

THE PRESENT POSITION OF PAPYROLOGY.¹

BY B. P. GRENFELL, D.LITT., F.B.A., PROFESSOR OF PAPYROLOGY IN THE UNIVERSITY OF OXFORD.

THE conquest of Egypt by Alexander the Great in 332 B.C. brought the country of the Pharaohs out of its comparative isolation into the main stream of European culture, which through Greece and Rome extends to our own day. Under the Ptolemies the most brilliant of the Hellenistic kingdoms, with Alexandria as the literary and scientific centre of the civilized world, under the Romans the richest and most important province of the Empire, under the earlier Byzantine Emperors foremost in the defence of Trinitarian Christianity and the foundation of Monasticism, Egypt had great influence on the history of the West for nearly a thousand years, until with the invasion of the Arabs in 640 the country was again isolated, not to return to the main stream until 1870, when once more, as the Khedive Ismail remarked at the opening of the Suez Canal, Egypt became part of Europe.

The Ptolemies made Greek the official language, and under the Romans, who conquered Egypt in 30 B.C., but employed Latin only in the highest official and in military circles, a knowledge of Greek became general, though ancient Egyptian continued to be spoken down to the third century, when in a Græcised form it became the Coptic language, which lasted till the sixteenth century. Hence the great majority of papyri from Egypt, written between 300 B.C. and the middle of the seventh century, are in Greek, and though there are many written in demotic and Coptic, and a few in Latin, Hebrew, Syriac, Aramaic, and Pehlevi, papyrology has come to mean practically the study of Greek papyri, including various substitutes for papyrus as writing-material, such as ostraca (bits of broken pottery), wooden or wax tablets, and after the second century vellum. Like epigraphy,

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papyrology is an aid to the study of Greek and Roman antiquity in its various departments, not an independent branch of inquiry. From our point of view it is narrower than epigraphy, because the evidence is practically all derived from one country. Apart from Egypt the only place where papyri have been discovered by excavation is Herculaneum, where a library of works on Epicurean philosophy, which had been burnt by the eruption of Vesuvius in 79, owes its partial survival to its calcined condition. But from another point of view papyrology is much wider than epigraphy, owing to the far greater range of the contents of papyri, and especially the presence of many Greek and some Latin literary pieces, which together form about one tenth of the whole amount. A good survey of the contribution of Greek papyri to classical literature through the recovery of lost works has been recently given by Sir Frederic G. Kenyon in the *Journal of Hellenic Studies*, 1919, where in another article I have sketched the value of Greek papyri of extant authors for textual criticism.

The history of papyrus discoveries in Egypt dates from 1778 ; but it was not until a hundred years later that papyri began to reach Europe in considerable quantities through dealers in antiquities, and the systematic search for Greek papyri dates from 1895, when the Egypt Exploration Fund (now Society) began excavations with that object in view. For some years Professor Hunt and I had the field to ourselves ; then our example was followed by the French, Germans, and Italians. Some papyri of the Ptolemaic period, and nearly all papyri of the Roman and Byzantine periods come either from the rubbish-mounds of certain large towns in middle Egypt, especially Arsinoë, Hermopolis, and Oxyrhynchus, where Hunt and I made our chief finds, or else from houses in Fayûm villages, which, owing to defective irrigation, became stranded in the desert, and remained outside the area of cultivation until a few years ago. Ptolemaic papyri are chiefly found in mummy-cartonnage, where papyrus in the third and second centuries B.C. was frequently, and in the first century B.C. occasionally, used as a substitute for cloth, but the Fayûm papyri in the later Ptolemaic period were sometimes used also in the wrappings of crocodiles, the sacred animals of that district. In rare instances literary papyri, both classical and Christian, have been discovered in tombs, buried beside their owners.

In the competition among various nations during the last thirty

years for obtaining papyri, the lion's share of the prizes has fallen to Great Britain. The enterprise of Sir E. A. Wallis Budge secured for the British Museum many of the best-preserved new classical texts, including the treatise of Aristotle *On the Athenian Constitution*, the *Odes* of Bacchylides, and the *Mimes* of Herondas, all edited by Sir F. G. Kenyon. Some minor literary fragments in the British Museum remain for the present unpublished. Of non-literary documents from various sites five stately volumes have been produced by Sir F. G. Kenyon and H. I. Bell, the first three containing mainly Ptolemaic or Roman papyri, the last two Byzantine; and there is material for two more volumes, which are in preparation.

The Bodleian Library possesses in the *Revenue Laws of Ptolemy Philadelphus*, which I edited in conjunction with the late Sir John Mahaffy in 1896, the longest and most important non-literary document of the early Ptolemaic period, and both the Bodleian and British Museums have a number of the best papyri from our excavations at Oxyrhynchus and elsewhere, which after publication are distributed among various museums and libraries, chiefly in England and America. The unpublished papyri in the Bodleian are of slight importance; but there is a very large collection of ostraca, recently presented by Dr. A. H. Sayce, which are being edited by a promising student of papyrology at Queen's College, J. G. Tait. A corpus of all the ostraca known up to 1900, over 1600 in number, was published in that year by U. Wilcken, and some have been published since by J. G. Milne and others; but the Bodleian has about 2500 new ones. A re-edition of the various lyric fragments on papyrus is being prepared for the *Oxford Classical Texts* series by a sub-librarian of the Bodleian, E. Lobel.

