

UNIVERSITY OF CAPE TOWN

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The development of the notion of libraries in the ancient world with special reference to the Middle East, Greece, the Roman Republic and the Royal Alexandrian Library.

A dissertation presented in fulfilment of the requirements for the degree of Master of Philosophy in Librarianship.

by

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ABSTRACT

The Royal Alexandrian Library (RAL) is considered by modern scholarship to represent the epitome of the development of ancient librarianship. Its extensive holdings imply the application of modern organizational procedures such as collection development, information retrieval and promotion of use - terms identifiable as elements embodied in the conceptual framework of librarianship (for the purposes of this study the latter two concepts - information retrieval and promotion of use - are combined into the simplified general concept of "collection accessibility"). The RAL therefore constitutes a key development phase in the evolution of modern librarianship. However, scholars have disputed the origins of the RAL and Mouseion or university it was attached to. The so-called "Greek thesis" emphasizes the purely Greek origins of both the Mouseion and the RAL. Conversely, the "Ptolemaic thesis", while acknowledging the Greek origins of the Mouseion, argues that the RAL (as an independent institution distinguishable from the Mouseion proper) is derived from Middle Eastern institutions. This study traces the origins of the RAL from the textual collections of the early Mediterranean and Middle Eastern civilizations, through the period of Greek and the subsequent Hellenistic cultural dominance - culminating in the legacy of Hellenistic librarianship as inherited by the Roman Republic, since the newly emerging Roman empire was to exert a deciding influence upon the historical development of the RAL. Within these civilizations and regions a brief overview is undertaken to gauge the extent of literacy and literary output prevalent in each as well as a general assessment of librarianship and library practices. The major and most noteworthy archival and book collections are then analysed according to the organizational procedures identified in the outlined conceptual framework of librarianship. For this purpose sufficient information has been obtained from archaeological evidence and primary and secondary sources to allow for the analysis of forty-three libraries throughout the ancient world. In this way predominantly Middle Eastern as well as Greek elements have been identified as contributing to the creation, organization and functioning of the RAL.

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1. INTRODUCTION

1.1 STATEMENT OF THE PROBLEM

The Royal Alexandrian Library (RAL) has variously been described as the most influential (PRE Vol. 3, 1899:414), the most noteworthy (Vorstius 1954:7) and "without doubt the greatest library of antiquity" (Kesting 1986:157) while Parsons concludes that the institution was "the greatest before the invention of printing ..." and considers its holdings to be "the most important ever collected" (1952:x).

However, scholars and historians have disputed the origins of the RAL and the Mouseion or university it was attached to. De Vleeschauwer and Wright (in Rawski 1973:87-90) have identified the two diverging schools of thought on this issue.

The so-called "Greek thesis", which is proposed by Milkau (1955) amongst others, emphasizes the purely Greek origins of both the Mouseion and the RAL, with both institutions seen as a "completely Greek achievement". According to this theory Demetrius of Phaleron, who was Ptolemy I Soter's appointee to undertake the founding of the Mouseion and its library, based his creation on the model of the Athenian Peripatos.

Conversely, the "Ptolemaic thesis" (of which De Vleeschauwer is a major proponent) argues that while the Mouseion proper can be traced back to Greek origins, the RAL itself "is derived from Ptolemy and his recollection of Oriental library institutions".

This study proposes, in the light of the two diverging theories outlined above, to trace the origins of the RAL from the book collections of the early Middle Eastern civilizations (Mesopotamia, Syria, Asia-Minor, Pharaonic Egypt and Palestine), the Greek Bronze Age, through the period of spreading Greek cultural dominance, culminating in the establishment of the Hellenistic libraries of Alexander the Great's Successors.

It was found necessary to continue with an analysis of the Hellenistic legacy of the newly emerging Roman Republic in order to provide an insight into the fate of the Hellenistic library institutions as well as to maintain consistency with the theme of continuity of this study. Furthermore, Rome was to exercise a direct influence on the historical development of the RAL (see 4.3.7).

1.2 DEFINITION AND METHODOLOGY

Librarianship can be defined as:

"a form of cultural enterprise whose main characteristic is the stimulation of the optimum use of mankind's cultural heritage insofar as it consists of coded thoughts recorded in documents that are and must be held in readiness for use with the ultimate objective of making possible cultural progress (also in the fields of religion and science) in its particular sphere" (Meijer 1982:26).

For the purposes of this study therefore, a library will be defined according to Johnson's definition (1965:7) as:

"... a collection of graphic materials arranged for relatively easy use cared for by an individual or individuals familiar with that arrangement and available for use by at least a number of persons".

