

# A Census of the Literary Papyri from Egypt

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SINCE the discipline of Graeco-Roman papyrology came of age some eighty years ago, thousands of papyri, both literary and documentary have been published. In his richly informative new introduction to the field,<sup>1</sup> E. G. Turner, who is doubtless in a better position to estimate than anyone else, guesses the number of published documents in Greek and Latin to lie between 15,000 and 20,000; the number of literary papyri already published must now have exceeded 3,000. Although there is no way to guess the number of either which remain unpublished in European and American collections, Professor Turner estimates that fewer than half the texts from the great Oxyrhynchus collection over which he presides have been published, and of the field at large remarks that "at least as many texts still await an editor as have been published" already; and beyond these, "papyri are still being discovered in Egypt faster than scholars can transcribe and edit them." If so, it is a race that scholarship will not regret to lose, for so long as fresh supplies of texts outrun the capacities of papyrologists to deal with them, optimism may prevail that discoveries of the future will equal and may surpass those of the past.

Meantime, if we stand for the moment near a midpoint in the publication of literary papyri—however transitory that point may later prove to be—a summary of the finds may be of particular interest.<sup>2</sup> In any case, an assessment of the finds is due whenever the appearance of a new catalogue makes such a reassessment possible. We must, of course, keep in mind the severe limitations of our evidence. Nearly

<sup>1</sup> Eric G. Turner, *Greek Papyri, an Introduction* (Princeton 1968) vii, 40, 45, 128.

<sup>2</sup> Professor Turner feels otherwise and expressly questions the value of statistical summaries because of "the extent to which caprice governs the survival and discovery of papyri" (*op.cit.* 30, 75). He nevertheless on occasion makes illuminating use of statistical observations: on rolls and codices (pp.10–11); on the relative frequency of texts of Homer and Euripides, e.g. (97f; cf. 81); concerning the period of selection of the classical texts which were to survive (123f); on factors affecting the relative frequency of finds (43–46). The interest inherent in statistical observation was well illustrated by its use in C. H. Roberts, "Literature and Society in the Papyri," *MusHelv* 10 (1953) 264–79.

all our papyri come from a single province of the Graeco-Roman world; and Egypt in many ways—in geography, tradition and political isolation—was a province atypical of the rest. Nor can our extant texts have derived uniformly from all Egypt. Since the survival of papyrus depends on complete protection from moisture, the rainfall of Alexandria and the flourishing Delta, the annual inundations of the Nile, irrigation, and the gradual rise of the water table over the centuries—not to mention other natural enemies—must necessarily have robbed us of the vast majority of ancient texts. On top of this are the vagaries of chance finds and the infrequency and limited coverage of organized excavations. By their nature, however, these deficiencies (except for the first) tend to enforce a random sample of the millions of texts once current in antiquity, and yield some confidence that survivals have not been deliberately distorted. The testimony for social history is never complete, but we must observe what we can. Provided we do not expect frequency counts of incompletely reported survivals to give us final truth and provided we refrain from pressing inferences beyond those which our evidence can sustain, we can derive from statistical summaries observations of significant interest on the relative popularity of authors and genres, the rise of the codex at the expense of the roll, and even of the rate of progress now maintained in the editing and identification of ancient texts.

## I

Such a summary is now made possible by the appearance in 1965 of the second edition of R. A. Pack's meticulous catalogue of all the Greek and Latin literary papyri from Egypt which had been published through April 1964.<sup>3</sup> The following tables and the observations de-

<sup>3</sup> Roger A Pack, *The Greek and Latin Literary Texts from Greco-Roman Egypt*, 2nd rev. and enlarged ed. (Ann Arbor 1965) [hereafter PACK<sup>2</sup>], which lists every published or reported text on papyrus, parchment, ostrakon or tablet, with full bibliography for each. The few texts of other than Egyptian provenience (Dura, Nessana, Judaea) are included except those from Herculaneum and Ravenna. To his second edition Professor Pack has added a list of patristic texts; but Biblical and other Jewish, Christian and Gnostic texts remain excluded.

After publication of his second catalogue Professor Pack generously prepared for me the following list of corrigenda which he had collected through August 1966: "There are four doublets which should be combined: nos. 97 and 2408, 185 and 1384, 2335 and 2664, 1991 and 2534 (this is actually Isocrates 2.32–36, identified by F. Seck, *Hermes* 94 [1966] 109–11). Nos. 461 and 2167 belong to the same papyrus. J. Bingen, *Cd'Ég* 40 (1965) 351 and 484, has discovered that 717 and 723 belong to the same papyrus, also 8 and 2858; and J. Lenaerts, *Cd'Ég* 41 (1966) 144–59, has found that 5 and 6 (Aeschines) belong to the same papyrus.

rived from them are based entirely upon the new catalogue,<sup>4</sup> which I offer partly as a tribute to his patient, superior and indispensable work, partly in the hope of encouraging wider interest in the literary texts and their exploitation, and in the hope that such attention to the published texts still unattributed may encourage the efforts of scholars to identify them and possibly may aid by pointing to observable trends.

TABLES I, II, III, IV and V below are based upon TABLES VII and VIII for their comprehensive summaries of the papyrus and parchment texts recorded in Pack<sup>2</sup>; comparable figures from Pack<sup>1</sup> and Oldfather's catalogue in TABLES I and II and from Pack<sup>1</sup> in TABLE III are drawn from my 1968 study and unpublished notes made in preparing it.<sup>5</sup>

In TABLE I may be observed the numbers of texts which had been published by 1922, 1951 and 1964, respectively. The growing number of literary papyri is a source of great satisfaction. But not so satisfying are the relative proportions of unattributed texts. While the identification of the Greek texts seems to be holding steady, little progress is evident in identifying the backlog of unattributed texts (more than 1100 of them) already published. One suspects that even more may be held back from publication in the hope of recognition before they are released in print. Some of the adespota, of course, are not amenable to

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No. 533: read BSAA 6.23. 1256: delete the reference to CP. 2001: read 'P.land. 5.85'. 2102 and 2570: read 'BKT 7.13-31'. 2308: read 'Aeg. 33'. 2377: read 'Archiv 4 (1908)'. 2434: read 'Archiv 6 (1920)'. 2512: read '(inv. 13405)'. 2571: read 'P.Rein. 2.83'. 2725: read 'JHS 43 (1923)'. In his subsequent article, "A Concordance to Literary Papyri: Basic Publications and Pack 2," *BullAmSocPap* 3 (1966) 95-118, Pack recorded all these corrigenda except the identity of nos. 5 and 6 (Aeschines) noted above. All these corrections, together with the entries in the "Supplement" (pp.156-59) and "Addenda" (p.165) in his new catalogue, I have incorporated in the summary tables presented in this article.

<sup>4</sup> Six years after the publication of Pack's first catalogue, *The Greek and Latin Literary Texts from Greco-Roman Egypt* (Ann Arbor 1952) [hereafter Pack<sup>1</sup>], I published a somewhat similar summary and study based upon it ("Greek Literary Papyri from Egypt and the Classical Canon," *HarvLibBull* 12 [1958] 5-34), comparing his data with those of C. H. Oldfather, *The Greek Literary Texts from Greco-Roman Egypt: a Study in the History of Civilization* (Madison 1923). The fuller discussion contained in the 1958 article I shall avoid repeating here, even where still relevant. The findings of the 1958 article were made more awkward to use and quite difficult to verify because of my ill-advised attempt to bring Pack's 1951 collection up to date by including the then uncatalogued texts published through 1956 (*op.cit.* 9 n.10). Consequently my 1958 tables (except for TABLE I) do not represent solely the data of Pack<sup>1</sup>, and cannot properly be compared with corresponding tables in the present article. To facilitate comparison with future catalogues, therefore, I have confined the following tables strictly to the data of Pack<sup>2</sup> and his corrections listed in n.2 above.

<sup>5</sup> *op.cit.* (*supra* n.4) TABLE I and pp.8-11.