Much the largest collection of unpublished papyri in this or any other country is in the muniment room of Queen's College, Oxford, where are reposing about eighty packing-cases full of papyri from our excavations, as yet unrolled and unexamined. The Oxyrhynchus series, which includes the *Sayings of Jesus* and fragments of various uncanonical gospels, lost poems of Sappho, Alcæus, and Pindar, considerable portions of the *Ichneutæ* of Sophocles, and the *Hypsipyle* of Euripides, the so-called *Hellenica Oxyrhynchia*, a historical work probably composed by Ephorus, dealing with events in 396-5 B.C., and a new Epitome of several of the lost books of

Livy, has now reached Part xiv., which appeared in April, 1920. This consists of non-literary documents, mainly of the third century, private letters, contracts and accounts predominating.

No. 1631, a contract for labour in a vineyard and lease of a fruit-farm in 280, gives an unusually elaborate list of operations, which are arranged mainly in chronological order from 28 September onwards, and includes a number of new technical terms requiring further elucidation from a professional vine-grower. It runs as follows: "To Aurelius Serenus son of Agathinus and Taposirias, of the illustrious and most illustrious city of Oxyrhynchus, from the Aurelii Ctistus son of Rufus and Dionysia, and his son Ptolemy, whose mother is Tauris, both of Oxyrhynchus, and Pelloius son of Heracleus and Tapontheus, from the village of Tanais. We voluntarily undertake to lease for one year more from 28 September of the present year all the vine-tending operations in the vineyard owned by you in the area of the village of Tanais and the adjoining reed-plantation, whatever be the extent of each, a half share being assigned to us, the party of Aur. Ctistus, and the remaining half to me, Pelloius; which operations are, concerning the vineyard, plucking of reeds, collection and transport of them, proper cutting of wood, making into bundles, pruning (?), transport of leaves and throwing them outside the mud walls, planting as many vine-stems as are necessary, digging, hoeing round the vines, and surrounding them with trenches, you, the landlord, being responsible for the arrangement of the reeds, and we for tendering you assistance in this, we being responsible for the remaining operations after those mentioned above, consisting of breaking up the ground, picking off shoots, keeping the vines well tended, disposition of them, removal (?) of shoots, needful thinnings of foliage; and concerning the reed-plantations, digging up both reed-plantations, watering, and continual weeding; and further we agree to superintend together with you in the vineyard and the reed-plantation the asses which bring earth, in order that the earth may be thrown in the proper places; and we will perform the testing of the jars employed for the wine, and will put these, when they have been filled with wine, in the open-air shed, and oil them, move them, and strain the wine from one jar into another, and watch over them as long as they are stored in the open-air shed, the pay for all the afore-said operations being 4500 drachmæ of silver, 10 bushels of wheat, and 4 jars of wine at the vat, which payments we are to receive in

instalments according to the progress of the operations. And we likewise undertake to lease for one year the produce of the date-palms and all the fruit-trees which are in the old vineyard, for which we will pay as a special rent $1\frac{1}{2}$ bushels of fresh dates, $1\frac{1}{2}$ bushels of pressed dates, $1\frac{1}{2}$ bushels of walnut-dates, $\frac{1}{2}$ bushel of black olives, 500 selected peaches, 15 citrons, 400 summer figs before the inundation, 500 winter figs, 4 white fat melons. Moreover we will, in consideration of the aforesaid wages, plough the adjoining fruit-garden on the south of the vineyard, and will do the irrigation, weeding, and all the other operations required from season to season, only the arrangement of reeds in it and the strewing of earth being done by you, the landlord, the rent being secured against all risks," etc.

The following letter (No. 1666) affords an interesting sidelight on Roman recruiting methods in the third century: "Pausanias to his brother Heraclides, greeting. I think that my brother Sarapammon has told you the reason why I went down to Alexandria, and I have previously written to you about little Pausanias becoming a soldier of a legion. Since however he no longer wished to join a legion but a squadron of cavalry, on learning this I was obliged to go down to him, although I did not want to. So after many entreaties from his mother and sister to transfer him to Coptos I went down to Alexandria, and employed many methods until he was transferred to the squadron at Coptos. I desired then to pay you a visit on the upward voyage, but we were limited by the furlough granted to the boy by the most illustrious praefect, and for this reason I was unable to visit you. If the gods will, I will therefore try to come to you for the feast of Amesysia. Please, brother, see to the deed of mortgage, that it is prepared in the customary way. I urge you, brother, to write to me about your safety, for I heard at Antinoöpolis that there had been plague in your neighbourhood. Do not neglect this, that I may rest more assured about you. Many salutations to my lady mother and my sister and our children, whom the evil eye shall not harm. Pausanias salutes you. I pray for the health of you and all your household."

The following letter, also of the third century (No. 1676), is the most sentimental that has yet appeared among published papyri: "Flavius Herculanus to the sweetest and most honoured Aplonarion, very many greetings. I rejoiced greatly on receiving your letter, which

was given me by the cutler ; I have not however received the one which you say you sent me by Plato, the dancer's son. But I was very much grieved that you did not come for my boy's birthday, both you and your husband, for you would have been able to have many days' enjoyment with him. But you doubtless had better things to do ; that was why you neglected us. I wish you to be happy always, as I wish it for myself ; but yet I am grieved that you are away from me. If you are not unhappy away from me, I rejoice for your happiness ; but still I am vexed at not seeing you. Do what suits you ; for when you wish to see us always, we shall receive you with the greatest pleasure. You will therefore do well to come to us in August, in order that we may really see you. Salute your mother and father and Callias. My son salutes you and his mother and Dionysius my fellow-worker, who serves me at the stable. Salute all your friends. I pray for your health." The letter is addressed on the back "Deliver to Aplonarion from her patron Herculanus. From Flavius Herculanus."