This would presuppose that a collection constituting a library would contain "coded thoughts" and "graphic materials" in the form of pictorial inscriptions or a writing style, both functioning as a symbolic representation to record thought and numbers. This collection of recorded material would be of such a size warranting the need for the application of some form of bibliographic control to facilitate easy access to the materials held therein.

The main objective of this dissertation will be to identify the RAL as the epitome of the development of ancient librarianship, thereby in turn providing the basis for the modern notion of librarianship.

To achieve this end, the study will be undertaken within the bounds of a conceptual framework of librarianship which outlines the complex of major functions of libraries as:

- (a) Collection Development
- (b) Information Retrieval (Heuristics)
- (c) Promotion of Use (Kesting in Nassimbeni and De Jager (eds) 1990:vi).

While the concept of collection development denotes procedures also applicable in ancient libraries such as selection, acquisition, storage and weeding, it was found necessary to combine the functions of (b) information retrieval and (c) promotion of use into a general concept of "collection accessibility" to describe the less complex and simplified methods of bibliographic control (as compared to modern procedures) employed in ancient libraries. Collection accessibility then, as applied in this study will imply the following functions: cataloguing/bibliographic description, classification, translation, editing, providing access to sources of knowledge/information, lending/issuing material and user guidance.

No direct distinction will therefore be made in this study between the "archive" and the "library" - essentially a modern differentiation. It can be argued for example that early Middle Eastern (see 2) and Greek Bronze Age (see 3.1) collections were purely of an archival nature as they contained documents and records and no literary material. However, these collections can be seen as representing the embryonic phase in the development of ancient librarianship as both the concepts of collection development and collection accessibility are identifiable in a number of these early collections - thereby constituting a "library" for the purposes of this study. Furthermore, especially in the case of the Greek Bronze Age, early civilizations had not developed a form of writing style complex enough to record oral tradition. Consequently literary material was absent from these collections.

The analysis of individual libraries according to the conceptual framework of librarianship as outlined above will be preceded by a brief overview of the extent of literacy and the literary output prevalent in each civilization and region (viz. - Chapter two: Mesopotamia, Syria, Asia-Minor, Pharaonic Egypt and Palestine; Chapter three: Greek Bronze Age, the

Dark Ages and Classical Greece; Chapter four: the Hellenistic Successor Kingdoms and the Roman Republic). It must be stressed that these are general discussions and should be regarded as such. A more detailed study investigating these topics would require a comprehensive thesis on its own. Since this dissertation is chiefly concerned with librarianship and libraries it is felt that the given studies, brief as they may seem, are adequate in providing a background for the study in hand. In this way therefore, a perspective will be gained as to the nature and sophistication of the reading public and the availability of book materials. In addition an insight will be provided on the general state of librarianship within each particular region or civilization as regards library buildings, personnel, general collection development and collection accessibility procedures and, where possible, the existing library types.

Depending on the availability of information as supplied by archaeological evidence and primary and secondary sources, the major individual library collections through the ages will be analysed as to the collection development policies and the accessibility procedures and methods these institutions employed. Arranged chronologically, the analyses will focus on the various types of libraries, including temple collections, state archival libraries, business and commerce collections as well as academic libraries and private collections. These findings will be brought together, summarized and tabulated in the concluding chapter (5. A case for continuity). In this way the elements that contributed to the creation of the RAL are to be identified, thereby contributing to the debate as to the origins of the RAL.

1.3 TIMETABLE

Exact datings in the subject-field of ancient history are still in many cases unresolved issues in modern scholarly circles. Owing to the complexities involved in this regard, an attempt has been made in this study to avoid potential areas of dispute by adopting generally accepted dates and timescales. However, areas where dating controversies have a direct bearing on this study, as for example with the dates of office of the head

librarians of the RAL (see 4.3.4), a more detailed analysis is undertaken of the issues involved by outlining various arguments and proposals.

The internal parameters of this study therefore have been determined by timescales as defined by the decline and emergence of various civilizations.

Analysis of the libraries of Middle Eastern civilizations (Mesopotamia, Syria and Asia-Minor) ends in c.668 B.C. with the establishment of the Assyrian royal library at Nineveh - the last noteworthy Middle Eastern library institution before the coming of Hellenism.

The Hellenistic period, for the purposes of this study, begins in 323 B.C. after the death of Alexander the Great and the emergence of the Successor kingdoms (see 4.2.1).

The Pharaonic period of Egypt ends therefore with the Hellenistic Ptolemaic rule of Egypt immediately after 323 B.C. A similar distinction is made between the Palestine before the advent of Hellenism and that of Hellenistic Palestine after 323 B.C. when the region became a pawn in the hands of Hellenistic kings.

The analysis of Greek libraries begins during the high-point of the Bronze Age (1450-1100 B.C.), through the Dark Ages (c.1100-800 B.C.), culminating with the age of Greek cultural dominance which ended with the emergence of the Hellenistic civilization (c.800-322 B.C.).