TABLE I

## TOTALS OF LITERARY PAPYRI REPORTED

Catalogue: Date of preparation:	Oldfather August 1922		Pack (1st ed.) September 1951		Pack (2nd ed.) April 1964	
	no.	%	no.	%	no.	%
<b>GREEK TEXTS</b>						
Attributed	721	63.9	1242	55.6	1612	58.1
Unattributed	407	36.1	990	44.4	1159	41.9
Total	1172 <sup>1</sup>		2232 <sup>11</sup>		2771 <sup>111</sup>	
<b>LATIN TEXTS</b>						
Attributed	—	—	44	53.0	52	42.6
Unattributed	—	—	39	47.0	70	57.4
Total	—	—	83		122	

<sup>1</sup> Total of the attributed and unattributed papyri consolidated from Oldfather's Tables III and IV as shown, plus 44 undated papyri not classified as to attribution.

<sup>11</sup> Includes 8 Dioscorus, 10 divination and 53 undated papyri not included in Oldfather's catalogue. Does not include Pack's 106 school exercises (mostly ostraca and tablets), 22 shorthand texts, inscriptions and graffiti, and texts not of Egyptian provenience.

<sup>111</sup> Excludes inscriptions, graffiti, ostraca and tablets. Includes all texts on papyrus and parchment other than writing exercises, including 73 patristic texts, a category not included in Pack<sup>1</sup>. See note 3.

attribution, belonging to such originally anonymous genres as the *Acta Alexandrinorum*, glossaries, mathematics and other subliterate types; but these comprise little of the verse and perhaps only a third of the prose fragments (see TABLE VII, end). Wider systematic study of the adespota listed in Pack<sup>2</sup> should yield significant results. Though the actual quantities are very small—as one would expect of Egypt—the rate of gain in new Latin texts from 1951 to 1964 is almost double that for Greek (47 % to 24 %). No doubt Latin papyri, being so much rarer, are given first priority in editing.

Like TABLE I, TABLE II offers some perspective on the success of the profession in publishing new Greek texts. It is encouraging to observe a significant increase in the average number of new papyri published annually during the last thirteen years. The figures suggest a generally steady flow in the editing of texts during the three periods marked by our catalogues, despite year-to-year fluctuations. But much of the progress of the latest period is due to one series, the *Oxyrhynchus*

TABLE II  
RATE OF GAIN IN PUBLISHED GREEK PAPYRI

Period	Duration	Gain in Attributed Texts	Average Annual Gain	Gain in Unattrib- uted Texts	Average Annual Gain	Total Gain in Texts <sup>1</sup>	Average Annual Gain
before 1887	—	38	—	15	—	53	—
1887 <sup>11</sup> –1922	35 years	+ 683	19½	+ 392	11	+ 1119	32
1922–1951	29 years	+ 521	18	+ 583	20	+ 1060	36½
1951–1964	13 years	+ 370	28½	+ 169	13	+ 539	41½

<sup>1</sup> For cumulative totals see Table I and notes.

<sup>11</sup> Date chosen arbitrarily, marking the start of *PRain.*, the first regularly published series.

*Papyri* (188 Greek texts, excluding *Biblica*), and within that to the phenomenal work of one scholar, Professor Edgar Lobel (150 texts of the Greek poets, 28 per cent of the gain for these years); without his single effort our record would be far poorer. Moreover, the figures make no distinction between a complete roll, such as the Bodmer Homer, and a tiny fragment, sole survivor of a roll or codex. While each counts equally for the existence of an ancient book, the figures say nothing about the amount of scholarly effort entailed or the sheer quantity of text given us.

From TABLE III we may read the proportional numbers of literary texts deriving from each century of the Graeco-Roman epoch, and collectively from the three distinguishable periods within it.<sup>6</sup> The causes—cultural, technological and archaeological—of the preponderance of papyri from the Roman period, especially from the second and third centuries, have often been proposed and explained,

<sup>6</sup> For dating I depend upon the assignments reported in Pack<sup>2</sup>, which rests upon the palaeographic judgement of the original editor of each text except where subsequent republication has revised a date. The dating of a literary hand to a century or half-century is often very difficult when no corroborating evidence is provided by associated documents, despite the aid afforded by such surveys as C. H. Roberts, *Greek Literary Hands 350 B.C.—A.D. 400* (Oxford 1955). No doubt the dating of many papyri edited in the early years, while palaeographic experience was first accumulating, would now be revised if they were to be re-examined; but it is likely that such errors are on the whole mutually compensating. To nearly half of the published papyri their editors have assigned only approximate dates, such as “second or third century.” In such cases, I have distributed the papyri of each author (or genre) equally between the alternative centuries, assigning the odd remainder after division to the century providing the larger number of more confidently dated texts.

as also the reasons for the larger number from the third century B.C. than from the second and first, and for the trailing off of texts in the later Byzantine centuries.<sup>7</sup> But hypotheses must begin with recognition of the character of our data. The figures tell us nothing directly about the relative number of texts once current in the centuries from which they are reported, but only how many texts of each period have been recovered for us—and by no means all of these, but only how many have been edited and published through August 1964.

TABLE III

PERCENTAGE DISTRIBUTION OF GREEK LITERARY POPYRI BY CENTURY (from Pack<sup>1</sup> and Pack<sup>2</sup>)

Period	Century	Number of Texts		Per Cent	
		Pack <sup>1</sup>	Pack <sup>2</sup>	Pack <sup>1</sup>	Pack <sup>2</sup>
Ptolemaic	{ 3rd B.C.	119	177	5.5	6.5
	{ 2nd B.C.	84	89	3.9	3.3
	{ 1st B.C.	74	80	3.4	2.9
		277	346	12.8	12.7
Roman	{ First	234	304	10.7	11.2
	{ Second	747	956	34.4	35.1
	{ Third	534	636	24.6	23.4
		1515	1896	69.7	69.8
Byzantine	{ Fourth	168	204	7.7	7.5
	{ Fifth	127	155	5.8	5.7
	{ Sixth	69	97	3.2	3.5
	{ Seventh	15	20	0.7	0.7
	{ Eighth	3	4	0.1	0.1
		382	480	17.5	17.5
		2174	2722	100.0	100.0
	Undated papyri	58	49		

Fluctuations by century invite the historian to seek external causes, aware in any case that we possess for any century only a tiny fraction of the texts once extant. Earlier papyri buried in deeper strata are likely to fall prey to the continually rising water table, as the bed of

<sup>7</sup> Turner, *op.cit.* (*supra* n.1) ch.iii ("Excavating for Papyri") esp. pp.26–32, and 43–47, 50; Roberts, *op.cit.* (*supra* n.2) 266, 269–70, 272–74, and concerning Latin texts 276–78; Willis, *op.cit.* (*supra* n.4) 11–13; and most fully by H. I. Bell, *Egypt from Alexander the Great to the Arab Conquest: a Study in the Diffusion and Decay of Hellenism* (Oxford 1948) 2–3, 6, 10–14, 42, 46–47, 53–59, 70–75, 80–85, 93, 127–28.

the Nile gradually silts up. For papyri of the two later Ptolemaic centuries we are thus far dependent on the yield of a very few sites. Beginning in the first Roman century the great finds at Oxyrhynchus (and other major sites) swell the account; the earlier papyri, at lower strata, were long ago ruined by moisture. Historians are entitled to speculate that the relative prosperity and security of the *Pax Romana*, and the deliberate Roman policy fostering Greek education, are bound to have encouraged the proliferation of books during the Roman centuries. Their survival in greater numbers, however, must be due in large measure to the opposite effect, that by the close of the third century the general economic decline and failure of the irrigation system caused progressive abandonment of outlying villages, so that papyri abandoned to drought (and thus preserved for us) were likely to be the most recent till then in use. Of still later papyri we read that untold thousands may have been sacrificed to the neglect of nineteenth century habits of private excavation.<sup>8</sup>

It is wrong, however, to allow the "caprice" of survival and discovery to deny significance to a count of the results. The greater the caprice, given appreciable numbers, the likelier it is that we have acquired a random sample.<sup>9</sup> This view is supported by the noteworthy evidence of TABLE III that the relative proportion of texts from the several periods have remained virtually constant. In 1922, when Oldfather listed 42 per cent as many texts as we had in 1964, the proportions ran: Ptolemaic 14.5, Roman 68.3, Byzantine 17.2 per cent.<sup>10</sup> It would be surprising indeed if these proportions changed significantly in the future.