Hunt and I are now occupied with Parts xv. and xvi. Part xv., which is due to appear in 1921, will be devoted entirely to literary papyri, while Part xvi., destined for 1922, will consist of non-literary documents of the Byzantine period, which, so far as Oxyrhynchus is concerned, has hitherto been rather neglected by us. The lyric section in Part xv. includes some new fragments of Sappho, Alcæus, Pindar, and an author (Ibycus ?) who at the end of a mythological poem concerning the Trojan War grandiloquently compares the fame of Polycrates, tyrant of Samos, to his own. All these are in a very imperfect condition, as are some elegiacs by Callimachus, which mention Berenice but seem to belong to the epinician poem to Sosibius. In better preservation are some hexameters describing Egyptian trees, and a series of epigrams of four lines each, the poems beginning with successive letters of the alphabet. The metre is a variation of the hexameter, with an iambus in the last foot. They were apparently meant to be sung to the accompaniment of the flute, like No. 15 of the *Oxyrhynchus Papyri*, a small fragment of the same or of a similar series. In one poem life is compared to a loan, which is repaid with reluctance ; another deprecates troubling oneself about ultimate problems instead of the purchase of perfume and garlands ; a third is a request to place the poet's flute on his tomb.

Among fragments of lost prose works are some of a historian of Alexander, describing the victory over the Persians at Issus in 333 B.C. The account is shorter than those of Diodorus and Arrian, but adds some new details : there is no obvious clue to the authorship. There are also parts of a series of lives of famous literary characters, Sappho, Simonides, Æsop, Thucydides, Lysias, Demosthenes, and Æschines, and some interesting glossaries of rare words with references to passages in lost works. Among extant works Sophocles is represented by some much broken fragments of the *Trachiniae*, of the third century, and Theocritus by part of *Idyl* 22, of the first century, this being the earliest papyrus of that poet. There are also two papyri of Plato (*Republic* and *Phaedo*), two of Isocrates (*Nicocles* and *Demonicus*), and two of Demosthenes, one of which has portions of five speeches. A Latin juristic papyrus, giving a summary list of edicts in part of Book I of the Codex Justinianus, supplies some details which are missing in the MSS. In the theological section there are two very early fragments (third century) of St. John's Gospel, another fragment of that very popular work in Egypt, the *Shepherd* of Hermas, and one of the *Teaching of the Twelve Apostles*, which has not previously been represented in Egyptian finds. A special interest attaches to a leaf of a codex containing the Greek original of the *Apology* of Aristides. That work, which is one of the earliest Christian apologies, is known primarily from a Syriac version discovered at Mount Sinai by Dr. Rendel Harris ; but the Greek text in a somewhat modified form is incorporated in a much later Christian work, the story of *Barlaam and Josaphat*. A short liturgical papyrus, of the nature of a choir-slip, written on the back of a third century document, and itself not later than 300, is remarkable not only on account of its early date, but from the presence of musical notation, which resembles, but is not identical with, that found in a somewhat earlier papyrus at Vienna in connexion with a few lines of Euripides' *Orestes*. This constitutes the oldest specimen of Church music. In all there are fifty literary pieces in Part xv., some of them (e.g. the Callimachus, epigrams, and choir-slip with musical notation) having been obtained by me last winter in Egypt together with other Oxyrhynchus papyri, which are now in the British Museum or America.

Part xvi. will consist of fifth to seventh century documents. In that

period the administration of Egypt, as of other parts of the Byzantine Empire, tended to pass out of the hands of a highly-centralized hierarchy of officials into those of the large landowners, who became semi-independent, thus leading up to the feudal system of the Middle Ages. At Oxyrhynchus the leading family was that of the Apions, one member of which attained the consulship in 539, and in 1897 we were fortunate enough to discover the remains of an archive consisting mainly of sixth century documents connected with that family. For two days the stream of papyri became such a torrent that there were hardly enough baskets in the village to carry away all the rolls. The choicest of these Apion papyri were retained by the Cairo Museum (the Egyptian Government is entitled to half the finds of an excavator, but since 1899 has allowed us to bring all our papyri to England and divide them after publication). One instalment of our Byzantine papyri at Cairo was edited in Part i. of the *Oxyrhynchus Papyri*, and in January last, while Professor Hunt was working upon the literary papyri for Part xv., I went to Cairo for two and a half months to prepare the remainder of the Oxyrhynchus texts there for publication with a number of contemporaneous papyri from the excavations of later seasons. In this volume H. I. Bell is collaborating with us, and is writing most of the commentary.

In 1905-6 we made our largest find of literary papyri, consisting of the debris of three libraries of classical works. The principal literary papyri in Parts v.-xv. belong to the first two of these finds, and with Part xv. the publication of them, apart from very small fragments, will be nearing completion. We hope, in 1921, to unroll and examine the third of these large finds of literary texts. Concerning its precise nature and importance we are still in the dark, for the papyri were found at a considerable depth, slightly damp, and not readily decipherable; but some interesting discoveries may be expected. There are also many literary pieces in the other unopened boxes from Oxyrhynchus, but Part xv. probably carries us more than half-way through the publication of the total finds of literary texts from that site. With regard to non-literary papyri, however, we are not yet nearly half-way through the publication, and, in fact, with the exception of the 1897 season's finds, have made comparatively little progress in unrolling them, so that the Oxyrhynchus series is likely to exceed thirty volumes.

