf. also Barrett, *Euripides, Hippolytus*, Oxford, 1964, notes on lines 170-171 and lines 1126-1130, pp. 144-145 and 374, respectively.

7. *P. Oxy.* XIX, p. 66.

8. *ibid*

1103 δρυινούς συγκεραυνουσαι κλαδούς w. P, Murray; δρυινοις συντριαινοῦσαι κλάδοις Hartung.

1104a New Line: βακχαι τα πενθεως . [....].πι.τω[

1113 δαρ: γαρ P, Murray.

1124 επιθε: ἐπειθέ P, Murray.

1131 πασ λο[: πασ' ὁμοῦ βόη P, Murray.

1132 στεναζων w. Musurus, Murray; στυγνάζων P.

1133 α δηλαλαζον: αὶ δ' ἡλαλαζον P. εφερε w. Duport, Murray; ἀνέφερε P.

Perhaps the most striking aspect of this text is the omission of lines 1091-1092 and the addition of 1104a. 1091 has been questioned and was rejected by Wecklein and Dalmeyda; 1092 has never been questioned. Dodds accepts both these deletions, arguing, with justice, that neither line adds to the sense of the passage.<sup>9</sup> P's εχουσαι in line 1091 is difficult to construe and 1092 adds little more than a restatement of 1089. The new verse after 1104 is only partially preserved and is, therefore, difficult to evaluate.<sup>10</sup> There are several instances where the readings of P are to be preferred to those of the papyrus, wherein the readings may be scribal errors. The reading of line 1071 is senseless, as is δικηνεγκαν in 1087, τα πηδων in 1094, and α δηλαλαζον in 1133. In line 1131 the original editor explains the evident corruption as the result of the scribe's repeating the end of the preceding line.<sup>11</sup> Finally, in line 1124 there may be itacism, though it is perhaps easier to assume that the aorist was consciously written for the imperfect of P. The imperfect, however, should be accepted for consistency of tenses in the messenger's narrative. In a greater number of instances the papyrus introduces readings which improve the text of P. In line 1085 βρομον is metrically acceptable and improves the less colorful, less precise βοήν of P. In line 1087 καρα gives satisfactory sense; the reading of P may result from the influence of κοραι at the end of 1089.<sup>12</sup> In lines 1089 and 1100 modern emendations receive support; in the first instance the sequence of action is better related by Hermann's suggestion than by the P reading, and in the second case the original reading of P was senseless. Sense also demands the acceptance of λελημένος preserved by the papyrus in 1102. In line 1113 the papyrus preserves δ αρ for γαρ of P; Dodds argues for the papyrus reading and may be correct.<sup>13</sup> In line 1132 sense favors the papyrus and in 1133 εφερε must be adopted *gratia metri*. There are two instances where the papyrus readings offer little alternative to P and are difficult to judge. In lines 1081 and 1083 no questions would probably have been raised if it were not for the discrepancy between papyrus and MS here presented. In line 1102 papyrus and P differ only in the gender of the adjective; though metrically sound, this phrase is generally modified by modern editors so as to include elision and the writing of the article. There are two final instances where papyrus and P agree in sound readings against modern emendation; both in lines 1078 and 1103 these readings should be accepted, as they were by Murray.

Although it is well to remember that a single MS provides our only other evidence for this section of the *Bacchae*, the most important significance of these fragments is the indication that a great deal of change was probably effected in the text after the first century. This fact is strikingly emphasized by the support given modern emendation and the number

9. Dodds, *op. cit.*, p. 214.

10. R. Merkelbach sees this verse as an attempt to clarify the context and syntax. "Zwei Euripidesinterpolationen", *Rheinisches Museum für Philologie* XCVII, 1954, pp. 373-375.

11. *P. Oxy.* XIX, p. 66.

12. Dodds, *op. cit.*, p. 214.

13. *ibid.*, p. 216.

of readings which are superior to those of P. Although this papyrus is the work of a careless scribe and is not without error, it may be a copy of an exemplar superior to P.

The *Bacchae* is preserved in no other papyrus from Oxyrhynchus; it is, however, attested by the fragments of two codices from Antinoopolis.

P. Ant. 24 Pack<sup>2</sup> 385

P. Ant. 73 Pack<sup>2</sup> 387

Physical and literary factors are here at variance. The roll itself, about 23 by 587 cm., is of average size.<sup>14</sup> The layout was neat and attractive. The generous upper and lower margins are well proportioned and, together with the intercolumniations, nicely set off the columns of writing. The size of both script and interlinear spaces also suggest that economy was not an important consideration. The margins are neat and straight, and within the columns, individual lines maintain a consistent horizontal placement. The hand is carefully executed and attractive. In contrast with these aesthetic details the text seems carelessly transcribed and is not greatly improved by correction. The physical aspects, however, point to an original roll of some pretension.

14. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, pp. 51 and 54.

#### 7. P. Oxy. 2224

*Hippolytus* 579-604  
Pack<sup>2</sup> 395

Early II  
Papyrus Roll

Number 7, 12.8 by 9.5 cm., preserves the upper part of one column containing the beginnings of line 579-604 of the *Hippolytus*; the upper margin and left intercolumniation are also partially preserved.<sup>1</sup> The text was apparently written on the recto; the original publication does not reveal what, if anything, was written on the verso.

It is impossible to estimate the height of the original column or the number of verses contained therein. The preserved portion is 10.2 cm. tall and contains 23 lines. The lines of writing are consistently 0.2 cm. in height, and interlinear spaces are slightly greater. The upper margin, probably incomplete, measures 2.6 cm.

There is also insufficient evidence to determine the length of the roll. Lines 603 and 604 contain 30 letters and would here have extended to about 9.5 cm., probably the maximum width of the preserved column. Most dochmias assigned to the chorus — though not iambic trimeters — were indented the space of six letters or about 2 cm. The blank space to the left of the column measures about 2.5 cm. at its greatest reach; there is no trace of a preceding column.

The hand is a well-rounded, consistent, neat though undecorated uncial datable no later than the earlier years of the second century. The letters, which are isocephalic and rest evenly along the line of writing, are about 0.4 cm. in width. A fairly consistent spacing

1. A plate for use in this study was supplied by the Bodleian Library, Oxford, which now has the papyrus in its possession.

of 0.1 cm. contributes to the feeling of regularity of this script. Occasionally, however, forms touch and there may be ligatures where the top of *tau* extends into the formation of the succeeding letter. This very easily read hand belongs to a style commonly dated to the end of the first century and on through the second. This particular example is very similar to, if neater than, P. Oxy. 220 which is dated to "the end of the first or (more probably) the early part of the second century".<sup>2</sup> In general style and individual letter formation these two pieces are very similar. The original editors liken the *Hippolytus* to P. Oxy. 2159-2164, 2178-2179, a series of Aeschylus fragments which are dated to the second century and which also provide a sound comparison. Finally, a more securely dated piece which is comparable despite its more rapid execution is the Hyperides papyrus dated to the first half of the second century.<sup>3</sup> These several parallels suggest a refinement of the second century date conjectured by the original editors, and limit the date of transcription of this text to the earlier years of that century.<sup>4</sup>

The use of lectional aids is similar to that in the aforementioned parallels. There are no instances where stops might be expected. Accents were not written. One of four possible rough but none of 18 possible smooth breathings is written. Elision is effected in all five possible instances and four times marked with apostrophe. A diaeresis is not written over the only initial *iota*. There is no instance where we can judge the writing of *iota* adscript. The only orthographical point of any interest occurs in line 580 where εντε confirms the obvious correction of εντε by modern editors.

Paragraphi were generally used to indicate change of speaker. One paragraphus was omitted following line 595, a dochmiac colon generally and rightly assigned to the chorus; this verse is unique among the choral dochmiacs of this fragment, for it alone is not indented. Confusion about the attribution of this verse was probably minimal, however, as a paragraphus separates it from the preceding exclamation of Phaedra, and the marginal notation φαῖδ(ρα) precedes the following verse. Another paragraphus is placed incorrectly before line 600, apparently erroneously attributed to the chorus. Although the slightest trace of the notation χορ(ος) can be found opposite line 591, the editor seems unduly cautious in writing that "the left margin... is too broken for it to be certain whether a change of speaker was always indicated by the name as well as by a paragraphus"; enough margin is retained opposite line 589 and 594 for at least traces of notations to be visible, if they were in fact written.<sup>5</sup>

There is some evidence for correction. In line 597 δ' has been added above the line, perhaps by the original scribe. A small mark, ←, occurs opposite line 585; the editor believes this sign "may indicate that ιων was regarded as suspect by a corrector".<sup>6</sup> The mark is unique, and not likely to have been an accidental stroke on so neat a text.

The *Hippolytus* is transmitted in each member of the two main MSS families. There is no peculiar relationship between this papyrus and any MS. The comments of Barrett, who has produced the most elaborate collation to date, are incorporated in the following list of variants, based primarily, for consistency in this study, on Murray's text.<sup>7</sup>

2. P. Oxy. II, pp. 41-42.

3. Roberts, *Greek Literary Hands*, 13b.

4. P. Oxy. XIX, p. 67.

5. *ibid.* Indeed, it may be possible to question whether paragraphi were written in other likely instances; though confusion regarding attribution would be allayed by the indentation of the succeeding choral passage, it appears from photograph that a paragraphus was also omitted beneath line 590.

6. *ibid.* It is true that this reading is variously preserved in the MSS.

7. W. S. Barrett, *Euripides Hippolytus*, Oxford, 1964.

585 ιαν: ιαχάν codd.; ιωάν γρ. Σ, whence ιαν Weil; άχάν Murray.  
 589 φα Om.MO.  
 591 "Xo. non ante ὕμοι sed ante προδέδοσαι M, Haun." Barrett.  
 592 μησομαι w. LPMD, lemma Σ, Murray; μητίσομαι A; μητίσομαι MV suprascr. A.  
 593 τα κλυππτα [γαρ w. codd., Murray; τὰ κρύπτ' ἐκπέφηνε Barthold, Barrett.  
 594 εε w. B; ε̄ ε̄ om.V; αἰαὶ ε̄ ε̄ rell, Murray, Barrett. "interiectiones choro continuat C, Phaedrae tribuunt rell." Barrett.  
 595 φιλως w. ABP, Murray; φιλως μὲν MV; φιλως μὲν οὐ καλῶς δ' ιωμένη L<sup>2</sup> (μὲν οὐ καλῶς in ras.).  
 598 πως ουν w. codd. Murray; τὶ γοῦν Chr. Pat. 610, 1830; τὶ οῦν Kirchoff.

The single wholly new reading here introduced, in line 585, supports Weil's sensible and metrical emendation. Most other readings of the papyrus are also acceptable. Line 589 was clearly and rightly attributed to Phaedra. Again, the division of line 591 is shared with the majority of MSS and seems wholly acceptable; that the chorus should be assigned this whole verse is not surprising, as dochmias are used by the chorus alone in this section of the play. In line 592 the papyrus also preserves a sound reading; that of A makes no sense and that of MV must be abandoned *gratia metri*. The reading of line 593 is more difficult, but the papyrus probably shares an incorrect reading with the MSS; both meter and immediate context make Barthold's emendation more likely.<sup>8</sup> It is also difficult to judge the reading of line 594; since this was probably an exclamation *extra metrum* there is no sure way to discover the true reading. Barrett argues that the attribution of this exclamation in the MSS and papyrus is incorrect and that it ought to be attributed to the chorus; final judgment here must be chiefly subjective.<sup>9</sup> Finally, the papyrus readings in both line 597 and 598 ought to be adopted; the first is metrically superior to the other variants, and the latter supports an acceptable reading of the MSS against evidence of the *Christus Patiens*.<sup>10</sup>

The colometry of the papyrus is very close to that of the MSS; indeed, only M varies, in not writing γεγωνεῖν ὄπα (586) as a separate colon.<sup>11</sup> The colometry is exactly comparable to that of Murray; Barrett differs in combining Murray lines 594-595 in one colon.

The *Hippolytus* is preserved in three additional papyri, none of which is from Oxyrhynchus:

P. Sorbonne Inv. 2252 Pack<sup>2</sup> 393  
 Brit. Mus. Pap. 2652B Pack<sup>2</sup> 397  
 BKT 5.88-96 Pack<sup>2</sup> 394

The text preserved in number 7 does not occur in any other of the remains.

This was originally an attractive text. We are not able to estimate the overall dimensions of this roll, but clearly the indentations, intercolumniations, and margins were generous. The hand is plain and legible, unadorned, but wholly attractive. The text has been corrected and is also of decent literary quality. In short, this was probably a reputable sales text of the *Hippolytus*.

8. Cf. the convincing note *ad. loc.* by Barrett, *op. cit.*, p. 271.

9. *ibid.* Barrett's comments on Phaedra's emotional state are not wholly convincing; cf. her exclamations at line 569 which do not seem the sign of "despairing calm". O is Barrett's abbreviation for Vaticanus Gr. 910, fourteenth century.

10. Cf. Barrett, *op. cit.*, p. 272 on the evidence of the *Christus Patiens*.

11. Metrical comparison with the colometry of the MSS is the work of Zuntz (*An Inquiry Into The Transmission of the Plays of Euripides*, Cambridge, 1965, p. 31). See also Barrett, *op. cit.*, p. 84.

## 8. P. Cairo Inv. 56224

Orestes 754-764  
Pack<sup>2</sup> 412

Early II  
Papyrus Roll

On the recto of number 8, 8.7 cm. by 5 cm., are segments of an upper margin and mid- portions of lines 754-764 of the *Orestes*.<sup>1</sup> The original editor notes that there are, on the verso, in a different hand, the ends of four lines of an indeterminate nature; these lines are not at all visible in photograph.<sup>2</sup>

The fragment is so preserved that calculation of the height either of the original roll or of an original column is impossible. Lines of writing average 0.3 cm. in height; interlinear spaces are only slightly less high. The upper margin, possibly complete, measures 1.6 cm. at its greatest reach.

The maximum width of the original columns can be estimated from the length of line 755, which is the longest preserved verse in number of letters, 40, and which would have measured approximately 13 cm. in length. To discover whether *eisthesis* was employed is impossible.

The hand is an elegant and carefully formed upright rounded uncial, probably datable to the early second century. Though there are obvious exceptions the majority of letters are limited by 0.3 cm. squares. Ligatures are completely absent and though occasional forms touch, letters generally stand 0.1 cm. apart. A skilled scribe has here used an attractive, clear, and easily legible hand. In roundness and consistency the script is not unlike *P. Oxy.* 20, dated to the first half of the second century, though that text is even more formal and more painstakingly executed.<sup>3</sup> In individual letters the hand is more comparable to *P. Berol.* 6926 or *P. Oxy.* 481, dated to the latter part of the first century and about the middle of the second century respectively.<sup>4</sup> In short, contemporary dated parallels in overall impression and peculiarities of individual letter form confirm an early second century date for this text.

There is no trace of punctuation, though stops might be expected in several verses which contain questions and exhortation or two separate statements. Though not used in every instance, there is evidence for the writing of all three forms of accent. The two possible rough and nine possible smooth breathings are omitted. Elision is observed in all possible instances but is never marked with apostrophe. It is impossible to judge whether the diaeresis or paragraphi were employed. There was no need for correction.

The *Orestes* is transmitted in each of the two main MSS families. There is no peculiar affinity between this papyrus and any MS. Variants follow in collation with Murray's text.

755 ἀρ w. ABVLP, Murray; γὰρ M. εἰ w. MABVL, Murray; ἦ P.

756 αμφ w. MBP, Murray; καθ' AV; ὑπερθ' L.

757 τ]ι χρῆμα λεξίον w. MABLP, Murray; τι λέξιν χρῆμα V.

761 αστεως w. L. Murray; ἀστεος MABVP. αγυιας w. MBVLP, Murray; δγυάς A.

762 ωσ[περει w. MABLP, Murray; ώσπερ V.

The papyrus preserves no wholly new readings; the text is entirely acceptable and in accord with Murray's text. In line 755 γὰρ is an inappropriate connective, and ἦ senseless in context. In line 756 αμφ is wholly permissible and also occurs in a majority of MSS. In

1. This fragment was published by W. G. Waddell in "Some Literary Papyri from Oxyrhynchus", *Etudes de Papyrologie* I, 1932, pp. 15-16. Photographs for use in this study were taken by A.E. Samuel in the Egyptological Museum, Cairo, which now has the papyrus in its possession.

2. Waddell, *op. cit.*, p. 15.

3. *P. Oxy.* 20 is included by Roberts, *Greek Literary Hands*, 12b.

4. These two pieces are pictured by Roberts, *op. cit.*, 11a and 14a.

line 757 the papyrus again has a good and well attested reading. In line 761 the first papyrus reading must be adopted *gratia metri*: in the second instance, the variant in A is senseless in context. Finally, in line 762 the papyrus reading must also be accepted *gratia metri*.

Number 8 is one of seven remains of the *Orestes* from Greco-Roman Egypt; there are three other texts from Oxyrhynchus.<sup>5</sup>

The limited size of this fragment makes speculation on the nature of the original roll dangerous. It was apparently a handsome product. The text was written on the recto; interlinear spaces are generous as may well have been the upper margin. The hand itself is attractive and carefully executed. Finally the literary quality of the text, though the remains are indeed slight, was also good. This was probably a fine copy of the *Orestes*.

5. For a list of the other *Orestes* texts from Greco-Roman Egypt, cf. number 1 *supra*.

#### 9. PSI 1193

*Phoenissae* 1027-1048  
Pack<sup>2</sup> 423

Early II  
Papyrus Roll

This text, 11 by 8 cm., contains the beginnings of lines 1027-1048 of the *Phoenissae* in one column and a fairly extensive margin to the left. The text occurs on the recto; the verso is blank.<sup>1</sup>

The preserved portion of the column measures about 11 cm. in height and is incomplete; the column contained at least 23 lines of writing. Individual lines and interlinear spaces average about 0.3 cm. in height. There is no evidence for upper or lower margins.

The column was perhaps widest at line 1042 which in number of letters, 28, is the longest of the partially preserved verses; this line would here have been about 9 cm. in length. As all preserved verses are from a choral passage, they do not provide a secure basis for extrapolation of total roll length. The left margin is 3 cm. wide at its greatest reach; there is no evidence of a preceding column.

The hand was dated by the original editors to the second century, a date which can perhaps be more closely limited to the earlier years of that century. The script is an easily read, rounded uncial with letters generally 0.3 cm. high and only slightly narrower. The neatness of the text seems to attest the skill of the writer rather than excessive care on his part; recurring letters, such as *alpha*, vary in formation, and certain other forms — *epsilon* and *mu* — seem hastily executed. In short, though ligatures and cursive forms are avoided, this seems a rather speedy product of a sure and practiced hand. Comparative pieces are Schubart, *PGB* 31, dated to the second century, and *P. Oxy.* 220, which is assigned to the early part of the same century. *P. Oxy.* 1810, a more elegant example of the same style, and the Hyperides papyrus, also share with the present example both individual letter forms and a common over-all impression.<sup>2</sup>

1. A photograph of this fragment for use in this study was kindly provided by Professor E. G. Turner.

2. The Hyperides papyrus (*P. Lond. Inv. 108 + 115*=*P. Lit. Lond. 132*) is included by Roberts, *Greek Literary Hands*, 13b.

Stops and accents were not written, nor were four rough or 20 smooth breathings. Two of three initial *iotas* receive the diaeresis. Elision is observed in none of three possible instances. The only possible *iota* adscript is not written. In line 1047 the scribe has written ματρι, the correct form for this lyric passage, where some MSS preserve μητρι. There is no evidence for correction.

The *Phoenissae* is preserved in each of the two main MSS families. There is no peculiar relationship between this papyrus and any MS. Variants follow in collation with Murray's text.

1035 εστεναξαν οικοις: ἐστέναζον ἐν οῖκοις L; ἐστέναζον οῖκοις codd., Murray.  
 1036 ιηηιον βοαν w. Murray; εύρισκεται ἐν τοῖς ποιηταις οῦτως ἡ ιή, ὡς τὸ ιώ ιώ Σ;  
 ιήιον codd., quo recepto βοάν βοάν et μέλος μέλος Grotius.  
 1037 ιηη μελος: See 1036, *supra*. ιηήιον μέλος Murray.  
 1038 αλλος αλλον w. codd.: ἄλλα' Battier, Murray. εποτο[]: ἐπωτότυζε B, Murray;  
 ἐπετότυζε MAVP suprascr. B; ἐπεττότυζενα L.  
 1039 βροντα δε: βροντᾶ δὲ in rasura 1; δὲ om. M; βροντᾶ δὲ codd., Murray.  
 1040 αχα]: ἄχα Musgrave, Murray; ιαχά vel ιαχᾶ codd.  
 1041 αποτε: ὄπότε Murray, codd. Ιλεως w. codd.: πόλεος Murray.  
 1042 πτεροεσσα: πτεροῦσσα AB, Murray; πτεροῦσα MVL, corr. M<sup>2</sup>  
 1043 πυθίαις w. codd., Murray; Πυθίοις Wecklein.  
 1044a τλαμων w. Murray, ABVL; γρ. δ τάλας M.  
 1046 ασμενοις w. Murray, MABL; ασμενος P.

Eight new readings are introduced, of which half are surely unacceptable. In lines 1037-1038, the second variant of line 1041, and in line 1042, the readings must be rejected *gratia metri*. In 1041 αποτε, which lacks sense, is probably a scribal error. In line 1035 the aorist may be as acceptable as the imperfect, though the latter is perhaps more colorful. The two remaining new readings are preferable to those of the MSS. In line 1036 the reading is metrically superior to that of the codices and is more likely to have been corrupted into the MSS reading than the emendation of Grotius; the scholia also tend to confirm the papyrus. And the reading in line 1040, at least insofar as it is preserved, supports the acceptable emendation of Musgrave. Additional readings are of mixed value. Lack of accents and the scant evidence for *iota* adscript make judgment on line 1039 difficult; one may say only that the papyrus did not agree with M. In line 1043 the reading acceptably supports the united MSS, and Wecklein's emendation receives no support. In line 1044a the reading is also acceptable and in accord with the MSS. In 1046 the papyrus similarly agrees with the majority of MSS and can be accepted. The combination of sure improvements in a copy marred by obvious clerical errors suggests that this text represents a careless transcription of a good exemplar.

The papyrus shares the colometry of MBLP, except that it apparently ended line 1026 with εκ, while the MSS kept preposition and object together.<sup>3</sup> This discrepancy is perhaps traceable to corruption in the MSS, as the corresponding verse in the antistrophe is so arranged as to respond with 1026 as preserved in the papyrus. The colometry of the papyrus differs from that of Murray only in that πυθίαις ἀποστολαισιν does not form a separate colon, but follows directly on εβα in line 1043.

The *Phoenissae* is attested by four other fragments from Greco-Roman Egypt, three of which are from Oxyrhynchus.<sup>4</sup> Number 9 preserves portions of the same text as number 15. A comparative listing of the readings of the two papyri follows.

3. Metrical information for the MSS is from G. Zuntz, *An Inquiry Into the Transmission of the Plays of Euripides*. Zuntz considers only four MSS—MBLP—and only that portion of P which coincides with the text preserved in *P. Oxy.* 224 (number 15).

4. See number 3 *supra*.

## Number 9

1033 ]αλ[.]μοι δε  
 1034 ιαλεμ[.] δε  
 1035 εστεναξαν οικο[  
 1036 ιηιηιον βοαν  
 1037 ιηιη μελος  
 1038 αλλος αλλον  
 εποτο[  
 1039 βροντα δε  
 1040 αχα[  
 1041 αποτε  
 ]λεως  
 1042 πτεροεσσα

## Number 15

1033 ιαλεδεμοι δε  
 1034 ιαλ[.]δε[...] δε  
 1035 εστεναξαν ο[.]κο[.]ς  
 1036 ιηιη·ηι·ον sc. ιηιηιον βοαν  
 1037 ]ιηι·ηι·ο[.] sc. ιηιηιον μελος  
 1038 [.]λος αλλον  
 επωτοτυξε  
 1039 βρονται δε  
 1040 αχαι  
 1041 οποτε  
 πολεος  
 1042 πτερουσσα

The papyri agree in two readings not preserved in the MSS. In line 1035 each preserves the aorist where the united MSS retain an imperfect; as suggested above, there is little choice between these forms. In line 1036 the papyri agree with a reading which is superior to that of the MSS and which is adopted by Murray; this agreement is upset in the following line only by scribal error in number 9. In line 1038 papyri and MSS preserve the unelided, unmetrical reading αλλον. In all other instances the papyri disagree, probably more through clerical blunders than through great differences in exemplars. In lines 1033 and 1034 the readings of number 9 are acceptable, and they were likely intended but miswritten in 15. The second reading in line 1038 occurs variously in the MSS; the reading of number 9 is unmetrical, while that of 15, metrically acceptable, differs here, as in line 1035, in preserving the aorist where B and Murray write the imperfect tense. In lines 1039 and 1040 the papyri may have agreed; it is impossible in number 9 to know whether in line 1039 the necessary *iota* was written and whether in line 1040 it was suitably omitted. In line 1041 the readings of number 9 are unacceptable; the first makes no sense and the second violates the meter. Finally, in number 15, the correct, contracted form of the adjective is preserved in line 1042; the uncontracted form in number 9 must be abandoned *gratia metri*.

The papyri are virtually identical in colometry, but in number 15 the sigma of πεδαιρους (line 1027) begins the following line.

The basic text of these two papyri is very similar, though each also contains numerous errors in company with improvements to the MSS. Both seem careless transcriptions, a curious judgment in light of their descriptions as *de luxe* editions; all physical aspects, however, support the conclusion that these were products of great quality.

## 10. P. Oxy. 2461

*Cretans*  
 Pack<sup>2</sup> 451

Mid II  
 Papyrus Roll

Number 10 comprises five fragments of the *Cretans*. Because the stichomythia preserved in fragment 1 involves a description of the Minotaur and incorporates a Euripidean citation from Plutarch of which the context concerns Theseus' journey to Crete, the original editor, Turner, thought both of the *Theseus* and the *Cretans* and finally, if with hesitation,

ascribed these fragments to the former play.<sup>1</sup> H.J. Mette has since discovered the coincidence of the fourth fragment with a quotation from the *Cretans* preserved in Porphyrius.<sup>2</sup> This revised attribution is now accepted.<sup>3</sup>

The five fragments vary considerably in size and content. Fragment 1, 9.3 by 5.5 cm., preserves the midsections of 26 iambic trimeters. The second, 4.2 by 5.3 cm., preserves the ends of eight lines of one column, an intercolumniation, and the beginnings of nine lines in a second column; this fragment perhaps belongs above and adjoining the first. The last three fragments are much smaller and their contents unknown, save for the restoration of fragment 4. They measure respectively 2.5 by 3, 1.5 by 2, and 2 by 1 cm., and preserve, in order, parts of only six, four, and four lines. Parts of an upper margin, incomplete, may be preserved in fragments 3 and 4. The text was apparently written on the recto.

Calculation of the height of the original columns or of the original roll is impossible. The preserved column originally contained at least 26 lines and was more than 9.3 cm. tall. The upper margin measured at least 0.6 cm. Lines of writing and interlinear spaces, though somewhat irregular, average 0.2 cm.

Horizontal measurements cannot be calculated to any meaningful extent. The longest line of the known citation probably measured about 8.5 cm., but so little of this play is known that the length of the original roll must remain a total mystery. Lyric passages, to judge from fragment 2, were indented 0.5 cm. The briefest intercolumniation measures 0.3 cm.

The hand is an unattractive rounded uncial, with cursive influence. Though the line of writing is very uneven and no attempt was made at isocephaly, individual letters are of average size, about 0.2-0.3 cm. in width and height, and, though occasional forms touch, are fairly evenly spaced 0.1 cm. apart. A strong feeling of irregularity dominates, however, arising from the shifting letter inclination and the variety of shapes for recurring letters. The script is very like Schubart, *PGB* 20, the *Didymus* commentary, and *PSI* 1094, both dated to the second century. *P. Oxy.* 2262 and *P. Oxy.* 213, also dated to the second century, provide further parallels. These comparative pieces, as well as documents dated respectively in 142 A.D. and 158/9 A.D. and presented as Schubart, *PGB* 21c and d, all confirm the mid-second century date suggested by the original editor.

The use of lectional signs is similar to that of *PSI* 1094. Though some stops might have been written, none occur. Only one accent, an acute, is written. The only possible rough breathing is omitted, as are eight possible smooth breathings. There is no instance where the diaeresis might have been employed. Elision is apparently effected and marked with an apostrophe three times, but is neglected in four other instances. The writing of *iota adscript* is nowhere possible.

One *paragraphus* is written to close the lyric system in fragment 2. Opposite line 8, fragment 2, column II, is written  $\dot{\chi}$  which may have signified 'chorus'.<sup>4</sup>

The text has been corrected by the original scribe;  $\varepsilon\iota$  has been added above the end of the first line of fragment 2.

The *Cretans* is not preserved in the medieval MSS. Nauck lists only two sure citations from later writers, the aforementioned from Porphyrius and another included in the scholia to Aristophanes, *Frogs*, 1356. On the evidence of the present fragments, Nauck Fr. 997 and

1. A photograph for use in this study has been generously provided by the British Museum which now has the fragments in its possession.

2. H. J. Mette, "Euripides, Kreter", *Hermes* XCI, 1963, p. 256.

3. Cf., i.a., reviews of *P. Oxy.* XXVII by W. Morel, *Journal of Hellenic Studies* LXXXIV, 1964, p. 185, and by H. Lloyd-Jones, *Gnomon* XXXV, 1963, p. 447ff.

4. So too Lloyd-Jones, *op. cit.*, p. 448. The possibility is not mentioned by the original editor. It is difficult from the photograph to determine precisely the lyric indentation and/or the 'chorus' notation.

perhaps Nauck Fr. 996 may be ascribed to the *Cretans*. From the former arose the original identification, and the second as well as the first occurs in the same section of Plutarch's *Life of Theseus*.<sup>5</sup>

The only other papyrus of this play does not preserve the same text as the present fragments:

BKT 5.2.73-79 Pack<sup>2</sup> 437

This was not an attractive text. The hand is rapid and inelegant. Individual lines of text are uneven and unattractive. The intercolumniation is very narrow and barely sufficient to separate adjacent columns. All signs point to a text prepared with little regard for aesthetic details.

5. Cf. Mette, *op. cit.*, and Lloyd-Jones, *op. cit.*, p. 449, *ad* 1.12: "Both this [Fr. 997] and Fr. 996 were assigned to this play by G. Körte, *Die Kreter des Euripides* (in *Historische und philologische Aufsätze E. Curtius gewidmet*, Berlin, 1884), 197 . . ."

### 11. P. Oxy. 852

*Hypsipyle*  
Pack<sup>2</sup> 438

Late II  
Papyrus Roll

Number 11 includes 116 fragments from over 600 lines of the *Hypsipyle*, an identification originally based on style and content but soon confirmed by coincidence of two sections of the remains with known citations.<sup>1</sup> A second full edition of the fragments was brought out in 1932 by G. Italie.<sup>2</sup> The most complete study to date is that of G. W. Bond, who has altered the placement of some fragments and suggested a major, if debated, change in the actual text layout.<sup>3</sup> The text is written on the verso of a private account of receipts and expenditures originally published as *P. Oxy.* 985.