Analysis of the historical development of the RAL will end in 41 B.C. with the alleged acquisition of the collection of the Pergamum royal library (see 4.1.5.7 and 4.3.5.1) as this represents the emergence of the RAL as the unrivalled leading library institution of the ancient world. Pergamum allegedly was the only institution that threatened the RAL's leading status.

As regards Rome, the study is limited to the republican period (established 509 B.C.) and ends in 39 B.C. with the founding of the first public library in the city of Rome (see 4.2.5.8) which was based on the example set by the RAL (see 4.3.7).

2. LIBRARIES OF THE MIDDLE EAST

2.1 MESOPOTAMIA, SYRIA AND ASIA-MINOR

2.1.1 HISTORICAL OVERVIEW

In ancient times as in the modern era, the region roughly corresponding to the Syria and Mesopotamia of antiquity had been enveloped in continuous conflict and upheaval. Yet, despite this inherent instability the land of the Euphrates and Tigris rivers is acclaimed as the cradle of civilization.

Originally the valley between the Euphrates and Tigris rivers was populated by a non-Semitic people, the Sumerians, whose origins have been traced back to 4000 B.C. (La Fay 1978:748; Milkau 1955:18-19). The upper reaches of the two rivers were inhabited by the Akkadian people, a Semitic race. Sometime between 2600 and 2300 B.C. Sargon I of Akkadia invaded and conquered the lower regions of the valley and united his people and the Sumerians into the Babylonian empire (Johnson 1965:21). The Akkadians went on to assimilate the Sumerian culture and laws (Milkau 1955:19) and their empire at its height extended from the Persian Gulf to the Mediterranean Sea (Johnson 1965:21). De Vleeschauwer (1967:30) and Milkau (1955:20) note that at this time too, the Akkadian language (known today as "Babylonian/Assyrian") became the lingua-franca of inter-state diplomatic exchange.

De Vleeschauwer (1967:29-31) traced the many upheavals that battered away at the foundations of the Babylonian empire in its roughly two thousand years of existence. These included a Sumerian revolt in 2350 B.C. against the Akkadian domination, which subsequently resulted in a renaissance of the Sumerian culture. Not long after that followed an invasion by Anatolian Hittites. The thirteenth century B.C. saw the rise of the Assyrians, who inhabited the left bank of the Tigris (Milkau 1955:18), as a power. By 1100 B.C. the Assyrians ruled the whole of the Euphrates region, including the vast

territory of the once proud Babylonian empire. Forming part of the Assyrian domains was the Phoenician trading city of Ugarit (see 2.1.6.7) situated on the northern Syrian coast. In 900 B.C. the Assyrians had advanced into Asia-Minor and even threatened Egypt (see 2.2.1). However, even the mighty Assyrian empire had to fall - this time to the Persians and Medes in 612 B.C. The Persians were to be the last people to rule over this region before the coming of the Macedonians and their Greek allies under the leadership of Alexander the Great, which resulted in the Hellenization of the greater part of the Middle East (see. 4.1.1).

The Hittites, a people whose capital Hattusa (see 2.1.6.6) was situated in central Asia-Minor, played a major role in the history of the ancient Middle East. As already mentioned, the Hittites invaded the Babylonian empire in the twentieth century B.C. This occurred at the time when the Hittites were a superpower with a highly developed culture which was powerful and stable enough to influence the balance of power in the Middle Eastern region. The Hittite empire finally collapsed in 1200 B.C. owing to the mass migration of peoples which extended as far as mainland Greece and Egypt (Milkau 1955:39).

2.1.2 THE INVENTION AND DEVELOPMENT OF WRITING

As the socio-economic systems of the Middle Eastern trading empires became more complex, a need developed to store and preserve vital political and commercial transactions for future reference (Kesting 1986:103). The spoken word began to be recorded in a written form by means of symbols and pictorial signs (Weimann 1975:16) to ensure the preservation of information. The earliest form of writing that has been discovered is of Sumerian origin and has been dated to roughly 3000/2900 B.C. (Bradscher 1985:239; Weimann 1975:16). This early writing style is known as cuneiform, a term derived from the Latin word *cuneus*, meaning "wedge", since the method of writing constituted "wedges made with a stylus primarily in clay tablets" (Bradscher 1985:239). Cuneiform was inscribed on tablets in two or more columns with Thompson noting that "the order of the columns was from left to right on the obverse but from right to left on the reverse" (1962:9).