## II

In TABLE IV the 150 Greek authors whose works have been identified on the papyri are arranged in the order of the descending frequency of their papyri. Clearly TABLE IV must be approached with great caution. Not only will the incidence of only one or two papyri from an author testify merely to accident, but among authors of more extensive survival our relative frequency will have been skewed out of time by any special efforts to search out and publish all texts of an author

<sup>8</sup> Turner, *op.cit.* (*supra* n.1) 21, 26.

<sup>9</sup> For the contrary view see Turner, *op.cit.* 39, 45.

<sup>10</sup> Willis, *op.cit.* (*supra* n.4) TABLE II, p.11.

TABLE IV  
ORDER OF FREQUENCY OF 150 GREEK AUTHORS ON POPYRI

Rank	Author	Number of Texts	<i>Two papyri each (29 authors):</i>	
1.	Homer ( <i>Iliad</i> ) ( <i>Odyssey</i> ) (Homerica)	657 454 136 67	Alcidamas Anacreon Aristides Apologeticus Aristoxenus*	Isaeus St John Chrysostom Lycurgus Manetho
2.	Demosthenes	83	Babrius	Oppian
3.	Euripides	75	St Basil of Caesarea	Panocrates*
4.	Hesiod	74	Cratinus*	Parthenius
5.	Callimachus*	50	Cyril of Alexandria	Satyrus*
6.	Plato	44	Dionysius Thrax	Simonides*
7.	Isocrates	43	Dioscorides	Sophon*
8.	Pindar	35	Ephorus*	Stesichorus*
9.	Thucydides	33	St Ephraem	Tatian*
10.	Aeschylus	28	Pseudo-Epicharmus*	Timotheus*
11.	Menander*	27	Herodas*	Tryphon*
12.	Xenophon	25	Irenaeus	
13.	Alcaeus*	22	<i>One papyrus each (70 authors):</i>	
	Aristophanes	22	Aeschines Socraticus*	Ps.-Gregorius
15.	Herodotus	21	Julius Africanus*	Corinthius
16.	Sophocles	20	Alexander of	Harpocratio*
17.	Sappho*	17	Alexandria*	Hellanicus*
18.	Apollonius Rhodius	15	Anaximenes of	Heraclides Lembus*
	Archilochus*	15	Lampsacus	Heraclides of
20.	Aeschines	14	Antimachus*	Miletus*
	<i>Shepherd of Hermas</i>	14	Antiphanes*	Hierocles Stoicus*
22.	Bacchylides*	11	Antiphon	Himerius
	Origen	11	Antonius Diogenes*	Hippolytus Romanus
24.	Theocritus	10	Anubion*	<i>Hymn to Demeter</i>
25.	Dioscorus*	9	Apollonius Mys*	Ibycus*
26.	Alcman*	8	Appian	Ignatius of Antioch
	Aristotle	8	Aristodemus*	Josephus
	Hippocrates	8	Arrian	Libanius
29.	Aratus	7	Basilius of Seleucia	<i>Margites</i>
30.	Euphorion*	5	Chares*	Musonius Rufus*
	Hipponax*	5	Choerilus*	Nonnus
	Lysias	5	Clement of Alexandria	<i>Oracula Sibyllina</i>
<i>Four papyri each (5 authors):</i>			Clement of Rome	Palaephatus*
	Chariton	Melito*	<i>Constitutiones</i>	Pamprepius
	Epicharmus*	Theophrastus	<i>Apostolicae</i>	Panopolitanus*
	Hyperides*		Critias*	<i>Pherecydes*</i>
<i>Three papyri each (14 authors):</i>			Ctesias*	Philemon*
	Achilles Tatius	Didymus Caecus*	Dictys*	Philicus*
	Aesop	Euclid	<i>Didache</i>	Philistus*
	Antiphon	Eupolis*	Didymus	Philostratus*
	Sophistes*	Lycophron	Grammaticus*	Phlegon*
	Astydamas*	Nicander	Dio Chrysostom	Phoenix*
	Cercidas*	Philo Judaeus	Diocles*	Polybius
	Chrysippus*	Plutarch	Dionysius*	Posidippus Comicus*
	Corinna*		(Periegetes?)	Ptolemy, Claudius
			Erinna*	St Romanus
			Eudoxus*	Simias of Rhodes*
			Eusebius	Soranus
			Favorinus*	Sosylus*
			Galen	Theognis
			Gregory of Nazianzus	Theopompus*
			Gregory of Nyssa	Tyrtaeus*

Papyri from Herculaneum are not included. Asterisks designate authors or works extant chiefly from papyri.

of particular interest. Such is the case with those poets of special interest to Professor Lobel—Hesiod, Archilochus, Alcman, Alcaeus and Sappho, Pindar, Bacchylides, Aeschylus and Callimachus: of these, Pindar has moved from thirteenth place in Pack<sup>1</sup> to eighth in Pack<sup>2</sup>, Aeschylus from seventeenth to tenth, Alcaeus from twentieth to thirteenth, Bacchylides from twenty-seventh to twenty-second, Archilochus and Alcman from far down the list to eighteenth and twenty-sixth, respectively. Except for these six dislocations, all other authors in the first thirty ranks by frequency in Pack<sup>1</sup> either remain in the same relative order of rank in Pack<sup>2</sup> or have shifted by only one place.<sup>11</sup> In other words, while Pack<sup>2</sup> records an overall gain of 24.1 per cent in Greek texts and a gain of 29.8 per cent in attributed texts, all authors except the six specified have maintained their former relative positions by sharing evenly in an average increase of 20 to 30 per cent.<sup>12</sup> Such a finding again points to the random character of the surviving papyri and affords some confidence in the significance of our data.

While we cannot say, then, that copies of Aeschylus were more prevalent than those of Menander, or that Pindar was more widely read than Thucydides, there is a high degree of probability that Plato and Isocrates were more widely circulated in upcountry Egypt (we have no evidence from Alexandria or the major Greek cities Naucratis and Ptolemais) than Thucydides and Xenophon, for example; or that Aristotle was far less current than Plato, Aeschylus and Sophocles together than Euripides, Bacchylides than Pindar, Lysias than even Aeschines, let alone Demosthenes or Isocrates. These judgements, in which we may feel comparatively secure, rest upon the preponderance of evidence from the second and third centuries of the Roman era (see TABLE VII); there is far too little data from the other centuries to afford probable comparisons, and argument must not be drawn from silence. In the case of Homer alone can we feel confident that he was the most widely read author in all centuries down to the sixth.

<sup>11</sup> Ranks in Pack<sup>1</sup> are not those presented in TABLE IV of my 1958 study, which includes texts published through 1956, but rest upon unpublished notes made in preparation of that study.

<sup>12</sup> In contrast, the masterful but selective work of Professor Lobel between the dates of Pack<sup>1</sup> and Pack<sup>2</sup> has raised the frequency in published papyri of Sappho by 54 %, Pindar 84 %, Hesiod 90 %, Aeschylus 115 %, Alcaeus 175 %, Archilochus 400 %, and Alcman 700 %! By the end of the second century of the publication of papyri, when the texts of other authors have had a chance to catch up, no doubt Lobel's poets will resume their previous order of frequency. In the meantime, we are so much the richer for his genius.

Other observations of interest may be derived from TABLE IV. While in 1922 Oldfather could record texts attributed to 85 different Greek authors (or works)<sup>13</sup> and Pack in 1951 listed 114, the 1964 catalogue contains 128, to which are added 22 Christian fathers and texts not previously catalogued. New appearances among the papyri are Anacreon, Anubion, Appian (from Dura), Aristodemus, Ctesias, Himerius, the *Hymn to Demeter*, the *Margites*, Libanius, Palaephatos, Posidippus Comicus, Simias of Rhodes and Stesichorus. Of the patristic texts newly recorded, the *Shepherd of Hermas* with 14 texts and Origen with 11 achieved significant circulation. There are 4 of Melito of Sardis and 3 of Didymus the Blind; two each of Aristides Apologeticus, St Basil of Caesarea, Cyril of Alexandria, St Ephraem, Irenaeus, St John Chrysostom, and Tatian (one from Dura); the remaining eleven are represented by one each. The productive lifetime of most of these fell within the late era from which we possess relatively few papyri.