While very few of the Oxyrhynchus papyri are earlier than A.D. 1, our finds of papyri in the Fayûm were to a large extent of the Ptolemaic period. The results of the first two seasons, which were not particularly successful, were issued in *Fayûm Towns and their Papyri*. The third season, when we were excavating at Tebtunis for the University of California, was much the most productive. Two parts of the *Tebtunis Papyri*, containing those from crocodile-mummies (chief of which is a series of forty-six decrees of Ptolemy Euergetes II), and the town ruins respectively, have been published. With regard to Part iii., containing third and second century B.C. papyri from mummy-cartonnage, the long and difficult process of extricating the individual papyri was undertaken for the most part by J. G. Smyly, and the decipherment begun by him and continued by E. Lobel was nearly completed by myself in 1916-17. Professor M. Rostovtseff, who came to Oxford in 1918, has devoted much time to writing a commentary upon the most important of the 500 texts in this Part—a long letter from the dioecetes or finance-minister at Alexandria towards the end of the third century B.C. to a newly appointed official in charge of the revenues of the Fayûm, giving elaborate directions concerning his multifarious duties and affording a comprehensive picture of the working of the Ptolemaic administration of Egypt. Part iii., which on account of its size will be divided into two volumes, may be expected to appear in 1922-3.

The results of our fourth and fifth seasons' excavations in the Fayûm have hardly been examined. They consist mainly of a large quantity of Greek and demotic third and second century B.C. papyrus-cartonnage, and a collection of first century B.C. papyri (chiefly demotic, but with some Greek) from crocodile-mummies. Besides Oxyrhynchus and the Fayûm, we excavated at Hibeh, situated between the two, where we found much early Ptolemaic cartonnage, about half of which has not yet been opened. When we gave up excavating in 1907, our work was continued until the war by J. de M. Johnson, who excavated various Ptolemaic cemeteries between the Fayûm and Minia with rather bad luck, the papyrus-cartonnage having been mostly spoiled by damp ; but in the town ruins of Antinoöpolis he found in 1914 a long papyrus containing several of the later idylls of Theocritus, which he is engaged in editing.

The best collection of Ptolemaic papyri from cartonnage which has

yet been published is the Petrie papyri, now mostly in Trinity College, Dublin, edited by the late Sir John Mahaffy, and more completely by J. G. Smyly. These were discovered in 1890 at Gurob in the Fayûm by Professor Flinders Petrie. In 1895 I excavated there for a couple of weeks, and found a few more bits of cartonnage, which Smyly has recently opened. He is now about to publish about thirty new texts in the *Cunningham Memoirs of the Royal Irish Academy*. They include a remarkable fragment of an Orphic ritual of the third century B.C., and by a curious chance a fair copy of the important, but very difficult juristic papyrus, P. Petrie, iii. 23 (g).

In the John Rylands Library at Manchester is a large collection of papyri, mostly bought by Hunt and me in Egypt, of which two volumes, comprising literary texts and documents prior to A.D. 284, have been published by Hunt, Johnson, and V. Martin. There are numerous papyri of the Byzantine period which remain to be edited. Recently the Manchester collection has been increased by some papyri acquired in Egypt partly by Dr. Rendel Harris in 1917, and partly by me in 1920. In the former group are a fragment of (apparently) an early uncanonical gospel, mentioning St. Andrew, and several third century B.C. papyri belonging to the Zeno find (cf. p. 154), while the latter group includes a number of literary fragments, about thirty Ptolemaic or Augustan papyri from the Fayûm, and several Latin papyri. Some pieces of a lost historical work dealing with events in 339 B.C. from a papyrus which is itself of the third century B.C. (Theopompus, *Φιλιππικά*), are of considerable interest, but we have not yet had time to work at these newest texts.

Apart from London, Oxford, Manchester, and Dublin, most of the papyri in British public libraries or museums consist of published specimens from our excavations. A small collection of very fragmentary texts at Aberdeen is being edited by J. G. Tait. There are but few papyri in private ownership in this country. A collection of about 200 papyri, purchased by us in Egypt for the late Lord Amherst of Hackney, and published in two volumes, of which the first contains the unique Greek original of part of an interesting Jewish apocryphal work, the *Ascension of Isaiah*, was subsequently acquired for America by Mr. Pierpoint Morgan. A small group of twenty-one papyri recently acquired by Mr. E. P. Warren, among which is a gnostic magical text of some interest, will shortly be published by us.