Clay became the obvious writing material as it was found in great abundance along the many river systems of Mesopotamia (Milkau 1955:20) and allowed for clear and intelligible inscriptions. Once hardened by sun or fire, the clay tablet became very durable as witnessed by the over 400 000 clay tablets that have been uncovered by archaeological excavations (Milkau 1955:21). Most of these tablets were discovered in the region between the Euphrates and Tigris rivers. The clay tablet was later superseded by parchment and papyrus in certain areas of Asia-Minor and Syria.

Milkau goes on to note that as successive layers of tablets were excavated, these were found to correspond with different levels of the development of writing (1955:22). Dalby (1986:475) explains the development as follows: "In earliest writings the characters were pictures, each representing an idea, later they came to stand for words, parts of words, groups of sounds, and sometimes single sounds".

Dalby goes on to point out that "later still the same script, with all its inconsistencies and imperfections was adapted for writing Akkadian and other ancient Eastern languages". Various peoples therefore adopted the Sumerian method of writing, adapting it to suit their own needs and consequently developed their own written languages. In this way in roughly 2 000 B.C. the Phoenicians developed their own alphabet consisting solely of consonants which went on to form the basis for languages such as Hebrew, Aramaic, Greek and Latin (Weimann 1975:17). The Hittites also adopted the cuneiform style and went on to develop a Semitic alphabet (Milkau 1955:20) while the Assyrians and Persians modified it to a simpler "line and stripe combination" to put their languages into writing (Weimann 1975:17).

2.1.3 THE EXTENT OF LITERACY

Writing developed in response to administrative needs. Because the monarchical bureaucracy dominated the political and economic processes of the ancient Middle Eastern kingdoms, knowledge of the art of writing was limited to a small proportion of the population. The training of these "civil-service" scribes is outlined below (Bradscher 1985:240).

Potential trainees were selected from the upper strata of society and in most cases these were sons of fathers who held important civil-service posts. Bradscher notes that in the case of Ebla (see 2.1.6.4) women may also have been trained as scribes. Less than ten students were enrolled at the scribal schools at a time. These scribal schools were usually affiliated to temples (De Vleeschauwer 1967:27). Bradscher goes on to explain that the school was headed by chief scribes and at Ebla these bore the title of "um-mi-a" ("expert"). Members of the teaching staff were known as "dub-zu-zu" ("one who knows tablets"). Cuneiform was very difficult to learn as generally over 2 000 different symbols had to be mastered. Also, the scribes had to be familiar with "foreign" scripts, as in Ebla for example where scribes had to be proficient in Eblaite as well as in the Sumerian script. Bradscher concludes therefore that "in the Ancient Near East only professional scribes learnt to write".

Confirming the difficulty involved in learning to write cuneiform, are the excavations of hoards of exercise tablets, some still displaying corrected errors (see 2.1.6.4b). Smaller tablets have been uncovered inscribed with a single word written in two languages. The fact that so many exercise tablets have been discovered has led Bradscher to conclude that "quite possibly they were used as teaching tools" (1985:240).

No doubt as the centuries progressed the knowledge of writing was no longer limited to royal administrative scribes. In temples, priests and temple scribes recorded sacred teachings and worshipping procedures in writing, while scholars present at the royal courts of various civilizations recorded the results of their academic studies and observations in the cuneiform scripts (see 2.1.4). However, it is doubtful that this form of literacy was developed beyond the confines of official state institutions. Scribes and those who possessed the ability to write were therefore held in esteem in ancient Middle Eastern society (Bradscher 1985:241) - heights to which the commoner never dreamt of aspiring.

2.1.4 LITERARY OUTPUT

Texts at first took the form of administrative lists recording information such as contracts of seasonal workers, tax arrangements and the maintenance of buildings and canals (Kesting 1986:103). As the script developed, more complex texts were produced embodying the written word. Works such as cult texts, oath formulas, poems, historical and genealogical records, proverbs and even dictionaries were compiled (Weimann 1975:18). As knowledge and the civilizations advanced so were the developments in the sciences recorded. These included studies in mathematics, geometry, astronomy, medicine, and chemistry (Weimann 1975:16).

Within 1 000 years literary output had advanced to such an extent that during the Babylonian period (c.2600-728 B.C.) King Hammurabi (ruled sometime between 1950-1800 B.C.) was able to commission the compilation of a complete history of Babylonia (Johnson 1965:22). This work included the history of all wars and international disputes, as well as the chronologies of the reigns of all the preceding kings. At the same time a religious history, partly mythological and partly historical in nature, was also compiled. This work outlined the stories of the gods, their temples and priests. Johnson goes on to explain that in order to complete such a work access was required to an immense amount of primary and secondary source material, which could only be available if the Babylonians "had at their disposal thousands of tablets of recorded history, well organized and catalogued into usable libraries" (see 2.1.5). Unfortunately both histories have failed to survive although extracts of the once voluminous works are preserved as they were copied later by the Assyrians.