Of surviving major classical authors the papyri preserve many fragments of lost works. In the case of Pindar, for example, there are now 8 papyri of or relating to the extant *Epinicia* (4 of *Olympian Odes*, 2 commentaries on the *Pythians*, one text and one commentary on the *Isthmians*—none of the *Nemeans*), but 25 of other classes of lost odes: 7 of *Paeans*, 4 of *Dithyrambs*, 2 of *Threnoi*, one each of *Hyporchemata*, *Parthenia* and *Prosodia*, and 7 more unidentified. Of the known poems 6 are of Roman date, 2 are Byzantine; of the new, all are Roman except the *Parthenion*, which is Ptolemaic. In provenience, 22 are from Oxyrhynchus, 2 from other towns, 9 are of unknown origin. In Roman Oxyrhynchus, our *Epinicia* were not the most popular of his poems; but only the *Epinicia* are attested in the Byzantine period and were transmitted to us.

In the papyri are found fragments of only two of the seven extant plays of Aeschylus (*Agamemnon* 1, *Seven against Thebes* 3, all from second-century Oxyrhynchus), against 24 from nineteen lost plays; of these, 23 are Roman (21 from Oxyrhynchus, nine being in the same hand), while one is Ptolemaic. Of Sophocles, six of the seven extant plays are represented by 11 texts (*Oedipus Tyrannus* 4, *Ajax* and *Electra* 2 each, one each of *Antigone*, *Oedipus Coloneus* and *Trachiniae*, none of *Philoctetes*); 8 are Roman, 3 Byzantine, and all but one are

<sup>13</sup> Four more listed by Oldfather were later reclassified and are not included.

from Oxyrhynchus. There are 9 papyri from seven lost plays, 4 of which are Ptolemaic, the rest Roman and Oxyrhynchite. As for Euripides, while the precise numbers of papyri recorded in Pack<sup>2</sup> vary somewhat from those compiled by Roberts in 1952,<sup>14</sup> the new record gives much the same testimony as the old; that two-thirds of our papyri are drawn from nineteen known plays, and among these the great majority (40 of 44) are from the ten 'selected' and annotated plays. From the Ptolemaic period we have 8 texts of extant plays and 8 of lost ones; from the Roman, 20 of extant plays against 9 of lost; from the Byzantine, 16 of extant plays against 4 of lost. As Roberts observed from earlier evidence, the select plays transmitted to us through continuing tradition were most heavily represented in antiquity, and their currency was spread throughout the entire ancient epoch; while the lost plays occurred with greatest relative frequency in the early period, and progressively grew rarer until they disappeared within the Byzantine period. The process of selection apparently began quite early.

Finally, from Aristophanes we have 18 fragments of ten of the extant plays (only the *Ecclesiazusae* is missing; the *Clouds* is commonest, with 5 texts) spread from the second to the sixth century; 2 texts only of lost plays, both from the second century. The 37 papyri of unidentified tragedies (11 Ptolemaic, 23 Roman, 3 Byzantine) and 45 unattributed papyri of Old, Middle and unidentifiable comedies (12 Ptolemaic, 27 Roman, 5 Byzantine)—presumably all from lost playwrights or lost plays—contribute to the impression that through the Hellenistic and Roman periods a great range of literature was widespread, but by the fourth century most of the 'lost' literature was already

<sup>14</sup> *op.cit.* (*supra* n.2) 270–71. Unlike Roberts, I have excluded anthologies from my calculations (also tablets and ostraca), restricting data to individual rolls and codices. Roberts' data should be revised as follows:

	Ptolemaic			Roman			Byzantine
	3	2	1	I	II	III	IV–VIII
Old Plays	5	1	2	3	11	6	16
New Plays	6	1	1	1	6	2	4

Of the known plays there are 44 texts—40 from the ten 'select' plays (*Phoenissae* 9, *Medea* 7, *Orestes* 6, *Andromache* and *Hippolytus* 5 each, *Bacchae* 4, *Hecuba* 2, and one each of *Alcestis*, *Rhesus* and *Troades*), 4 from the nine 'alphabetical' or accidentally preserved plays (one each of *Electra*, *Helen*, *Heracles* and *Iphigenia in Tauris*, none from the rest). Of the lost plays there are 21 texts (*Telephus* 4, *Hyppisypyle* 3, *Archelaus* and *Phaethon* 2 each, and one each of ten others). Oxyrhynchus provided 18 of the old plays, 6 of the new. Euripides papyri are much more widely distributed in time and place than those of the other tragedians.

very scarce. But ancient preference for the works which have survived is already discernible in the Ptolemaic period.

### III

With the figures at our disposal it is tempting to arrange the authors by the period from which their texts derive, to see whether the length of their currency may be related to their subsequent loss at the close of antiquity or their survival through the manuscript tradition of the Middle Ages. In TABLE V authors are arranged alphabetically, with no regard to frequency, in six columns according to the period or groups of periods in which their papyri were written: i. Ptolemaic only—13 authors, of whom 11 are contemporary or nearly so; ii. Roman only—65 authors, of whom 21 were contemporary with that period; iii. Byzantine only—29, including 19 contemporary with the period, the remainder (except Dionysius Thrax) being of the immediately preceding centuries; iv. both Ptolemaic and Roman—9 authors; v. both Roman and Byzantine—23 authors, of whom seven did not antedate the Roman period; finally in column vi, eleven authors of papyri deriving from all three periods. Authors some at least of whose works have been transmitted through mediaeval manuscripts are italicised.

From these lists one may observe that no author whose papyri are exclusive to the Ptolemaic period has otherwise survived; 14 (21 %) of those of exclusively Roman provenience and 20 (69 %) of those exclusively Byzantine were preserved, though eleven of the latter are patristic. The majority of those represented in the Roman and Byzantine papyri (16, or 70 %, only two being patristic) were transmitted, while of the eleven authors represented in all three periods, only Menander failed altogether to survive, although of Callimachus only the *Hymns* were preserved. Those eleven authors comprise most of the acknowledged major classics; and the few not included (Aeschylus, Lysias, Aeschines, Aristophanes, Aristotle, Herodotus, Isocrates) are to be found in the columns combining two successive periods. Among the lists confined to only one period, only Plutarch and possibly Polybius may be considered major authors. Continuous transmission to the present correlates well with the duration of currency through successive periods of antiquity, as we might naturally have expected.

The incidence gives us no warrant to deduce cause and effect, but interesting observations can be made. The exclusively Ptolemaic