The height of the original roll was 37.1 cm.<sup>4</sup> Columns varied in the number of lines which they contained. Column V, fragment 1 contained about 60 lines and column I, fragment 60 contained 62 lines. Both column II, fragment 60 and column II, fragment 64 contained 55 lines. A more marked departure from the norm was proposed by Bond, who suggested that the first column of the roll might have held only ten or fifteen lines.<sup>5</sup> Variation in the number of lines contained in columns of presumably equal height – Bond's initial column is here excluded – of course reflects differences in height both of individual lines and interlinear spaces. Such differences are obvious between the second and third columns of fragment 1,

1. These fragments are now in the Bodleian Library, which kindly supplied photographs for this study. The fragments bear shelfmark Gr. class. b. 13/1-6. (P).

2. Gabriel Italie, *Euripidis Hypsipyla*, Berlin, 1923.

3. G. W. Bond, *Euripides, Hypsipyle*, Oxford, 1963.

4. The measurement of the original editors, *P. Oxy.* VI, p. 19, has been accepted; there is a slight discrepancy between their figure and that obtained through measurement of the photograph.

5. Bond, *op. cit.*, p. 8. This arrangement of the first column is by no means widely accepted. Cf. the review of A. M. Dale, *Journal of Hellenic Studies* LXXXIV, 1964, pp. 166-167 and that of E. W. Handley, "Reconstructing the *Hypsipyle*", *Classical Review*, N.S. XV, 1965, pp. 24-29.

where interlinear spaces extend at their greatest to 0.4 cm., are more usually 0.3 cm., but not uncommonly constrict to 0.2 cm. Individual lines similarly vary with recurring letters assuming new dimensions. Column height is best judged from the second column of fragment 64 which was originally about 30.0 cm. tall. In this same fragment the lower margin, perhaps complete, measures about 3.8 cm. and the upper, incomplete, about 2.5 cm.

Stichometrical letters indicate that the total length of this play was about 1700 lines. As preserved, there are some large lacunae and several instances where the Euripidean treatment and emphasis of various aspects of the myth are unclear. These factors, together with the varying number of lines in successive columns, make extrapolation of original roll length impossible. Bond prints average widths for five preserved columns; four columns have an estimated width of 7 cm., the fifth, 7.5 cm.<sup>6</sup> Although these averages may give some impression of the original roll, maximum column width is a more important measurement in trying to judge how economically papyrus was employed. In column I, fragment 60, the longest iambic line contains 33 letters and measures 8.5 cm.; in column II, fragment 1, the longest lyric line contains 30 letters and measures 5.7 cm. Preserved intercolumniations vary slightly from 1.5 cm. between columns II and III, fragment 1, to 1.7 cm. between columns I and II, fragment 60.

Lyric passages are always indented, but the depth of indentation varies, sometimes without apparent system.<sup>7</sup> In strophe  $\alpha'$ , fragment 1, all but the last three lines, which are flush with the margin, are indented one letter; in antistrophe  $\alpha'$  all but the last two lines, which are flush with the margin, are indented one letter. Again, in strophe  $\beta'$  all but the last ten lines, flush with the margin, are indented one letter, while in antistrophe  $\beta'$  the first line is indented one letter, all others two letters. This arrangement does not seem to indicate changes in choral structure. Even more surprising is the lack of responsion in indentation between strophe and antistrophe. At the top of column IV, fragment 1, the conclusion of Hypsipyle's epode is also variously indented. The last four lines are flush with the margin and are preceded by a line indented two letters, that line preceded by four other verses indented the space of three letters. The epode is followed by five verses which are indented three letters and attributed to the chorus. The remaining lines of this column, iambs exchanged by Amphiaraus and Hypsipyle, are written, as might be expected, without indentation. Column II, fragment 64, which contains a lyric-iambic exchange, is the last instance where verses are indented. The first five lines, apparently part of a dochmiac system, are attributed to Hypsipyle and indented two letters. In the ensuing exchange between Hypsipyle, Amphiaraus, and Euneus iambic lines are not indented, while the lyric verses of Hypsipyle are indented three letters.

One other aspect of layout deserves mention; parts of a single verse assigned to two speakers occupy separate lines, with both lines flush with the margin.

Best characterized by its careless irregularity, the hand is under cursive influence. Individual letters vary perceptibly in measurement. In fragment 1 the great majority of forms are 0.2 cm. tall, while those in fragment 60 are closer to 0.4 cm. Letter widths similarly vary. Letter placement seems haphazard, and there is not a consistent horizontal either at the top or bottom of the line of writing. Again, letters sometimes slope to the right, may stand upright, or even incline leftward. Spacing varies from the isolation of individual letters to occasional ligatures. Written rapidly, the hand shows no trace of decoration. Grenfell and Hunt in the original publication, considering the account on the recto dated palaeo-

6. Bond, *op. cit.*, Appendix II, p. 143.

7. These indentations, however various, are slight and do not exceed 0.3 cm.

graphically to the second half of the first century, dated the *Hypsipyle* "little anterior to A.D. 200".<sup>8</sup> Though he admits the essential lack of style, Schubart associates this hand with the 'Strenger Stil' and also dates it to the second half of the second century.<sup>9</sup> This date seems wholly acceptable and is supported by comparison with the *Hellenica Oxyrhyncha*, a parallel suggested in the original Oxyrhynchus publication. From a document on its recto which belongs to the reign of Antoninus or Marcus Aurelius, the *Hellenica* is dated to the second half of the second century.<sup>10</sup> Though the historical work is a much more attractive product overall, it shares with the *Hypsipyle* a feeling of irregularity and basic right slope. In both pieces *alpha* is a fairly broad letter, open and angular, with an almost horizontal bow to the left. Each also looks forward to the severe style, a tendency more pronounced in the *Hellenica*; compare the straightened forms of *epsilon* and *sigma*, the flat-based *omega*, and the broader forms of *mu* and *nu*, a letter whose similarity depends as well on a cross-stroke which tends toward the horizontal. In short, the later second century date assigned this text seems secure.<sup>11</sup>

The use of lectional signs in this text is also comparable to that in the *Hellenica*. There is evidence for the occasional use of high stops and one low stop. All three forms of accent are written, with most, though surely not all, occurring in lyric passages; an occasional syllable has two accents.<sup>12</sup> Only slightly fewer than half of all possible rough breathings are written, but only 11 of about 450 smooth. A diaeresis is generally written above initial *iota*; one *iota* and three initial *upsilons* are unmarked. Elision is effected and marked with apostrophe in 80 instances, 47 times is written but unmarked, and in 12 additional instances is neglected. Crasis is not always effected nor, if written, is it always marked. Aphaeresis occurs once but is unmarked. In two instances a hyphen is slung below the component parts of compound words. *Iota* adscript is written in only eight of 38 instances. Orthography is good; there are only four itacisms, of which one has been corrected. *Alpha* and *eta* are unsystematically written in lyric passages.

An alphabetical stichometrical system was apparently used throughout this text.<sup>13</sup> Six figures remain: δ (400), ζ (600), η (700), θ (800), λ (1100), and π (1600).

Paragraphi indicate strophic divisions and, at times coupled with character notations, change of speaker. These notations do not accompany each new speech; a surprising omission occurs in fragment 64 where Euneus enters into conversation with Hypsipyle in speeches distinguished only by paragraphi. Elsewhere notations are used for the Chorus, Hypsipyle, her sons, Eurydice, Amphiaraus, and Thoas. The form of these sigla is not consistent. Amphiaraus is written αφιαρ and αφι; and the Chorus is indicated by χ and χο. Hypsipyle is abbreviated alternately as υψιπ and υψιπυλ.

Despite a relatively competent job of correction, effected in at least some instances by the original scribe, errors still remain. The correction varies in extent. In fragment 1, for the example, the scribe has inserted line three, apparently omitted in the first writing of the text, in its rightful place. In other cases accents have been modified or inserted where

8. P. Oxy. VI, p. 20. The dating of the recto account is more fully discussed under P. Oxy. 985, p. 322.

9. Schubart, *Griechische Palaeographie*, Berlin, 1925, p. 131.

10. The *Hellenica Oxyrhyncha* was originally published as P. Oxy. 842 and is also illustrated in Roberts', *Greek Literary Hands*, 17b.

11. Turner sees no problem in the interval between the date of the recto and that of the verso, though it is perhaps greater than usual. Cf. Turner, "Recto and Verso", *Journal of Egyptian Archaeology* XL, 1954, p. 106.

12. The original editors note that the system of accentuation here parallels that in other papyri of the period. P. Oxy. VI, p. 20.

13. P. Oxy. VI, pp. 20 and 96, note on Fragment 25.

first omitted. Additional corrections range from the insertion of an omitted letter to such more extensive changes as are probably indicated by the marginal markings ↓ and ανω where, in fragment 1, revisions were apparently inserted in the upper margin.

In fragment 64 two glosses are written "in a small hand resembling that of the text, though perhaps distinct from it."<sup>14</sup> In the right margin opposite line 50-51 in column I are inserted Ἡδωνίσι Θρακιαῖς and Πάγγαιον ορος τῆς θρακῆς which apparently defined terms in the text.

There is one other papyrus of the *Hypsipyle*:

P. Petr. II, 49c Pack<sup>2</sup> 438

The Petrie papyrus shares the text of lines 10-11 with fragment 22 and of lines 1-19 with fragment 60. A comparative list of the readings follows.

P. Petr. II, 49c

- 6 έχρη..παιδα δια μαθε
- 7 ]υθεν
- 8 ]υ θανειμ
- 11 τεκουσαν
- 12 ]ους εφερβον ωλενμεμο
- 13 λευκαιον
- 14 ]ουδ ιω παιδ ως
- 17 δια γαρ σε
- 19 ]τατον

P. Oxy. 852

- 6 οργη πριν ορθῶς πραγμ[
- 7 ουδεν
- 8 του θανειν
- 11 τεκουσα
- 12 στεργουσα εφερον ωφελημ' εμοι
- 13 λευκαιον
- 14 οργους ιω παιδες ως
- 17 δια σε γαρ
- 19 σαφεσταταν

Bond believes it unlikely "that a text like P. Petr. was intended for an educated public; it is better classed with... semi-literate schoolboy exercises..."<sup>15</sup> This seems a fair judgment: of the nine variants listed for P. Petr., six must be rejected, and in the three which remain, two acceptable readings are found in erratic contexts. ἔφερβον in line 12 confirms Murray's conjecture for the unmetrical Oxyrhynchus reading; the remainder of the verse in P. Petr. is senseless. In line 14 παιδ must be accepted both for sense and meter; again, the opening of this line is in error. Finally, in line 19 the gender of σαφεστατον is necessary. In every other instance the Petrie readings must be cast out. In line 6 the reading is wild. In line 7 orthography is incorrect. In line 8 μη is erroneous. In 11 the wrong case is used. In 13 where the Oxyrhynchus text has been suitably corrected, the Petrie papyrus is again in error. Finally, the transposition in line 17 violates the meter. In this comparison the Oxyrhynchus text is revealed as the product of a more careful scribe and, despite its own errors, far superior to the Petrie text, dated to the third century B.C.

Nauck lists 19 citations from the *Hypsipyle*. The present text also recruits Nauck Fr. 350 into the play.<sup>17</sup>

Bond follows Schubart in judging this text "perhaps a cheap edition or a private copy".<sup>18</sup> The kollemata were unusually tall and thin, 37.1 by about 17.8 cm., measurements which exceed those of most literary pieces. They are perhaps not as surprising in this instance, however, as this is a verso text.<sup>19</sup> Columns are correspondingly tall, yet margins are

14. P. Oxy. VI, p. 103.

15. Bond rejects the possible attribution of P. Petr. II 49d (Pack<sup>2</sup> 440) to the *Hypsipyle*. Cf. Bond, *op. cit.*, p. 140.

16. Bond, *op. cit.*, p. 146 in reference to Barrett, *Euripides, Hippolytus*, Oxford, 1964.

17. As regards the quality of the text, in comparison with the known citations Bond claims that the present fragments compare favorably. Bond, *op. cit.*, p. 145.

18. *ibid.*

19. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, p. 48f.

of average or rather smaller proportions. Layout was not arranged with care, as evidenced by the discrepancy in lines per column and the smallish intercolumniations. The hand also lacks any trace of elegance and was rapidly executed. The literary quality of the text is difficult to evaluate because there are not sufficient comparative standards; it may be noticed that, as usual, correction, which was here rather extensive, did not catch all errors. In short, as regards the objective data, the judgment of Bond and Schubart seems secure.

## 12. PSI 1302

*Alcmeon In Psophis*  
Pack<sup>2</sup> 431

Late II  
Papyrus Roll

Number 12, 23 by 15 cm., preserves the beginnings of twenty lines of the *Alcmeon*; identification rests on the coincidence of lines six and seven with a citation from Stobaeus. (Nauck Fr. 86).<sup>1</sup> Upper and lower margins are at least partially retained, as well as a wide clear expanse to the left of the column of writing. The text is written on the recto; the verso is blank.

The original roll was probably a little more than 23 cm. high. The preserved column is approximately 12 cm. tall and contains twenty lines of writing; lines of writing and interlinear spaces average 0.3 cm. in height. The upper margin, apparently complete, measures 4.1 cm.; the lower margin, perhaps incomplete, measures 6.5 cm. at its greatest extent.

It is difficult to estimate the width of the original column. The bottom line is attested by both its beginning and end, though there is a sizeable lacuna in the middle of the line. The verse itself measures 5.5 cm. and is indented 2 cm. Calculation shows that those verses quoted by Stobaeus, which are non-lyric, and which contain twenty-nine and thirty letters, measured here roughly 12 cm. The left intercolumniation measures 3.5 cm. at its widest reach; there is no trace of a preceding column.

The hand is a sloping uncial attractive and consistent in formation. The width of individual letters, generally isocephalic, ranges from 5 cm. in forms such as *delta* or *mu* to 2 cm. for *epsilon* or *rho*. Generous spacing aids in clarity and legibility. There is no true decoration, though *nu* may curl rightward at the top of its right post and letter tails occasionally end with a very slight leftward flourish. Close parallels for this hand are provided by *P. Oxy.* 26, a text of Demosthenes dated to the second half of the second century, and a text of Herodotus dated to the last years of the second or the early years of the third century.<sup>2</sup> Both these pieces share with the present fragment general similarities such as right inclination and a marked contrast of broad and narrow forms. The *Alcmeon* text is

1. A photograph for use in this study was provided by the Instituto Papirologico "G. Vitelli", Florence, which now has the papyrus in its possession.

2. The Demosthenes text is reproduced in *P. Oxy.* I, Plate VII, the Herodotus in *P. Oxy.* XVII, Plate III. These two fragments were also published in Roberts, *Greek Literary Hands*, 19a and 19b. Roberts (*op. cit.*, p. 19) writes: "On the verso of the Herodotus is a land survey, most probably of the reign of Gallienus. The recto was probably written between A.D. 200 and 250". In the original publication of this piece Hunt wrote: "The Emperor whose fifteenth year is repeatedly referred to (on the verso), is most probably Gallienus, in whose reign a papyrus found with this one is dated, and a fairly secure *terminus ante quem* is thus obtained for the recto, which can hardly have preceded it by less than a generation and may well be a half century or so earlier". Hunt's cautious statement is more

perhaps datable to a period between the two pieces, in the last quarter of the second century. The earlier Demosthenes gives an impression of greater angularity, evident in the less rounded cross-stroke of *mu*, a more sharply defined *omega*, a broader, squatter *delta*, and the more rigid strokes of *lambda*. In these various particulars the present example better approximates the more rounded Herodotus text, wherein the tails of *rho*, *tau*, and *upsilon* are longer and more curved at their tips and *mu* has a lower, more smoothly curving saddle. It seems fair to refine the broad second century date originally offered for the *Alcmeon* text to a date in the later years of that century.

Evidence for lectional aids is similar to that found in other papyri of this period.<sup>3</sup> There is no punctuation, and the only accents written are two circumflexes. One of three possible rough breathings is written; three possible smooth breathings are omitted. A diaeresis is placed over one of two initial *upsilons*. Elision is observed in all three possible instances, indicated by apostrophe twice. *Iota adscript* is not written in the only possible instance.

In addition to being distinguished by *eisthesis*, the lyric passage is also marked at its beginning with a *paragraphus*, here shaped like a carat opening into the left margin, and a *coronis* of fairly simple design, , which in general style and simplicity is comparable to other examples of the late second-early third centuries.<sup>4</sup>

The text shows evidence for correction only in line 5 where the third *iota* of αιτιαιοθε has been neatly cancelled with a short horizontal stroke and a dot placed above that unnecessary letter. The ends of two lines of marginal notes are preserved at the far left of the intercolumniation; it seems from their location that these notes, in a small cursive hand, refer to a lost preceding column.

This is the first fragment of an *Alcmeon* to be identified among the papyri. The citation from Stobaeus upon which the present identification is based refers simply to the *Alcmeon* of Euripides, with no distinction made between *Alcmeon in Corinth* and *Alcmeon in Psophis*. The distinction between these plays is not infrequently neglected; of twenty-six citations collected by Nauck, the great majority do not differentiate the two possibilities. On the basis of the *Alcmeon* myth in Apollodorus and Hyginus, however, Hartung attributed the present fragment to the *Alcmeon in Psophis*; this attribution is accepted by both Norsa and Schadewaldt, though each alters the precise context.<sup>5</sup>

This fragment is from what originally must have been a handsome product. The height of the roll was perhaps only moderately pretentious, but extravagant use was made of the papyrus surface.<sup>6</sup> The text is written on the recto of an otherwise blank sheet, and only slightly more than half of the vertical dimension is covered with text; the number of lines per column is relatively low.<sup>7</sup> Interlinear spaces and both top and bottom margins are ample, and inter-

convincing. To assume a date of 250 for the Herodotus text makes possible a life of only 18 years maximum for a literary text described, again in the original publication, p. 144, as a "handsome roll". An earlier date is surely possible and perhaps more probable. (It is interesting to note that Roberts and Turner disagree in another instance on the time to be allowed between the writing of a literary text on the recto and the use of the verso for documentary purposes: Turner argues, as does Hunt in the preceding instance, for a longer interval. Cf. Roberts, *op. cit.*, p. 22 and Turner "Recto and Verso", *Journal of Egyptian Archaeology* XL, 1954, p. 102.

3. Cf. *P. Oxy.* 1016, dated to the early third century.

4. Cf. Lameere, *Aperçus de paléographie homérique*, Brussels, 1960, p. 193, figs. 6-8, and *P. Oxy.* 2092, dated to the second century A.D.

5. I.A. Hartung, *Euripides Restitutus* I, Hamburg, 1843, p. 192. Compare Norsa, *PSI* XIII, p. 55 and W. Schadewaldt, "Zu Einem Florentiner Papyrusbruchstück aus dem *Alkmeon in Psophis* des Euripides", *Hermes* LXXX, 1952, pp. 46-66. Cf. now also Webster, *The Tragedies of Euripides*, London, 1967, p. 41 ff.

6. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, p. 51.

7. *ibid.*, p. 59.

columniations are similarly generous. The column has a slight but consistent leftward inclination, and individual lines are fairly consistently horizontal. The hand is also attractive and easily read. Finally, though we know little of the text, this work does bear evidence for correction and in the one instance where we can compare the text with a known citation, the text seems wholly reliable. All evidence supports the judgment of the original editor that this was a *de luxe* edition.

## 13. P. Oxy. 2335

Andromache 954-1022  
Pack<sup>2</sup> 381

Late II  
Papyrus Roll

Number 13, 18 by 6.3 cm., preserves portions of 67 lines of the *Andromache*.<sup>1</sup> Column I, broken off at its top, contains the ends of lines 954-982. Column II, complete in its vertical dimension, contains the beginnings of lines 983-1022. Upper and lower margins are at least partially preserved. The text is written on the verso; the recto preserves eight incomplete lines of a document which is neither reproduced nor dated in the original publication.

The original roll was approximately 18 cm. tall. Column II contains 39 lines and is about 16 cm. in height. Lines of writing average 0.2 cm. in height, and interlinear spaces vary between 0.2-0.3 cm. Both upper and lower margins measure 1 cm. at their greatest extents and appear in each instance to be wholly preserved.

In this format a full text of the *Andromache* would have been about 431 cm. long and contained about 34 columns. Calculation of over-all horizontal dimensions is especially hazardous here, as there is considerable difference in letter width, both in the shapes of recurring letters and in the formation of different letters. It is likely, however, that columns were not more than 12 cm. wide. Line 1018 is the longest of the preserved verses in number of letters, 33, and as part of a choral song is indented 1.8 cm.: the width of column II at this point was about 11.7 cm. The narrowest intercolumniation is 0.3 cm. wide.

The hand is rapid, liberally dotted with cursive forms, and irregular. The height and width of recurring letters vary considerably. For example, a consistent contrast is apparent between the broader forms of *mu* and *nu* and the narrower shapes of *epsilon*, *theta*, and *sigma*. Letter spacing is also uneven: some forms are isolated, but there are also occasional ligatures. There is no decoration, nor any attempt at isocephaly. Successive forms are written on slightly varying planes. Though forms may stand upright, there is a fairly consistent slope to the right. The hand was originally dated to the second half of the second century. *P. Mich. 3*, a text of Dioscorides, and the *Hellenica Oxyrhynchia*, *P. Oxy. 842*, are both dated to the second half of the second century.<sup>2</sup> In the general impression of artless irregularity and in individual letter formation each parallels the *Andromache*, but neither reveals such strong cursive influence. All three of these pieces look forward to the more developed 'severe style' of the third century, with its contrast of broad and narrow forms, a pronounced rightward inclination, and a characteristically small round *omicron*. The date set by the

1. A photograph for use in this study was provided by the Bodleian Library, Oxford, which now has the papyrus in its possession.

2. These pieces appear in Roberts, *Greek Literary Hands*, 15c and 17b respectively.

original editor of our fragment is probably acceptable.

In its use of lectional aids this text is also similar to the *Hellenica Oxyrhynchia*. Though stops might have been expected at the ends of some verses in column I, there is no trace of punctuation. No accents are written. Six rough and 26 smooth breathings are omitted. A diaeresis is not written over the only initial *iota*. Elision is effected and marked with apostrophe in four instances, is written but unmarked in one instance, and is not effected in a final possible instance.<sup>3</sup> None of three possible *iota* adscripts is written. There are two instances of itacism: ηνιχομην in line 980 and μινωσιν in line 1000. τοιη occurs for τοια of the MSS in line 995. Scribal carelessness probably accounts for αλ (αλλ) in line 1005.

Paragraphi are used in conjunction with marginal character notation to indicate changes of speaker. Ερμιο(νη) is written opposite line 987 and is followed immediately below by Ν(λεγει); ορεστ(ης) is written opposite line 983; and χ is written before line 1009.

There is slight evidence for correction. A *sigma* has been added above the end of line 963 to change θελει to θελεις, and in line 957 *rho* was inserted above the original *rho* of βροτους. In this last instance the original reading is not secure, especially at the very end of the word; in addition, a semicircular stroke crosses through the word, as though the scribe's pen had slipped.

One other feature of this text deserves mention. Commenting on the *ekthesis* in the first line of column II, a projection of only one letter, the editor notes briefly: "The projection of the initial letter of a column is noticeable at this early date".<sup>4</sup> In fact, only one other literary text in the Oxyrhynchus series has the same sort of projection.<sup>5</sup> In P. Oxy. 1018, which preserves two columns of the *Cyropaedia* of Xenophon, the second column is also begun with a line so arranged; this text is attributed to the first half of the third century. It would thus seem that such εκθεσις is unique in the papyri at any period, and the mere presence of the projection seems more noteworthy than its date of occurrence. It is not inconceivable, in light of the slight intercolumniation, that here the scribe chose an incorrect point at which to begin his second column, modified his intercolumniation, and then maintained it for the rest of the column.

The *Andromache* is transmitted in each of the two main MSS families; B, however, lacks lines 957-1211. The original editor suggests an affinity between the papyrus and O and D, but notes that even this relationship was not close. The suggestion was apparently based on the community of readings in line 991, evidence insufficient to prove any special and strong connection.<sup>6</sup> Variants follow in collation with Murray's text.

956 γυναικειο]υς w. BOPH: γυναικείας rell.. νοσους w. MAVLP, Murray. νοσους] γρ.. φύσεις. B.

962 φ]θονω: φόθω codd. et Σ; φόνω Murray following Lenting.

965 λόγον w. MAVL, Murray λόγους P.

975 ραδίως w. MAP, Murray: ράδιον LV<sup>2</sup>.

3. In the original publication the editor does not indicate all of these marks of elision in his transliteration of the preserved text.

4. P. Oxy. XXII, p. 106.

5. Projection within a column is not at all uncommon in certain types of texts. In glossaries, for example, individual glosses usually project from the consistent columns of commentary; this scheme is found in P. Oxy. 1801-1804, and 2087. Again, in P. Oxy. 853 and 2306, commentaries on Thucydides and Alcaeus, lemmata project to the left of the column; in P. Oxy. 2260, a less clearly identified poetic commentary, the same scheme is adopted. Other examples include P. Oxy. 1184, a collection of pseudo-Hippocratean letters where the first word of each epistle slightly projects from the column; P. Oxy. 1249 where, in a collection of the Fables of Babrius, the first letter of each fable projects slightly; and in P. Oxy. 1795, a collection of acrostic epigrams where the first letter of each also projects.

6. P. Oxy. XXII, p. 104.

980 συμφορά]ις w. codd. Murray: συμφοράς Scaliger. ηνιχομην: ηνειχόμην codd.;  
ένειχόμην Dindorf.

984 ες οικ[ον]: δπ'οικων codd. Murray.

985-6 "Hermann's attribution of this distich to the chorus with the consequent change  
of γάρ to τοι finds no support."<sup>7</sup>

990 "Prinz-Wecklein assumes a lacuna after this line."<sup>8</sup>

991 η πρεσβυς οικους w. OD and aproc. Par. 2818, Murray; η παιδὸς οῖκους p<sup>2</sup>; γρ. οῖκους  
τε τούσδε' V<sup>2</sup> unde Haun. οῖκους τε τούσδε μ'; οῖκους MAVLP.

1001 δει]ξει w. codd., Murray: δείξω Herwerden, Prinz-Wecklein.

1002 [πικ]ρως w. AVL: Murray: πικρὸς MP; πικρὸν Cobet.

1007 ἔχθρῶν: "iniuria suspectum;" habuit Σ, codd., Murray.

1009 ω w. Murray following Musurus; ὖω codd. et Σ.

1020 εζ[ευξατε: om. A.

The papyrus preserves three wholly new readings. The first of these, line 962, seems less appropriate than the MSS reading.<sup>9</sup> In line 984 choice between the papyrus and MSS is more difficult; either reading yields good sense and is metrically acceptable. The last of the new readings, line 1009, supports the early emendation of Musurus and should be accepted for both sense and meter. In line 956 either spelling of the adjective is permissible; the second reading in this same verse gives no support to the notation in B. In lines 965 and 975 the variants are not of great significance; the papyrus acceptably supports the majority of MSS in both cases. In lines 980, 985-986, 990, and 1001 the papyrus is again in accord with the MSS. Modern emendation is in all four instances unnecessary and receives no support. In line 991 the beginning of the verse has been lost in a majority of the MSS; the papyrus here shares the reading of O and D and satisfactorily fills the lacuna. In line 1002 the more common and wholly acceptable reading is preserved by the papyrus. Finally, in lines 1007 and 1020 the readings of the papyrus are acceptable: that in line 1007 confirms the MSS reading against the doubts of Murray and that in 1020 must be accepted *gratia metri*. In short, the majority of the readings here appear sound.

The colometry of this papyrus differs from that of Murray but is evidently the same as that in the MSS.<sup>10</sup> The distinction of strophe and antistrophe after Murray line 1018 is also ignored: the structure is not marked with a paragraphus nor indeed is there responsion between strophe and antistrophe.

The *Andromache* is represented by one other papyrus from Oxyrhynchus and three texts from the rest of Greco-Roman Egypt:

P. Oxy. 449 [14] Pack<sup>2</sup> 379  
P. Rendell Harris 39 Pack<sup>2</sup> 380  
P. Ross. Georg. I, 8 Pack<sup>2</sup> 382  
P. Berol. Inv. 13418 Pack<sup>2</sup> 383

P. Ross. Georg. I, 8, two parchment strips used to repair the back of a codex, coincides very slightly with number 13. The coincidence, though extremely limited, shows no disagreement between the two texts.

This was not likely a very impressive product. The original roll was relatively small,

7. *ibid.*, p. 106.

8. *ibid.*

9. Roberts (P. Oxy. XXII, p. 106) comments: "The reading of 2335 gives excellent sense and should be preferred". But cf. the cogent argument of W. Morel, "Notes on Two Literary Papyri", *Bulletin of the American Society of Papyrologists* II, 1965, pp. 78-80.

10. Barrett, *Euripides, Hippolytus*, Oxford, 1964, p. 84, describing the colometry of this fragment writes that "the medieval colometry is evidently the same".

11. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, p. 50ff.

18 by 431 cm., and the text was written on the verso. In addition, the writing surface was used most economically: upper and lower margins are both very slight, and the intercolumniation extremely narrow.<sup>12</sup> The hand is also unattractive and under strong cursive influence. The text itself, though not carefully transcribed, has been corrected and is of surprisingly good quality in comparison with the other aspects of the fragment; only once, in line 962, is the text in apparent error. This was likely an inexpensive sale edition.

12. *ibid.*, p. 60.

#### 14. P. Oxy. 449

*Andromache* 5-6, 8-28, 30-36, 39-48  
Pack<sup>2</sup> 319

Late II  
Papyrus Roll

This number includes five fragments from one column of the *Andromache*.<sup>1</sup> The largest fragment, 9.1 by 8.7 cm., preserves the ends of lines 5-6 and 8-21. The second fragment preserves the beginnings of lines 5-6 and 8-23. The middle sections of lines 20-28 are contained in the third fragment. Fragment 4, the smallest fragment, 3.2 by 4.2 cm., preserves inner portions of lines 30-36. The last piece holds end sections of lines 39-48. There is evidence, including a complete segment of the lower margin, for the blank papyrus which would have bordered the four sides of the column of writing.

The original editor suggested that these fragments are from a codex.<sup>2</sup> The text is written on the verso while "on the recto in the center of the page are the letters  $\rho\eta$  [or  $\rho\iota$ ] with a short horizontal stroke above them and a lacuna sufficient for another line below": these letters were thought by the editors to "represent a number or perhaps a title, i.e.  $\rho\pi\sigma\tau\varsigma$  Άνδρομάχης.<sup>3</sup> This supposition of the codex form is ill conceived. It is apparent from fragment 1 that the fifth line of the play initiated the preserved column. If these fragments were from a codex, it would be odd that the first four verses of the play are not attested on the recto, especially since fragment 5 preserves the bottom of the papyrus where these verses could be expected. It would be equally odd that if the text had begun on a facing page of the codex, it did not continue from line 48 onto the recto. Finally, in photograph the upper right corner of fragment 1 appears to have broken in such a way that verso fibers are lost and recto fibers protrude rightward from beneath. Thus, it may be assumed

1. A photograph for use in this study was kindly provided by M. Jean Bingen from the Musées Royaux, Brussels, which now has the papyrus in its possession.

2. *P. Oxy.* III, p. 101. It is interesting to consider Roberts' figures on the comparative frequency of roll and codex in the second, second-third, and third centuries. In the second century he lists 465 rolls and 11 codices; in the case of texts dated to the turn of the second and third centuries, 208 rolls and 6 codices; and for the third century he counts 297 rolls and 60 codices. These figures emphasize the editor's statement on p. 101 that this would be an "early example of the book form". The comparative figures make one less ready to accept this present example with its problematic layout as evidence for a codex at this date. Cf. Roberts, "The Codex", *Proceedings of the British Academy* XL. 1954, p. 184.