A similar feat was achieved in the codification of laws which bears Hammurabi's name (Johnson 1965:23; Kesting 1986:104). Once again this presupposes the existence of "well arranged legal collections as sources for laws ...", which suggests that there must have been access to "an excellent legal archive or law library" (Johnson 1965:23).

Milkau (1955:21) concludes that judging by the immense archaeological finds of cuneiform tablets, it is certainly astounding as to the amount of writings the ancient Middle Eastern civilizations had produced.

2.1.5 MIDDLE EASTERN LIBRARIANSHIP

It was soon realized that to preserve the ever-increasing hoards of tablets (Weimann 1975:18) and to protect them against deterioration from the harsh Mesopotamian climate, storage facilities had to be provided (Bradscher 1985:239). Consequently "by 2700 B.C. libraries or at least extensive archives had been established" (Johnson 1965:21). Weimann points out that initially these institutions were of an unspecialized nature and contained general collections embracing a wide variety of subjects (1975:18). That these libraries became to be permanent institutions is confirmed by the stored material which in some cases dates back many years (De Vleeschauwer 1967:29).

Milkau argues that since so many clay tablet collections have been uncovered, it can be assumed that these finds could not have been in private possession but must have belonged to temple or palace libraries, especially as most of these collections contained literary texts (1955:50). Johnson (1965:25-26) concurs with this hypothesis, citing the evidence supplied by archaeologists whose excavations have revealed mostly palace and temple libraries dating to approximately 2 000 to 500 B.C. Nevertheless, Johnson does point out that evidence has also been found of private and commercial collections belonging to families in several cities of the Mesopotamian valley.

2.1.5.1 Architectural layout

Book collections generally were housed in a separate chamber or chambers of clay or brick construction (see 2.1.5.4). These chambers formed part of the temple or palace complex they were attached to (Weimann 1975:18). Within these chambers, Weimann adds, the tablets were stored upon either wooden shelves or benches, and in clay jars or wooden boxes. Papyrus fragments have also been found in boxes or clay jars.

2.1.5.2 Library personnel

Librarians were variously known as "man of the tablets", "master of the books", "keeper of tablets" (Johnson 1965:28), "man of the written tablets" (Thompson 1962:12) and "director of the library" (Milkau 1955:48). To ensure easy access to a collection, the appointed librarian had to be literate and highly qualified. Johnson (1965:28-29) outlines the training a librarian had to undergo during his apprenticeship. Firstly, he had to be a graduate from a scribal school because a librarian, in addition to his normal library duties, was often called upon to translate and transcribe works needed for "higher government and religious officials". Then he underwent thorough training in the literature or type of records he was to oversee. Since it was a very responsible post, a librarian usually was a member of an upper class family, often the youngest son.

In temple libraries the librarian served the dual role of scribe and high-ranking priest, while in royal libraries he was often an important official (Johnson 1965:28).

2.1.5.3 Collection development

De Vleeschauwer notes that archaeological excavations have revealed that temples and palaces were constructed in close proximity to each other. Not only does this give an indication of the close relationship between state cult and monarchy, but also of how the collections of these two institutions complemented each other. Whereas the palace collection laid more emphasis on official state documents, the temple library holdings displayed a more literary character (1967:27).

Temple libraries served as storehouses of religious material, which Johnson lists as "incantations, invocations and prayers as well as sacred epics and scriptures" (1965:26). Also included were mythological accounts (Weimann 1975:18), liturgies and anthems to deities (La Fay 1978:750). De Vleeschauwer maintains that temple libraries performed a dual function (1967:27-28). Firstly, such libraries were religious, literary and academic educational institutions and therefore would house material encompassing those subject-fields which would have been copied from local copies or originals, as well as those from

foreign sources. Secondly, the temple library functioned as a writing school (see 2.1.3). This would presuppose the existence of reading and writing materials, dictionaries and textbooks for students to copy from.

As mentioned, the state or palace library generally contained material mostly of an administrative nature. However, many contained much the same literary material as the temple libraries, the only essential difference being that the palace library's collection would be much larger (De Vleeschauer 1967:28). Commercial records, treaties, war discourses (La Fay 1978:750), travel logs and poetry (Weimann 1975:18) were amongst the materials making up the palace library holdings.

2.1.5.4 Collection accessibility

A detailed insight into early Mesopotamian cataloguing methods has been obtained from an extensive study by Dalby (1986) of a series of catalogues drawn up over a period of 300 years from roughly 2000 - 1700 B.C. The catalogues are of Sumerian and old Babylonian origin. Each individual catalogue spans a series of tablets and upon each tablet entries of individual works are inscribed. Each of the catalogues that Dalby analysed has been assigned a letter of the alphabet to aid in identification.