TABLE V  
AUTHORS BY PERIOD

I. PTOLEMAIC ONLY	II. ROMAN ONLY	III. BYZANTINE ONLY	IV. PTOLEMAIC AND ROMAN	V. ROMAN AND BYZANTINE	VI. ALL PERIODS
Anaximenes of Lampsacus	]Achilles Tattius	Erinna	]Alexander of Alexandria	<i>Aeschylus</i>	<i>Aeschines</i>
Astydamas	Aeschines Socraticus	<i>Euclid</i>	]Aristides Apologeticus	<i>Aesop</i>	<i>Callimachus</i>
Chares	Africanus, Julius	]Favorus	]St Basil of Caesarea	Archilochus	<i>Demosthenes</i>
Diocles of Carystus	Alcaeus	]Harpocration	]Basil of Seleucia	Cercidas	<i>Euripides</i>
Ps.-Epicharmus	Alcman	Hellanicus	Clement of Rome	Chrysippus	<i>Hesiod</i>
Eudoxus	Anacreon	Heraclides Lembus	]Constitutiones Apostolicae	Hyperides	<i>Homer</i>
Ibycus	Antimachus	]Heraclides of Miletus	]Cyril of Alexandria	<i>Lysias</i>	<i>Menander</i>
Philicus	Antiphanes Comicus	Herodas	]Didache	Simonides	<i>Pindar</i>
Phoenix	<i>Antiphon</i>	]Hierocles Stoicus	]Didymus Caecus	<i>Theophrastus</i>	<i>Plato</i>
Posidippus	Antiphon Sophistes	Hipponax	<i>Dio Chrysostom</i>	Eupolis	<i>Sophocles</i>
Comicus	]Antonius Diogenes	Margites	<i>Dionysius Thrax</i>	]Hermas, Shepherd of	<i>Thucydides</i>
Sosylus	]Anubion	<i>Hymn to Demeter</i>	]Dioscorus of Aphrodito	<i>Herodotus</i>	<i>Xenophon</i>
Timotheus	Apollonius Mys	<i>Isaeus</i>	]St Ephraem	<i>Hippocrates</i>	
Tyrtaeus	]Appian	]Josephus	<i>Eusebius</i>	]Irenaeus	
	Aristodemus	Lycophron	<i>Galen</i>	<i>Isocrates</i>	
	<i>Aristoxenus</i>	Lycurgus	]Gregory of Nazianzus	Manetho	
	]Arrian	]Musonius Rufus	]Gregory of Nyssa	]Melito of Sardis	
	]Babrius	]Nicander	Ps.-Gregorius Corinthius	]Oppian	
	Bacchylides	]Panocrates Epicus	]Himerius	]Origen	
	Choerilus	Pherecydes	]Hippolytus Romanus	<i>Parthenius</i>	
	]Clement of Alexandria	Philemon	<i>Ignatius of Antioch</i>	<i>Philo Judaeus</i>	
	Corinna	Philistus	]St John Chrysostom	Sappho	
	Cratinus	]Phlegon	]Libanius	]Tatian	
	Critias	]Phtarch	]Nonnus	<i>Theocritus</i>	
	Ctesias	<i>Polybius</i>	Oracula Sibyllina		
	]Dictys Cretensis	]Ptolemy, Claudius	]Pamprepius		
	Didymus	Satyrus	Panopolitanus		
	Dinarchus	Simias of Rhodes	<i>Philostratus</i>		
	]Dionysius	Sophon	]St Romanus		
	(Periegetes?)	Stesichorus	<i>Soranus</i>		
	]Dioscorides	<i>Theognis</i>			
	Ephorus	Theopompus			
	Epicharmus	Tryphon			

NOTE: Each author (or work) is listed only once, alphabetically in that column corresponding to the period(s) from which papyri have survived. Authors of whose principal works separate manuscripts have survived from the Middle Ages are italicized. The symbol ] indicates that the lifetime of the author falls within the earliest period from which his papyri derive, earlier than which his papyri could not have occurred.

papyri, as we saw, are mostly of contemporary authors no longer extant. The authors found solely in Byzantine papyri are virtually all contemporary, or very little earlier. But of those found solely in the Roman list only 32 % are contemporary, 22 % are Hellenistic, and 46 % are of the fourth century B.C. or earlier. A vigorous 'classical' interest seems evident during the Roman era.

To find all the authors for whom we have evidence of circulation in the Ptolemaic period, we must combine columns I, IV and VI, which together comprise 33 (of 104 authors possible). Similarly, columns III, V and VI together show 63 authors (of 150 authors possible) current in the Byzantine period. But from the Roman period (columns II, IV, V and VI) we have a total of 108, or 82 % of all the 132 authors earlier than the fourth century now known from papyri. In the Roman centuries, therefore, we find evidence even in the hinterland of Egypt of the widespread availability of Greek literature of which most has subsequently perished. Since it is much more difficult to identify fragments of lost works than of extant works, it is very likely that a majority of the numerous adespota from the Roman centuries (218 of verse, 526 of prose recorded in TABLE VII) conceal many more unknown authors of lost works.

The circulation and reading of books in provincial Egypt, outside of Alexandria, can have had little directly to do with the selection and preservation of the classics for transmission through mediaeval manuscripts to the age of printing. But the papyri offer our only surviving reflection of the mainstream of education and literary activity elsewhere in the ancient world. It is not very good, but it is the best evidence we have of the tastes and interests of the ancient reading public. Turner's carefully drawn criteria<sup>15</sup> for distinguishing texts used in the schools from 'commercially' published or private copies, while useful to the scholar editing a new text, give us no infallible method of identifying school texts, and in any case can hardly be applied retrospectively to many incompletely described editions on which Pack had to rely in preparing his catalogue. We cannot safely, therefore, segregate a category of school texts (as Oldfather sought to do)<sup>16</sup> and look to it for some special correlation with 'selection' and subsequent survival. From TABLE IV we see that mere frequency of texts from the entire thousand-year period shows only partial relation

<sup>15</sup> *op.cit.* (*supra* n.1) 88-92.

<sup>16</sup> *op.cit.* (*supra* n.4) TABLE III and p. 75.

to the ultimate survival of their authors: of the 32 authors of highest over-all frequency rank, 11 are known to us either wholly or chiefly from the papyri. We can say no more than that those authors whose currency persisted in middle and upper Egypt through the three eras of our papyri, and half of those whose papyri lasted through two, are the same authors transmitted to our time. The loss of Menander alone of the former group appears to be an accident of the Middle Ages.<sup>17</sup>

#### IV

The most complex of our tables is the record of the distribution of rolls and codices in TABLE VI. In his excellent study of the rise of the codex in the Roman centuries,<sup>18</sup> Roberts has shown that the key evidence for its origin and spread was that attested by the early Biblical and other Christian books in both Greek and Coptic. Of these Pack's new catalogue lists only 70 "major" patristic texts in Greek, expressly leaving to specialists the cataloguing of Biblical, Jewish, Gnostic, and other Christian texts. Pack<sup>2</sup> therefore does not provide us an adequate basis for the study of the larger question of the origin of the codex. But it does permit a full and detailed analysis of the relative frequency of the use of papyrus roll, papyrus codex and parchment codex for non-Christian Greek and Latin books in middle and upper Egypt,<sup>19</sup> with a degree of control offered by the patristic texts. It must be remembered, however, that Egypt was the sole source of papyrus in antiquity and might reasonably be expected to prefer it to parchment for bookmaking.

Our table records no evidence for the first century, when the codex was presumably first developed in Rome and first borrowed for the circulation of Christian writings.<sup>20</sup> But from the second century onward we can read from it the progressive displacement of the roll by the codex—especially the papyrus codex—in the three main

<sup>17</sup> On the fate of libraries and scriptoria in the later Byzantine East, see N. G. Wilson, "The Libraries of the Byzantine World," *GRBS* 8 (1967) 53–80.

<sup>18</sup> C. H. Roberts, "The Codex," *ProcBritAc* 40 (1954) 169–204. Pack<sup>2</sup> now allows Roberts' figures for non-Christian Greek literature (pp.183–85) to be extensively revised. To Roberts' evidence for the earliest codices (pp.180, 184–86) may now be added *PYale* 1, a fragment of *Genesis* from a Christian papyrus codex dated by its editor to the last quarter of the first century, and described also in C. B. Welles, "The Yale Genesis Fragment," *The Yale Univ. Library Gazette* 39 (1964) 1–8 and plate.

<sup>19</sup> Some of these may have found their way to Egypt from Italy and other parts of the empire: see Turner, *op.cit.* (*supra* n.1) 50–51.

<sup>20</sup> Roberts, *op.cit.* (*supra* n.18) 177–80, 187–92.