3. *ibid.*

that the verso did continue the text in a following column. In short, on the basis of the available evidence, it seems prudent to dismiss the suggestion of codex form and to adopt a more simple and satisfactory explanation, that the text is from a roll, and that the recto of this sheet had been only slightly used before it was incorporated in the later roll.<sup>4</sup>

On a sheet more than 26.5 cm. tall, the original column contained 39 verses and measured about 23.5 cm. in height. The upper margin was probably greater than the 0.7 cm. which remains, and the lower margin, complete, measures 2.8 cm. The line of writing varies slightly between 0.2 and 0.3 cm., and interlinear spaces are fairly consistently 0.3 cm. high.

The original roll was about 392 cm. long. The preserved column at its widest was 10.3 cm. Although the absence of an adjacent column precludes final judgment, the intercolumniations may have been fairly impressive. That to the left of the column measures 2.1 cm., while the blank space to the right measures 1.4 cm.

This hand is somewhat smaller than usual in these texts. Aside from such letters as *epsilon*, *omicron*, *sigma*, and *theta*, most forms are broader than high, and the various shapes are fairly isocephalic. The strongly vertical placement of individual letters and the fairly equal spacing between them give a feeling of strength and regularity. This effect is increased by a marked consistency in the shape of recurring letters, despite such exceptions as the sometimes rounded, sometimes angular loop on *alpha* or the occasionally high cross-bar of *eta* as distinct from its usual mid-position. The attractiveness of this hand, which lacks any decorative flourishes, is likely a result of this regularity. Though certain cursive features betray the scribe's haste, he has employed a consistently legible, very neat and attractive script. A more formal example of this same script style, *P. Oxy.* 843, a copy of Plato's *Symposium* dated to about 200, is very similar to the present example in the small, heavy formation of the various letter forms.<sup>5</sup> The *Andromache* hand is also similar to that of Demosthenes' *Prooemia* published as *P. Oxy.* 26 and dated to the second half of the second century.<sup>6</sup> The small size of the present hand is different from the Demosthenes text, but the relative breadth of the shapes is apparent there, as is the tension between a basically rectilinear hand and the more curved shapes of *alpha* and *omega*. In light of these comparative pieces a slight shift from the early third century date suggested by the original editors to the late second century seems possible for the *Andromache*.

The use of lectional signs here is not dissimilar from that of either the Plato or Demosthenes texts. Three high stops were written — one within, the other two at the ends of verses. Accents are not used consistently though all three forms are attested. One of five possible rough breathings is written, but all 13 smooth breathings are omitted. There is no instance where we might judge the use of the diaeresis. Elision is not effected uniformly: it is not effected in one instance, is effected but unmarked in another, and in the five remaining possible instances is both written and marked with an apostrophe. In line 47 *υπεκπεμπω* may have been misinterpreted as two words and an apostrophe inserted after *kappa* as if to indicate elision. *Iota* adscript is always written, both with verbs and nouns; one superfluous *iota* is added to *τικτω* in line 9. There is no evidence for correction.

The *Andromache* is transmitted in each of the two main MSS families. There is no peculiar relationship between this papyrus and any MS. Variants follow in collation with Murray's text.

4. The *Hypsipyle* text, number 11, is written on the verso of a non-literary document. Some of the fragments, however, are not inscribed on the recto. Cf. *P. Oxy.* 852, p. 20. Professor Bingen has independently come to the same conclusion on number 14; cf. *Chronique d'Egypte*, XL, 1965, p. 484.

5. *P. Oxy.* V, p. 243ff. and Plate VI. This text is also illustrated in Schubart, *PGB*, Abb. 88, p. 130.

6. *P. Oxy.* I, p. 53f. and Plate VII. This text is also illustrated in Roberts, *Greek Literary Hands*, 19a.

7 omitted. Bracketed by Murray.  
 9 εσ[ειδον w. codd., Murray; ἐπειδον Naber.  
 10 ριφεντα w. MAVP: ριφθέντα LB, Murray.  
 17 ρ iv: ναιώ πεδί' codd., Murray.  
 23 omitted by M.  
 24 αρσενα ε[ντικτω: ἄρσεν' ἐντίκτω MAVBP, Murray; ἄρσενα τίκτω L; ἄρσεν' ἐνα τίκτω Barnes; cf. Σ ἰδίως ἐνα φησὶ παῖδα γενέσθαι.  
 27 τ]εχθεντ[ος: σωθέντος codd., Murray.  
 28 καπι]κουρ[ησιν w. codd., Murray; κάπικούφησιν Elmsley.  
 29-31 Omitted with space left blank by V; added by v.  
 41 Σπ]αρτης w. MSS., Murray; ἀπὸ πάτρος BO.

There are two wholly new readings. In line 17 the text is so poorly preserved that one may say only that the reading was not that of the MSS. In line 27 the papyrus is also unique and most probably wrong, since the passive of τίκτω does not seem to appear in good classical Greek, is not otherwise attested in Euripides, and in any case yields sense inferior to that of the MSS.<sup>7</sup> In the omission of verses the papyrus does not match the medieval tradition. Line 7, which the scholia record as an actor's interpolation, was here omitted as it is by modern editors, and this is probably correct, as inclusion of the line requires changes in the preceding verse.<sup>8</sup> The papyrus does retain lines 23 and 29-31 in accord with the majority of MSS, and is once more very probably correct, as these lines do add new and relevant information to Andromache's narrative. In lines 9 and 28 modern emendations are unsupported; in neither case is revision necessary. In line 41 the reading of the majority of MSS is supported and may be accepted, and in line 10 the reading of the papyrus may also be correct.<sup>9</sup> Finally, line 24 is the only instance where elision is not effected; it seems likely, however, that the reading most closely approaches that of the majority of MSS.

This text was of decent quality, with conspicuous improvement in line 7.

The *Andromache* is attested by one other text from Oxyrhynchus, as well as three from the rest of Greco-Roman Egypt.<sup>10</sup>

This roll, probably an attractive product, measured roughly 27 by 392 cm. and was thus shorter than average, although in height it approached some of our finer specimens.<sup>11</sup> The text was arranged with little thought for economy in use of the writing surface; intercolumniations and interlinear spaces are generous, and probably top and bottom margins were also. Individual lines are consistently horizontal, and the left margin, although it has a slight leftward inclination, is neat. The hand, though effected with some speed and undecorated, is also pleasing. The text itself is of a quality comparable to that of the roll and hand. This roll may have been a respectable sale copy of the *Andromache*.

7. Cf. τίκτω, pp. 616-617 in Allen and Italie, *A Concordance to Euripides* and L.S.J., s.v., "passive tenses seem not to have been used in correct Attic".

8. Cf. Murray and Paley, *Euripides*, II, p. 240, *ad loc.*

9. Allen and Italie, *op. cit.*, pp. 567-568.

10. Cf. *supra*, number 13.

11. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, p. 50ff.

## 15. P. Oxy. 224 and P. Ryl. 547

*Phoenissae* 1017-1043, 1064-1071 (P. Oxy.)  
*Phoenissae* 646-657 (P. Ryl.)

ca. 200 A.D.  
 Papyrus Roll

Pack<sup>2</sup> 421

P. Oxy. 224, 23.5 by 21.3 cm., preserves parts of two columns of the *Phoenissae*, as well as an intercolumniation and segments of upper and lower margins.<sup>1</sup> Column I contains substantial remains of lines 1017-1043, column II lesser portions of lines 1064-1071. The text is written on the recto; the verso is blank. P. Ryl. 547, 10.7 by 7.3 cm., holds remains of lines 646-657 as well as an upper margin and left intercolumniation, and has been identified as belonging to the same roll as P. Oxy. 224.<sup>2</sup>

The height of the original roll was 23.5 cm. In P. Oxy. 224 column I is 14.6 cm. tall and contains 29 lines of text. Lines of writing average 0.3 cm. in height, as do interlinear spaces. The upper margin measures 4.6 cm., the lower 3.8 cm.

It seems certain from the lacuna between these two fragments that the original roll contained a complete text of the *Phoenissae*. The 1776 lines of the play would have required 61 columns and a roll about 1087 cm. long. Column I is widest, about 14.6 cm., at line 1019, a lyric verse indented the space of five letters or about 2.2 cm. The intercolumniation measures 2.8 cm. at its narrowest point.

The hand is an early example of Biblical Uncial, datable to about 200 A.D. The original editors, somewhat hesitant in their dating, set a generous *terminus ante quem* of 300 A.D. for the *Phoenissae* on the basis of some documents of the "later Roman period" found with the literary text, and attributed the hand itself to the third century. Since that original publication, more securely dated examples of this same style have been found, and a second century date is no longer unusual. Indeed, when the Rylands fragment was published in 1938 its date was set in the later second century.<sup>3</sup> The great majority of forms are isocephalic, evenly spaced along a consistently level line of writing, and are rigid and upright; most also occupy a squarish area for their formation. Shading is not uncommon and decorative contrast between heavy vertical and thinner horizontal and diagonal strokes also appears. These decorative elements are neither as consistent nor as attractive as those in later examples of the style like the Codex Sinaiticus. In overall impression and individual letter formation the hand is comparable to P. Ryl. 16 from the Heronius archive, and dated variously to the late second or early third century.<sup>4</sup> Also comparable is P. Oxy. 1179, for which the editors on palaeographical grounds suggested a late second-early third century date.<sup>5</sup>

The use of lectional aids in these fragments is similar to that of other papyri of this period.<sup>6</sup> In P. Oxy. 224 these signs have been added in a lighter ink and apparently by a second hand. Profuse punctuation includes two low stops at the ends of lines. Although the distinction between middle and high stops is not always clear, what is probably a middle stop was written at the end of line 1020, while 19 high stops were written, two within and 17 at the ends of lines. Four acute accents were written. None of 27 smooth or six rough breathings is written. A diaeresis is not written over the only two initial *iotas*. Elision is

1. A photograph for use in this study was supplied by the Bodleian Library, Oxford, which now has this fragment in its possession.

2. This fragment is illustrated as Plate 9 of P. Ryl. III.

3. P. Ryl. III, pp. 547-8.

4. P. Ryl. 16 also appears in Roberts, *Greek Literary Hands*, 22b.

5. P. Oxy. 1179, p. 186.

6. Cf. P. Oxy. 661 or P. Ryl. 16.

effected wherever possible but never marked with apostrophe. An unnecessary *nu* movable is written on φοιτασι before πτεροις in line 1024a. *Iota* adscript is written on both nouns which require it, and added superfluously to an otherwise superior reading in line 1040. Line 1017 contains the one sure instance of itacism, πολις. In line 1023 the papyrus reads μιξοπαρθενος with the MSS where Murray prints μειξοπαρθενος, a word for which evidence for the classical spelling is divided.<sup>7</sup> The original scribe inserted an apostrophe between *gamma* and *mu* in στεναγμος in line 1039a, apparently as a mark of syllabification.<sup>8</sup>

The only likely paragraphus is omitted after line 1066 where it would have marked the end of a choral passage and the change to a new speaker. This change was probably evident from the consistent indentation of lyric passages, but, in any case, the cursive notation αγγελ(ος) was later added opposite line 1067 by the second hand.

The text has been effectively corrected in lines 1036-1037 where *eta* and *iota* were deleted by dots placed at the top of the line of writing on either side of these two letters.

The *Phoenissae* is preserved in each of the two main MSS families. There is no peculiar relationship between this papyrus and any medieval text. Variants follow in collation with Murray's text.

1019 πτερουσσα B, Murray; πτεροῦσα codd.

1022 πολυφορος πολυστονος: πολύστονος τολύμοχθος P. πολύφθορος πολύστονος: codd., Murray.

1033-1034 ιαλεδεμοι δε: ιάλεμοι δε codd., Murray.

1035 εστεναξαν ο[ι]κο[ι]ς: έστεναζον ἐν οίκοις L; έστεναζον οίκοις codd., Murray.

1036-1037 ιηιη·ηι·ον sc. ιηιηον w. Murray. cf. Σ εύρισκεται ἐν τοις ποιηταις οὔτως ιήιη, ως τὸ ιώ ιώ; ιήιον codd., quo recepto βοάν βοάν et μέλος μέλος Grotius.

1038 αλλον w. MSS.: ἄλλ' Battier, Murray. επωτοτυξε: ἐπετότυξε: MAVP suprascr. B; επωτότυξε B; Murray; ἐπεττότυξεν L.

1040 αχαι; ἀχά Musgrave, Murray; ιαχά or ιαχᾶ: codd.

1041 πολεος w. Murray following Porson; πόλεως codd.

1042 πτερουσσα w. B; Murray πτεροῦσα MVL; corr. M<sup>2</sup>.

Eight wholly new readings are introduced here. In lines 1022 and 1033-1034 the variants seem the result of scribal errors. In the first instance the reading is unmetrical and inappropriate in context, while the two latter and identical readings, both unmetrical, seem the result of dittography. In lines 1035 and 1038 the aorist forms are difficult to evaluate; both are acceptable, although the imperfect would perhaps be more colorful. In lines 1036-1037 the corrected papyrus reading is superior to that of the MSS and seems more likely to have been corrupted into the MSS reading than Grotius' emendation. In line 1040 αχα must be rejected, for, although this form is metrically superior to that preserved in the MSS, Musgrave's emendation is demanded by context. Finally, orthography demands the papyrus readings in lines 1019 and 1042, and the meter requires elision in line 1038 and πολεος in 1041.

In the stasimon begun at line 1019 the colometry agrees at times with that of MBLP, at times with that of Murray.<sup>9</sup> Papyrus and MSS extend the first colon through λοχευμα, while Murray prints ἔβας ἔβας on a separate line. From the following verses through πολύστονος the papyrus and Murray form three cola, while the MSS divide these verses after καδμείων and create only two. This discrepancy probably results from corruption in the MSS, which in the antistrophe do have a tricolon. In line 1024 where the papyrus, P, and Murray close the colon with πτεροις, MBL end the same verse with a division of ὁμοσι/τοις. Finally, in line

7. Cf. LSJ s. μειξ-.

8. This mark is discussed in *Archiv* I, p. 510.

9. The metrical data which follows is based on the work of G. Zuntz, *An Inquiry Into the Transmission of the Plays of Euripides*, Cambridge, 1965, p. 34. Zuntz takes into account only the four MSS MBLP.

1026 the papyrus and Murray divide the phrase *ἐκ τόπων* while the MSS keep preposition and object together; once again the antistrophe in the MSS responds to the papyrus arrangement.

In the Rylands fragment, lectional aids were written by the original scribe. There is no instance where stops might be expected. Two acute accents were written. The only possible rough breathing is inserted, and two possible smooth breathings are omitted. There is no way to judge the writing of diaereses, apostrophes, *iota adscript*, or the use of *paragraphi*. Variant readings from this smaller fragment follow in collation with Murray's text.

651 κισσον: κισσος codd., Murray.

652 ελικτος with MSS. (ἐ or ἐ); ἐλικος Hermann, Murray.

654 και

655 βακχειον with MSS.: βάκχιον Valckenaer, Murray.

All four readings are unacceptable. In line 651 the case is wrong; in line 652 the reading of the papyrus, though shared by all the MSS, violates the meter. The last two readings are metrically unacceptable.

The colometry of the Rylands fragment agrees with that of MBL.<sup>10</sup> Murray follows P in ending line 649 with the division of μά/τηρ which in MBL is kept intact and ends the colon.

These fragments give evidence for one of three texts of the *Phoenissae* from Oxyrhynchos; there are two remains of the play from the rest of Greco-Roman Egypt.<sup>11</sup> Number 15 carries portions of the same text as preserved in number 9.<sup>12</sup>

This was originally a text of some quality. The roll, 23.5 by 1087 cm., was of average height but relatively long, and the text itself was written on the recto of an otherwise blank papyrus.<sup>13</sup> Margins and intercolumniations were generous, and interlinear spaces amply divide successive lines. The layout generally is neat, with individual lines level and carefully aligned between one column and the next. The hand, handsome and careful, is appropriate to an edition of this sort. The text is uneven in its literary quality. Indeed, judgment based on the Rylands fragment alone would be highly unfavorable, and even in the larger fragment many errors escaped the attention of the corrector. In short, there is a marked discrepancy in this work between the attractive physical aspects of the roll, its layout and hand, and the rather careless transcription of the text itself.

10. *ibid.*

11. Cf. number 3 *supra*.

12. The coincidence is discussed more fully under number 9.

13. Cf. Kenyon, *Books and Readers In Ancient Greece and Rome*, Second Edition, Oxford, 1951, pp. 50-55.

#### 16. P. Oxy. 419

Archelaus  
Pack<sup>2</sup> 455

II-III  
Papyrus Roll

Number 16 was originally published without plate. This is especially unfortunate as the original was destroyed during World War One, and no photograph is available for study and clarification of the rather unsatisfactory initial publication.<sup>1</sup> As described by Grenfell and Hunt this fragment was "a narrow strip containing parts of 16 lines from the *Archelaus*". This is one of the Euripidean plays not transmitted by the MSS, and identification rests on the coincidence of lines 8 and 9 with Nauck Fr. 275. The preserved verses—twelve trochaic tetrameters and four lines of choral lyric—were written in "round rather irregular uncials of

1. M. Jean Bingen reports that this fragment has been destroyed, and that no photograph is available.

medium size" dated to the second or third century; it is unfortunate that this description does not include mention of comparable scripts nor state whether the text appeared on recto or verso.

Two high stops are written, one internal and one at the end of a line. There is also evidence for the occasional use of both circumflex and acute accents. None of seven possible smooth or two possible rough breathings is written. There is no instance where we might judge the use of the diaeresis. Elision is effected in each of two possible instances, but is only once marked with apostrophe.

The original scribe was perhaps responsible for the presence of lectional aids as well as for correction of the text. *Iota* adscript was inserted above the *eta* of ελθης in line 9. In line 10 *nu*-movable was deleted before an initial *kappa*. In line 11 *ou* was written above a deleted *omega*, and *kappa* above a deleted *omicron* in line 16. Again, the original publication does not note how these several deletions were effected.

The *Archelaus* is attested by one other papyrus, *P. Hamb.* 118, Pack<sup>2</sup> 434, including a part of the prologue. Nauck lists 37 citations of this play.

Our limited knowledge of this fragment frustrates any attempt to evaluate the quality of the original roll.

### 17. P. Oxy. 450

*Medea* 710-715  
Pack<sup>2</sup> 404

Early III  
Papyrus Roll

*P. Oxy.* 450 a fragment of the *Medea*, preserves interior portions of lines 710-715 which stood at the top of the column of writing; what may be complete sections of the upper margin are also retained.<sup>1</sup> The *Medea* was written on the verso; on the recto are "two or three mutilated lines of cursive of the second or third century."<sup>2</sup>

Original column height is unknown. Lines of writing average 0.3-0.4 cm., interlinear spaces 0.3 cm. The upper margin at its greatest reach measures 1.2 cm.

It is also impossible to determine the length of the roll. As written in this copy lines 711 and 715 probably contained 33 letters and would have extended to about 12.6 cm.

The hand is a rapid and careless example of that style which is exemplified by *P. Oxy.* 2098, 2341, and 223, all of which have been attributed to the early years of the third century.<sup>3</sup> In each instance there is a marked contrast between the narrow forms of *epsilon* and *sigma* and the broad, expansive shapes of letters such as *mu* and *nu*. Again, an ill-defined *omega* and a smallish, suspended *omicron* are also common characteristics. Haste in execution is evidenced by the varying forms of such letters as *epsilon*, *omicron*, and *tau* as well as by the irregular and haphazard spacing of the individual letters; speed may also account for the mistaken *nu*, cancelled by the scribe himself in line 713, and what appears to be an *omicron* corrected to *omega* in line 714. In all, this is an undistinguished script which in slight revision of the general third century date suggested by the original editor, may be with some confidence placed in the earlier years of that century.

The text bears no trace of punctuation or accents. The single possible smooth and all five possible rough breathings are omitted. The only possible diaeresis is written over an initial *iota*. Elision, possible in only one instance, is effected but unmarked. The editors, noting that the reading is difficult, believe that και αυτος was "fairly secure" in line 715;

1. This fragment is now in the possession of the University of Graz, which generously provided a photograph for use in this study.

2. *P. Oxy.* III, p. 103.

3. These papyri are illustrated, respectively, in Roberts, *Greek Literary Hands*, 19b, 19c, and 21a.

crasis effected in the MSS was thus neglected.<sup>4</sup> There is no instance where one might determine use of paragraphi or the writing of *iota* adscript.

The *Medea* is retained in AVB and LP. This fragment is too brief for determining any particular relationship with any MS.

Variants follow in collation with Murray's text:

710 τῶν w. AL, Murray: om. VBP.

713 δομο[ι]ς w. codd., Murray: δόμων Prinz-Wecklein.

714-715 Written, as in codd., Murray. "These two lines are excised by L. Dindorf and are bracketed by Prinz-Wecklein".<sup>5</sup>

In line 710 τῶν must be accepted *gratia metri*. In line 713 the dative is not impossible, and with the united MSS gives no support to the emendation of Prinz-Wecklein. Finally, the papyrus and MSS agree in including lines 714-715, lines which make acceptable sense and which are difficult to reject in the face of the combined ancient and medieval testimonia.

This is one of seven texts of the *Medea* from Greco-Roman Egypt and one of three from Oxyrhynchus.<sup>6</sup>

4. *P. Oxy.* III, p. 103. This reading is not clear in photograph.

5. *ibid.*

6. For a list of the other *Medea* texts from Greco-Roman Egypt cf. number 5, *supra*.

### 18 P. Oxy. 2458

*Cresphontes*  
Pack<sup>2</sup> 436

Mid III  
Papyrus Roll

Number 18 includes six fragments of the *Cresphontes*.<sup>1</sup> Identification rests on the probable coincidence of Nauck Fr. 456 with lines 40-41 of fragment 1, and a similarity of the papyrus story to that found in Hyginus and Apollodorus. Fragment 1, 12 by 20.5 cm., preserves part of an upper margin and the tops of three consecutive columns. Fragment 2, 8.3 by 8 cm., carries at least part of the lower margin and the remains of two more columns, one of which preserves part of a choral passage. The four remaining fragments are considerably smaller. The text was written on the recto.

Lines of writing and interlinear spaces average 0.3 cm. in height. The upper margin, which nowhere seems complete, measures 1 cm. at its greatest reach. As regards the original vertical dimensions of this roll, one may state only that its height exceeded 12 cm., and that its columns contained at least 19 lines.

The horizontal dimensions of the original roll are impossible to extrapolate. The longest preserved verse in fragment 1 measures 11.7 cm. The briefest intercolumniation measures 1.5 cm. In fragment 2 the choral passage is indented at least two letters or slightly more than 0.6 cm.

The hand is an example of the broad and rightward-sloping style common in the third century. Most forms are 0.2-0.3 cm. in height. Although *omicron* is much smaller, the extended verticals of *iota*, *rho*, and *phi*, which vary between 0.5 and 0.8 cm., are most striking. Letter widths similarly vary. Though most forms measure about 0.3 cm., *omicron* is again smallest, while *epsilon*, *theta*, and *sigma* measure 0.2 cm., and *mu* and an occasional *delta*

1. A photograph for use in this study has been generously provided by the British Museum, which now has the fragments in its possession.

0.5 cm. There are occasional ligatures, many forms touch, but still others are isolated. The line of writing is quite uneven, with the verticals of *tau* and *gamma* sinking below the line while *omicron* and *omega* commonly float above it. Despite these irregularities, the hand is not without decoration, but any decoration is highly unobtrusive and may perhaps be unintentional. The aforementioned long strokes often end in slight curls to the right. *Phi* also seems an unusually carefully drawn form, and the main element of the letter is generally a well-defined diamond. A far better and less rapid example of this same style is *P. Oxy.* 1608, dated somewhat earlier, to the latter half of the second century. Three specimens dated from external evidence confirm the mid-third century date suggested by the original editor. *P. Oxy.* 223, a text of *Iliad* V dated to the early third century, shares with this hand rightward inclination, haste in execution, and contrasts of broad and narrow, tall and short forms.<sup>2</sup> *P. Oxy.* 23 and *P. Oxy.* 232, dated prior to 295 and the early third century respectively, are also similar both in overall impression and in individual letter shapes.

Three high stops were written at the ends of lines. Eight acute, one grave, and nine circumflex accents were written, and in one instance the same word bears two circumflexes. Four of 12 rough breathings were written, but only one of 40 smooth. A diaeresis appears over one of two initial *iotas* and two of four initial *upsilons*. Elision is both effected and marked in eight instances, is once written but unmarked, and is twice neglected. An apostrophe three times separates individual words and twice separates double mutes. Two makrons were also written. *Iota* adscript is omitted in the only possible instance. Paragraphi indicate change of speaker. Some correction was effected, apparently by the original scribe. In one instance an acute accent has been changed to a circumflex. In line 59 "supralinear corrections appear to have been intended to give αγγελλοιτ and to have been deleted"; this insertion is only partially visible in photograph.<sup>3</sup> Finally, in line 48 πατρος is deleted by superposed dots.

The most striking aspect of these fragments is the appearance of the marginal sigla A<sup>—</sup>, Γ<sup>—</sup>, and Χ at the beginning of successive speeches. The original editor regards these notations not as symbols identifying individual characters of the drama but rather the several parts in the play assumed by one actor. This observation is based both on the appearance of such marks in other papyri as well as on the conclusions reached by Andrieu in his study of similar notations in the *Bembinus* of Terence.<sup>4</sup> The example of the use of the siglum A<sup>—</sup> in the present fragments may clarify the original editor's analysis. From context in fragment 1, Column II it seems likely that A<sup>—</sup> there referred to Cresphontes while in Column III of the same fragment the identical siglum is ascribed to Nauck Fr. 456, from Plutarch, which is attributed to Merope. In short the assertion that the same actor assumed both roles is convincingly demonstrated by the editor.

The original editor further believes that these fragments represent a series of extracts from the *Cresphontes*, not a text of the complete play, arguing that the change of tone and content between Columns II and III of fragment 1 is too abrupt for explanation by any other hypothesis.<sup>5</sup>

From the combined evidence of marginal sigla and extracted text the original editor concludes that these fragments are from an "acting copy...presumably...used for actual

2. *P. Oxy.* 223 is illustrated in Roberts, *Greek Literary Hands*, 21a.

3. *P. Oxy.* XXVII, p. 80.

4. *ibid.*, p. 75. The problem is discussed more fully by Andrieu in *Etude sur les sigles personnages et les rubriques de scène dans les anciennes éditions de Térence*, Paris, 1940 and *Le dialogue antique: structure et présentation*, Paris, 1954.

5. *P. Oxy.* XXVII, p. 75. For further discussion of alphabetical sigla in the papyri cf. E.J. Jory, "Algebraic Notation in Dramatic Texts", *Bulletin of the Institute of Classical Studies* X, 1963, pp. 65-

representation in the theatre of Oxyrhynchus".<sup>6</sup> As such number 18 attests the only tragic text from the site identifiable as an acting script, though there are two other Oxyrhynchian texts of a related nature, acting copies of the *Charition* mime and of extracts from Menander's *Kolax*.<sup>7</sup>

This play is found in no other papyrus. Nauck lists eleven citations from later authors.

The principles of layout in this papyrus, despite its somewhat unique purpose, do not differ from those of other literary texts in this study. Interlinear spaces and intercolumniations were generous. Although the hand itself is irregular, individual lines are fairly horizontal and neatly aligned from one column to the next. There is a proportionately greater number of lectional aids but these are not of an unusual nature. It is unfortunate that the preserved text is not of greater extent and that it is not from a play retained in the MSS.

78, a study which emphasizes evidence for Plautus but in which the author supports the original editor's view. J.C. Lowe, "The Manuscript Evidence for Change of Speaker in Aristophanes", *BICS* IX, 1962, pp. 27-42 is also pertinent. Other possibilities in the interpretation of this text are suggested by Lloyd-Jones in his review of the original publication, *Gnomon* XXXV, 1963, p. 444ff. Granted that the theory of an extracted text is correct, the following remark of Lloyd-Jones' is odd: "Turner's idea that the letters might represent the protagonist, deuteragonist, and tritagonist is unlikely, for the same actor can hardly have played Merope and Cresphontes" (p. 445). H.J. Mette rejects the extract theory and, with it, difficulties of speech assignment: "Euripides, Cresphontes", *Hermes* XCII, 1964, pp. 391-395. Turner answers Mette in "Euripides, Cresphontes: A Note", *Hermes* XCIII, 1965, p. 256 and provides some evidence against the Mette view.

6. *P. Oxy.* XXVII, p. 76.

7. *ibid.*

### 19. *P. Oxy.* 877

*Hecuba* 1252-1269, 1271-1280  
Pack<sup>2</sup> 390

Mid III  
Papyrus Roll

Number 19 includes two fragments from the upper part of a single column.<sup>1</sup> Fragment 1, 11.8 by 4.3 cm., preserves the beginnings of lines 1252-1269 of the *Hecuba*, as well as part of the upper margin. Fragment 2, 5.5 by 6.7 cm., carries the inner portions of lines 1271-1280. The text is on the verso of the papyrus, and the recto is blank.

It is impossible to estimate the height either of the original column or of the original roll. In fragment 1, blank papyrus extends upward to the left of the preserved text and may indicate an upper margin of at least 1.6 cm. If this be true, line 1252 was apparently the first line of a column. As there is only one verse missing between fragments 1 and 2, and as a column of only 18 lines is somewhat unusual, these two fragments probably ought to be imagined as joined together with the missing line 1270 intervening. This arrangement yields an original column of at least 19 lines.<sup>2</sup> Lines of writing average 0.3 cm. in height, and

1. This fragment is now in the University Museum, Philadelphia, Pennsylvania, Inventory Number E 3075. The Museum kindly supplied a photograph for this study.

2. Compare Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, pp. 58-59; Kenyon's figures, however, include "lines in column" figures for only prose works.

interlinear spaces are slightly higher.

Estimates of horizontal dimensions must be equally tentative, as we have only partial remains of one column and no complete lines are preserved. Lines 1256 and 1275, however, which each contain 33 letters and are longest in number of letters of the preserved verses, probably provide safe maximum column width: their length in this text would have been about 9 cm. The left intercolumniation at its greatest reach is about 2.5 cm., with no trace of a preceding column.

The hand is a rapid and slightly sloping, angular uncial, with considerable contrast in letter width. Except for occasional shading there is no decoration. Individual shapes are consistent in form and spacing and are easily recognized, though confusion between the broad, open shapes of *alpha* and *lambda* is not difficult. These fragments were originally assigned to the third century, a date which perhaps can be more narrowly defined. The script is an example of a style common from the second century on. Both in general impression and in the formation of individual letters the present specimen is very like P. Oxy. 2208, also assigned to the third century. The hand may also be compared to P. Oxy. 1012, which is a smaller and considerably more elegant script. This piece is fairly securely dated to around the middle of the third century, probably a safe date for number 19 also.<sup>3</sup>

There is no evidence for punctuation, accents, breathings, or diaereses. Elision is written in all six possible instances but is never indicated by apostrophe. This paucity of lectional signs is also found in P. Oxy. 1012.<sup>4</sup> *Iota* adscript is written with one noun, but omitted with a verb and another noun. Paragraphi indicate change of speaker. There is no evidence for correction, nor does any seem to have been in order.

The *Hecuba* is transmitted in each of the two main MS families. O is also relevant for the readings here preserved. Variants follow in collation with Murray's text.