The Mesopotamians identified a work by the first words of the text, which has come to be known by the Latin term "incipit". Dalby notes that identification by title "had not been invented" yet (1986:480). Identification by incipit was designed to identify a specific tablet and did not act as an abstraction of the literary work. Therefore each successive tablet in a series would be identified by its opening words.

The catalogues in most cases indicated the location of the works they listed. For example, a catalogue which Dalby designated "B" and dated to c.2000 B.C. (1986:478), provided the following information:

- Entries 1 and 2 - list tablets belonging to two series, each followed by the phrase "in a well".
- Entry 3 - records that its series was "not found (or recovered)".
- Entry 4 - names a series but says nothing of its contents or location.

Dalby explains that the "well" recorded on entries 1 and 2 above will have been accessible since "it would have been neither possible nor necessary to list the individual tablets of the series that had been put in it" (1986:481). Dalby goes on to suggest that the well was possibly "a nickname for the type of doorless, windowless archive room" which could be entered "by ladder from above, in which tablets were stored" and concludes "that the owner of the works listed in B had the fourth (series) of them to hand, had lost the third and kept the first two in the less accessible archive room, making it necessary to list their contents for reference".

Another example of a location guide is catalogue D (1986:478-479) which dates from the Babylonian period, roughly 2000 to 1700 B.C. (1986:480). On this particular catalogue entries 1 to 11 were followed by the phrase "in the lower tablet-holder", and entries 13 to 24 were followed by "in the upper tablet-holder". Dalby believes that this is a library catalogue which lists the contents of two tablet boxes or baskets (1986:481).

A number of catalogues were found to be differentiated by subject (1986:481). Out of sixteen catalogues examined, five contained works identified with hymns only. An example is catalogue P which has been dated to the period after 1700 B.C. This catalogue was further subdivided according to the deity addressed. This was indicated at the end of each class or subdivision. For example entries 26-42 are followed by the words "Hymns of the gala" and a ruled line, entries 44-47 by "Hymns of the pastorite of Inanna" and a ruled line and entries 49-60 by "Tigi" and a ruled line (1986:480).

Dalby (1986:482-483) concludes that this form of subject classification within individual catalogues may have served the purpose of assisting "priests to find texts for a particular ceremony".

Dalby noted that two catalogues, namely F and G, coincided in their contents and arrangement "much more than could be explained by chance" (1986:483). He went on to conclude that catalogue G was in fact a duplicate listing of the tablet collection contained in F and was drawn up after the latter. The reason for this whole repetitious procedure appears to be that the continuous "use and the disorderly replacement" of tablets had

disarrayed the original sequence. The only option for the librarian was to draw up a new catalogue reflecting the new though unintentional arrangement. As a result, the collection of educational works in catalogue F were found to be replaced by a collection of hymns in G. Furthermore, catalogue G displayed additional works embodying epics, proverbs and a number of other works listed in no particular arrangement towards the end of the existing collection also contained in F (1986:483-484).

Attempts were made to modify the existing catalogues to improve the general accessibility of collections. For example, it appears that the procedure of entry by incipit caused problems, since some incipits would be repeated, such as "lugal" (king) for hymns and "U4-ri-a" (in former days) for legends. This problem was partly solved by lengthening the incipits to differentiate between them (1986:481-482). Catalogue G, for example, has two titles beginning with "es-nun-e". Here additional words of the title were recorded in the incipit, with four "lugal" titles being dealt with in the same manner. Likewise three titles in catalogue C beginning with "U4-ri-a" were also lengthened.

However this same catalogue C also utilized another method to solve the problems posed by similar incipits. Entry number 33 on this catalogue lists three works all beginning with the words "dumu-é-dub-ba", while entry number 43 lists eleven works beginning with the term "lugal". In this way similar titles were grouped together, no doubt saving time in the search for a specific work.

Dalby goes on to note that further close examination of catalogue C indicates that the titles listed in this catalogue were arranged in such a way as to "help the person responsible for the collection to memorize its contents: a sign or group of signs in each title in turn, or an aspect of the subject represented, would recall the next title" (1986:485). For example, a series of entries would be recorded as follows:

4lugal-me5me6me-ta-am7me8 ...

Dalby (1986:484) explains that "the first entry here means that the phrase "lugal-me" occurs in both tablets C4 and C5; the second entry means that "me" is common to C5 and C6 ..." and so on. Therefore, as Dalby concludes "the keywords once given, the rest of the titles would come to mind" (1986:485).