Next in importance to the British collections of papyri come the German, which were obtained mainly by purchase, partly by excavations at Elephantine, which produced the earliest dated Greek papyrus, a marriage contract of 311 B.C., at Busiris in the Heracleopolite nome, where many valuable documents of the Augustan age, which had been written at Alexandria, were discovered in mummy-cartonnage, and at Hermopolis. The principal collection is at Berlin, where the authorities of the Museum have issued the *Persae* of Timotheus, a celebrated fourth century B.C. lyric poem on the Battle of Salamis, of which an incomplete copy was found buried in a tomb, and six parts of the *Berliner Klassikertexte*, including three very long and well preserved literary papyri, two of the nature of commentaries, the third an ethical treatise by Hierocles, a Stoic contemporary of Epictetus. The first three volumes of the *Berliner Griechische Urkunden* constitute the chief publication of Fayum papyri of the Roman period, while the fourth volume is mainly devoted to the Alexandrian papyri from Busiris. In 1919 the Berlin Museum began the publication of Vol. V with a most important Fayûm papyrus written about A.D. 150, which contains in abstract the official rules (*Gnomon*) laid down by Augustus, and modified in later reigns, for guiding one of the leading officials, the Idios Logos, in the performance of his duties. In over 100 regulations preserved almost entire the principal subjects dealt with are wills and inheritances, with especial reference to the claims of the Imperial Treasury, marriage, registration, and the position of priests. For the Roman administration of Egypt, and, above all, for the relation to each other of the different classes of the population, Roman and Alexandrian citizens, Greeks, Egyptians, freedmen, and slaves, this document is of primary importance. The text and translation alone (by W. Schubart) have so far been issued; but historical and juristic commentaries by Schubart and A. Sickel are in preparation.

There is also at Berlin a minor collection of papyri and ostraca edited in 1915 by P. M. Meyer, and there are important partly-edited collections at Leipzig (largely fourth century papyri; ed. L. Mitteis); Giessen (edd. E. Kornemann and P. M. Meyer), where is a copy of the celebrated decree of the Emperor Caracalla in 215 conferring Roman citizenship upon the provincials; Heidelberg (edd. A. Deissmann and G. A. Gerhard), which has a long papyrus of the Minor Prophets in the Septuagint; Halle (ed. Graeca Halensis), which possesses one

of the most important early Ptolemaic papyri, containing extracts from the laws of Alexandria; Hamburg (ed. P. M. Meyer); Munich (edd. U. Wilcken and A. Heisenberg and L. Wenger); Strassburg (edd. F. Preisigke, who is now engaged with Part ii.); Freiburg, and Bremen. According to a recent official estimate¹ about half the total of Greek papyri in Germany has yet to be published; but from an article by U. von Wilamowitz-Möllendorff (*Sitzungsber. der Preuss. Akad.*, 1918), publishing a number of literary fragments, including one of Tyrtaeus, it appears that not much more is to be expected in the way of new classical texts.

The Austrian collection at Vienna was the first very large collection of papyri to be made in Europe; but unfortunately the Archduke Rainer, who obtained it, made no adequate provision for its publication, and the editing of the Greek texts has been confined to a single scholar, C. Wessely, who, in spite of great industry, has hardly been able to cope with the mass of both Greek and Coptic material. One volume of a Corpus, containing chiefly contracts of the Roman period, appeared in 1895; since then only certain classes of the Greek papyri, those dealing with municipal affairs at Hermopolis and topography and Byzantine tax-receipts, have been published in full. The Austrian collection is poor in literary texts, except Biblical fragments, and has no Ptolemaic papyri. A quantity of Ptolemaic papyrus-cartonnage, discovered in 1908 at Gamhûd (in the Heracleopolite nome) by a young Polish archæologist, T. Smolenski, who died shortly afterwards, went to Budapest, but has not since been heard of.

In France the Louvre has not in recent years taken part in the competition for Greek papyri, though a papyrus of the first century B.C. containing the oration of Hyperides *Against Athenogenes* was published by E. Revillout in 1892. A volume, consisting chiefly of late Ptolemaic contracts from Acoris, which were obtained by T. Reinach, was issued by him in 1903. The headquarters of French papyrology has hitherto been at Lille, where is a large collection of early Ptolemaic papyri from the Fayûm, discovered in 1900-3 by P. Jouguet, who has been assisted by J. Lesquier and P. Collart in the publication of them. This collection, which has fortunately not been injured by the war, is likely to be removed soon to Paris, Jouguet

¹ W. Schubart, *Einführung in die Papyruskunde*.

having been transferred to the Sorbonne. Another volume of the publication is in progress.

Italy, which has the credit of having started Graeco-Egyptian papyrology with Amadeo Peyron, and has in G. Lumbroso the *doyen* of papyrologists, who, fifty years after the issue of his well-known *Recherches sur l'économie politique de l'Égypte sous les Lagides*, is engaged in a comprehensive dictionary of everything bearing upon ancient Alexandria, continues to show an active interest in the subject. At Naples the difficult process of unrolling and deciphering the burnt papyri from Herculaneum has been resumed with much success. At Florence the two leading Italian Hellenists, D. Comparetti and G. Vitelli, have obtained and edited a large collection of documents, including a group of about 250 papyri concerning a certain Heroninus, manager of a large estate in the Fayûm in the middle of the third century. A society called the *Società Italiana per la ricerca dei papiri* was formed in 1909, which, partly from excavations at Oxyrhynchus and Hermopolis, partly by purchases, is issuing under the direction of Vitelli a series of which the sixth volume is in the press. Parts i.-iii. contain many literary fragments, while Parts iv. and v. are mainly devoted to the Florentine section of a large find of third century B.C. papyri made about 1912 by natives in a Fayûm village (Philadelphia). These all concern a certain Zeno, a subordinate of the chief finance minister, and, unlike papyri obtained from mummy-cartonnage, are mostly in good condition. Many of them are official letters, and add much to our knowledge of the Ptolemaic administration in Palestine and Asia Minor as well as in Egypt. At Milan there has been founded recently a school of papyrology, directed by A. Calderini, which has issued three volumes of *Studi* (1917-20) but has not yet had much opportunity of editing new texts. A noteworthy feature of both the Florentine and the Milanese schools is the considerable share in editing and commenting upon the papyri which has been taken by ladies. It is to be hoped that the excellent example set by Medea Norsa and Teresa Lodi will be followed by some of the ladies in this country.