- 1254 "Hecubae tribuit P, fortasse recte" Murray.
- 1257 χαιρεις w. MSS; Murray; χαιροις A.
- 1270 "Suspectus" Murray.
- 1271 σω w. ABL, Murray; σὸν MVPO.
- 1272 επωδον w. MSS, Murray; επώνυμόν τι Nauck.
- 1275 γ' w. MSS, Murray; δ' Kirchoff.
- 1280 Hecubae trib. AB: corr A<sup>1</sup>B<sup>1</sup>.

The papyrus offers no wholly new readings, differs not at all from that printed by Murray, and is in each case wholly satisfactory. There are no marginal notations of character or actor, but paragraphi make clear that verses 1254 and 1280 were assigned quite sensibly in agreement with the majority of MSS. Maddeningly, line 1270 does not appear in these fragments; if the verse were written, it would occur at the exact point where these fragments ought to be joined. Although there is no trace of an additional line either at the base of fragment 1 or at the top of fragment 2, it is likely that the verse was originally included, for the two fragments as they are preserved join imperfectly. In line 1257 the indicative is wholly acceptable, as is the dative form in line 1271. The MSS reading in line 1272 is also confirmed and makes acceptable if difficult sense.<sup>5</sup> Finally, the reading in line 1275 is also permissible.

3. P. Oxy. VII, p. 84. In the original publication "a period of from thirty to fifty years" is suggested as the time lapse between the use of the recto, dated about 204-205 A.D., and the use of the verso. Turner's study of such intervals makes the lower limit more likely; cf. E.G. Turner, "Recto and verso", *The Journal of Egyptian Archaeology* XL, 1954, pp. 102-106.

4. P. Oxy. VII, p. 84.

5. The original editor notes: "The vestiges after επωδον are inconsistent with π and suit μ, and there is space for another letter between this and τι. μ[η] τι gives a sense, but would be a doubtful improvement on the MSS reading η τι". It is impossible from photograph to confirm or deny these speculations.

Number 22 is the only other papyrus of this play from Greco-Roman Egypt, and there is no coincidence of lines in the two texts.

It is interesting that this text is written on the verso while the recto is blank. It is most probable, however, when one remembers the size of the fragments, that the original κόλλημα had been inscribed on its recto and that the recto area here preserved has quite by chance been unused.<sup>6</sup> The verso surface was not used stintingly. Interlinear spaces, and probably intercolumniations, were generous. The text is also neatly written, with straight left margin and evenly horizontal lines of text. The script is rather stylish and written with care. This was probably a fairly respectable copy of the *Hecuba*.

6. In number 14 the same conclusion has been adopted as in the case of some fragments incorporated in number 11 which is written, as can be demonstrated from the remains, on the verso of a private account. Cf. *P. Oxy.* 852, p. 20.

#### 20. *P. Oxy.* 2459

*Oedipus*  
Pack<sup>2</sup> 443

IV  
Papyrus Roll

The first fragment of this number, 10.5 cm. by 9.5 cm., preserves the ends of 15 iambic trimeters with at least part of a top margin, and coincidence of lines 2-3 with Nauck Fr. 540 led to identification of these fragments as being from the *Oedipus*. This same fragment also recruits into this play Nauck Fr. 541, formerly unidentified.<sup>1</sup> Fragment 2 is noteworthy for the apparent inclusion of the Sphinx's riddle in hexameters. The other fragments are considerably smaller, with numbers 4 and 5 consisting of nothing more than unidentifiable syllables. So little is known of the Euripidean *Oedipus* that it is difficult to place the fragments in any sure dramatic context. The text is written on the recto, and the verso is blank. The original editor suggests that these fragments may be the remains of a codex and as such be the remains of only an extract from the play; this suggestion of the codex form, for which the lack of external evidence was acknowledged, is apparently based on the prevalence of the codex in the fourth century.<sup>2</sup> In the absence of better evidence, however, and considering the blank verso, the papyrus roll seems the safer conjecture for the original text format.

It is impossible to calculate vertical dimensions for the original roll from these remains. Lines of writing average about 0.3 cm. in height, and interlinear spaces vary only slightly between 0.2 cm. and 0.3 cm. The upper margin in fragment 1, 2.5 cm. at its greatest reach, is probably incomplete.

Those verses contained in ancient quotations can provide some index for original column width. Most of these lines contain 30 letters and would require a length of about 12.5 cm. in this text. In fragment 1 a blank space of 1.5 cm. follows the fifth line but, as there is

1. A photograph for use in this study has been generously provided by the British Museum, which now has the fragments in its possession.

2. Cf. *P. Oxy.* XXVII, p. 81. Roberts, "The Codex", *Proceedings of the British Academy* XL, 1954, p. 184 in a tabulation made in 1952 notes 25 rolls and 71 codices of non-Christian literature dated to the fourth century.

no trace of an adjacent column, it is dangerous to use this figure in estimating intercolumniations.

The hand is sloping and broad-stroked, and representative of a style most common in the fourth century and later.<sup>3</sup> Individual letters, which share a strong rightward inclination, range considerably in width, and the thin, oval forms of *epsilon*, *omicron*, and *sigma* contrast most strikingly with the broader, more fluid, and dominant shapes of *eta*, *pi*, and *nu*. The forms also rest on different planes and define no constant line of writing. Irregularity can further be seen in recurring letters such as *alpha* or *upsilon*. Although some of these elements may be the result of conscious design, the scribe seems to have emphasized speed rather than beauty in his transcription. The script seems to fall between two groups of known and dated examples. Forms of certain letters like *omega* and *nu*, and more especially the contrast between broad and narrow forms, look back to earlier pieces like *PSI* 1165, dated to the third or fourth century. What are probably later examples of this same style are *PSI* 126, assigned to the fifth century, and Lameere Plate 10, dated to the sixth century. Both of these pieces share the right slope of the *Oedipus* hand, and the Lameere Homer is similarly done in broad strokes. These two later pieces, however, display a greater consistency in letter heights as well as more consistent, later forms of *alpha*, *omega*, and *upsilon*. The hand most similar to that of number 20 is that of *PSI* 6, dated by its editor to the fourth century. This example shares with the *Oedipus* text not only many individual letter parallels but also a generally blunt appearance and a pronounced rightward inclination. Both pieces also share similar letter shapes, such as *alpha*, *eta*, *pi*, *nu*, and *tau*, as well as the aforementioned contrast in letter widths. In short, the fourth century date conjectured for the *Oedipus* text by its original editor is probably correct, although it cannot be said to be certain.

The use of lectional aids is comparable to that found in other papyri of this date.<sup>4</sup> Five high stops are written – three at the ends of verses and two within. All three forms of accent are employed, though not in each possible instance. Breathing are also used inconsistently, as one of eight possible rough, but none of 16 possible smooth breathings is written. A diaeresis is twice placed above initial *upsilon*, twice above initial *iota*, and each of these letters occurs once without diaeresis. Elision is not consistently effected. There are three instances where elision is not effected, three where it is effected but unmarked, and four instances where the elision is marked with an apostrophe. In line 3 of the first fragment a hyphen is drawn under the compound  $\omega\kappa\pi\tau\epsilon\sigma\omega$ . A double dot occurs in line 7 of fragment 2, the significance of which, because of our poor knowledge of the text, is difficult to judge. *Iota* adscript is written with the one noun that requires it, but not with the one possible verb. The text bears no trace of correction.

The *Oedipus* is not preserved in the MSS nor in any other papyri from Greco-Roman Egypt. Nauck lists 18 citations from this play, ranging from one to five lines.

Our limited knowledge both of the physical dimensions of this roll and of the text of the play itself limits speculation on the quality of the original product.<sup>5</sup> The undistinguished script is an uncertain guide. *PSI* 1371 is in a similar hand but is found in a codex of which the margins are lavish, and which is described as a *de luxe* edition. In short, judgment

3. Cf. the outline of the development of this style in Lameere, *Aperçus de Paléographie Homérique*, p. 178.

4. Cf. *P. Oxy.* 1011, securely dated to the fourth century, as well as *P. Oxy.* 1095, 1096, and 1615, assigned by their editor to the fourth century.

5. Turner in the original publication regards the preserved text as superior to that preserved in Nauck 541; the evidence is slight, however, and insufficient for forming a judgment of the whole work. Cf. *P. Oxy.* XXVII, p. 86.

ought to be suspended on the original quality of this roll.

It is interesting that Euripides' *Oedipus* was still being copied in the fourth century. In contrast to the poor representation of this play, however, there are remains of four copies of the *Oedipus Tyrannos* of Sophocles from Oxyrhynchus, ranging in date from the second to the fifth or sixth centuries.<sup>6</sup>

6. Pack<sup>2</sup>, pp. 85-86:

21. P. Oxy. 1616

*Orestes* 53-61, 89-97  
Pack<sup>2</sup> 409

V  
Vellum Codex

Number 21, 4.2 by 7.8 cm., is from a codex of thin vellum, and preserves on the recto or flesh-side mid-sections of lines 53-61 of the *Orestes*, on the verso, end sections of lines 89-97.<sup>1</sup>

The fragment is from the middle of a page. Columns apparently contained 36 lines of text with each line about 0.2 cm. in height, and each interlinear space about 0.3 cm. Rough estimate yields a height of 17.2 cm. for the original column.

The codex apparently carried one column on each page. Line 97, the longest preserved verse in number of letters, 36, would here have measured about 14 cm. in length.

In this format 48 pages would probably have been required for a complete text of the *Orestes*. It seems likely that this fragment is from the second/third page of the codex, although even this much cannot be established with certainty. Obviously, questions of quire formation and arrangement must also go unanswered.<sup>2</sup>

The hand is a well-developed Biblical Uncial assigned by the original editors to "probably the fifth century".<sup>3</sup> Most letters are isocephalic at 0.2 cm. in height and are generally 0.3 cm. wide, although *mu*, *phi*, and *omega* are still broader. Careful shading is evident in forms such as *lambda* or *alpha*. The elegance of this script, evident in this artful shading and in the overall shapes of *epsilon* or *sigma*, recalls that of the Codex Alexandrinus.<sup>4</sup> In each case the letters are rather broader than in other examples of this style.<sup>5</sup> Individual forms are also similar both in formation and in decorative shading. The Codex Alexandrinus is generally dated to the fifth century, and supports the fifth century date suggested for this text of the *Orestes*.<sup>6</sup>

1. Photographs of this papyrus were taken by A. E. Samuel in the Egyptian Museum, Cairo, which now has the fragment in its possession.

2. Cf. for example, number 23, where the first 19 verses of the *Medea* were placed on a separate page of a codex with columns containing 36-37 verses. Evidence on the formation of a vellum codex has not been conveniently collected, and where discussed, exceptions to general rules are not infrequent. See Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, p. 101ff.; Thompson, *Introduction to Greek and Latin Paleography*, Oxford, 1912, p. 54; Milne and Skeat, *Scribes and Correctors of the Codex Sinaiticus*, p. 72.

3. P. Oxy. XIII, p. 163.

4. Reproduced in Thompson, *op. cit.*, Facsimile No. 46, p. 206.

5. Compare the Codex Sinaiticus, Thompson, *op. cit.*, Facsimile No. 45, p. 204.

6. For the fifth century date of the Alexandrinus, cf. Schubart, *Gr. Palaeographie*, Berlin, 1925, p. 138; Metzger, *The Text of the New Testament, Its Transmission, Corruption, and Restoration*, Oxford, 1964; Milne and Skeat, *The Codex Sinaiticus and the Codex Alexandrinus*, London, 1938, p. 31; and Thompson, *op. cit.*

The original hand wrote high stops at the ends of four verses and apostrophes to indicate elision, and elision was observed in four of five possible instances, marked with apostrophe three times. A second hand is responsible for a middle stop in line 56, and for two acute and two circumflex accents. None of four possible rough or eight possible smooth breathings was written. There is no instance where it is possible to judge the writing of the diaeresis. Crasis is not marked in line 60, nor is the only possible *iota* adscript written. In lines 53, 59, and 60 the scribe has written εις where Murray prints εις.<sup>7</sup> In line 60 a *nu* movable above the line has been added to προύπεμψ by the second hand. The second also wrote ηκ above line 91 to yield απειρηκεν; the original reading is uncertain.

The *Orestes* is retained in each member of the two main manuscript families. There is no particular relationship between this papyrus and any MS. Variants follow in collation with Murray's text.

59 πέτ[ρων w. edd.: πέτρῶν B; πετρῶν codd., Murray.

61 συ]μφορας: συμφοράν codd., Murray.

89 in textum omissum in margine add. M

91 απειρηκεν as corrected (original unknown), w.M, Murray, Σ; ἀπειρηκ' εν ABLP;  
απειρηκα V.

92 τι w. codd., Murray; τι om. A.

93 προσεδρια: προσεδρία MABLP, Murray; προσεδρεία V.

94 κασιγνητης w. MVLB, Murray; κασιγνήτας AB, corr. B<sup>2</sup>

There are two or perhaps three wholly new readings. πέτ[ρων in line 59 confirms the obvious emendation of modern editors. There is little to choose between the variants in line 61; συμφορας is at least as acceptable as the reading of the MSS. Finally, as *iota* adscript is not written in the only other possible instance, it is likely that in line 93 the papyrus preserves the reading of the majority of MSS. It is conceivable, however, that the nominative was incorrectly intended here.<sup>8</sup> In line 89 there is no support for the earlier omission in M. In line 91, because of the lack of apostrophe and the various treatments of elision in this text, the papyrus can show only that the corrected reading was not that preserved in V. In line 92 the reading is that of the majority of MSS and wholly acceptable. Finally, in line 94 the preserved reading must be accepted, since the alternative is senseless in context.

The *Orestes* is attested by three other remains from Oxyrhynchus and three from the rest of Greco-Roman Egypt. There is no coincidence of the present text with any other fragments.<sup>9</sup>

This was probably an impressive product. The exiguous remains reveal a neat codex of good vellum with individual lines evenly placed, amply spaced. The hand is also of considerable beauty and was obviously carefully written. Finally, the text, which has been corrected, is of good quality. All indications point to an original work of considerable worth and beauty.

7. Chapouthier in the Budé series prints εις.

8. A. S. Way in the Loeb Classical Library prints the nominative.

9. Cf. number 1 *supra*.

## 22. P. Oxy. 876

Hecuba 701-703, 737-740  
Pack<sup>2</sup> 389

V  
Papyrus Codex

Number 22, 2.9 by 8.4 cm., is from a codex of the *Hecuba* and carries parts of lines 701-703 on the verso and of lines 737-740 on the recto.<sup>1</sup> Although small portions of the inner margins are preserved, it is impossible to determine the precise situation of the fragment on the codex page.

Columns of this text carried 36 verses. Lines of writing average about 0.3 cm. in height, with interlinear spaces a bit larger. Columns were probably about 25 cm. tall.

An estimate of the length of line 740, which contains thirty-one letters and is longest in number of letters of the preserved verses, yields a measurement of slightly over 14 cm. At the end of line 701 there is a margin which must have exceeded 2.8 cm.; on the recto the incomplete margin at the beginning of line 738 measures 1 cm. It can be said certainly only that the original page was at least 15 cm. wide.

In this format a full text of the *Hecuba* would have required about 36 pages. It is impossible to discover anything of the original quire formation or in what sort of collection of plays, if any, this text was included.

The hand, if not truly attractive, is clear and easily legible, with letters generally isocephalic at 0.3 cm. There is considerable range in letter width from *mu*, 0.7 cm., down to *epsilon* or *sigma*, 0.2 cm. The letters are spaced unevenly with occasional ligatures, although some forms are completely isolated. A similar irregularity is evident in the slope of the individual letters as well as in their shapes. The only conceivable decoration, which may not be intentional, is the oblique stroke on the vertical of *tau* in line 738. Number 22 does not fit easily into the framework of a clearly defined style, but seems transitional between Schubart's severe style and the blunt, heavy-handed scripts of the late fourth and yet later centuries. *Mu*, *omega*, and even *kappa* seem fluid and easily drawn, while the thinner forms of *epsilon*, *theta*, *omicron*, and *sigma* are more crabbed in appearance. This contrast of widths, if not individual shapes, is reminiscent of such examples as *P. Oxy.* 26, *P. Oxy.* 2098, *P. Oxy.* 2341, *P. Oxy.* 1016, and *P. Oxy.* 223, which are reproduced as Roberts *Greek Literary Hands*, 19a-c, 20a, and 21a. But there are also affinities between this specimen and coarser and later hands like those of *P. Oxy.* 1010 and 1011, or Lameere Plates 9 and 10. To none of these pieces, however, is the present example comparable in individual letter shapes. A better parallel in this respect—although it must be emphasized that comparisons from other periods might easily be cited—is the Menander text in Norsa 16, dated to the fifth, or perhaps sixth, century.<sup>2</sup> Limiting this comparison is the absence in the present fragment of the pronounced rightward slope evident both in Norsa's plate and also in several other of the late pieces cited above. Nevertheless, the heavy strokes of the Menander text as well as certain letter forms are common to the present example. In short, the original editors were probably not wrong in dating this *Hecuba* to the fifth century, but the later fourth century does not seem impossible.

There is no evidence for punctuation or accentuation in the preserved text. One rough and three smooth breathings are omitted. Elision is effected in both possible instances and is each time marked with an apostrophe. *Iota adscript* is not written in the only possible

1. Photographs for use in this study have been generously supplied by the Princeton University Library, which now has the papyrus in its possession, catalogue number AM4436.

2. Norsa dates this Menander text to the fifth or sixth centuries; Lameere places the date more firmly in the fifth century (*Aperçus de paléographie homérique*, Brussels, 1960, p. 154) reaffirming the date suggested in *Archiv VI.*, p. 224.

instance. A paragraphus between lines 738 and 739 indicates the only preserved change of speaker.

An oval dot above and between *omega* and *nu* in line 739 is dismissed by the editors as "apparently meaningless".<sup>3</sup> It seems possible, however, that this may be a trace of *iota* added to correct the preceding προσωπω to a dative form with *iota* adscript. This 'dot' is also similar to a mark described in number 15, line 1039a, as a mark of syllabification. The mark in number 22 may have been used to indicate word division between προσωπω and νωτον.<sup>4</sup> At the end of line 701 the final *nu* of κλυδων is indicated, not unusually, by a short dash into the margin from above *omega*.

The paragraphus and apostrophes in this text are in a darker ink "and seem to be due to a corrector, who is perhaps responsible also for εμων in line 703".<sup>5</sup> If a corrector did check this text, he neglected the meaningless κραθεν in line 740.

The *Hecuba* is found in each member of the two main manuscript families. The present fragment is too small to exhibit any peculiar relationship with any medieval MS. Variants follow in collation with Murray's text.

701 πελάγιος w. MSS.; θαλάσσιος L.

740 κραθεν: πραγθέν codd.

In line 701 the variant is senseless. Curiously, this same erroneous reading was written first in B and later corrected so as to agree with the reading of the other MSS.<sup>6</sup>

The colometry of this text seems unique. The interjection, which varies in the MSS, after κλυδων was here written on a separate line, as in A, a position different from that in Murray and, presumably, the other MSS. Further, εμων here occurs at the end of line 703 whereas Murray places it at the beginning of the following verse, again presumably in accord with the MSS.<sup>7</sup>

Number 19 is the only other papyrus of this play from Greco-Roman Egypt, and there is no coincidence of text with text.

Because this fragment is so small it is difficult to judge the quality of the original text. The lines which remain, however, show, as does number 23, that late papyri need not closely match the MSS. Aesthetically this seems to have been a not unpleasing product, with individual pages neat and attractive in layout. Perhaps this text was an average product of the book trade.

3. P. Oxy. VI, p. 183.

4. Cf. *supra*, number 15.

5. εμων is only slightly visible in the photographs, as is the distinction between the two inks employed. See P. Oxy. VI, p. 182.

6. P. Oxy. VI, p. 183.

7. This metrical data is derived from P. Oxy. VI, pp. 182-183 and Murray's text.

### 23. P. Oxy. 1370

*Medea* 20-26, 57-63

*Orestes* 445-449, 469-474, 482-486, 508-510, 685-690, 723-729, 811-817, 850-854, Papyrus Codex 896-898, 907-910, 934-936, 945-948, 1247-1263, 1297-1305, 1334-1345, 1370-1371  
Pack<sup>2</sup> 402

V

In its nine fragments number 23 gives evidence for seven pages of a papyrus codex

which originally contained at least the *Medea* and *Orestes*.<sup>1</sup> The first fragment, 8.1 by 18.1 cm., includes the top of a column and segments of upper and side margins. This fragment, which alone preserves the *Medea*, retains portions of lines 20-26 on the verso, and of lines 57-63 on the recto. Remaining fragments are from the *Orestes*. Fragments 2 and 3 are from one page, of which fragment 2 contains bits of lines 445-449 and 482-486 on recto and verso respectively, while fragment 3 preserves portions of lines 469-474 and 508-512 as well as side and lower margins. Fragments 4 and 5 together carry on the verso small parts of lines 685-690, on the recto of lines 723-729. Fragment 6, another rather insignificant piece, carries inner portions of lines 811-817 and 850-854 on verso and recto respectively. Fragments 7 and 8 are also from one page, but are separated by a lacuna of eight lines. Fragment 7, very small, retains parts of lines 896-898 on the recto, of lines 934-936 on the verso. Fragment 8, 7.1 by 5.3 cm., preserves parts of lines 907-910 on the recto, of lines 945-948 on the verso, as well as lower margins. Fragment 9, largest of all the *Orestes* fragments, preserves, with centerfold and parts of upper and inner margins, evidence for two pages. The remaining portion of the first page of this fragment measures 14.8 by 5.5 cm. and has the beginnings of lines 1247-1263 on the verso, and lines 1297-1305 on the recto. The second page, 12.1 by 6.3 cm., preserves beginnings of lines 1334-1345 on the recto, ends of lines 1370-1371 on the verso.

From this group of fragments one may form some impression of the page layout of the original codex. Columns probably averaged 37 or 38 lines, although some slightly greater variation may have existed. Fragments 2 and 3, for example, are separated on the recto by 19 lines, on the verso by 21. Fragment 9 may provide evidence for a yet greater discrepancy, for the verso column of the first page carried what Murray prints in 50 lines. As other columns seem more consistent in height and since these verses are from a choral passage the colometry of which differed at least slightly from that of Murray, this column was perhaps a unique exception to the general rule.

Lines of writing average about 0.3-0.4 cm. in height, interlinear spaces about 0.3 cm. With these figures a column of 38 lines which would approach 25.5 cm. can be imagined. Upper margins are largest in fragment 9, 4.3 cm., and in the *Medea* fragment incomplete upper margins measure 3.6 cm. and 4 cm. on verso and recto respectively. Complete bottom margins in fragments 3 and 8 measure 5.5 cm. and 5.1 cm. If maximum measurements for upper and lower margins are accepted as standard in this codex, pages approximately 35.5 cm. tall can be posited.

The most complete page width, 18.1 cm., is preserved in the *Medea* fragment. The most complete individual verses are also preserved in the *Medea* fragment, on the verso of which the longest line, of 22 letters, measures 11.5 cm. and on the recto of which line 60 extends to 11 cm. Margins vary considerably. The left, inner margin on the verso of fragment 1 measures about 1 cm. The comparable margin measures 2.1 on the recto of fragment 3 and on pages one (verso) and two (recto) of fragment 9. Right margins are, of course, determined by the length of individual lines. The verso of the *Medea* fragment preserves the only outer, right margin, and this measures 5.3 cm. Inner right margins vary between 2.5 cm. on page one (recto) fragment 9, and 4.1 cm. on the versos of fragment 3 and page two (verso) fragment 9. The lyric passages in fragment 9 are indented four letters, or a little over 1 cm.

Individual pages of this codex, each of which carried one column of text, were, therefore, roughly 35.5 by 18.1 cm., perhaps a bit taller than average.<sup>2</sup> With 38 lines in each

1. Negatives of the complete collection of fragments were kindly provided for use in this study by the Chapin Library, Williams College, which now has the fragments in its possession.

2. Cf. Kenyon, *Books and Readers in Ancient Greece and Rome*, Second Edition, Oxford, 1951, p. 109.

column, a somewhat insecure figure, a complete text of the *Medea* would have required 39 columns and the *Orestes* 45. The codex would thus have contained at least 84 pages or 42 single papyrus sheets. It is, of course, not unlikely that other plays were contained in the volume. For the two plays which immediately concern us, the original layout cannot be defined with precision. The first 19 verses of the *Medea*, for example, were written on a separate page, and arrangement of the opening of the *Orestes* cannot be known. As to the formation of the codex as a whole, one can say with certainty only that this was not a large single quire codex so arranged that recto preceded verso or verso recto consistently in the first or second half. The rather enigmatic succession of recto and verso pages precludes this possibility. The evidence of fragment 9 suggests formation from a succession of small quires arranged so that recto preceded verso in the first half, verso recto in the second. But it is also possible that the codex was formed of a succession of small, conceivably even two-leaf quires, arranged so that verso faced verso, and recto faced recto throughout.<sup>3</sup>

The hand is a regular, large and sloping oval uncial, undecorated but not unattractive. The letters average about 0.3 cm. in height and are usually slightly broader than high. Exceptions to this observation are the forms of *epsilon*, *omicron*, and *sigma*, about 0.2 cm. wide, although in *epsilon* the extended mid-stroke lessens contrast between that and other forms. An occasional ligature and uneven spacing give evidence for the scribe's working in some haste. External evidence for the dating of the hand is provided by the glosses in fifth or sixth century cursive at lines 1370-1371. Furthermore, the pieces were found together with *P. Oxy.* 1369, 1371-1374. The hand does strongly resemble that of *P. Oxy.* 1371, which also has notes in fifth century cursive,<sup>4</sup> and shares with it many individual letter shapes, although in this second example letters are more widely spaced. In both instances there is a marked slope to the right and letters such as *kappa*, *mu*, *nu* and *omega*, formed with apparent ease in thickish strokes of the pen, are strikingly similar. On the basis of the palaeographical parallels and the *terminus ante quem* provided in each instance by marginal notes, it is likely that the hand of the present codex is of fifth century date. Lameere 10, which that editor compares with this set of fragments and also dates to the fifth century, is a further parallel, if a more neat and stylized piece.

The use of lectional aids is like that found in other fifth century texts.<sup>5</sup> In the *Medea* the original hand inserted a high stop at the end of line 59, and diaereses, paragraphi, and two of four possible *iota* adscripts. A second hand is responsible for all other signs and the single textual correction. The three forms of stop are employed, all but one of which, a middle stop in line 22, occur in end positions. Eight acute and five circumflex accents have been added. One of seven possible rough breathings was written, while all eight possible smooth breathings were omitted. Elision was effected in all five possible instances and marked in four. Crasis was effected but not marked in line 57. The second hand also added the two *iota* adscripts still lacking and, according to Grenfell and Hunt, corrected the  $\pi$  of  $\pi\alpha\nu\tau\alpha$  in line 25, a correction not visible in photograph.<sup>6</sup>

In the *Orestes*, in contrast to the *Medea*, stops, accents, breathings, diaereses, apostrophes, and most paragraphi were written by the original scribe. Only high stops are employed, nine at the ends of lines and one internally. All three forms of accent are sporadically used: 15 acute, one grave, and two circumflex. Diaereses too are not used in every possible instance. There are no initial *upsilons*, but only one of three initial *iotas* receives

3. *ibid.*, p. 107ff. and W.H. Willis, "New Papyri at the University of Mississippi", in *Proceedings of the IX International Congress of Papyrology*, Oslo, 1961, pp. 381-392 and especially p. 387 n.1.

4. *P. Oxy.* XI, p. 126.

5. Cf. Lameere 10 and *P. Ryl.* 58.

6. *P. Oxy.* XI, p. 128.

the diaeresis. Four of seven rough and four of 24 smooth breathings are written. Elision is once not effected, is twice effected but not marked, and is effected and marked in three further instances. Paragraphi have been inserted in most instances to signify change of speaker. *Iota adscript* is written with the only possible verb and with five of six possible nouns.

There are few points of orthographical interest. Itacism occurs in οικτειρον in line 1341 and in line 508 αποκτεινειν occurs for ἀποκτείνει, receiving an unnecessary nu-movable before σύλλεκτρος. In line 910 αυτις is acceptable although Murray prints αῦθις of the MSS. Again, τερεμνα in line 1370 may be possible, though Murray prints τέραμνα, preserved by MBV.<sup>7</sup>

I accept the judgment of the original editor that possibly four correctors, in addition to that of the *Medea*, worked on the *Orestes*, but note that the summary which follows is based almost exclusively on the original publication, as some revisions are not visible in photograph.<sup>8</sup> One corrector added *iota adscript* in line 909 in ink similar to that of the main text. This same hand changed αρχη at the end of line 897 to αρχαισιν, ην by inserting λαισιν above the line and by adding ν at the end; ην was again changed by the same hand to ηι by addition of *iota* above the end of the line. A second corrector is responsible for altering lines 1334, 1342, and perhaps 511. At the beginning of line 1334 a large *tau* is written above the line; in 1342 ιθ' was apparently corrected from ωδ; in 511 ποι was deleted after and reinserted before κακων, its position in the MSS. This same hand may also be responsible for the insertion of τυνδ(αρευς) before line 470 and the outsized χ(οπος) before line 1249, as well as the paragraphi below lines 1250, 1257, and 1260. A third corrector may be responsible for the notation αλ]λο ημιχ(οριον) (almost wholly illegible in photograph) before line 1260, and the two glosses at lines 1370 and 1371, glosses perhaps reflected by medieval scholia on the same words: in line 1370 ευμαρισιν is identified as ειδος υποδηματος and in 1371 a note on πασταδων reads η παστας / π[ε]πο[ι]κιλμενο[ς]. Finally, the addition of the name Ηλ(εκτρα) at line 247, if not by the original hand, is by a fourth corrector.

The *Medea* is transmitted in AVB and LP. There is no particular relationship between this papyrus and any MS. Variants follow in collation with Murray's text.

21-22 δεξιας πίστιν: δεξιάς, πίστιν BP, Schol. Ar. *Nub.* 81; δεξιᾶς πίστιν AVLF.

57 μ'υπῆλθε w. codd., Murray; μούπῆλθε Meineke; μοι ἐπῆλθε b.

58 μολού[ση] w. ABVP, Murray; μολούσαν Lv. Μηδείας w.VLP; δεσποίνης AB, Murray, et Σ *Phoen.* 1 et suprascr. V. Cf. Ennius, fr. 3, "cupido crepit miseram me nunc proloqui / caelo atque terrae Medeai miserias."

In lines 21-22 the lack of accent on δεξιας makes unclear with which MSS the papyrus was in agreement. In line 57 no support is given the reading of Meineke nor reason to abandon the MSS readings. In line 58 the dative is not unusual Euripidean usage and is common to all the MSS.<sup>9</sup> Finally, the second reading in line 58 is also acceptable. Editors prefer δεσποίνης but the choice is difficult, as each reading makes good sense and is metrically sound.<sup>10</sup>

The *Medea* is attested by seven remains from Greco-Roman Egypt, including two others from Oxyrhynchus.<sup>11</sup>

7. For αυτις cf. *P. Oxy.* 1174.ix.20, p. 78 and note. For τερεμνα cf. *LSJ* s.v.

8. *P. Oxy.* XI, pp. 126-133, *passim*.

9. D.L. Page, *Euripides, Medea*, Oxford, 1952, p. 71.

10. Both Page, *ibid.*, and Pasquale, *Storia della Tradizione e Critica del Testo*, Florence, 1952, p. 192, prefer δεσποίνης.