Succeeding civilizations inherited these original cataloguing procedures, modifying and adapting them to their own needs. Weimann (1975:19) found examples of more detailed bibliographical control from the Middle Assyrian Empire period (after 1100 B.C.). Biographical notes were added to the end of individual works. Tablets which formed part of a series were numbered to reflect the correct sequence, while a single tablet would function as a contents page by listing by incipit the total number of tablets that made up a multi-tablet work.

Tablet collections were accessible to a limited group of users since the majority of the population was illiterate (see 2.1.3). Weimann maintains that public access to the collections was further restricted as these were housed within palace and temple complexes (1975:19). Only state officials, scribes and temple staff could have gained access. No doubt as literacy became more widespread and scholarly activity increased, collections were made available to a more wide range of users.

2.1.6 ANALYSIS OF INDIVIDUAL LIBRARIES

2.1.6.1 Ur

Situated not far from the mouth of the Euphrates river, the city of Ur was the seat of the moon god Nannar-sin. Already as far back as 3000 B.C. the city had become an important centre, a position it was to hold until the Persian conquest in the seventh century B.C. (Milkau 1955:24).

Archaeologists have excavated a building devoted solely to the storing of tablets and which bore the name "great house of tablets" (Johnson 1965:26). Also small tablet chambers were uncovered within the temple complex (Milkau 1955:24).

2.1.6.1a Collection development

Legal texts were discovered in the library building, including a code of law which Johnson (1965:26) maintains antedated Hammurabi's code by several centuries (see 2.1.4). Also

found were the records and procedures of a national law court which span a period of over a century.

The temple collection was made up of religious and astronomical works. Another chamber within the temple complex was found to have contained tablets of diverse subject matter such as economic accounts, legal documents, letters, religious works, school textbooks as well as school exercises. This chamber could presumably have served as the library of a temple school (Milkau 1955:24).

2.1.6.1b Collection accessibility

Archaeologists have identified a form of subject division by chamber, as separate chambers appear to have housed the economic, literary and religious collections (Milkau 1955:24-25). Milkau goes on to note that many tablets were found to be stored in clay boxes, the contents of which were identified by labels and impressions.

2.1.6.2 Mari

The archaeological remains of the ancient city of Mari were uncovered along the upper reaches of the Euphrates river in what is now Syria (Johnson 1965:26). Mari enjoyed a period of great prosperity during most of the third millennium B.C. until it was conquered by Ebla (see 2.1.6.4) in 2480 B.C. (La Fay 1978:750). The city was finally destroyed by Hammurabi (De Vleeschauwer 1967:30), who had ruled as king sometime between 1950-1800 B.C. (see 2.1.4).

Over 20 000 cuneiform tablets have been uncovered which date to the last few hundred years of the city's existence. The majority of these have been found strewn about in the royal palace, although Milkau (1955:35) notes that two chambers alone yielded 13 000 tablets. The library must have formed part of the palace complex, which at one time had numbered over 300 chambers and courts (La Fay 1978:750).

2.1.6.2a Collection development

Tablets recording the extensive trade the city undertook make up the majority of the collection (De Vleeschauwer 1967:30). It also contained historical and geographical works (Johnson 1965:26), as well as letters and many religious and literary texts (Milkau 1955:35).

2.1.6.2b Collection accessibility

A form of subject division was employed, as tablets covering specific subjects were found roughly grouped together in certain areas of the excavation site (Milkau 1955:35).

Two small clay labels were found, each with a tiny opening or hole through which a ribbon or wire could be threaded. On one side of the label was inscribed what appears to be a title: "container for the tablets of the servants of Zimrilin". On the reverse side a date was inscribed: "Thirty-second year of Hammurabi". Milkau (1955:36) concludes therefore that these labels identified tablet-containers which were arranged chronologically.

With such precise bibliographic control it is highly likely that the collection was organized for constant everyday use.

2.1.6.3 Kish

Kish lies in north eastern Babylon along a branch of the Euphrates river. The city was at one time the capital of the Babylonian empire until Sargon I, sometime in the latter half of the second millennium B.C. (see 2.1.1), transferred the seat of the monarchy to Akkad (Milkau 1955:31).

Archaeologists have excavated a large administrative complex dating back to the time of Hammurabi (c.1950 B.C.) and which was subsequently rebuilt by Nebuchadnezzar II (605-562 B.C.). Large tablet finds have been made within the confines of these buildings which Milkau believes point to the existence of a library.

2.1.6.3a Collection development

Apart from administrative material, the library contained large amounts of religious texts written in cuneiform (Milkau 1955:32).

2.1.6.3b Collection accessibility

A large proportion of the tablet collection was stored in rows of clay jars arranged along the walls of the library - a practice which De Vleeschauwer finds unique (1967:29). Seals and signatures were inscribed on the outside of the jars to aid in the identification of the contents of each individual jar. Milkau (1955:32) maintains that each jar contained tablets limited to a specific subject, thereby allowing for a neat and precise subject differentiation as well as easy access. Subject differentiation was also practised by chamber, as a number of chambers were found to store jars all containing tablets covering one common subject-field.