Switzerland has one good collection of papyri at Geneva, of which a volume of documents and several valuable literary fragments have been edited by J. Nicole. His place has now been taken by V. Martin, who is preparing another volume. A small collection at Bâle, edited

by E. Rabel in 1917, is unimportant. Holland has only a few Ptolemaic and magical papyri which were edited long ago. There are very few papyri in Belgium and the Scandinavian countries, but more in Russia, which are largely Ptolemaic and nearly all inedited.

America possesses a small collection of papyri at Chicago, edited by E. J. Goodspeed, and at Detroit a number of Biblical MSS. on vellum, which were found in Upper Egypt in 1906, the most important being an early MS. of the Gospels, which has a curious interpolation near the end of St. Mark's Gospel. Shortly before the war Mr. Pierpoint Morgan obtained a collection of over 100 Coptic MSS., which were found in the ruins of an old monastic library at Hamûli in the Fayûm. These are temporarily at the Vatican, being repaired under the direction of Père Hyvernât, who will edit them. A few accessions to this find were brought to Rome in 1920 by Professor F. W. Kelsey, of Michigan University, besides a complete and early papyrus codex of the Minor Prophets. Professor Kelsey, while in Egypt last winter, also obtained a collection of about 400 well-preserved documents from the Fayûm and Oxyrhynchus, together with a long treatise concerning omens (second century) and several hundred lines of a Homeric papyrus (*Iliad*, xviii.). These texts have been divided between the Universities of Michigan (which obtains the larger part) and Wisconsin.

Lastly, while the Alexandrian Museum possesses few papyri of importance, at the Cairo Museum is a very valuable collection of Greek papyri, consisting of (1) two of the chief literary finds, five plays of Menander and part of the Gospel of Peter, an early rival of the canonical gospels, (2) the Oxyrhynchus documents mentioned on p. 149, (3) a large and particularly important group of Byzantine documents from Aphrodito in Upper Egypt, edited by J. Maspero, whose death in the war was an irreparable loss to papyrology, (4) some miscellaneous texts, mostly published by various scholars, (5) the largest section of the Zeno find (cf. p. 154), now being edited by C. C. Edgar in the *Annales du service des antiquités*. An accession to the last-named section, including a papyrus of special importance for the Macedonian Calendar, was made through my agency in 1920.

To sum up, about sixty volumes of papyri or ostraca, with nearly 10,000 texts, have been published, representing probably less than

half of the whole material which has been recovered. The minor publications of non-literary texts have been usefully collected in F. Preisigke's *Sammelbuch Griechischer Urkunden aus Aegypten*. A classification of all Greek and Latin papyri and ostraca published up to 1920, arranged according to subject, date, and provenance, has been compiled by me, and may appear in 1921.

With regard to the palæography of Greek papyri, Sir Frederic Kenyon in 1900 published a book which is still the standard authority, although for the dating of uncials much new evidence is now available, and cursive writing is treated rather briefly. Sir Edward Maunde Thompson has valuable chapters dealing with papyri in the second edition of his *Greek and Roman Palæography* (1912), but has not space for many details. The subject will, I hope, some day be treated fully by Hunt. I have begun a comprehensive work on the geography of Græco-Roman Egypt, for which the papyri provide an immense mass of evidence; but this will take some years to finish. While the new material has been so largely provided by Englishmen, the utilization of it through the composition of books showing the bearing of papyri upon the various branches of history, law, and philology has hitherto been left almost entirely to foreign scholars, principally German or French. The best introduction to papyrology, paying especial attention to literary papyri, is W. Schubart's *Einführung in die Papyruskunde*, which appeared in 1918 and is very accurate and clearly arranged. Sir John Mahaffy's *Empire of the Ptolemies* (1897) is not very systematic, and Bouché Leclercq's *Histoire des Lagides*, completed in 1907, of which the first two volumes are mainly devoted to dynastic and foreign history, the last two to the internal condition of the country, is the best general history of the Ptolemaic period. But for the administration of Ptolemaic Egypt the principal authority is U. Wilcken's *Grundzüge der Papyruskunde*, accompanied by 500 selected texts, and covering the whole period from Alexander to the eighth century. This work of the leading German papyrologist, issued in 1912, has laid a firm historical foundation for future researches connected with Græco-Roman Egypt. A brilliant sketch of the Ptolemaic regime in the light of the most recent discoveries is given by M. Rostovtseff in *Journ. of Egypt. Arch.* (1920), pp. 161-178. Of the Roman and Byzantine periods in Egypt there is no satisfactory general account. J. G. Milne's