11. Cf. number 5 *supra*.

The *Orestes* is retained in each member of the two main manuscript families, although V lacks eight pages containing verses 1205-1504. There is no particular relationship between this papyrus and any MS. Variants follow in collation with Murray's text.

448 ἡμ[η] w. ABVLP, Murray; ἡ γ' ἡ (sed γ, in rasura) M.  
 472 χεομενος w. ABVLP, Murray; χεύμενος M.  
 473 ἥκοι w. MABVL; Murray; ἥκει P.  
 485 ἐν βαρ]βαροις w. ABVLP, Murray; γράφεται ἀφ' Ἐλλάδος Mv et Apollon. Ty. Epist. 34.  
 508 αποκτει]νιεν σύλλεκτρος: ἀποκτείνειν ὁμόλεκτρος codd., Murray.  
 852-854 Suspecti Verrallio.  
 907-910 Bracketed by Murray, who notes: "Euripideos quidem esse sed non hic suam sedem habere statuit Kirchoff".  
 946 πε]τρ[ουμ]ενος w. M, Wecklein: πετρουμένους rell., Murray.  
 1256 στα[θεις w. MABVP, Murray; ταθεις L, corr. 1.  
 1335 αξίοισι ταρ: αξίοισι τ' ἄρ A; αξίοισιν ἄρ' LB<sup>2</sup>; αξίοις τ' ἄρ P; αξίοισιν γάρ MB; αξίοισί τάρ' Murray.  
 1337 καὶ w. MABVP: om. L.  
 1340 ὀγ' w. Weil: ὀλλ' codd., Wecklein, Murray.

The only wholly new reading is preserved in line 508: συλλεκτρος is metrically acceptable and makes good sense. Further, ὁμόλεκτρος, as suggested in the original publication, may be a reminiscence of the same word in line 476.<sup>12</sup> In most other instances the papyrus also preserves sound readings. In lines 448 and 472 the readings of M are senseless. In line 473 the reading of P is acceptable but ought to be rejected in favor of that of the majority of MSS and the papyrus. The papyrus and majority of MSS share a sound reading again in line 485. In line 946 the papyrus and M agree, perhaps rightly, in reading the nominative participle; the sense and meter here are admissible, although it may be argued that because the fates of both *Orestes* and *Electra* are here concerned, the accusative participle is preferable.<sup>13</sup> In line 1256 no support is given to the earlier, inferior reading of L. The absence of accents in line 1335 again makes discovery of the precise reading impossible. It may at least be said that the papyrus did not read γαρ, which is not the desired connective in this context. In line 1337 καὶ must be read *gratia metri*. Finally, the original editors accepted the reading ὀγ' in line 1340 as confirmation of Weil's emendation. This emendation, however, is probably unnecessary and incorrect, as has been argued cogently by Biehl.<sup>14</sup> As to the omission of verses in the *Orestes*, the papyrus in each instance supports the readings of the MSS and offers no support to excisions from the text by modern editors.

The assignment of lines 1258ff. originally differed from that of the MSS, which are followed by Murray.<sup>15</sup> As mentioned above, choral verses in this text were originally indented

12. P. Oxy. XI, p. 132.

13. But cf. Pasquale, *op. cit.*, p. 192ff., who favors the reading of M and the papyrus.

14. W. Biehl, *Textprobleme in Euripides Orestes*, Göttingen, 1955, who is followed by Chapouthier in the Budé *Orestes*. Pasquale, *op. cit.*, p. 193, in discussing number 1 accepts the reading of this papyrus as correct confirmation of Weil's emendation but does not argue for his position.

15. The speculations of Maurice Pope "Changes of Speaker in Papyrus Bodmer IV", *Acta Clasica* III, 1960, pp. 40-52 are puzzling. In discussing means of indicating change of speaker in tragic papyri he writes (p. 49): "In P. Oxy. 1370 (5th century) . . . the paragraphi may have been omitted and the same function served by outsetting the first letter of the new speech". This statement is misleading in two respects. Paragraphi were not wholly omitted, even by the original scribe, nor were the first letters of new speeches outset; Pope may here refer to the usual process of indenting choral passages, though even this indentation is not the depth of one letter. Pope also states (p. 49): "In the same late Euripides papyrus . . . the termination of speeches is further marked by single dots". This statement is robbed of its significance if not of its validity when one notes that single dots are also

four letters or a little over 1.0 cm. As first written — to judge from *eisthesis* — the chorus was assigned lines 1258-1259, 1261-1262, and Electra was given lines 1260 and 1263. The notation  $\alpha\lambda\lambda\lambda\eta\mu\chi\kappa\sigma\tau\iota\sigma\nu$  was subsequently written opposite line 1260, and in a final correction another hand inserted *paragraphi* after 1257 and 1260. Speeches were thus, presumably, assigned as in Murray and the MSS except perhaps L. Some confusion may have remained, however, as line 1263 was not indented nor, apparently, assigned by marginal siglum. The editors suggest that a *paragraphus* may be lost before this line.<sup>16</sup>

The colometry here differed, if only slightly, from that adopted by Murray. The text of these questionable passages is so scantily preserved, however, that to recognize any metrical scheme, or even sure variation from the Murray readings, is difficult.<sup>17</sup>

The *Orestes* is attested by three other papyri from Oxyrhynchus and three more from the rest of Greco-Roman Egypt, but only number 1 preserves the same text.<sup>18</sup>

These fragments seem to be the remains of a rather impressive codex. The volume itself, was of good size and neat, with generous margins and interlinear spaces. The hand itself, though not calligraphic, was also attractive. Finally, the texts of both the *Medea* and the *Orestes* were reputable, copied by a scribe of some ability, and rather well corrected. This was evidently a respectable edition of these two plays.

used at the ends of lines within separate speeches; cf. *Medea* 20 and 22 and *Orestes* 511 and 512. It seems unlikely that single dots had any particular purpose as signs of speech division at the ends of individual speeches, though it is certainly true that they do occur in such positions.

16. *P. Oxy.* XI, p. 133.

17. Cf. the editor's comments in the original publication. *P. Oxy.* XI, pp. 132-133.

18. Cf. number 1, *supra*.

TABLES  
INDICES  
PLATES



TABLE I  
Texts of Extant Tragedies at Oxyrhynchus

Extant Tragedies	Oxyrhynchus	Other Sites
<i>Alcestis</i>	0	0
<i>Andromache</i>	2	3
<i>Bacchae</i>	1	2
<i>Electra</i>	0	0
<i>Heracles</i>	0	0
<i>Helen</i>	1	0
<i>Hippolytus</i>	1	3
<i>Ion</i>	0	0
<i>Iphigenia in Aulis</i>	0	0
<i>Iphigenia in Tauris</i>	0	1
<i>Medea</i>	3	4
<i>Ornestes</i>	4	3
<i>Phoenissae</i>	3	2
<i>Rhesus</i>	0	1
<i>Suppliants</i>	0	0
<i>Trojan Women</i>	0	0
	<hr/>	<hr/>
	17	20

TABLE II

Texts of Lost Tragedies at Oxyrhynchus		Other Sites
<i>Alcmeon in Psophis</i>	1	0
<i>Alexander</i>	0	1
<i>Antiope</i>	0	1
<i>Archelaus</i>	1	1
<i>Cresphontes</i>	1	0
<i>Cretans</i>	1	1
<i>Hypsipyle</i>	1	1
<i>Meleager</i>	0	1
<i>Melanippe the Prisoner</i>	0	1
<i>Oedipus</i>	1	0
<i>Phaethon</i>	0	2
<i>Pbrixus</i>	0	1
<i>Telephus</i>	1	3
	<hr/>	<hr/>
	7	13

TABLE III

Additional Evidence for Euripides at Oxyrhynchus\* (A: Anthology;  
C: Commentary; H: Hypothesis; S: School Exercises; Sc: Scholia)

Oxyrhynchus (All Hypotheses)	Other sites
<i>Aeolus</i>	<i>Aegeus</i> (S)
<i>Alcestis</i>	<i>Alcestis</i> (S)
<i>Alcmeon in Corinth</i>	<i>Bacchae</i> (S)
<i>Chrysippus</i>	<i>Danae</i> (A)
<i>Electra</i>	<i>Electra</i> (A, S)
<i>Hypsipyle</i>	<i>Hecuba</i> (A, S)
<i>Medea</i>	<i>Hippolytus</i> (2A, H, S)
<i>Melanippe the Wise</i>	<i>Ino</i> (S)
<i>Oedipus</i>	<i>Medea</i> (2A)
<i>Orestes</i>	<i>Melanippe the Prisoner</i> (2A)
<i>Phaethon</i>	<i>Meleager</i> (A)
<i>Philoctetes</i>	<i>Orestes</i> (A)
<i>Phoenissae</i>	<i>Phoenissae</i> (A, S, Sc)
<i>Phoenix</i>	<i>Protesilaus</i> (2A)
<i>Phrixus I</i>	<i>Rhesus</i> (H)
<i>Phrixus II</i>	<i>Scyrians</i> (H)
<i>Sthenoboea</i>	<i>Trojan Women</i> (C, S)
<i>Telephus</i>	
<i>Temenidae</i>	
<i>Temenus</i>	
<i>Trojan Women</i>	

\* "Additional Evidence" does not include quotations in other extant works as such may derive from anthologies and not attest in Oxyrhynchus the existence of independent works concerned with or based on the works of Euripides.

TABLE IV

## Cumulative Evidence for Euripides at Oxyrhynchus

Oxyrhynchus	Other Sites
<i>Aeolus</i>	<i>Aegeus</i>
<i>Alcestis</i>	<i>Alcestis</i>
<i>Alcmena</i>	<i>Alcmena</i>
<i>Alcmeon in Corinth</i>	<i>Alexander</i>
<i>Alcmeon in Psophis</i>	<i>Andromache</i>
<i>Andromache</i>	<i>Antiope</i>
<i>Archelaus</i>	<i>Archelaus</i>
<i>Bacchae</i>	<i>Bacchae</i>
<i>Cresphontes</i>	<i>Cretans</i>
<i>Cretans</i>	<i>Danae</i>
<i>Chrysippus</i>	<i>Electra</i>
<i>Electra</i>	<i>Hecuba</i>
<i>Hecuba</i>	<i>Heracles</i>
<i>Helen</i>	<i>Hippolytus</i>
<i>Hippolytus</i>	<i>Hypsipyle</i>
<i>Hypsipyle</i>	<i>Ino</i>
<i>Medea</i>	<i>Iphigenia in Tauris</i>
<i>Melanippe the Wise</i>	<i>Medea</i>
<i>Oedipus</i>	<i>Melanippe the Prisoner</i>
<i>Orestes</i>	<i>Meleager</i>
<i>Phaethon</i>	<i>Orestes</i>
<i>Philectetes</i>	<i>Phaethon</i>
<i>Phoenissae</i>	<i>Phoenissae</i>
<i>Phoenix</i>	<i>Phrixus I</i>
<i>Phrixus I</i>	<i>Protesilaus</i>
<i>Phrixus II</i>	<i>Rhesus</i>
<i>Sthenoboea</i>	<i>Scyrians</i>
<i>Telephus</i>	<i>Telephus</i>
<i>Temenidae</i>	<i>Trojan Women</i>
<i>Temenus</i>	
<i>Trojan Women</i>	

TABLE V

MSS and Chronological Distribution of the Texts of Euripides from Oxyrhynchus

'Select' Plays (MSS MABVLP)	B.C.		A.D.				
	II	I	I	II	III	IV	V
<i>Alcestis</i>							
<i>Andromache</i>				xx			
<i>Bacchae</i>		x					
<i>Hecuba</i>		x			x		x
<i>Hippolytus</i>		x					
<i>Medea</i>		x			x		x
<i>Orestes</i>	x		x				xx
<i>Phoenissae</i>	x		x	x			
<i>Rhesus</i>				x			
<i>Trojan Women</i>							
'Alphabetic' Plays (MSS LP)							
		x					
<i>Electra</i>							
<i>Helen</i>							
<i>Heracles</i>							
<i>Heraclidae</i>							
<i>Ion</i>							
<i>Iphigenia in Aulis</i>							
<i>Iphigenia in Tauris</i>							
<i>Suppliants</i>							
'Lost' Plays							
				x			
<i>Alcmeon in Psophis</i>				x			
<i>Archelaus</i>					x		
<i>Cresphontes</i>						x	
<i>Cretans</i>				x			
<i>Hypsipyle</i>				x			
<i>Oedipus</i>						x	
<i>Telephus</i>	x						

TABLE VI

Formal Aspects of the Papyri of Euripides from Oxyrhynchus\*

Recto Texts	Sheet Height	Column Height	Upper Margin	Lower Margin	Lines per Column	Overall Length	Column Width	Inter- Columniation	Lyric Indent
1	21 <sup>+</sup>	18.7	0.4	1.9 <sup>+</sup>	24	700	8.7	0.4	—
2	15.2 <sup>+</sup>	12.5	1.8 <sup>+</sup>	1.0 <sup>+</sup>	25	649	8.5	0.8	0.8
6	23.5	16.6	3.0	3.9	33	587	12.5	0.9	—
7	12.8 <sup>+</sup>	10.2 <sup>+</sup>	2.6 <sup>+</sup>	—	23	—	9.5	2.5 <sup>+</sup>	2.0
8	—	—	1.6	—	—	—	13.0	—	—
9	—	11.0 <sup>+</sup>	—	—	23 <sup>+</sup>	—	9.0	3.0 <sup>+</sup>	—
10	10.0 <sup>+</sup>	9.3 <sup>+</sup>	2.6 <sup>+</sup>	0.6 <sup>+</sup>	—	—	8.5	0.3	0.5
12	23.0 <sup>+</sup>	12.0	4.1	6.5	20	—	12.0	3.5 <sup>+</sup>	2.0
15	23.5	14.6	4.6	3.8	29	1087	14.6	2.8	2.2
18	12.0 <sup>+</sup>	11.0 <sup>+</sup>	1.0 <sup>+</sup>	—	19 <sup>+</sup>	—	11.7	1.5	0.6
20	10.5 <sup>+</sup>	8.0 <sup>+</sup>	2.5 <sup>+</sup>	—	15 <sup>+</sup>	—	12.5	1.5 <sup>+</sup>	—
Verso Texts									
3	—	12.5	—	1.9	41	375	8.0	0.0-0.5	Almost None
4	—	—	2.3 <sup>+</sup>	5.0	—	—	—	0.5-3.0?	2.5
5	16.5 <sup>+</sup>	15.0	—	1.5 <sup>+</sup>	27	555	8.2	2.0	—
11	37.1	30.0	2.5 <sup>+</sup>	3.8	55-60	—	8.5	1.5-1.7?	0.3
13	18.0	16.0	1.0	1.0	39	431	12.0	0.3	1.8
14	26.5 <sup>+</sup>	23.5	0.7 <sup>+</sup>	2.8	39	392	10.3	1.4-2.1	—
17	—	—	1.2	—	—	12.6	—	—	—
19	17.0 <sup>+</sup>	16.0	1.6 <sup>+</sup>	—	29 <sup>+</sup>	—	9.9	2.5 <sup>+</sup>	—
Recto-Verso?									
16	No Plate								
Codices									
21	—	17.2	—	—	36	48 pages	14.0	—	—
22	—	25.0	—	—	36	36 pages	14.0	15.0 <sup>+</sup>	—
23	35.5	23.5	4.3	5.1-5.5	37-38	M:40 pages	11.5	18.1 <sup>+</sup>	1.0 <sup>+</sup>
O:46 pages									
Page Width									

\*Texts are arranged chronologically within categories; all measurements are in centimeters.

TABLE VII

## Letters per Line and Column Width\*

Recto-Verso	Papyrus Number	Letters per Line	Line Length (Column Width)
R	15	20 letters + 2.8 cm. indent.	14.6 cm.
V	4	26 letters	8.0 cm.
R	10	26 letters	
R	9	28 letters	9.0 cm.
V	3	30 letters	8.0 cm.
R	7	30 letters	9.5 cm.
R	12	30 letters	12.0 cm.
R	20	30 letters	12.5 cm.
R	2	31 letters	8.5 cm.
Codex	22	31 letters	14.0 cm.
V	5	32 letters	8.2 cm.
Codex	23	32 letters	11.5 cm.
R	1	33 letters	8.7 cm.
R	6	33 letters	12.5 cm.
V	11	33 letters	8.5 cm.
V	13	33 letters + 1.8 cm. indent.	12.0 cm.
V	14	33 letters	10.3 cm.
V	17	33 letters	12.6 cm.
V	19	33 letters	9.9 cm.
R	18	36 letters	11.7 cm.
Codex	21	36 letters	14.0 cm.
R	8	40 letters	13.0 cm.

\*Number 16 has been excluded for lack of photograph.

TABLE VIII

Punctuation and Diacritical Marks Found in the Papyri of Euripides at Oxyrhynchus

Verso Texts	Stops H M L	Accents A G C	Breathings R S	Long Marks	Short Marks	Elisions (%)	Diæreses (%)	Crasis (%)	Aphaeresis (%)
3	x o o	o o o	0/3	0/6	o	0/1	0/1	-	-
4	x o x	x o x	1/3	1/20	x	5/7	-	-	-
5	o x o	o o o	0/1	0/14	o	0/5	-	-	-
11	x o x	x x x	70/130	11/450	o	80/139	4/24	-	0/1
13	o o o	o o o	0/6	0/26	o	0/6	0/1	-	-
14	x o o	x x x	1/5	0/13	o	0/7	-	-	-
17	- - -	o o o	-	0//4	o	0/1	1/1	-	-
19	- - -	o o o	0/3	0/13	o	0/6	-	-	-
Recto Texts:									
1	o o o	o o o	0/5	0/15	o	0/2	-	-	-
2	o o o	o o o	0/5	0/11	o	0/3	-	-	-
6	o o o	o o o	0/6	0/36	o	0/23	0/1	-	-
7	- - -	o o o	1/4	0/18	o	0/5	0/1	-	-
8	o o o	x x x	0/2	0/9	o	0/2	-	-	-
9	o o o	o o o	0/4	0/20	o	0/3	2/3	-	-
10	- - -	x o o	0/1	0/8	o	3/7	-	-	-
12	- - -	o o x	1/3	0/3	o	2/3	1/2	-	-
15	x x x	x x o	0/6	0/27	o	0/4	0/2	-	-
18	x x x	x x x	4/12	1/40	x	8/11	3/6	-	-
20	x o o	x x x	1/8	0/16	o	4/10	4/6	-	-
Recto-Verso (?)									
16	x o o	x o x	0/2	0/7	x	o	1/2	-	-
Codices:									
21	x o o	x o x	0/4	0/8	o	o	3/5	-	0/1
22	o o o	o o o	0/1	0/3	o	o	2/2	-	-
23	x x x	x x x	5/14	4/32	o	o	9/11	1/3	0/1

TABLE IX

Original and Proposed Dating for the Papyri of Euripides at Oxyrhynchus

Text Date of Publication, Date Proposed by Editor Date Proposed in this Study

1	1912	Early I B.C.	Ca. 100 B.C.
2	1954	Late I B.C.	Same
3	1912	Early I	Same
4	1962	Mid I	Same
5	1954	Later I	Third Quarter I
6	1948	II	Late I
7	1948	II	Early II
8	1932	Late I – Early II	Early II
9	1935	II	Early II
10	1962	Mid II	Same
11	1908	Late II	Same
12	1953	II	Late II
13	1954	Late II	Same
14	1903	First half III	Late II
15	1899	Late II	Ca. 200
16	1903	No Plate	
17	1903	III	Early III
18	1962	Mid III	Same
19	1908	III	Same
20	1962	IV	Same
21	1919	V	Same
22	1908	V	Same
23	1915	V	Same

INDEX I \*  
References in Part One to  
Papyri Studied in Part Two

Number 1 (*P. Oxy.* 1178): 12; 13; 14; 15; 16; 18; 19; 22; 23 and n.1; 27; 30; 31.

Number 2 (*P. Oxy.* 2336): 12; 16; 19; 22; 24.

Number 3 (*P. Oxy.* 1177): 13; 15 and n. 16; 16; 19; 25; 31.

Number 4 (*P. Oxy.* 2460): 14; 15; 16; 17; 19; 22; 27; 30; 31.

Number 5 (*P. Oxy.* 2337): 13; 14; 15; 19; 24; 31.

Number 6 (*P. Oxy.* 2223): 19; 24; 30.

Number 7 (*P. Oxy.* 2224): 16; 19.

Number 8 (*P. Cairo Inv.* 56224): 15; 19; 31.

Number 9 (*PSI* 1193): 23.

Number 10 (*P. Oxy.* 2461): 11; 16; 22; 31.

Number 11 (*P. Oxy.* 852): 11 n.3; 12; 13; 15; 16; 22; 25; 29.

Number 12 (*PSI* 1302): 12; 14; 15; 16; 19; 23; 25; 29.

Number 13 (*P. Oxy.* 2335): 12; 13; 15; 16; 30.

Number 14 (*P. Oxy.* 449): 11 and n.3; 13; 22; 30.

Number 15 (*P. Oxy.* 224—*P. Ryl.* 547): 13; 14; 15 and n.16; 16; 17; 19; 22; 23; 31.

Number 16 (*P. Oxy.* 419): No References

Number 17 (*P. Oxy.* 450): 11 n.2.

Number 18 (*P. Oxy.* 2458): 5 n.10; 8; 16; 19; 22; 27; 31.

Number 19 (*P. Oxy.* 877): 31.

Number 20 (*P. Oxy.* 2459): 30.

Number 21 (*P. Oxy.* 1616): 12; 14; 19; 22.

Number 22 (*P. Oxy.* 876): 12; 14; 16.

Number 23 (*P. Oxy.* 1370): 12; 13; 14; 15; 16; 19; 22; 23; 25; 29.

\*All abbreviations employed in the indices are those employed by  
R.A. Pack, *The Greek and Latin Literary Texts from Greco-Roman Egypt*,  
Second Revised and Enlarged Edition, Ann Arbor, 1965.

## INDEX II

References in Part One to Papyri  
Mentioned but not Studied in Part Two

*P. Harris* 38: 24.  
*P. Oslo inv.* 1662: 28 n.3.  
*P. Oxy.* 420: 4 n.5.  
*P. Oxy.* 841: 28.  
*P. Oxy.* 853: 28 n.3.  
*P. Oxy.* 1176: 5 n.9.  
*P. Oxy.* 1228: 11 n.3.  
*P. Oxy.* 2245-2255: 20 n.28.  
*P. Oxy.* 2255: 6 n.11.  
*P. Oxy.* 2455: 3 n.3; 4 n.5.  
*P. Oxy.* 2456: 3 n.3.  
*P. Oxy.* 2457: 4 n.5.  
*P. Ross. Georg. I.8:* 23.  
*PSI* 1303: 5 n.8.  
*P. Teb.* 268: 12.

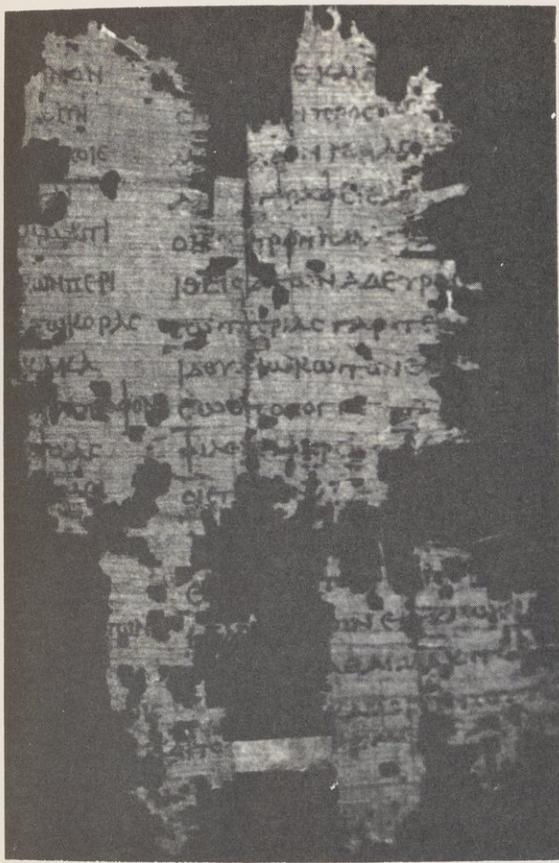
### INDEX III

#### References in Part Two to Papyri not specifically studied Therein\*

BKT 5.2.64-72 (*P. Berol.* 9908): 44; 45.  
*Codex Alexandrinus*: 82 and n.4.  
*Codex Sinaiticus*: 72.  
*Lameere Plate 9* (Musées Royaux, Brus-  
sels, inv.E60002A): 84.  
*Lameere Plate 10* (Bibl. de Univ. Gent,  
inv.75): 81; 84; 87.  
*Norsa, SLG 16* (*P. Cairo* inv. 43227): 84.  
*P. Fay.* 6: 38 n.3; 39 n.5; 49 and n.3; 50.  
*P. Fay.* 7: 38 and n.3; 39 n.5; 42 and n.5.  
*P. Hamb.* 118: 76.  
*P. Harris* 38: 48.  
*P. Lit. Lond.* 129 = *P. Oxy.* 26: 64; 70  
and n.6; 84.  
*P. Lit. Lond.* 132 = *P. Lond.* inv. 108  
+115: 56 and n.2.  
*P. Lond.* 140: 44.  
*P. Mich.* 3: 66.  
*P. Mich.* 139: 46.  
*P. Oxy.* 20: 50; 55 and n.3.  
*P. Oxy.* 23: 77.  
*P. Oxy.* 26 = *P. Lit. Lond.* 129: 64; 70  
and n.6; 84.  
*P. Oxy.* 213: 59.  
*P. Oxy.* 220: 53, 56.  
*P. Oxy.* 223: 75 and n.3; 77 and n.2; 84.  
*P. Oxy.* 232: 77.  
*P. Oxy.* 409: 78.  
*P. Oxy.* 413: 78.  
*P. Oxy.* 481: 55 and n.4.  
*P. Oxy.* 661: 72 n.6.  
*P. Oxy.* 842: 62 and n.10; 66; 67.  
*P. Oxy.* 843: 70 and n.5.  
*P. Oxy.* 853: 67 n.5.  
*P. Oxy.* 985: 62.  
*P. Oxy.* 1010: 84.  
*P. Oxy.* 1011: 81 n.4; 84.  
*P. Oxy.* 1012: 79.  
*P. Oxy.* 1016: 65 n.3; 84.  
*P. Oxy.* 1018: 67.  
*P. Oxy.* 1095: 81 n.4.  
*P. Oxy.* 1096: 81 n.4.  
*P. Oxy.* 1174: 88 n.7.  
*P. Oxy.* 1179: 72 and n.5.  
*P. Oxy.* 1184: 67 n.5.  
*P. Oxy.* 1249: 67 n.5.  
*P. Oxy.* 1369, 1371-1374: 87.  
*P. Oxy.* 1371: 87 and n.4.  
*P. Oxy.* 1608: 77.  
*P. Oxy.* 1615: 81 n.4.  
*P. Oxy.* 1790: 46.  
*P. Oxy.* 1795: 67 n.5.  
*P. Oxy.* 1801-1804: 67 n.5.  
*P. Oxy.* 1806: 46 n.3.  
*P. Oxy.* 1810: 46; 56.  
*P. Oxy.* 2087: 67 n.5.  
*P. Oxy.* 2092: 65 n.4.

\*This listing does not include those summary mentions of the various papyri which attest the same play as those papyri individually examined; such lists may be found toward the end of the account of the first papyrus of a particular play in Section Two.

*P. Oxy.* 2098: 64; 75 and n.3; 84.  
*P. Oxy.* 2159-2164: 53.  
*P. Oxy.* 2178-2179: 53.  
*P. Oxy.* 2208: 79.  
*P. Oxy.* 2260: 67 n.5.  
*P. Oxy.* 2262: 59.  
*P. Oxy.* 2298: 42 n.4.  
*P. Oxy.* 2306: 67 n.5.  
*P. Oxy.* 2309: 42.  
*P. Oxy.* 2341: 75 and n.3; 84.  
*P. Oxy.* 2369: 38.  
*P. Oxy.* 2391: 42.  
*P. Oxy.* 2431: 75 and n. 3.  
*P. Oxy.* 2435: 42.  
*P. Oxy.* 2439: 46.  
*P. Ryl.* 16: 72 and n.4 and n.6.  
*P. Ryl.* 58: 87 n.5.  
*P. Ryl.* 154: 44.  
*P. Ryl.* 161: 44.  
*P. Ryl.* 482: 45.  
*PSI* 6: 81.  
*PSI* 126: 81.  
*PSI* 1092: 42.  
*PSI* 1094: 59.  
*PSI* 1165: 81.  
*PSI* 1371: 81.  
*P. Teb.* 1: 35 and n.3.  
*P. Teb.* 10: 35.  
Schubart, *PGB* 11a (*P. Berol.* 9767): 42 and n.4.  
Schubart, *PGB* 18 (*P. Berol.* 6926): 46 n.3; 55 and n.4.  
Schubart, *PGB* 20 (*P. Berol.* 9780): 59.  
Schubart, *PGB* 21c (*P. Berol.* 9740): 59.  
Schubart, *PGB* 21d (*P. Berol.* 7233): 59.  
Schubart, *PGB* 31 (*P. Berol.* 9782): 56.