TABLE VI  
TIME DISTRIBUTION OF ROLLS AND CODICES

		II			III			IV			V			VI			VII			VIII			Not Dated			TOTAL					
		Papyrus Codex			Papyrus Codex			Papyrus Codex			Papyrus Codex			Papyrus Codex			Papyrus Codex			Papyrus Codex			Papyrus Codex			Papyrus Codex			Papyrus Codex		
		Roll			Roll			Roll			Roll			Roll			Ro I			Roll			Roll			Roll			Roll		
		Parchm. Codex			Parchm. Codex			Parchm. Codex			Parchm. Codex			Parchm. Codex			Parchm. Codex			Parchm. Codex			Parchm. Codex			Parchm. Codex			Parchm. Codex		
<i>Iliad</i> and	No.	187	1	0	140	21	4	10	17	18	3	14	10	0	8	3	0	1	0	0	0	0	8	0	1	348	62	36			
<i>Odyssey</i>	%	99.5	.5		84.8	12.7	2.5	22.2	37.8	40.0	11.1	51.9	37.0													78.0	13.9	8.1			
Other Ident-	No.	410	4	1	172	31	11	31	28	20	27	29	18	23	17	6	2	3	4	2	1	1	17	1	2	684	114	63			
fied Authors	%	98.8	1.0	.2	80.4	14.5	5.1	39.2	35.5	25.3	36.5	39.2	24.3	50.0	37.0	13.0										79.5	13.2	7.3			
Total of Ident-	No.	597	5	1	312	52	15	41	45	38	30	43	28	23	25	9	2	4	4	2	1	1	25	1	3	1032	176	99			
fied Authors	%	99.0	.8	.2	82.3	13.7	4.0	33.1	36.2	30.7	29.7	42.6	27.7	40.3	43.9	15.8										78.9	13.5	7.6			
Adespota,	No.	96	0	0	65	10	0	13	17	2	3	11	1	0	4	1	2	0	0	0	0	0	8	0	0	187	42	4			
Verse	%				86.7	13.3		40.6	53.1	6.3	20.0	73.3	6.7														80.3	18.0	1.7		
Adespota,	No.	250	7	0	166	16	0	24	21	3	12	24	3	17	15	3	3	4	1	0	0	0	12	0	0	484	87	10			
Prose	%	97.3	2.7		91.2	8.8		50.0	43.8	6.2	30.8	61.5	7.7														83.3	15.0	1.7		
Total of	No.	346	7	0	231	26	0	37	38	5	15	35	4	17	19	4	5	4	1	0	0	0	20	0	0	671	129	14			
Adespota	%	98.0	2.0		89.9	10.1		46.3	47.5	6.2	27.8	64.8	7.4	42.5	47.5	10.0											82.4	15.9	1.7		
TOTAL OF																															
CLASSICAL	No.	943	12	1	543	78	15	78	83	43	45	78	32	40	44	13	7	8	5	2	1	1	45	1	3	1703	305	113			
GREEK TEXTS	%	98.6	1.3	.1	85.4	12.3	2.3	38.2	40.7	21.1	29.0	50.3	20.7	41.2	45.4	13.4	35.0	40.0	25.0								80.3	14.4	5.3		
Patristic	No.	0	0	0	3	10	0	5	9	4	2	14	2	1	11	3	0	4	1	0	0	1	0	0	0	11	48	11			
Texts	%				23.1	76.9		27.8	50.0	22.2	11.1	77.8	11.1	6.7	73.3	20.0											15.7	68.6	15.7		
TOTAL OF GREEK	No.	943	12	1	546	88	15	83	92	47	47	92	34	41	55	16	7	12	6	2	1	2	45	1	3	1714	353	124			
LITERARY TEXTS	%	98.6	1.3	.1	84.1	13.6	2.3	37.4	41.4	21.2	27.2	53.2	19.6	36.6	49.1	14.3	28.0	48.0	24.0								78.2	16.1	5.7		
TOTAL OF LATIN	No.	9	0	0	18	0	2	10	12	9	13	14	12	1	12	5	0	0	0	0	0	0	0	1	0	0	51	39	28		
LITERARY TEXTS	%				90.0	10.0		32.3	38.7	29.0	33.3	35.9	30.8	5.6	66.7	27.7											43.2	33.1	23.7		

categories of non-Christian Greek literature, patristic texts and Latin literature. We find a steady, rapid progress in the spread of the codex, though the roll hangs on even as late as the seventh century, and the parchment codex, which was to triumph in the Middle Ages when the supply of Egyptian papyrus was curtailed, never seriously challenged its papyrus counterpart in antiquity.

For non-Christian Greek literature I have computed the data separately by classes to determine whether distinctions might be drawn between the ever most popular Homer and other Greek authors, or between identified authors (comprising most classical literature) and prose adespota (which incorporate most subliterary treatises). It turns out, however, that no significant differences emerge, except that—somewhat surprisingly—Homer is adapted to the codex sooner and more completely than other Greek literature (note particularly the ratios in the fourth and fifth centuries). No doubt the capacious virtue of the codex was particularly appreciated for long texts like the epic. For all Greek literature we find that a dramatic change occurred in the fourth century, from a codex frequency of one per cent in the second century and 15 per cent in the third to 62 per cent in the fourth (78 per cent for Homer) and 71 per cent in the fifth (for Homer, 90 per cent—and there are no more rolls thereafter).

Decisively contrasting are our data for patristic texts. In the third century, when Greek literature was still 85 per cent in rolls, the Fathers were already 77 per cent in codices. In the fourth, the Fathers remain about the same, while classical literature is catching up in codices. Both categories show acceleration of the trend thereafter, with the fathers always ahead. The ratios for Latin literature are not significantly different from those for non-Christian Greek literature until the sixth century. But Latin from the beginning shows a greater proclivity to parchment than does Greek. Perhaps it better reflects practices outside Egypt. In any case, the evidence for all classes shows that up through the third century, the predominant book form is the roll, except for Christians. Thereafter, through the rest of the ancient period the predominant book is the papyrus codex.

## V

There follow the comprehensive tables classifying the full record of Pack's new catalogue. TABLE VII presents the tally first for each

identified Greek author (including Church Fathers) and at the end for each genre of adespota as their texts are distributed by century. Included are all texts on papyrus and parchment only, viz. those texts each of which could represent a separate book. TABLE VIII codifies a similar record of the Latin texts. Segregated in TABLES IX and X are the data for ostraca and wooden tablets, respectively, since these were not books and could contain only extracts, though they may testify indirectly to the currency of literature. The data for TABLES I through V above were drawn exclusively from TABLES VII and VIII.

Some inaccuracies and imponderables in the sorting of data are inevitable. The method of assigning papyri to specific centuries is described in footnote 6 above. From editors' comments and in the absence of photographs it is often impossible to tell whether two or more fragments of a given author belong to the same roll. It is likewise uncertain whether a small fragment derives from a full copy of its parent text or from a secondary citation or anthology. Scholia and titles are counted with texts to which they relate on the supposition that they were once attached to these texts and attest to their existence; but what appears to be a fragment of scholia might sometimes have derived from a treatise or *hypomnema*, and thus have been misclassified. There is always the possibility of misapprehending the real nature of a text known only from its catalogue entry. Finally, an editor's attribution of a new text to a work no longer extant is often doubtful, and may later be re-attributed.

Despite these uncertainties in some of our data, the data remain our best evidence for the currency of books in antiquity, and deserve more study than the present summary article attempts to make. Of course the absolute value of literary papyri resides in the quality and amount of new text brought to us, not in their numbers; and by their aid we can achieve a substantial, sometimes revolutionary advantage in the textual criticism of extant authors. But their existence and incidence are of great moment to social and intellectual history as well. Even at some distant time when all papyri shall have been published (if that day should ever arrive), we could still be no more certain than today that we possess a representative sample of ancient books once circulating in provincial Egypt, or that provincial Egypt was representative of Alexandria, or that together or singly either was representative of the rest of the Graeco-Roman world. The evidence we do have, however, is not inconsiderable, and sheds all the light we are likely to get on the reading habits and literary tastes of that world.