History of Egypt under Roman Rule (1899) is rather slight and out of date. The leading authority is again Wilcken's *Grundzüge*, which gives the main outlines. For the Byzantine period there is, besides Wilcken's book, a good account of the administration by M. Gelzer, and an excellent sketch of the same subject by H. I. Bell in *Journ. of Egypt. Arch.* (1918). There is a great opening for books dealing with the five main subdivisions of the period from Augustus to Heraclius. There is (1) the period from Augustus to Nero, with the transition from the Ptolemaic system taken over by the conquerors to the developed Roman system. It would be especially interesting to examine in detail how far the Romans altered the Ptolemaic regime, how far they were themselves influenced by it, since the conquest of Egypt with its highly-organised and centralised administration coincided with the establishment of the principate. (2) There is the period from Vespasian to Severus, with the Empire at the height of its prosperity. (3) A new epoch begins with the reforms of Severus, who introduced the Greek system of the city-state into Alexandria and the principal towns, and with the bestowal of Roman citizenship by Caracalla upon the provincials. (4) There is the end of the third century and the fourth, with the reorganisation of Egypt under Diocletian and Constantine, and the general adoption of Christianity leading up to (5) Egypt from the fifth to the seventh centuries as a Byzantine province, with a quite new outlook, system of government, and culture, having by this time lost many of its peculiarities and becoming assimilated to the other parts of the Eastern Empire. Here the gap is likely to be soon filled by the publication of a posthumous work by J. Maspero on Byzantine Egypt which is being edited by Mr. Fortescue.

On the economic side there are two very good books, M. Rostovtseff's *Geschichte des römischen Kolonates* (1910), which deals largely with Græco-Roman Egypt, and Vol. i. of U. Wilcken's *Griechische Ostraka* (1900), which is primarily concerned with taxation, and remains the chief authority on that subject. H. Maspero's *Les finances de l'Égypte sous les Lagides* (1900) and A. Steiner's *Der Fiskus der Ptolemäer* (1902) are unsatisfactory, and most questions concerning finance and taxation in Græco-Roman Egypt, for which there is now a vast quantity of new evidence available, soon to be increased by the publication of the Bodleian ostraca (cf. p. 144),

urgently require to be rehandled. In Leipzig before the war statistics of prices found in the papyri were being collected, and it is to be hoped that this valuable piece of work may be soon completed.

To the French are due the principal works on military affairs in Græco-Roman Egypt. The Ptolemaic army in Egypt (1910), and now the Roman (1919), are the subjects of elaborate and most accurate books by J. Lesquier, while the Byzantine army has been well treated by J. Maspero (1912). A Frenchman has also produced the chief work on municipal organisation, P. Jouguet's *La vie municipale dans l'Égypte romaine* (1909), which, though somewhat lacking in clearness, is very useful. Both this and a recent German work, F. Oertel's *Die Liturgie im hellenistischen Ägypten* (1919, but composed before 1914), which partly covers the same ground, have been supplemented by two publications which appeared during the war, P. Rylands, ii., and P. Oxyrhynchus, xii., containing important minutes of the proceedings of a council of officials at the end of the second century and of a local senate in the third.

There are some good studies of particular officials, especially by G. Plaumann, the ablest of the younger German papyrologists, who was killed in the last days of the war, on the Idios Logos, and that by V. Martin on the Epistrategi, the chief administrators of the three main subdivisions of Roman Egypt, who, as is shown by a Tebtunis papyrus, were of Ptolemaic origin. But there is great need of similar studies dealing, e.g., with the dioecetes, who was the head of the Ptolemaic finance administration but of less consequence in Roman times, with the praefect, who was the head of the whole province in Roman times, and with the strategus, who under both the Ptolemies and the Romans was the chief local official.

The system of credit and banking was highly developed in Græco-Roman Egypt, which was conspicuously modern in this respect. A comprehensive treatise on this subject, *Das Girowesen im griechischen Ägypten* (1910), has been composed by F. Preisigke, but is not very satisfactory, and some rather fundamental questions are still in dispute. Agriculture, for which the extant evidence is particularly comprehensive, and the various industries, also require a series of special studies.

With regard to religion, the organization of the Græco-Egyptian priesthood was dealt with in detail by W. Otto in 1902-5, but much

new information is now available, especially from the *Gnomon* of the *Idios Logos* (cf. p. 152). Pagan beliefs, especially the cults of Sarapis and Isis and that curious mixture of Greek, Egyptian, Persian, Jewish, and Christian religions illustrated by the magical papyri, have not yet been adequately handled. A corpus of the magical papyri was projected in Germany by K. Preisendanz before the war, and a Czech scholar, Dr. Hopfner, is engaged upon the difficult task of elucidating them. The interesting litany of Isis published in P. Oxyrhynchus, xi. is the subject of a forthcoming work by a young Dutch scholar. On the Christian side the chief work is A. Deissmann's illuminating *Licht vom Osten* (2nd ed., 1910), which has been translated into English (*Light from the Ancient East*).

The juristic side of papyrology, which is rather technical, and of which the importance and interest have hitherto remained unappreciated in this country, is too large a subject to be discussed here. The standard general work on it is L. Mitteis's *Grundzüge* (1912), with 382 selected texts, a companion to Wilcken's work mentioned on p. 156, but much more abstruse. A new selection of ninety-three of the chief juristic texts, with a commentary, has just been issued by P. M. Meyer (1920). There are many books or monographs on particular points by L. Mitteis, O. Gradenwitz, L. Wenger, P. M. Meyer, J. Partsch, and other German or Austrian jurists, and some by Italian and French, but almost the only English jurist who has displayed any interest in the subject is the new Professor of Civil Law at Oxford, F. de Zulueta, who has published a useful essay on *Patronage in the Later Empire*.