Number 1: *P. Oxy.* 1178

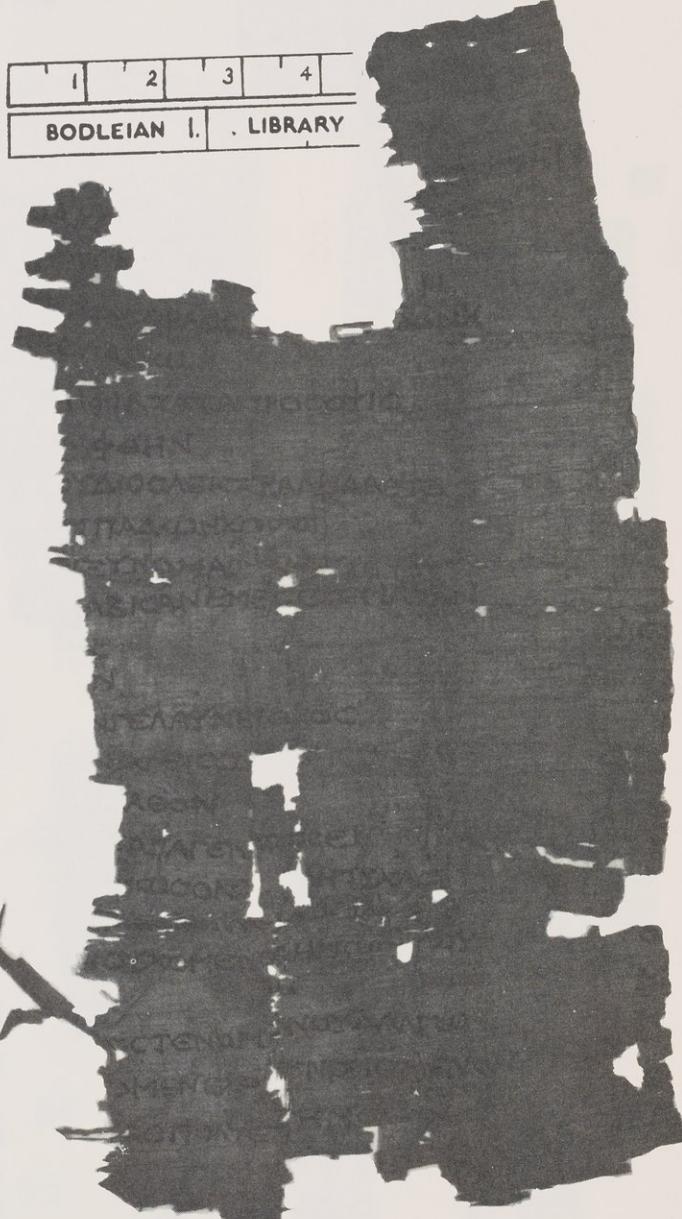


Number 3: *P. Oxy.* 1177

Plate I

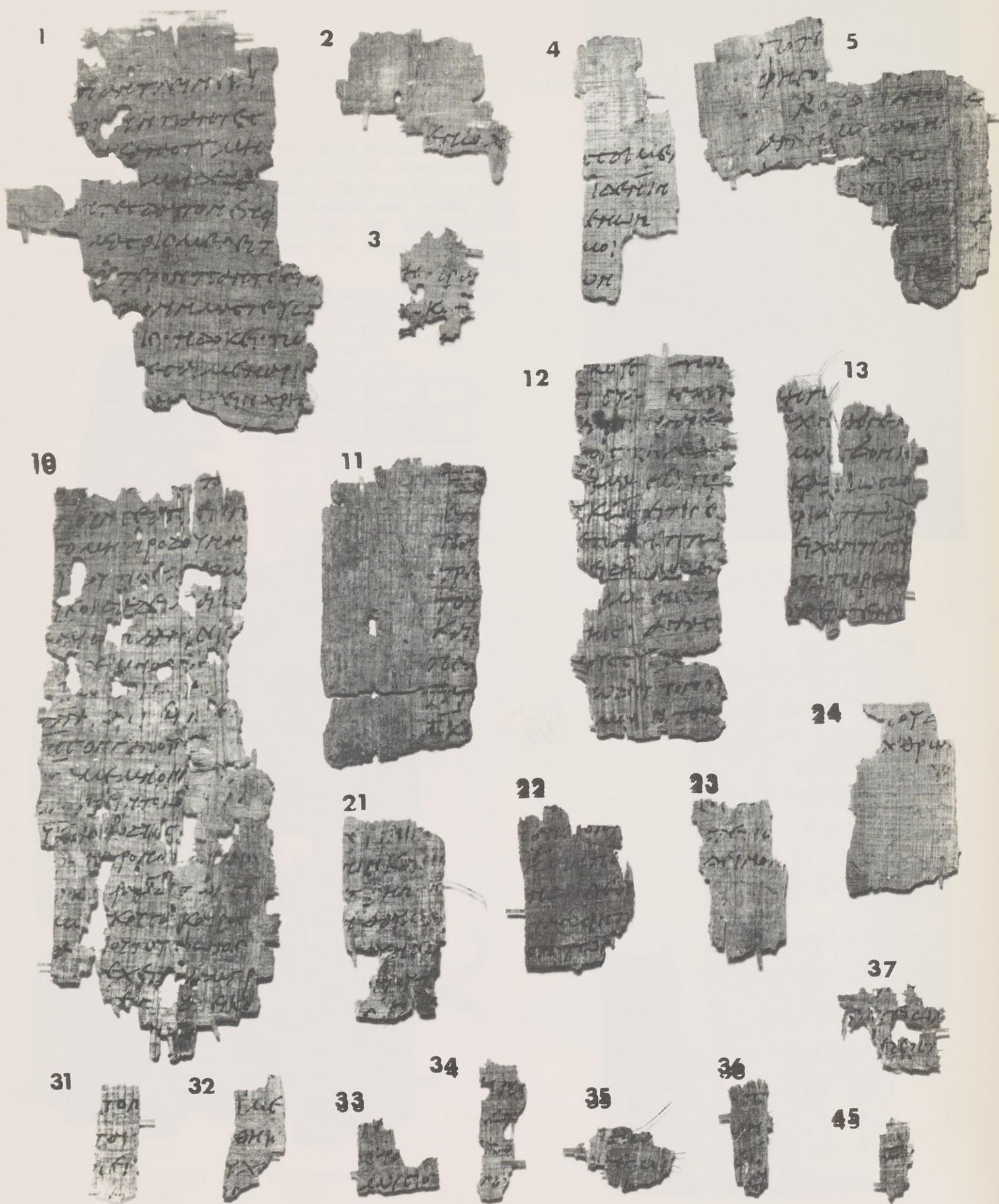
The following plates are in the scale of 1:1 unless otherwise noted. Where major discrepancies have appeared I have relied on those measurements provided by the original editors who worked with the papyri themselves and not facsimiles. The numbering of individual fragments of any given papyrus are those employed in the original publication.

B. E. D.

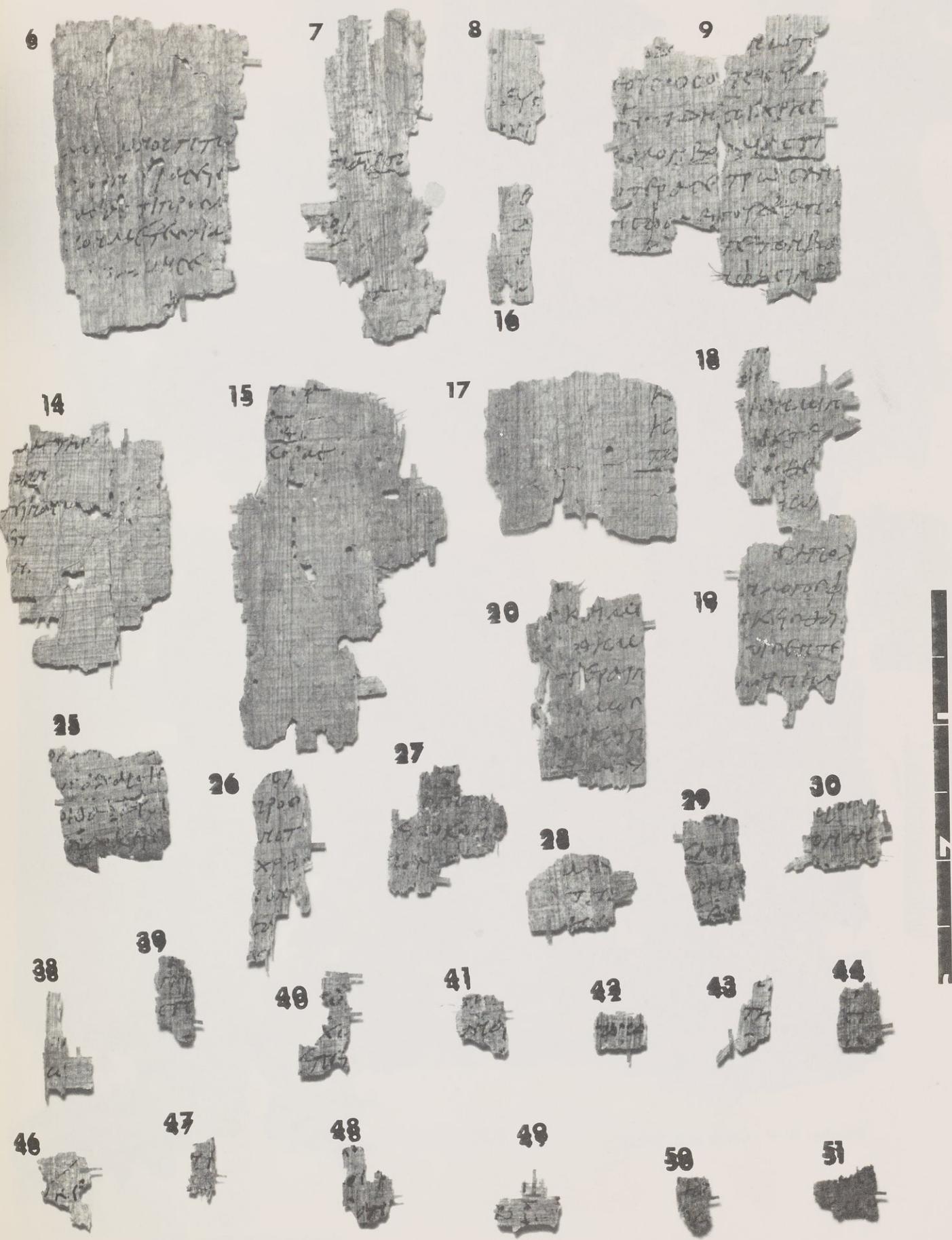


Number 2: *P. Oxy.* 2336

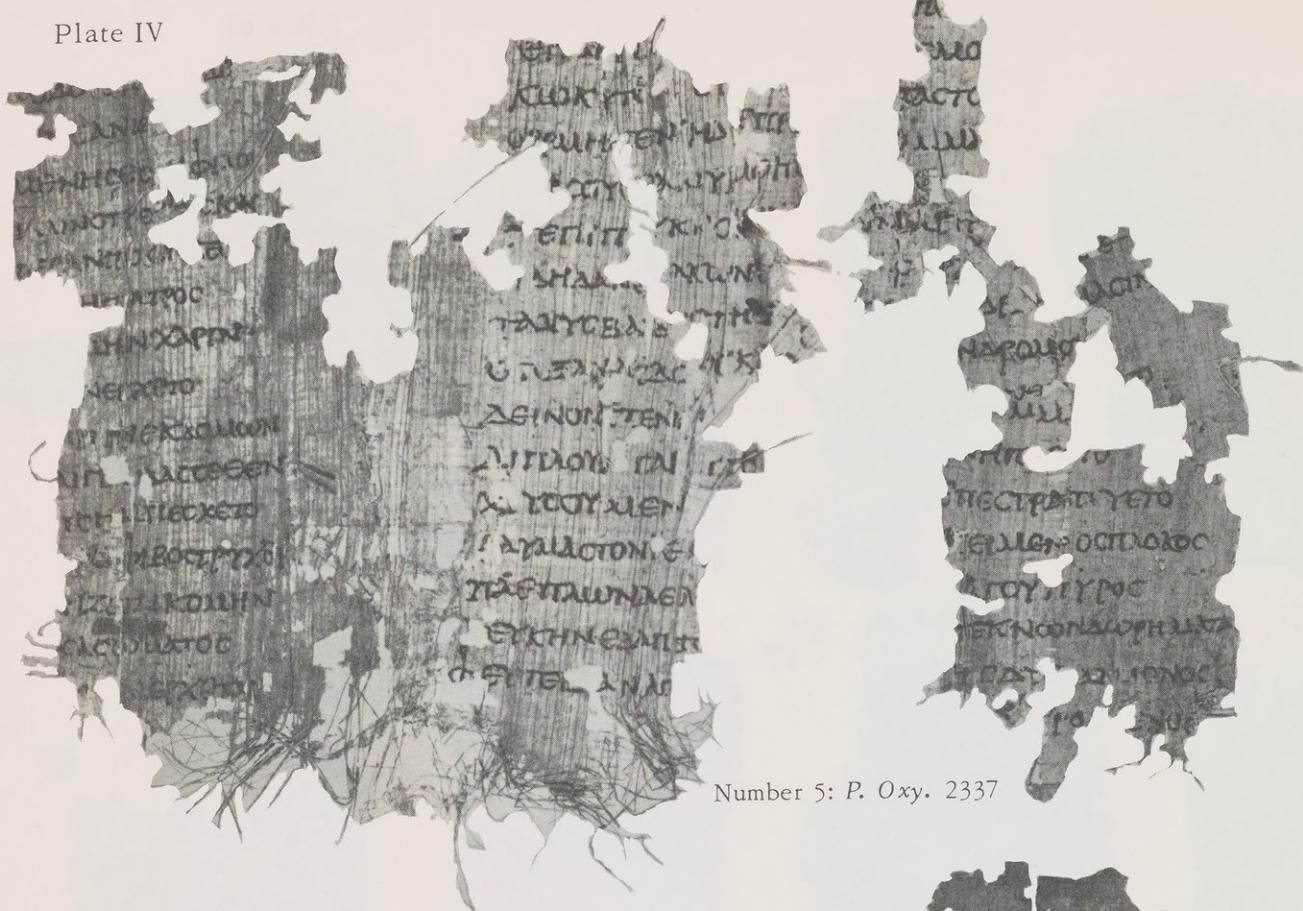
Plate II



Number 4: P. Oxy. 2460



## Plate IV

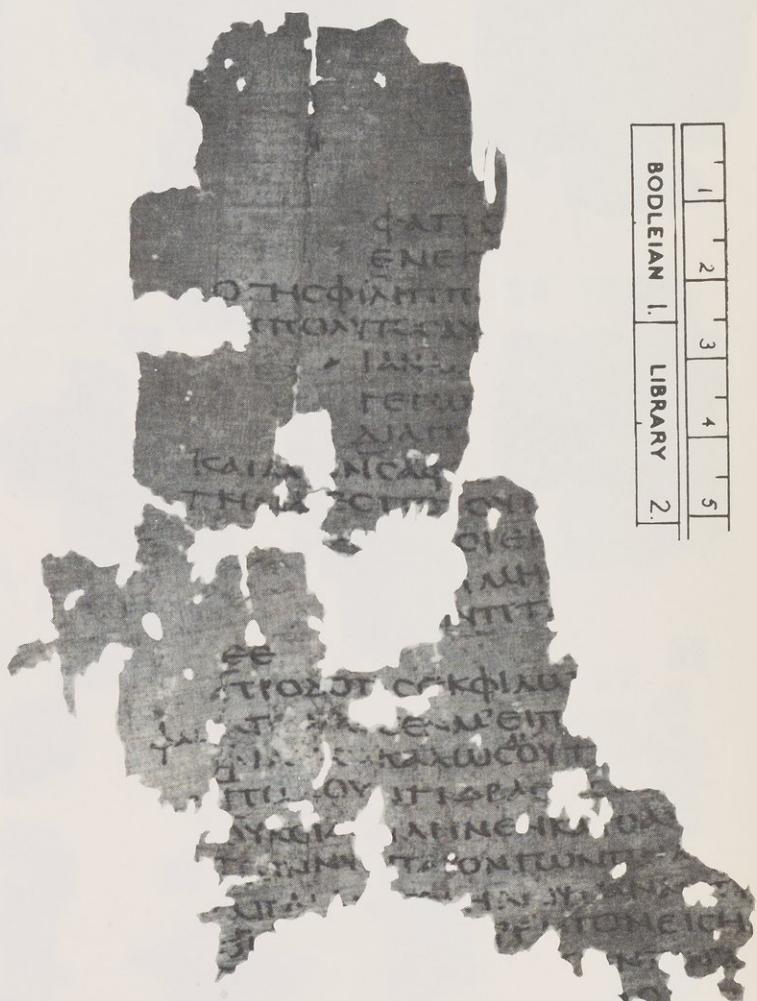


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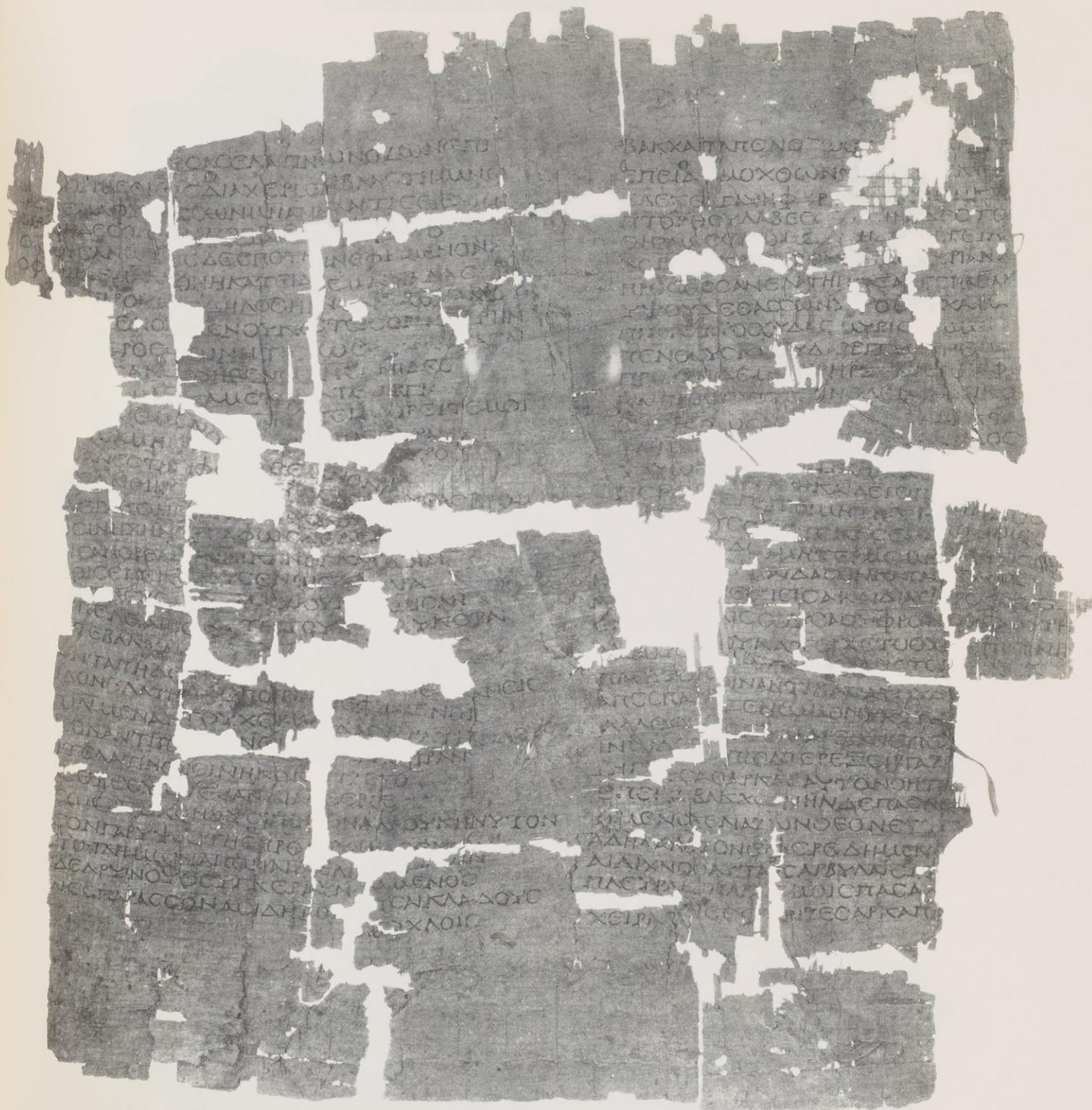


Number 8: *P. Cairo Inv. 56224*

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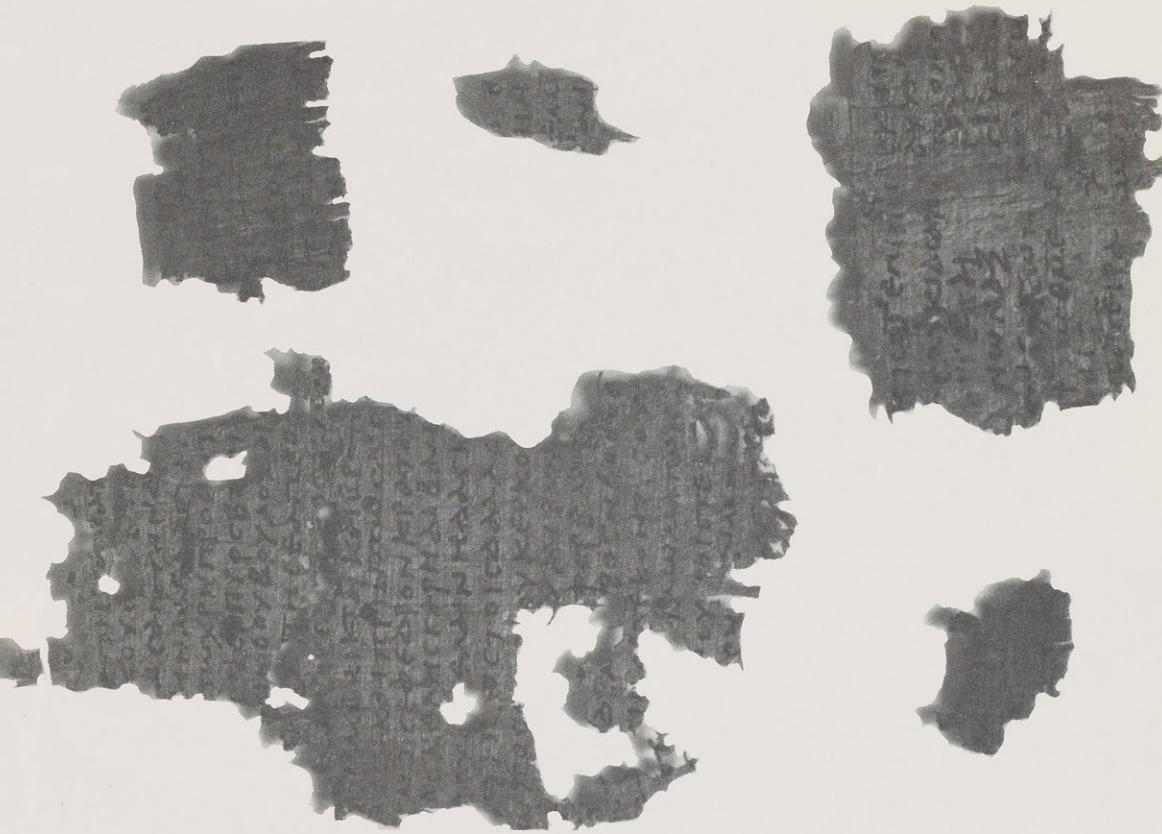