TABLE VII

CHRONOLOGICAL DISTRIBUTION OF GREEK LITERARY PAPYRI (from Pack<sup>2</sup>)\*

<i>Author</i>	<i>Ptolemaic</i>			<i>Roman</i>			<i>Byzantine</i>					<i>Not Dated</i>	<i>Total</i>	
	3	2	1	I	II	III	IV	V	VI	VII	VIII			
Achilles Tatius	×	×	×	×	1	2								3
Aeschines					8	5		1						14
Aeschines Socraticus					1									1
Aeschylus		1		1	25	1								28
Aesop				1		1		1						3
Africanus, Julius	×	×	×	×		1								1
Alcaeus				5	15	2								22
Alcidamas	1				1									2
Alcman				4	4									8
Alexander of Alexandria (P)	×	×	×	×	×	×						1		1
Anacreon					2									2
Anaximenes of Lampsacus	1													1
Antimachus					1									1
Antiphanes Comicus						1								1
Antiphon					1									1

\* Centuries prior to the birth of each respective writer are canceled with the symbol ×. Inscriptions, graffiti, ostraca and tablets reported in Pack<sup>2</sup> are not included. Pack<sup>2</sup> does not include Herculeaneum and Biblical papyri. The symbol (P) after an author's name indicates Patristic Texts listed in the Appendix of Pack<sup>2</sup>.

TABLE VII—continued

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Antiphon Sophistes					1	2							3
Antonius Diogenes	×	×	×		1								1
Anubion	×	×	×			1							1
Apollonius Mys	×	×			1								1
Apollonius Rhodius				2	7	3		1	1		1		15
Appian ( <i>P.Dura</i> )	×	×	×	×		1							1
Aratus				1	2		2	1				1	7
Archilochus	2				10	3							15
Aristides Apologeticus (P)	×	×	×	×			2						2
Aristodemus	×	×			1								1
Aristophanes					3	3	2	10	4				22
Aristotle				2	3	1	1		1				8
Aristoxenus						2							2
Arrian	×	×	×	×		1							1
Astydamas		3											3
Babrius	×	×	×	×	1	1							2
Bacchylides				2	6	2						1	11
St Basil of Caesarea (P)	×	×	×	×	×	×		2					2

TABLE VII—*continued*

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Basil of Seleucia (P)	×	×	×	×	×	×	×	1					1
Callimachus	1		2	8	25	7	5	1	1				50
Cercidas		1			1	1							3
Chares	1												1
Chariton	×	×	×	×	2	1			1				4
Choerilus						1							1
Chrysippus		1			2								3
Clement of Alexandria (P)	×	×	×	×		1							1
St Clement of Rome (P)	×	×	×				1						1
<i>Constitutiones Apostolicae</i> (P)	×	×	×	×	×	×			1				1
Corinna					3								3
Cratinus					2								2
Critias					1								1
Ctesias					1								1
Cyril of Alexandria (P)	×	×	×	×	×	×		2					2
Demosthenes			2	7	35	18	8	9	1			3	83
Dictys Cretensis	×	×	×	×		1							1
<i>Didache</i> (P)	×	×	×				1						1

9 + G.R.B.S.

TABLE VII—*continued*

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Didymus	×	×			1								1
Didymus Caecus(P)	×	×	×	×	×	×			3				3
Dinarchus						1							1
Dio Chrysostom	×	×	×					1					1
Diocles of Carystus	1												1
Dionysius (Periegetes?)	×	×	×	×	×	1							1
Dionysius Thrax	×							1	1				2
Dioscorides	×	×	×		2								2
Dioscorus of Aphrodito	×	×	×	×	×	×	×	×	9				9
Ephorus					2								2
St Ephraem (P)	×	×	×	×	×	×			2				2
Epicharmus					4								4
Pseudo- Epicharmus	2												2
Erinna					1								1
Euclid					1	2							3
Eudoxus		1											1
Euphorion					1	3			1				5
Eupolis					1	1			1				3
Euripides	12	3	4	5	21	9	2	12	5	1	1		75

TABLE VII—*continued*

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Eusebius (P)	×	×	×	×	×				1				1
Favorinus	×	×	×			1							1
Galen	×	×	×	×					1				1
Gregory of Nazianzus (P)	×	×	×	×	×	×			1				1
Gregory of Nyssa (P)	×	×	×	×	×	×			1				1
Pseudo-Gregorius Corinthius	×	×	×					1					1
Harpocration	×	×	×	×	1								1
Hellanicus					1								1
Heraclides Lembus	×				1								1
Heraclides of Miletus	×	×	×		1								1
Hermas, Shepherd of (P)	×	×	×	×	1	4	6	1	2				14
Herodas					2								2
Herodotus				1	10	9	1						21
Hesiod	1	1	2	7	30	20	5	4	1			3	74
Hierocles Stoicus	×	×	×		1								1
Himerius	×	×	×	×	×	×			1				1
Hippocrates				1	3	3			1				8

TABLE VII—*continued*

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Hippolytus Romanus	×	×	×	×					1				1
Hipponax					4	1							5
Homer, <i>Iliad</i>	9	10	19	66	152	132	33	21	7			5	454
<i>Odyssey</i>	6	7	6	21	36	33	12	6	4	1		4	136
Homerica	3	1	5	10	20	13	3	4		1		7	67
(Homer altogether)	(18)	(18)	(30)	(97)	(208)	(178)	(48)	(31)	(11)	(2)		(16)	(657)
[Homer] <i>Margites</i>				1									1
Homeric <i>Hymn to Demeter</i>						1							1
Hyperides		2			2								4
Ibycus			1										1
Ignatius of Antioch (P)	×	×	×					1					1
Irenaeus (P)	×	×	×	×	1		1						2
Isaeus					1	1							2
Isocrates				5	14	9	10	4				1	43
St John Chrysos- tom (P)	×	×	×	×	×	×		1	1				2
Josephus	×	×	×			1							1
Libanius	×	×	×	×	×	×					1		1
Lycophron				1	1	1							3

TABLE VII—continued

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total	
	3	2	1	I	II	III	IV	V	VI	VII	VIII			
Lycurgus					2									2
Lysias	1				2	2								5
Manetho					1			1						2
Melito of Sardis (P)	×	×	×	×		1	1	2						4
Menander	1		1	2	6	8	4	2	1			2		27
Musonius Rufus	×	×	×			1								1
Nicander	×			2	1									3
Nonnus	×	×	×	×	×	×			1					1
Oppian	×	×	×	×	×	1	1							2
Oracula Sibyllina	×	×	×				1							1
Origen (P)	×	×	×	×	×	3	2	1	1	4				11
Palaephatus												1		1
Pamprepius Pano- politianus	×	×	×	×	×	×	×	1						1
Pancrates Epicus	×	×	×	×	2									2
Parthenius	×	×				1	1							2
Pherecydes						1								1
Philemon					1									1
Philicus	1													1
Philistus					1									1
Philo Judaeus	×	×				1	1		1					3

TABLE VII—*continued*

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Philostratus	×	×	×	×			1						1
Phlegon	×	×	×	×	1								1
Phoenix		1											1
Pindar			1	3	17	10	1	1	1			1	35
Plato (incl. Ps.-Plato)	3			1	24	14	1		1				44
Plutarch (incl. Ps.-Plutarch)	×	×	×		1	2							3
Polybius	×				1								1
Posidippus Comicus	1												1
Ptolemy, Claudius	×	×	×	×		1							1
St Romanus (P)	×	×	×	×	×	×	×	1					1
Sappho					10	5				2			17
Satyros					2								2
Simias of Rhodes					1								1
Simonides	1				1								2
Sophocles	3	1		1	9	2	2	1		1			20
Sophon				1	1								2
Soranus	×	×	×	×			1						1
Sosylus		1											1

TABLE VII—*continued*

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Stesichorus				1	1								2
Tatian (P)	×	×	×	×		1		1					2
Theocritus				1	3		2	2	2				10
Theognis					1								1
Theophrastus	2				1	1							4
Theopompus					1								1
Thucydides	1			4	14	9	3	1	1				33
Timotheus	2*												2
Tryphon	×	×			1	1							2
Tyrtaeus	1												1
Xenophon	1			1	12	9	2						25
TOTALS	58	34	43	170	603	379	124	101	57	10	4	29	1612

\* The fourth century Timotheus papyrus (*PBerol. inv. 9875*) is included here for convenience.