To turn from History and Law to Philology, a good grammar of the Ptolemaic papyri by A. Mayser was issued in 1906, and one of the Herculaneum papyri by W. Crönert in 1903. On the fertile subject of the relation of papyri to the Septuagint and New Testament, besides the standard works of A. Deissmann, *Bibelstudien* (1902 : translated as *Bible Studies*) and *Licht vom Osten* (cf. p. 159), good work is being done by British scholars, especially the *Grammar of the New Testament* begun by J. H. Moulton, who fell a victim to German submarine warfare, and now being continued by W. Howard, and the *Vocabulary of the Greek Testament Illustrated from the Papyri*, begun by Moulton and G. Milligan and continued by the latter scholar alone, which has reached nearly halfway through the alphabet. In the forthcoming revised edition of Liddell and Scott's

Lexicon, which is under the direction of H. Stuart Jones, Ptolemaic papyri are being looked after by E. Lobel and P. Jouguet with his pupils, Roman papyri by V. Martin, Byzantine by H. I. Bell. The corresponding German lexicon of Passow was being re-edited by a papyrologist, W. Crönert, but in 1914 had only reached *av*, and the editor, who was taken prisoner early in the war, has not yet recovered all his materials. F. Preisigke in 1915 issued a vocabulary of technical terms in papyri concerning the administration, which is useful so far as it goes. The same indefatigable researcher has also planned dictionaries, not only of personal names, of which there is a great variety, but of all Greek papyri. In the meantime Heft iii. of his *Berichtigungen*, a collection of all the corrections which have been made upon the original editions of papyri, is about to be issued.

The chief periodical relating to papyri, the *Archiv für Papyrusforschung*, edited by U. Wilcken, has just resumed publication, while the French have revived the *Revue Égyptologique*, which, under the editorship of A. Moret and P. Jouguet, is now partly devoted to papyrology; the Italians have started a similar periodical, *Ægyptus*, edited by A. Calderini; and of C. Wessely's *Studien zur Palæographie und Papyruskunde*, Heft xix. has recently appeared. The lack of an English papyrological journal is more conspicuous than ever.

Having endeavoured to sketch what papyrologists in different countries have achieved during the last generation and are now doing, I conclude with some practical remarks about the future of papyrology in this country. Fortune has been kind to British workers in this field, who have secured the best part of the material in respect of both quantity and quality; but the small band of British papyrologists has been thinned recently by the death of Sir John Mahaffy in the fullness of years, the absorption of Sir Frederic Kenyon in his duties as Principal Librarian of the British Museum, and the loss of J. de M. Johnson, who has joined the staff of the Clarendon Press and has little time for papyrology. The primary business of Hunt and myself is, of course, the publication of the mass of papyri at Oxford, which has been called "the Mecca of papyrologists". We should, of course, be glad of the assistance of younger researchers to help us and some day to succeed us. In particular it would be a great advantage if we could get the whole of the unexamined portion of our collection unrolled or extricated from cartonnage, and find out what is there, thus rendering it all avail-

able for study and for publication in more definite groups of cognate papyri than is possible at present. It is very unsatisfactory that we are still quite ignorant of the nature of so many of our unpublished finds, especially those of the Ptolemaic period, and the larger documents of the Roman and early Byzantine periods from Oxyrhynchus. Under present conditions we can only deal with comparatively small sections at a time, and these not necessarily the most important.

Secondly, the contrast between the predominance of this country in the discovery and editing of papyrus texts, and the small part taken by it in the utilization of the material for historical and juristic purposes is hardly creditable. In the list of the chief editions of papyri at the end of Schubart's *Einführung* (cf. p. 156), there are fifteen British entries, including the two largest series, compared to forty-five of all other nationalities ; but in Schubart's list of books dealing with papyri only two out of fifty entries are British. It is to be hoped that this lack of enterprise, for which editors occupied with new texts can hardly be blamed, will not continue much longer. Papyrology, a creation of the last forty years, has been able to avail itself of the high state of organization already attained by Roman epigraphy, and is well systematized. There are plenty of bibliographies ; editions of texts are elaborately indexed, and, in most cases, provided with notes and translations, while there are excellent introductions to the subject and selections. Several of the more important topics which require discussion or further inquiries have been indicated ; but there is also a great opening for less ambitious studies, e.g. combining the information derived from groups of papyri concerning particular persons, localities, or items. The lead which has been given by Oxford and Dublin ought to be followed by other Universities.

Lastly, there is the question of further search for papyri in Egypt. My visit last winter led me to the conclusion that the present time is more propitious for buying papyri found by native diggers for nitrous earth than for digging at one's own expense. America, owing to the favourable exchange, seems to be the only country which is just now in a position to face the heavy outlay for excavations in search of papyri in a town site. The Egypt Exploration Society is fully occupied for the coming winter with its excavations at El Amarna, which are about to commence, and promise results of exceptional interest for Egyptologists. But that Society has by no means abandoned the idea of

resuming excavations on a Græco-Roman site, and, if a successor to us and Johnson is forthcoming in the near future, I shall be happy to assist him in starting work in Egypt. The next few years will probably see the disappearance of the rapidly dwindling rubbish-mounds or house-ruins at the various town-sites in middle Egypt which have yielded papyri ; but it will be some time before the chances of obtaining papyrus-cartonnage are diminished up to the point of excluding the need of further research in Ptolemaic tombs, and tombs of any date within the Græco-Roman period will continue to present the possibility of discovering complete literary rolls, either classical or theological.