Number 7: *P. Oxy.* 2224



Number 6: P. Oxy. 2223

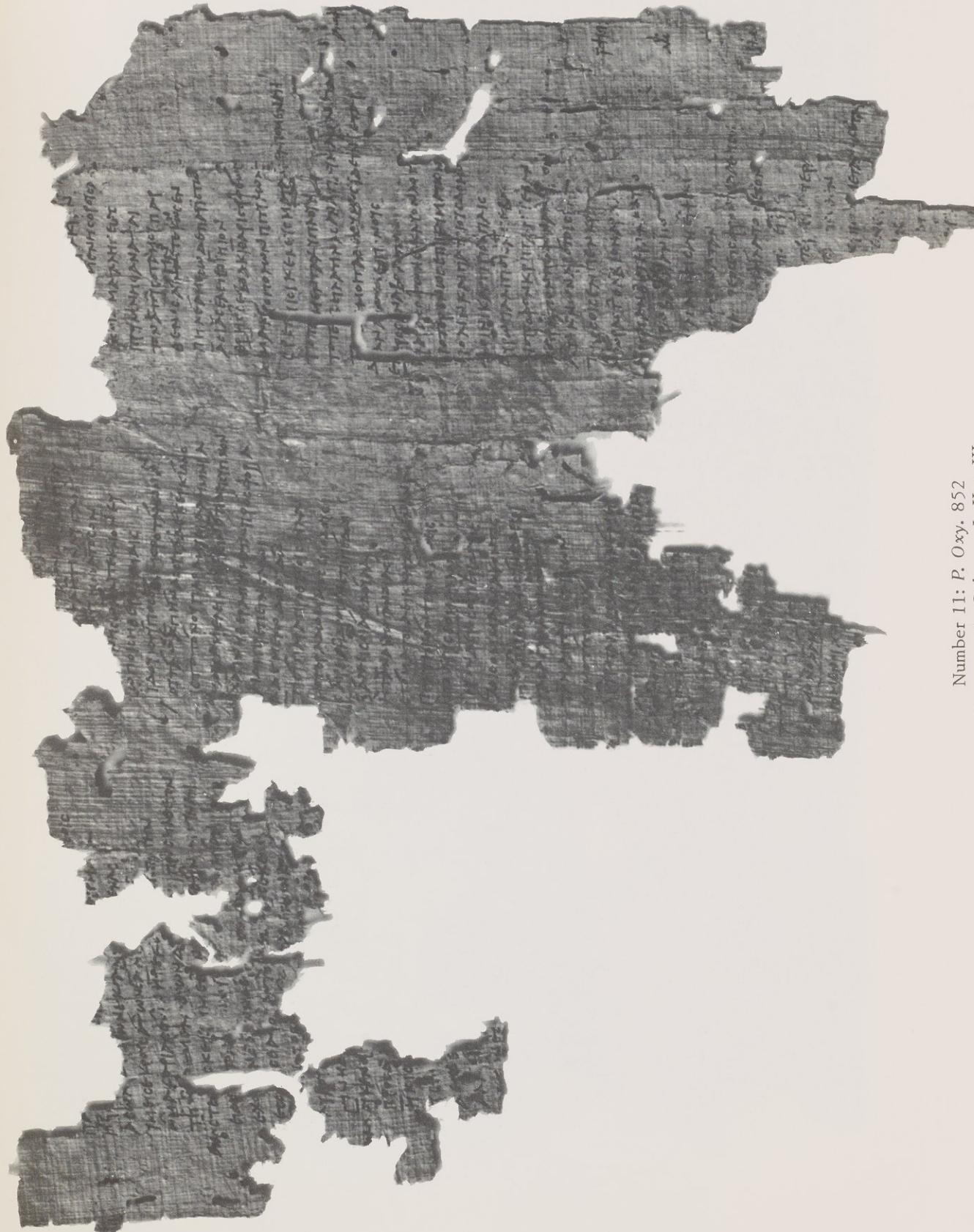
1 2 3 4 5  
BRITISH MUSEUM 2



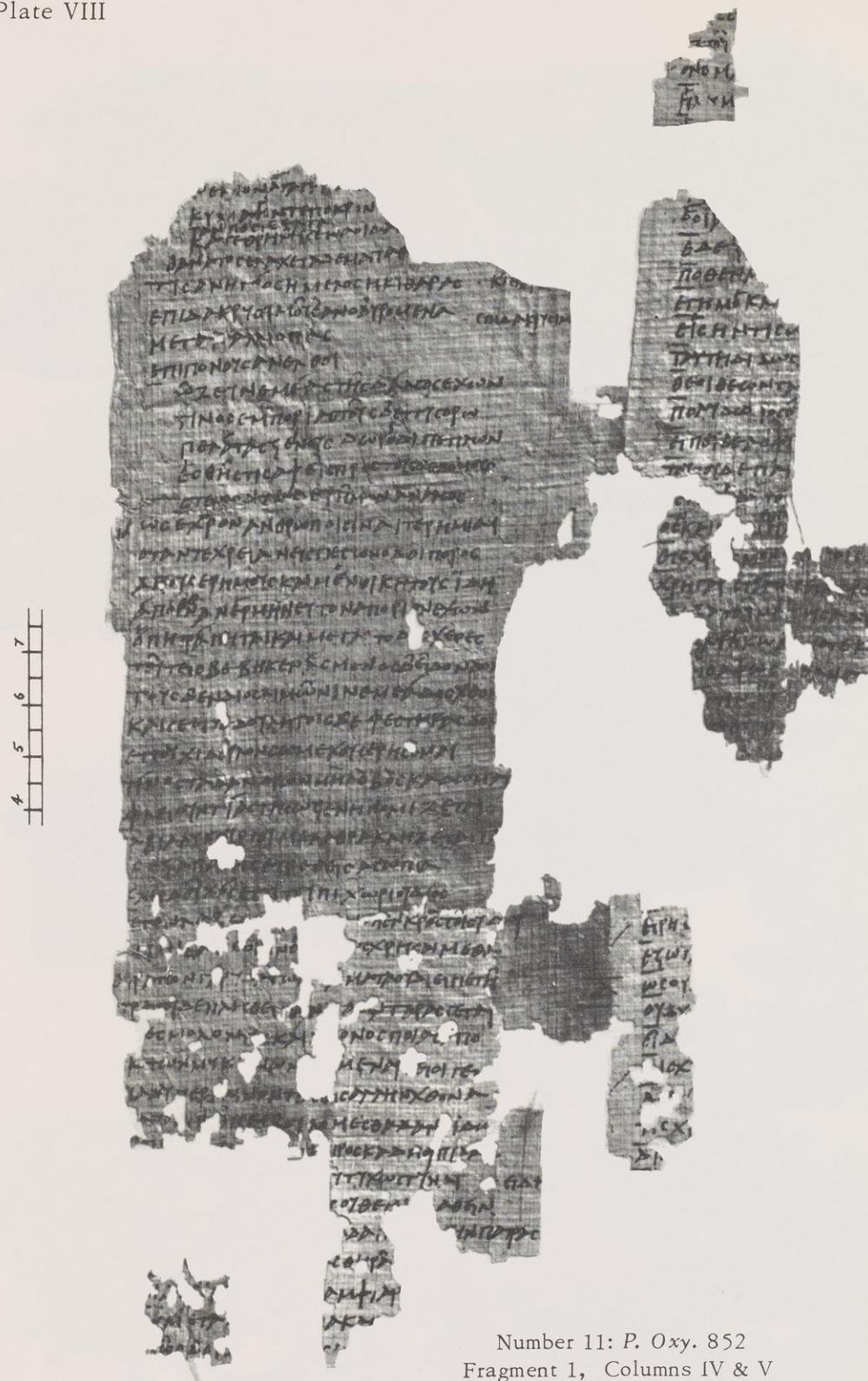
Number 10: *P. Oxy.* 2461



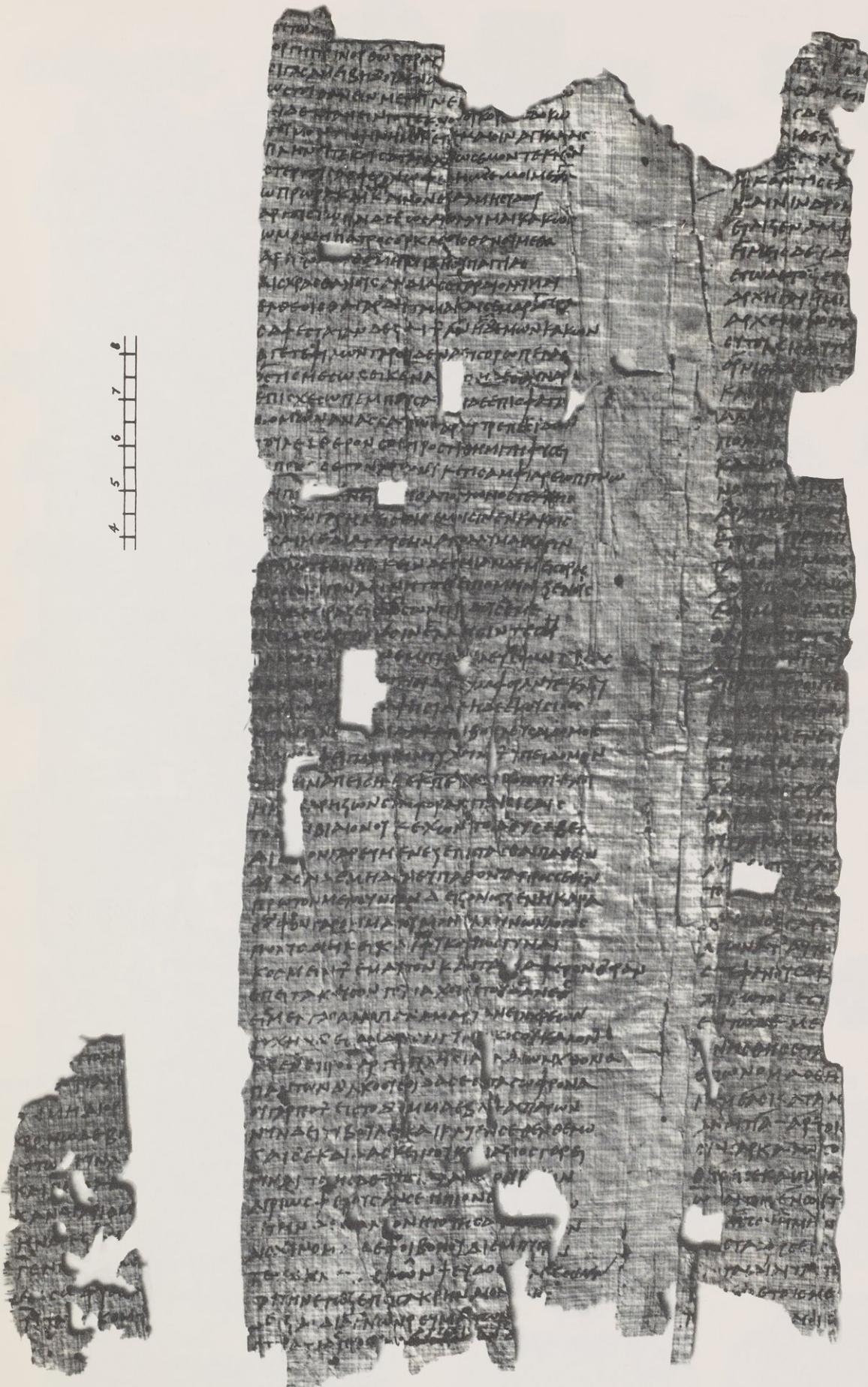
Number 9: *PSI* 1193



Number 11: *P. Oxy.* 852  
Fragment 1, Columns I, II & III  
Fragment 2



Number 11: *P. Oxy.* 852  
Fragment 1, Columns IV & V  
Fragment 4



Number 11: *P. Oxy. 852*  
Fragments 22 & 60, Columns I & II

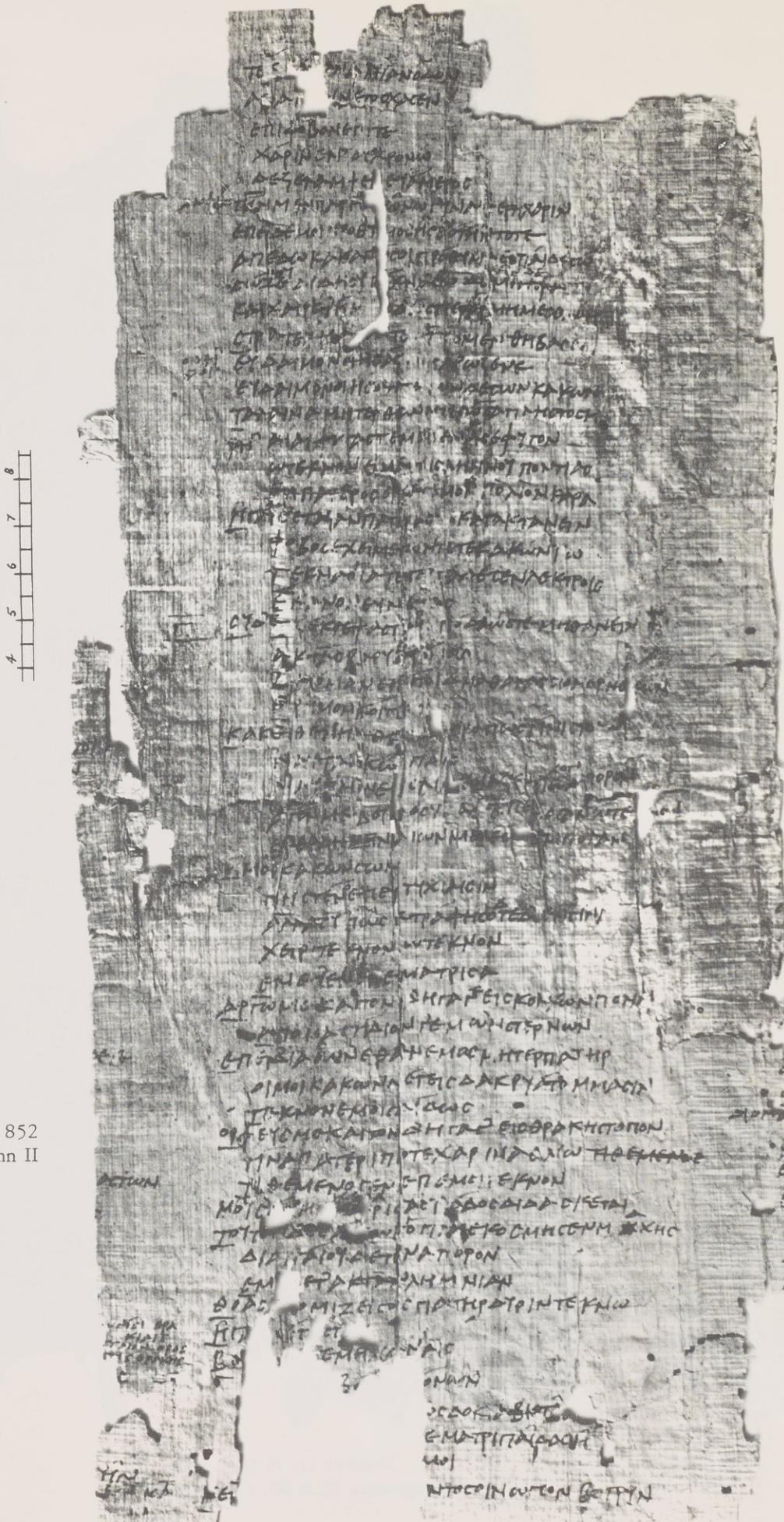
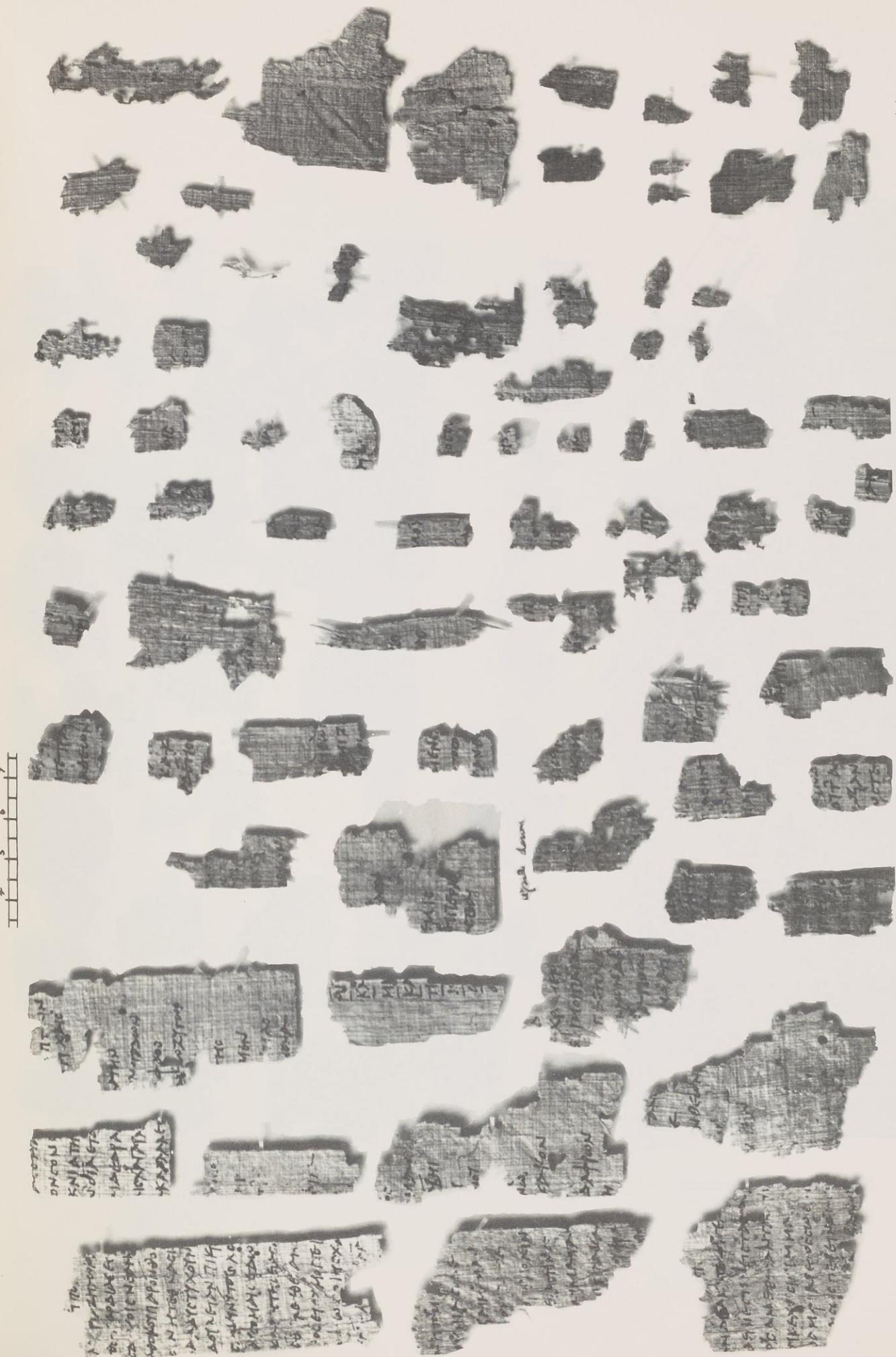


Plate XI



Number 11: P. Oxy. 852

Plate XII



Number 11: P. Oxy. 852

Plate XIII

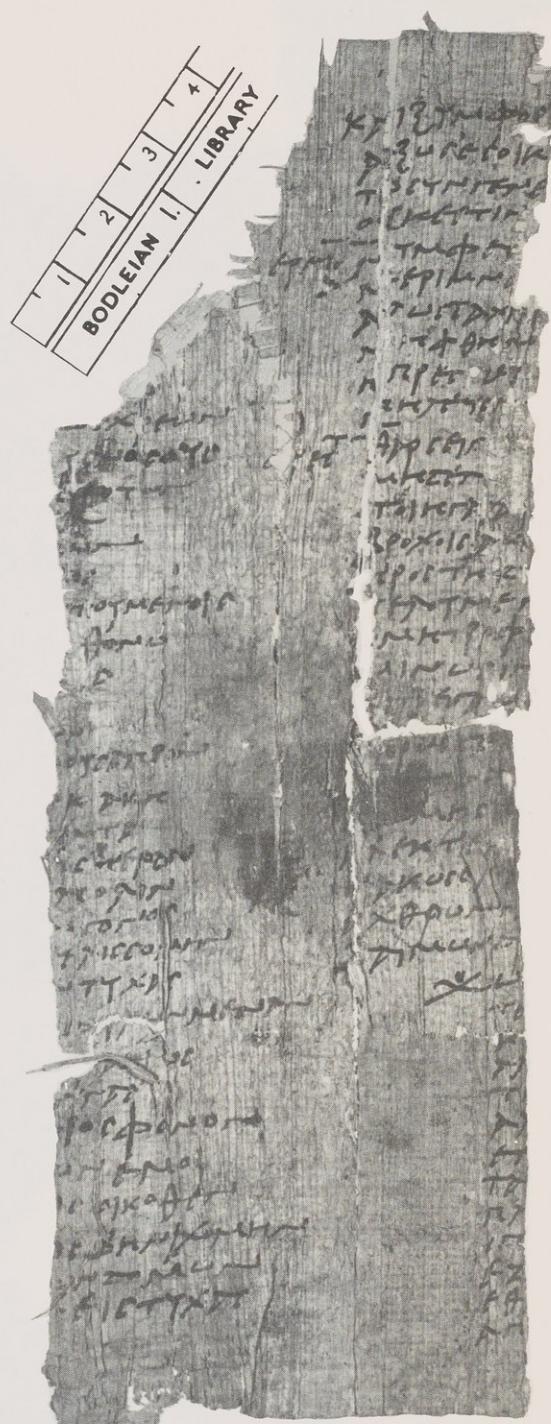
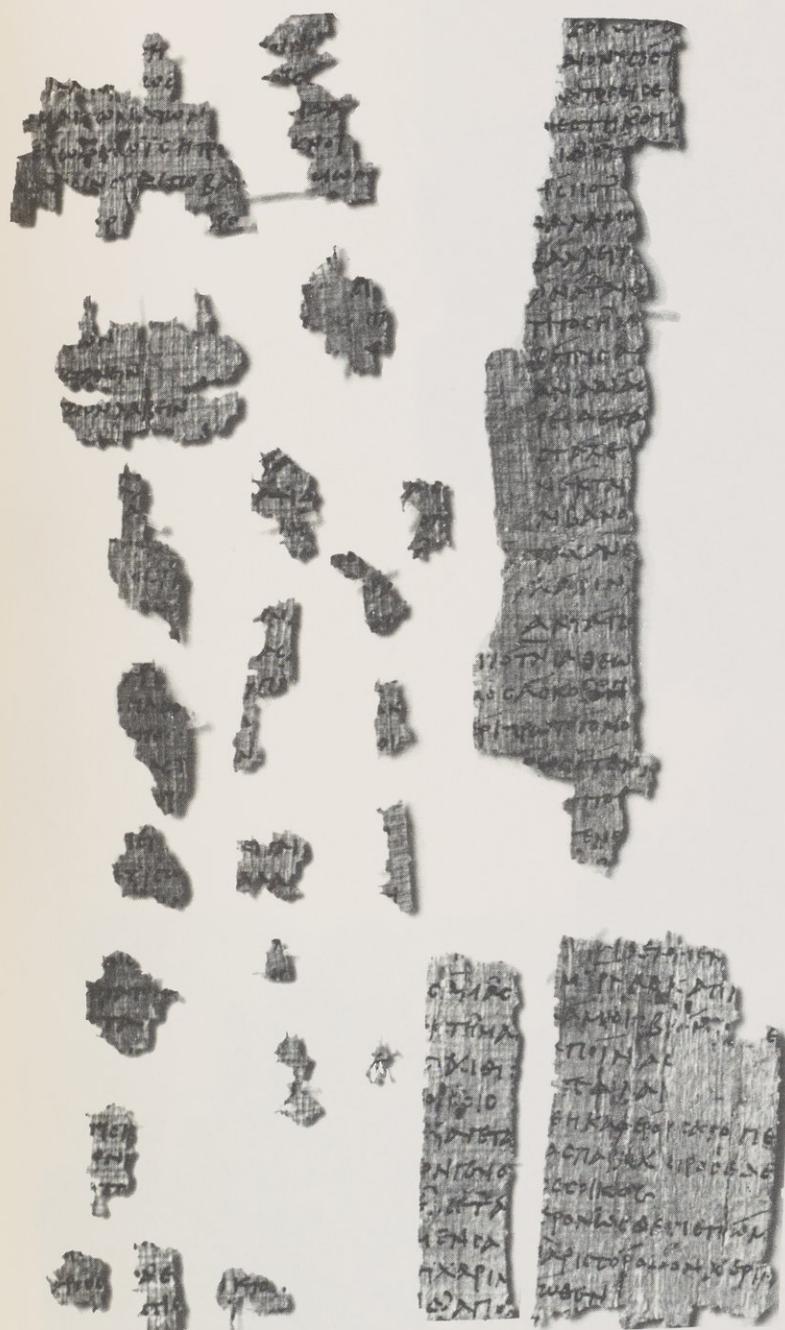
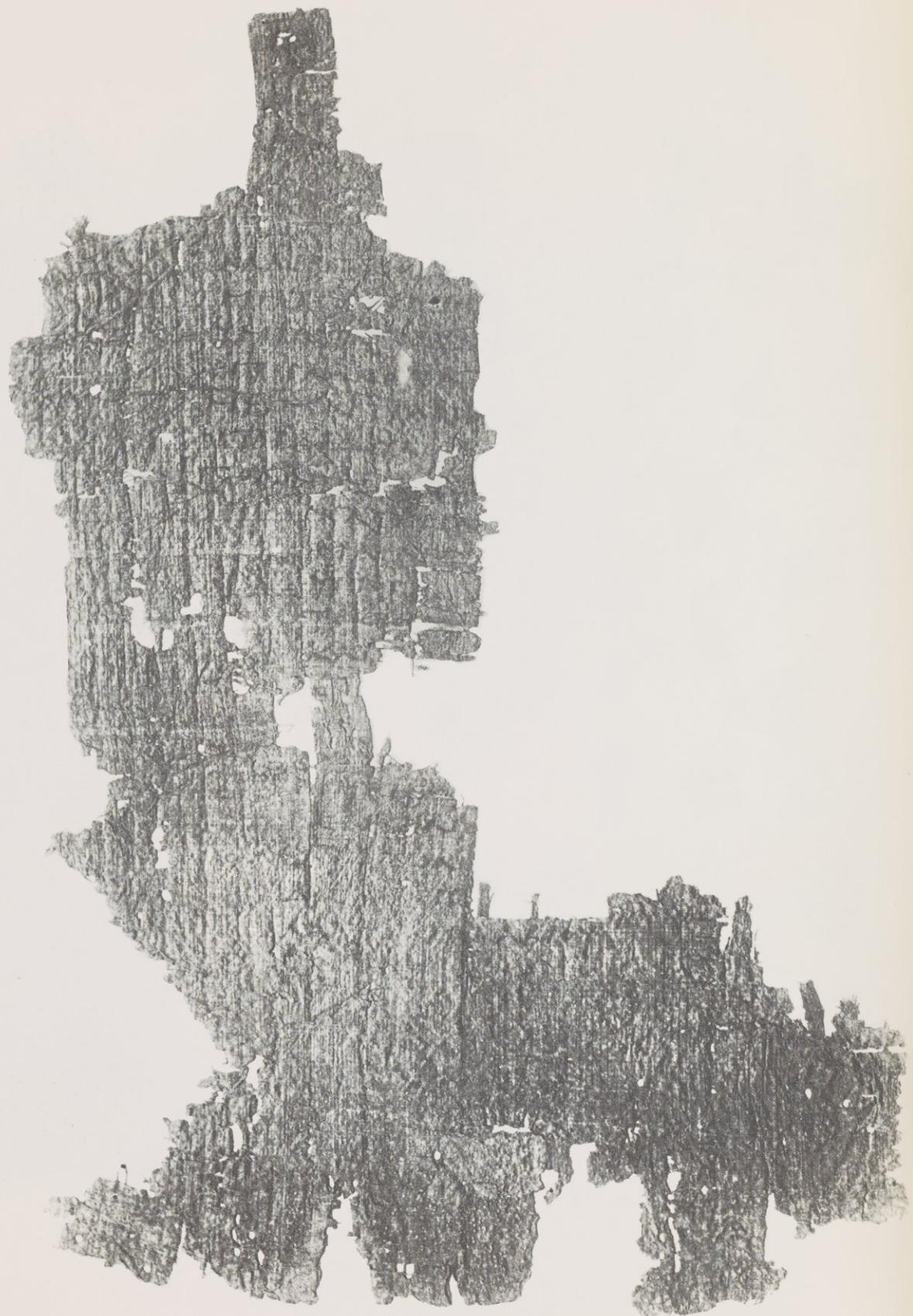
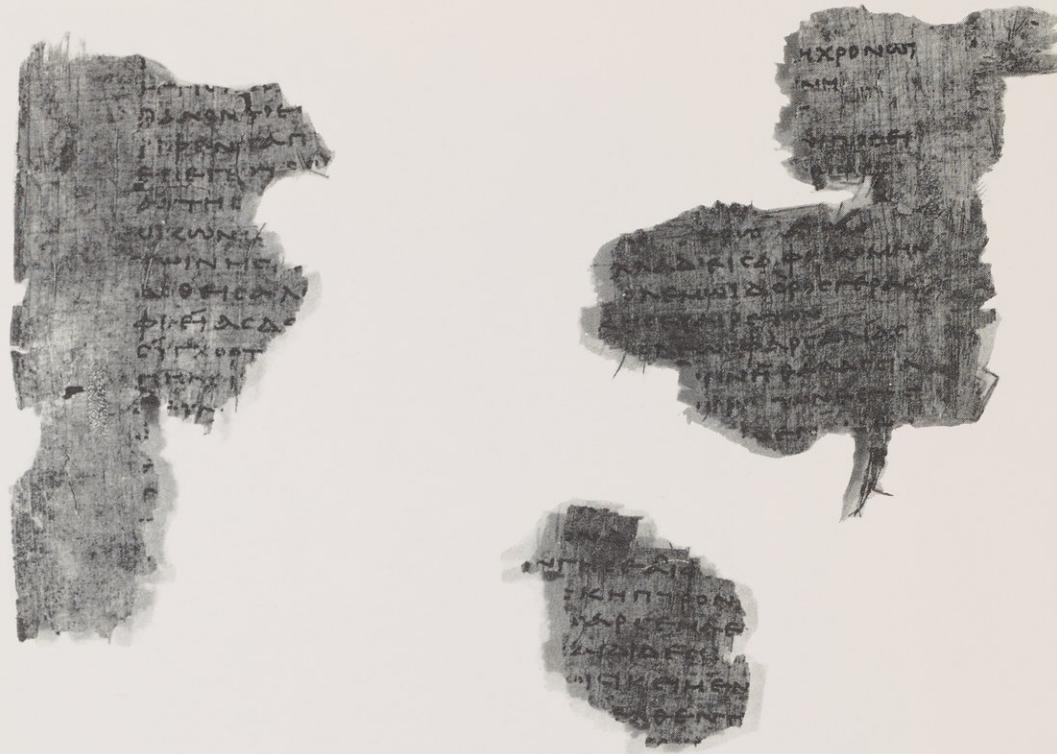