TABLE VII—*continued*

		ADESPOTA												
		VERSE												
Genre	Ptolemaic			Roman			Byzantine					Not Dated	Total	
	3	2	1	I	II	III	IV	V	VI	VII	VIII			
Anthologies	7	13	5	7	6	7		1	2				48	
Comedy: Old	4				5	4		1	2				16	
Middle	1				2								3	
New	10				4	6	4	4	1				29	
Unidenti- fied	5	1	1		2	7	7	1	1			1	26	
(All com- edy)	(20)	(1)	(1)		(8)	(18)	(15)	(6)	(4)			(1)	(74)	
Elegy	3	2			3	1							9	
Epic (all hexa- meter)	6	5	4		11	15	24	20	8	3	2	4	102	
Epigram	4				1		1						6	
Gnomic and Fable						2	2	2				1	7	
Lyric	7		1		9	26	14	2				1	60	
Mime		1			1	2	1						5	
Satyr Play	1		1		1	1							4	
Tragedy	7	3	1		3	14	6	1	2				37	
Unclassified	6	3	1		6	9	4	1				1	31	
TOTALS	61	28	14		47	96	75	32	15	5	2	8	383	

TABLE VII—continued

Genre	Ptolemaic			Roman			Byzantine					Not Dated	Total	
	3	2	1	I	II	III	IV	V	VI	VII	VIII			
LITERARY Acta Alexandri- norum				5	13	10								28
Anthologies: Anecdotes (incl. no. 2725)	1				1	1								3
Maxims					1	1	1							3
Sayings of Diogenes			1		1	1								3
Biography	2				6	2	2	1	1	1		1		16
Book Catalogues						4								4
Dialogue		1	1	1	3									6
Epistolography			1		2	2								5
Geography	1				2			1						4
History	3	4	7	9	18	15	2	5	1					64
Mimes					3			1						4
Oratory	6	3	1	7	20	18	4	3	2			1		65
Philosophy	8	1	2	7	22	14				1		1		56
Romance				5	9	7	3	1	1					26
TREATISES Agriculture	2													2
Cooking						1								1
Divination					3	3	4							10

TABLE VII—*continued*

Genre	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Glossaries	3			1	5	1	1		4	2			17
Grammar	1			5	10	6	2	2	3	1			30
Law*						1	1	5	4	1		1	13
Literary Criticism and Rhetoric	3				6	7	1	1	1				19
Mathematics			2	1	5	2	4		1			1	16
Medicine	3	5	4	13	28	20	4	5	3				85
Metrics		1			1	2	1	2	1				8
Metrology	1			1	3	2	1					1	9
Music	4	1			3								8
Mythography	3		1	4	6	3							17
Patristic Texts	×	×	×			3	3	3	5	1			15
Religion (non- Christian)	2	1		4	12	9						1	29
Sciences: Alchemy and Chemistry				1	1	1	1					1	5
Astronomy and Astrology	3			5	24	20	6	1	2			2	63
Botany and Zoology					2		1						3
Sports (Hunting, Wrestling)					1	1							2

\* Includes Nos. 2958, 2966, 2968.

TABLE VII—*continued*

Genre	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Unclassified fragments	12	10	3	18	46	25	6	8	6	1		2	137
<b>TOTALS</b>	58	27	23	87	257	182	48	39	35	8		12	776

Shorthand				1	1	4	3	7	4			5	25
Writing exercises (papyri only)	2	3		8	8	6	1	2	3			16	47

TABLE VIII

CHRONOLOGICAL DISTRIBUTION OF LATIN LITERARY POPYRI (from Pack<sup>2</sup>)

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Aesop (bilingual; Latin transl.)						1							1
Cicero, <i>Orations</i>	×	×		1			1	4	1				7
Juvenal	×	×	×					1					1
Livy	×	×				2							2
Lucan	×	×	×					1					1
Sallust	×	×				1	3	1					5
Terence	×						1	1					2
Vergil: <i>Eclogues</i>	×	×				1							1
<i>Georgics</i>	×	×					1	1					2
<i>Aeneid</i>	×	×					5	6	2				13
(All Vergil)*	×	×				(1)	(6)	(7)	(2)				(16)
LEGAL TEXTS													
Gaius	×	×	×	×		1		1					2
Papinian	×	×	×	×				1					1
Paulus†	×	×	×	×			2						2
Ulpian	×	×	×	×		1	1	1				1	4
<i>Theodosian Code</i>	×	×	×	×	×	×	×	2	1				3
<i>Digest</i> †	×	×	×	×	×	×	×	×	2				2

\* Two writing exercises (Nos. 2938 and 2947) are omitted.

† Greek commentaries and translations, omitted here, are included in TABLE VII.

TABLE VIII—*continued*

<i>Author</i>	<i>Ptolemaic</i>			<i>Roman</i>			<i>Byzantine</i>					<i>Not Dated</i>	<i>Total</i>	
	3	2	1	I	II	III	IV	V	VI	VII	VIII			
<i>Justinian Code</i>	X	X	X	X	X	X	X	X		3				3
Unidentified legal texts				1	1	2	12	7	5					28
(Law altogether)				(1)	(1)	(4)	(15)	(12)	(11)			(1)		(45)
ADESPOTA Glossaries					1	2	3	3	1					10
Miscellaneous (excl. Law)				2	7	9	2	9	3					32
TOTALS				4	9	20	31	39	18			1		122

TABLE IX

OSTRACA REPORTED IN PACK<sup>2</sup>

<i>Author</i>	<i>Ptolemaic</i>			<i>Roman</i>			<i>Byzantine</i>					<i>Not Dated</i>	<i>Total</i>
	<i>3</i>	<i>2</i>	<i>1</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>		
Euripides ( <i>Hippolytus</i> )		1											1
( <i>Phoenissae</i> )		1											1
Homer ( <i>Iliad</i> )				2	1			1				1	5
( <i>Odyssey</i> )		1											1
( <i>Homerica</i> )				2									2
Menander												1	1
Sappho		1											1
Theognis		1											1
Thucydides				1									1
ADESPOTA: VERSE Anthologies	1	1		1	1			2					6
Comedy	1												1
Mime		1											1
Elegy		1											1
Epigram	1	1	2										4
Gnomic & Fable				1									1
Lyric		1		2									3
Unidentified		1											1

TABLE IX—*continued*

<i>Author</i>	<i>Ptolemaic</i>			<i>Roman</i>			<i>Byzantine</i>					<i>Not Dated</i>	<i>Total</i>	
	3	2	1	I	II	III	IV	V	VI	VII	VIII			
ADESPOTA: PROSE Sayings of Diogenes						1								1
Astronomy & Astrology					1	3								4
Biography												2		2
Glossaries	1					1								2
Mathematics	6													6
Medicine					1	2	6	1	1					11
Mythography							1							1
Religion	1													1
Philosophy	1													1
Unidentified			1		1		1							3
Writing exercises		3	2	4	17	7	6	4	2	6	4	5		60

TABLE X

TABLETS REPORTED IN PACK<sup>a</sup>

Author	Ptolemaic			Roman			Byzantine					Not Dated	Total
	3	2	1	I	II	III	IV	V	VI	VII	VIII		
Babrius						1							1
Callimachus (Hecale)								1					1
Euripides (Phoenissae)								1					1
(Troades)				1									1
Hesiod (Op.)						1							1
Homer (Iliad)					1	3		1	1				6
(Homerica)					4	1							5
Philemon												1	1
Posidippus of Thebes (?)						1							1
<b>ADESPOTA: VERSE</b>													
<b>Anthologies</b>					1	1			1				3
<b>Epigram</b>					1	1							2
<b>Epic</b>								1					1
<b>Gnomic &amp; Fable</b>						1		1				3	5

TABLE X—*continued*

<i>Author</i>	<i>Ptolemaic</i>			<i>Roman</i>			<i>Byzantine</i>					<i>Not Dated</i>	<i>Total</i>	
	<i>3</i>	<i>2</i>	<i>1</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	<i>VII</i>	<i>VIII</i>			
ADESPOTA: PROSE Astronomy & Astrology				1										1
Mathematics									2				1	3
Shorthand						1							2	3
Writing exercises						4	3	1		1			5	14

DUKE UNIVERSITY  
June, 1968