Plate XIV

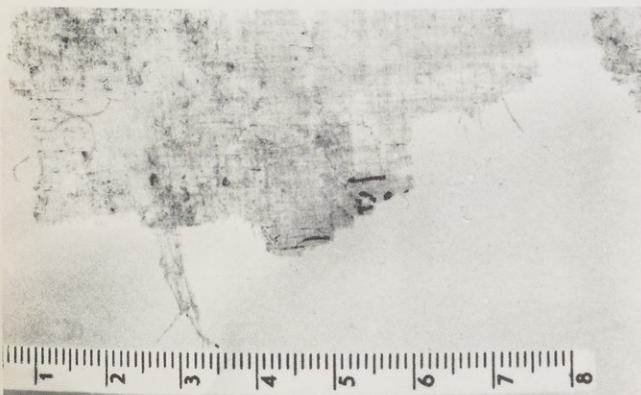


Number 12: *PSI* 1302

Plate XV



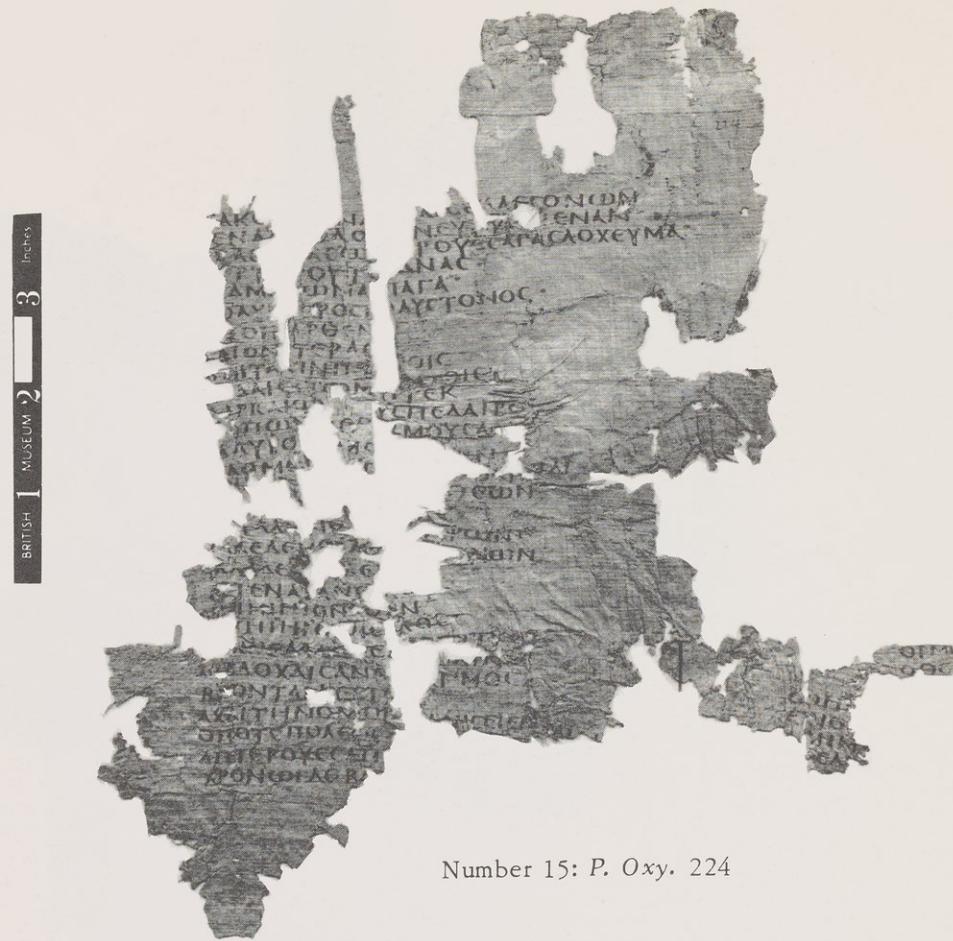
Number 14: *P. Oxy.* 449  
Recto



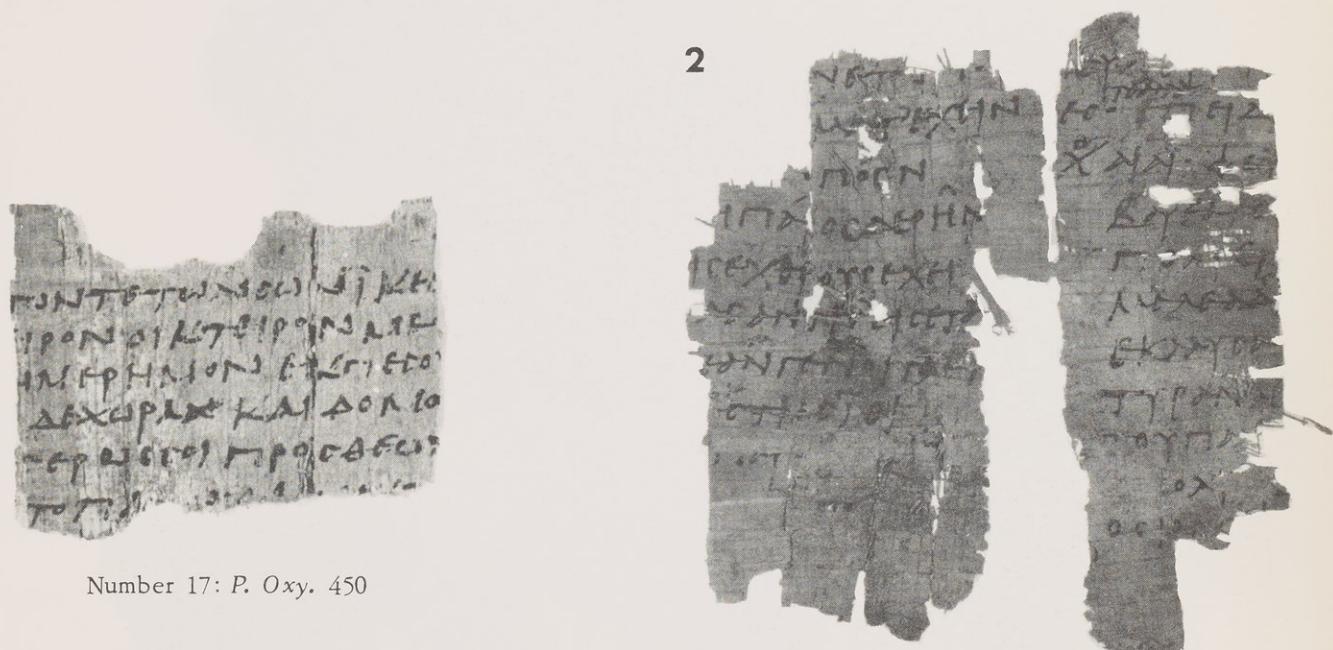
Number 14: *P. Oxy.* 449  
Verso



Plate XVI



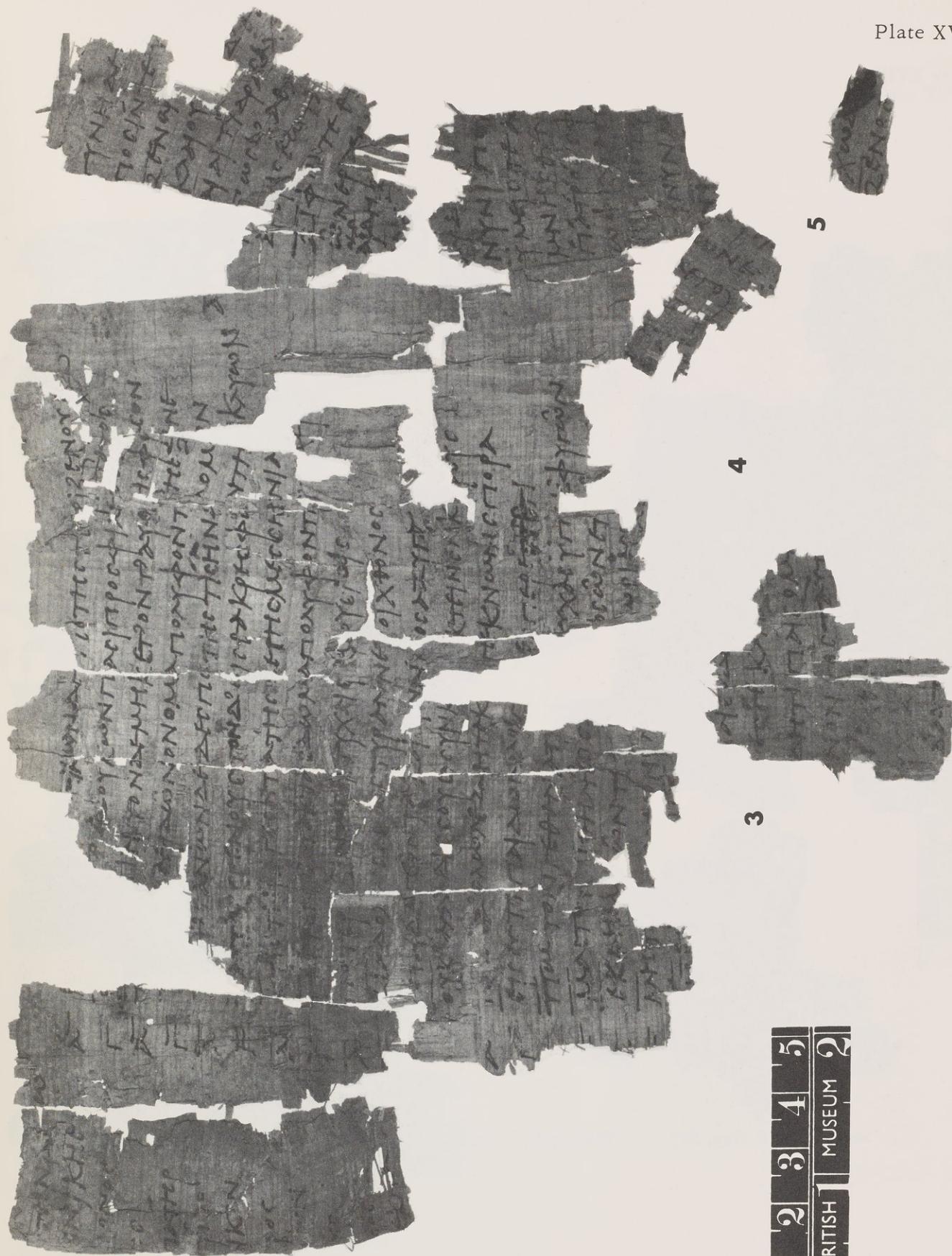
Number 15: *P. Oxy.* 224



Number 17: *P. Oxy.* 450

Number 18: *P. Oxy.* 2458

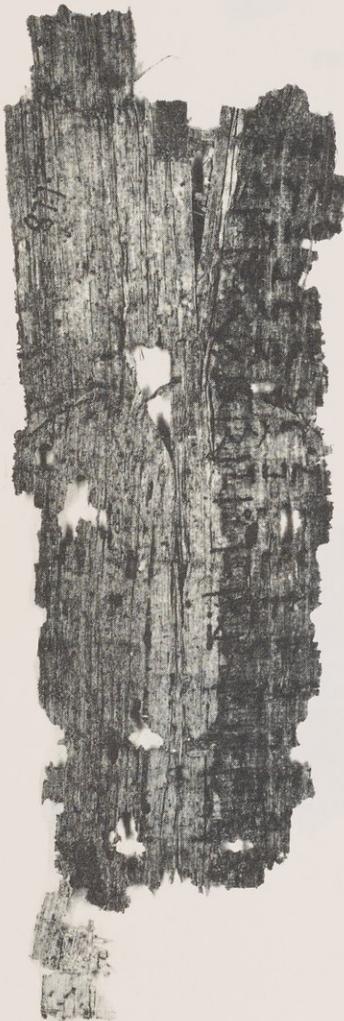
Plate XVII



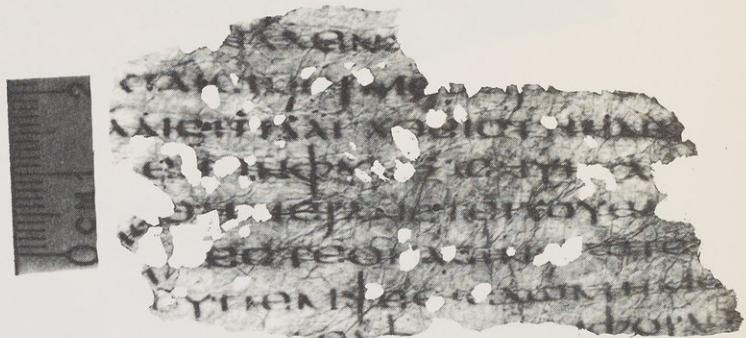
Number 18: *P. Oxy.* 2458

Cms. 1	2	3	4	5
Ins. BRITISH	1	MUSEUM	2	

Plate XVIII



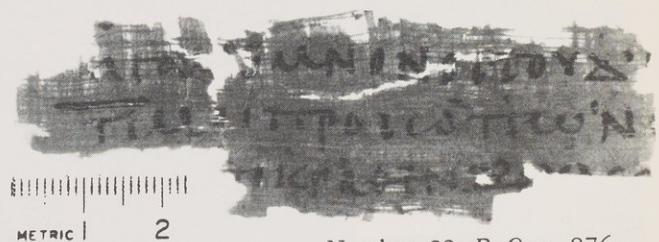
Number 19: *P. Oxy.* 877



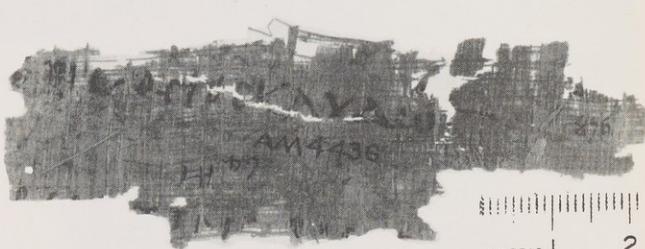
Number 21: *P. Oxy.* 1616  
Recto



Number 21: *P. Oxy.* 1616  
Verso

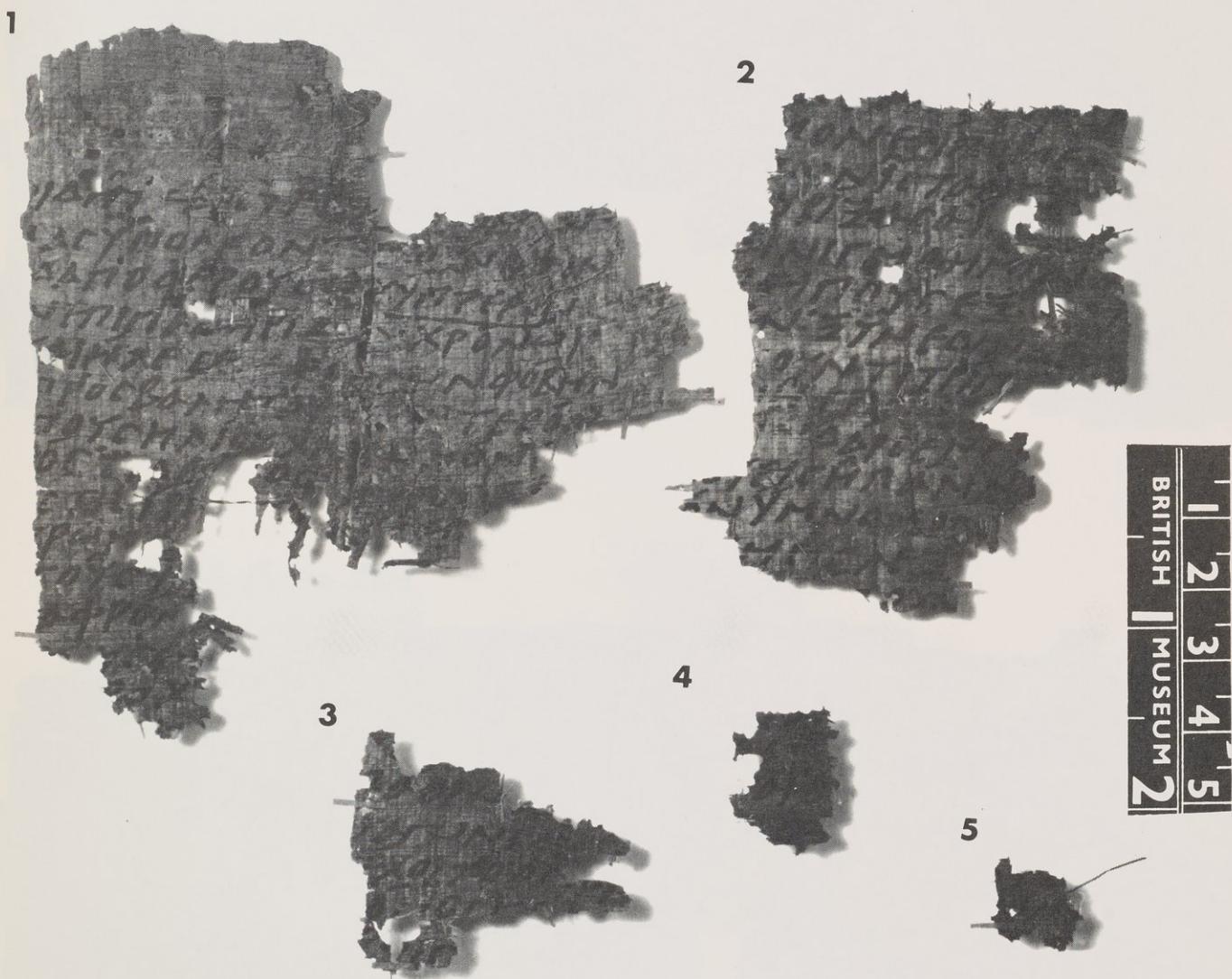


Number 22: *P. Oxy.* 876  
Recto



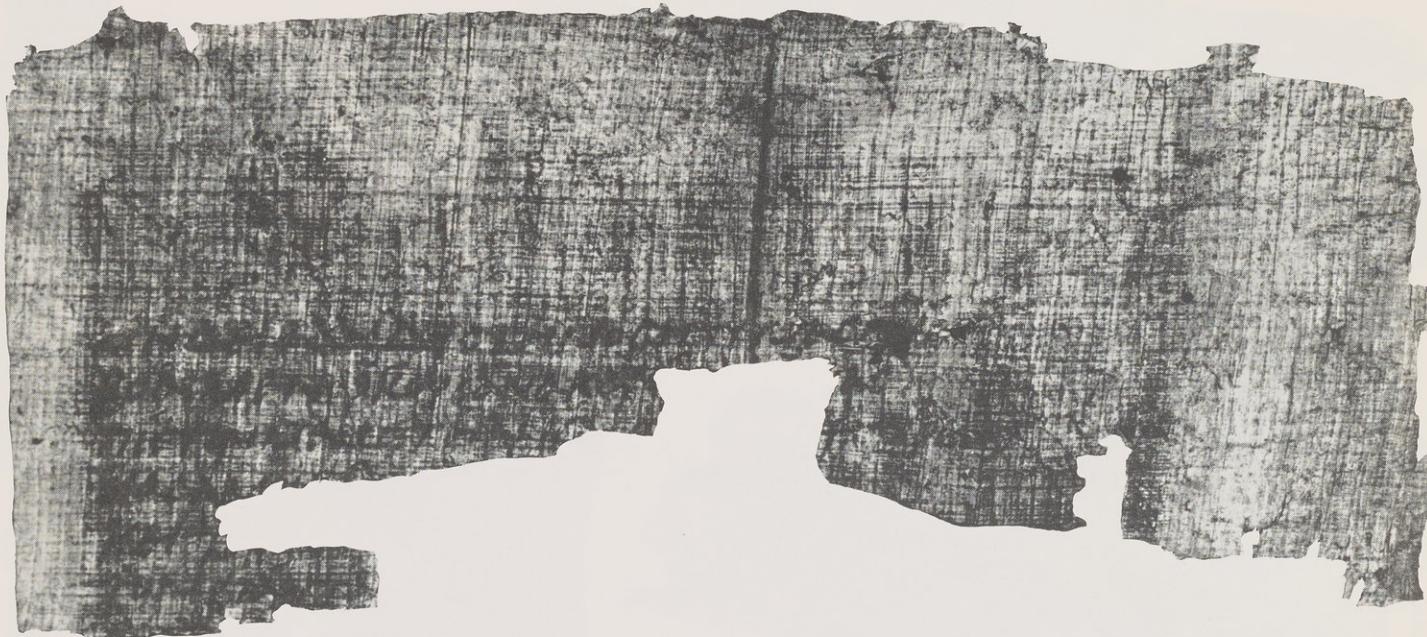
Number 22: *P. Oxy.* 876  
Verso

Plate XIX

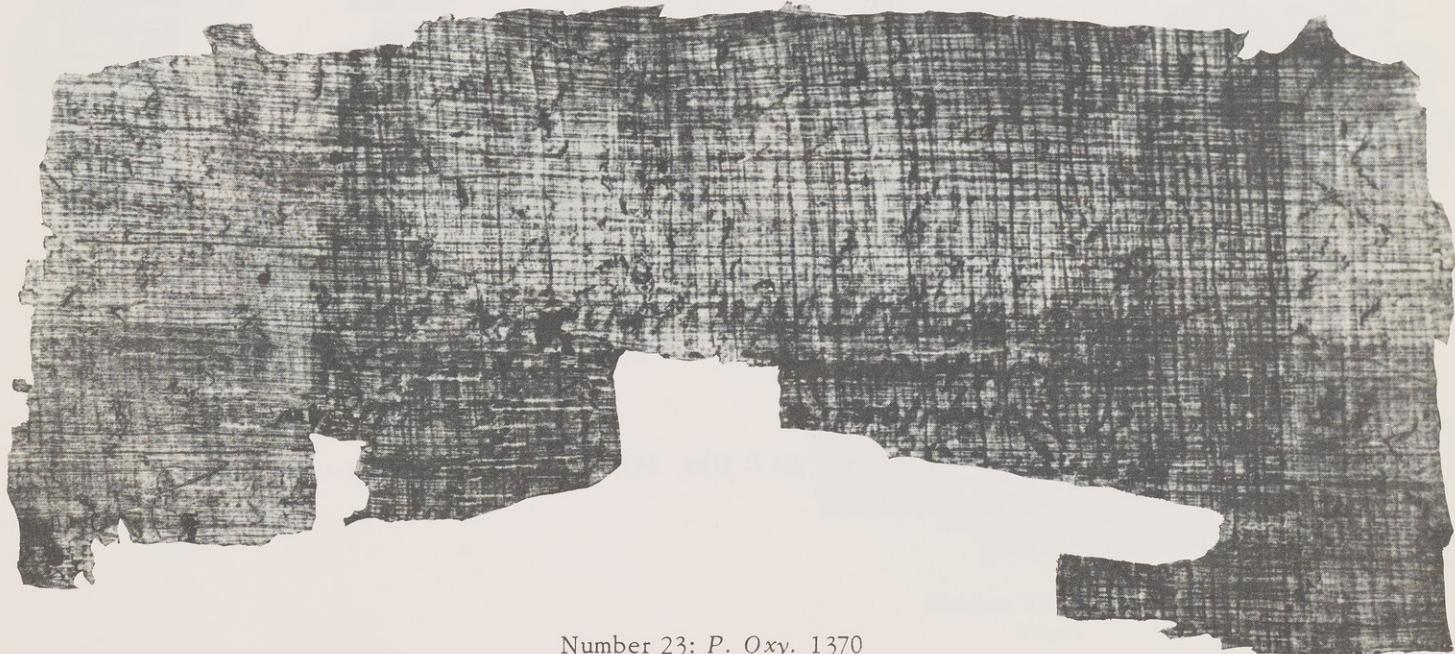


Number 20: *P. Oxy.* 2459

Fragment 1  
Recto

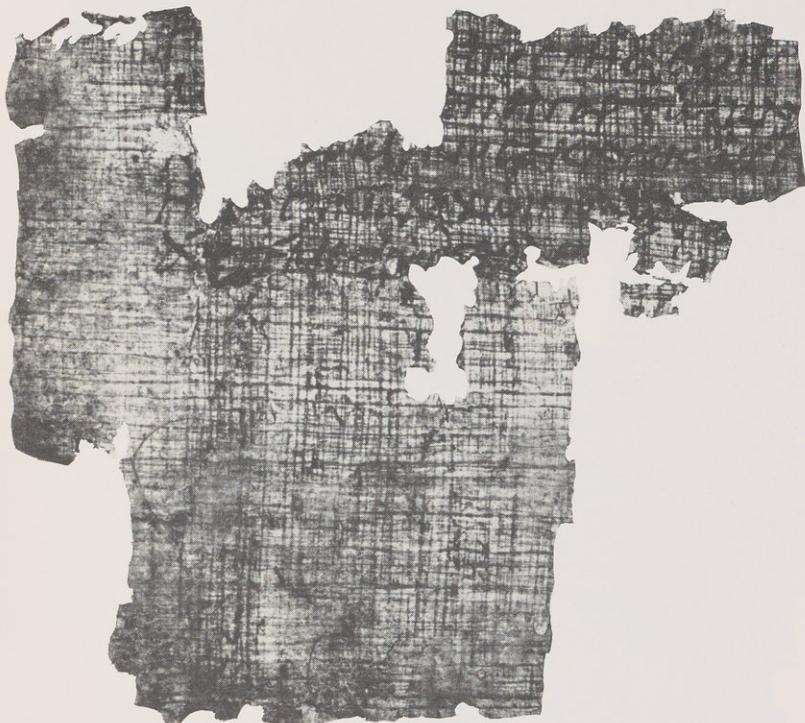


Fragment 1  
Verso

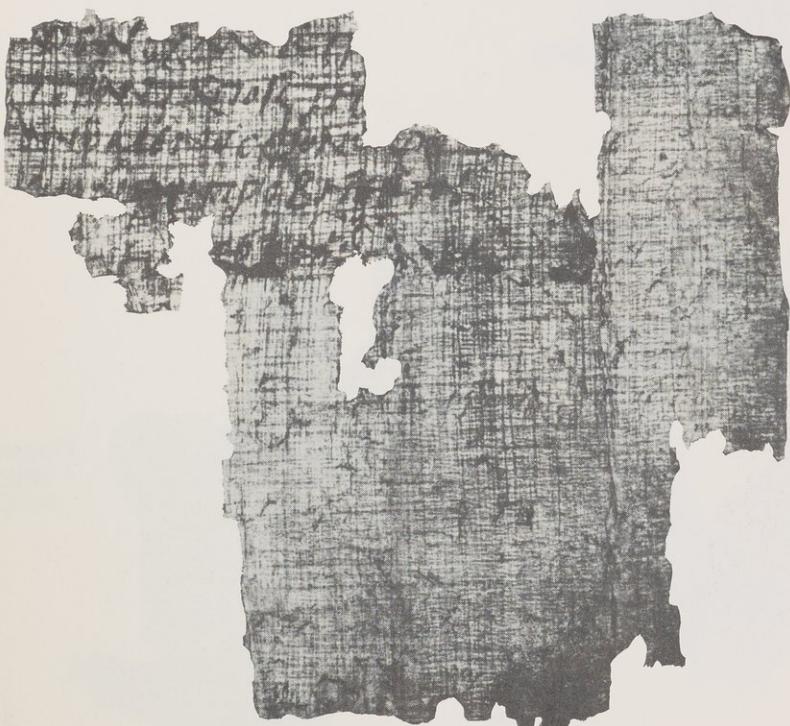


Number 23; *P. Oxy.* 1370

Fragment 3  
Recto



Fragment 3  
Verso



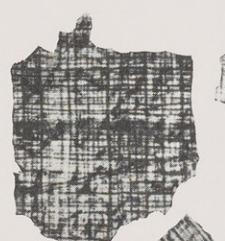
Number 23: *P. Oxy.* 1370

Plate XXII



Fragment 9  
Recto

Fragment 2  
Recto



Fragments 4 & 5  
Verso



Fragment 6  
Verso



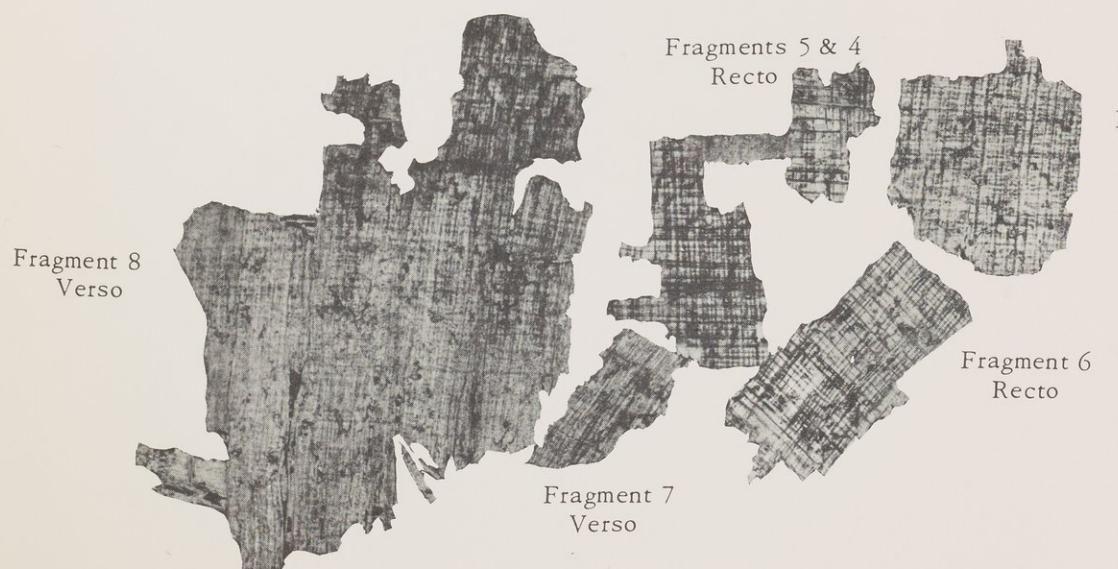
Fragment 7  
Recto



Fragment 8  
Recto



Fragment 9  
Verso



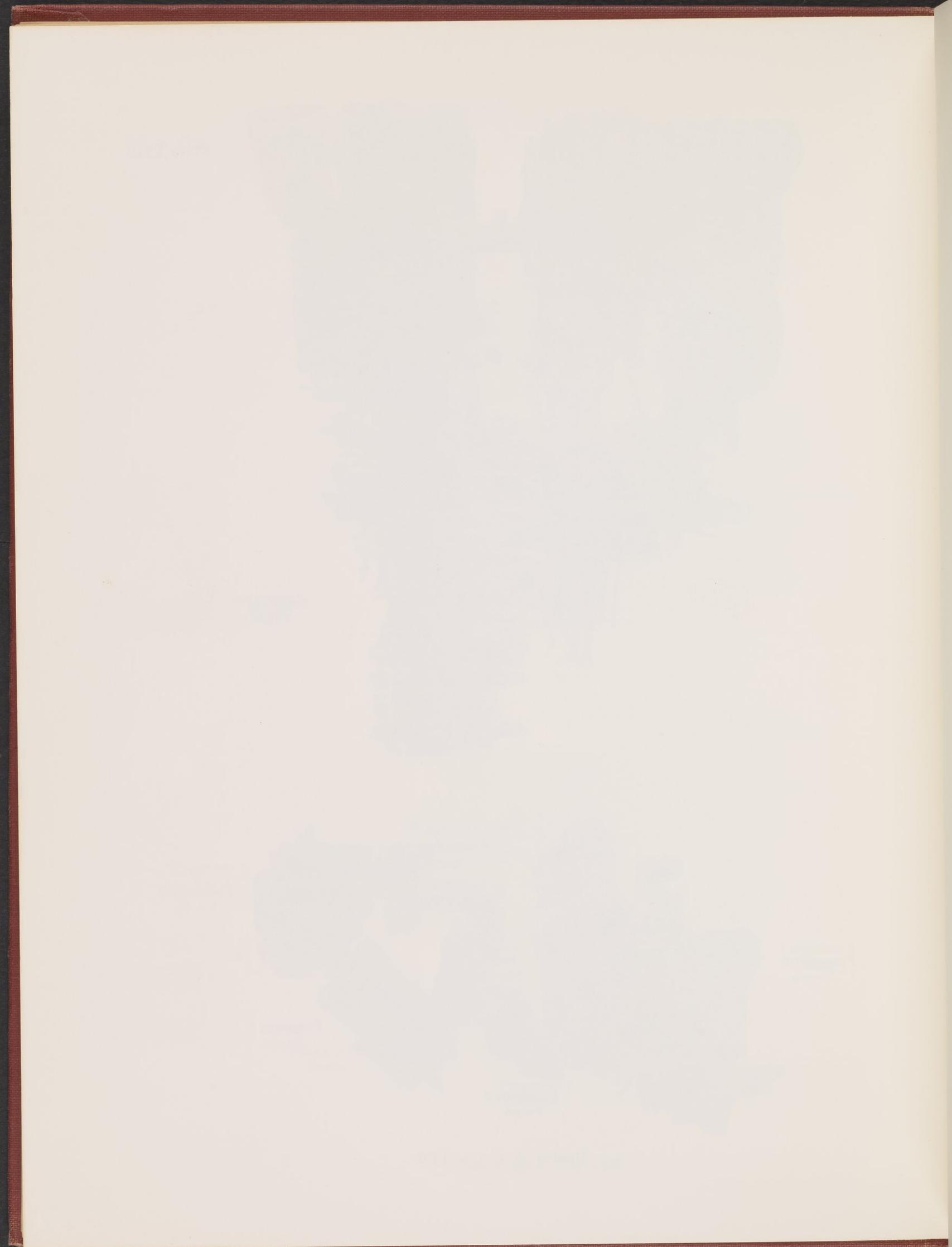
Fragment 8  
Verso

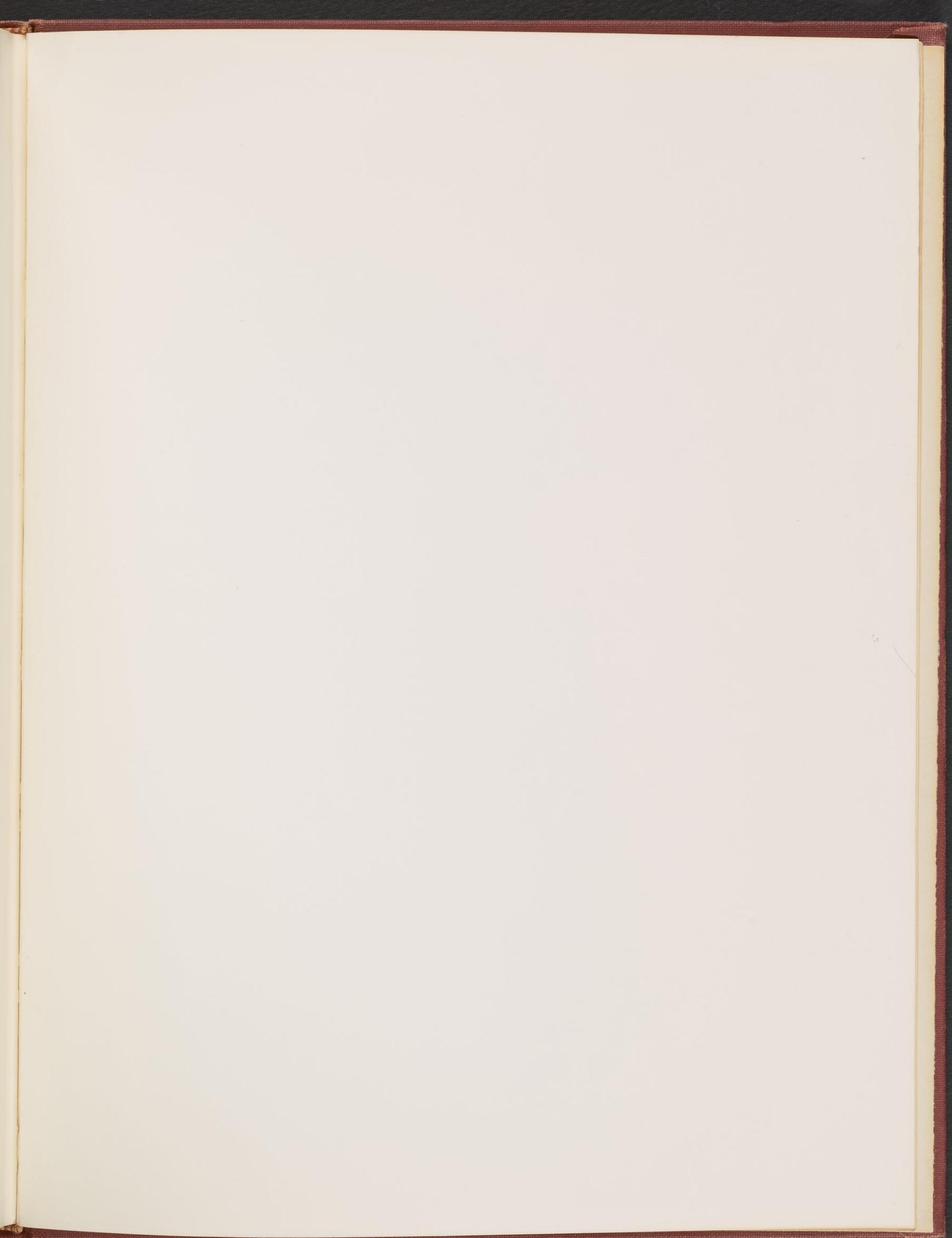
Fragment 5 & 4  
Recto

Fragment 2  
Verso

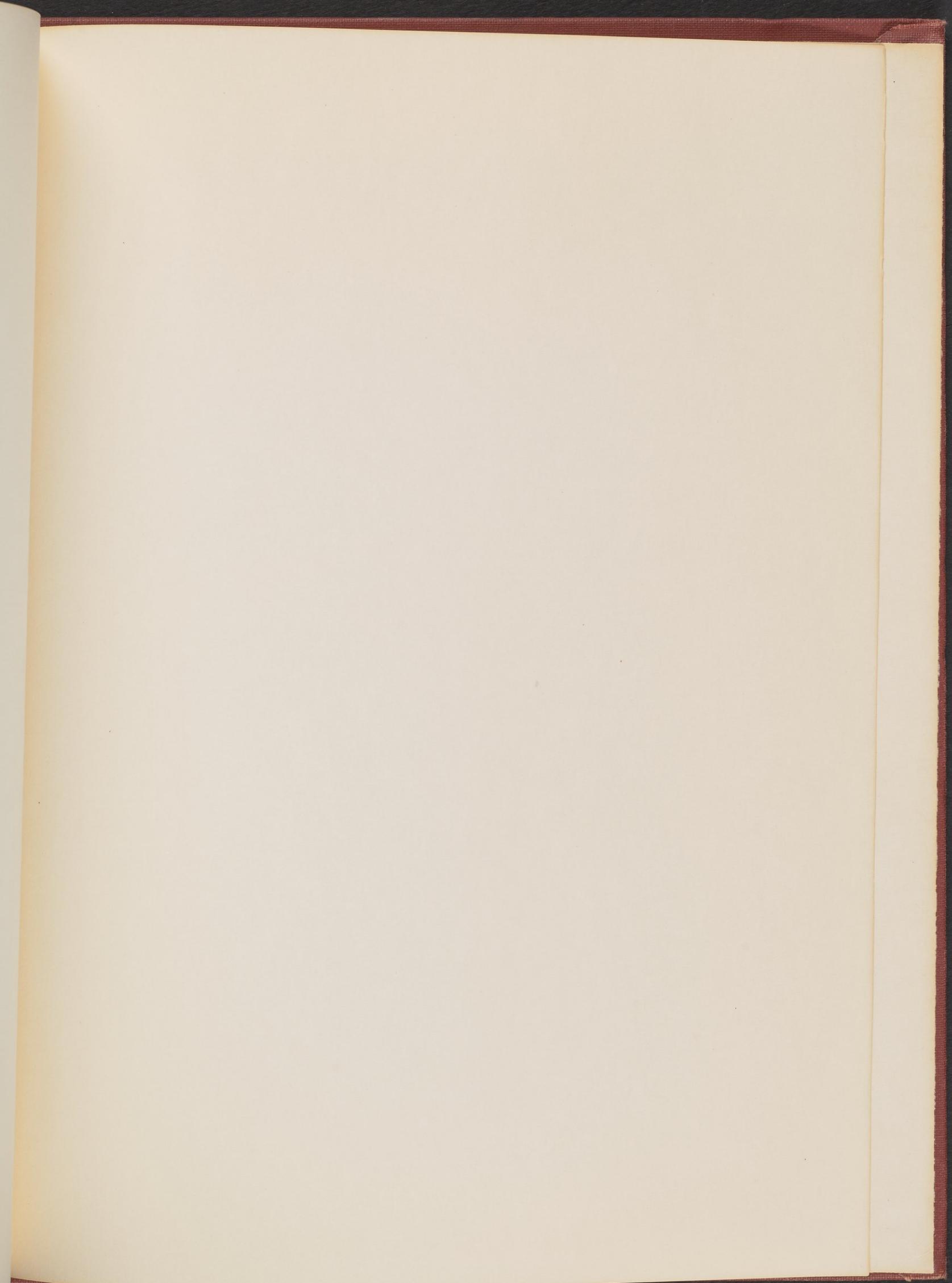
Fragment 6  
Recto

Fragment 7  
Verso









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