Judging by the nature of the holdings, the collection would have been limited to official use only, as well as to that of the priesthood. However, the library was clearly organized to be used.

2.1.6.4 Ebla

The city of Ebla was the capital of a Sumerian empire situated in today's northern central Syria (Bradscher 1985:238). Most of the tablets that have been found here are believed to have survived the city's destruction by the Akkadians in the 2250's B.C. (Wellisch 1981:490), which would date the city's tablet collection roughly to the period of 2400-2250 B.C. (Bradscher 1985:239). The fact that Ebla dated so far back into the third millennium is partly proven by the find of a lid of an Egyptian jar at the excavation site. This lid, which was imported from Egypt, bears the cartouche of pharaoh Pepi I, who ruled in Egypt from 2332 to 2283 B.C. (La Fay 1978:759). The city, which at its height rivalled both Mesopotamia and Egypt as a superpower in the ancient world (La Fay 1978:731), was finally destroyed in 1600 B.C. by the Hittites - having been rebuilt after its initial destruction in roughly 2250 B.C. (Wellisch 1981:490).

Archaeologists have uncovered four library chambers on the site, all situated within the confines of the royal palace (Bradscher 1985:239). What has been identified as the main archive contained 15 000 tablets, while another three archives have been discovered in antechambers containing 600, 800 and 1 000 tablets respectively. In the vicinity of the palace remains, a writing chamber has been found, complete with writing instruments and clay jar tablet containers. Here, Bradscher concludes, "Ebla's tablets were created and inscribed". The tablets excavated at Ebla vary in size and shape (Bradscher 1985:239), with rectangular shaped tablets roughly measuring 18 x 18 cm, oblong tablets 20 - 21 cm in width and small round tablets 2.6 to 6.0 cm in diameter (Wellisch 1981:491).

The fact that so many tablets have survived whole and intact was a result of the first destruction of the city by Naram-Sin (2291 - 2255 B.C.), the grandson of Sargon I (see 2.1.1), who put the city to the torch sometime in the 2250's B.C. (Wellisch 1981:490). Bradscher (1985:239) points out however that this raises the question of what happened to the tablets for the period 2200 - 1600 B.C., as so far none have been found.

2.1.6.4a Collection development

Texts covering a very large variety of subjects have been uncovered at Ebla. Among the administrative texts identified are inventories, daybooks and ledgers which record the intensive trade Ebla undertook to far flung lands, trading materials such as wood, textiles, metals and ceramic wares (Wellisch 1981:493). There are also tribute payment lists, personnel assignments, payroll listings, lists of offerings for temples as well as lists of rations for state functionaries, the royal family and messengers travelling to other city-states (Bradscher 1985:240). Added to this are executive texts such as royal ordinances, military records (for example, correspondence concerning military action) as well as legal texts, which include contracts and judicial decisions.

The Eblaite's keen interest in linguistics is indicated by a collection of thirty-two bilingual dictionaries (Wellisch 1981:494). These took the form of word-lists which list over 3 000 words of Eblaite. These were arranged either by similarity of sound (as pronounced in Eblaite) or by similarity in the form of the cuneiform signs. Even bilingual word-lists were found, for example one work where 1 000 Eblaite words are listed in one column, with

a parallel column giving the corresponding meaning in Sumerian. Eighteen copies of one such bilingual dictionary have been found (Bradscher 1985:240). The Ebla tablets also contained examples of monolingual grammars showing, for example, the conjugation of verbs in the Eblaite language (Wellisch 1981:495-496).

Literary texts included religious hymns and incantations (Wellisch 1981:494), as well as a creation story and accounts of the flood (Bradscher 1985:240). Epics, mythological themes and proverbs also made up the collection (Wellisch 1981:494). Wellisch goes on to note that many of these literary texts were often found in several copies.

An interesting find were simple lists of gods, kings, objects such as stones, wood and metal as well as of fishes, birds and animals and even professions (Wellisch 1981:496). Wellisch explains that the drawing up of lists was "a typical feature of Sumerian culture". Most of these lists were reproduced into a number of identical copies, and many of them were found to have been copied later in Akkad, Babylonia and Assyria. Indeed, at Ebla many texts in foreign languages and scripts were discovered (Wellisch 1981:498).

2.1.6.4b Collection accessibility

There is evidence of a system of subject differentiation. On a broad scale, subject division seems to have been based on a principle of "subject by chamber", as two smaller storage rooms contained over 1 000 tablets which dealt exclusively with economic matters (Wellisch 1981:491).

However, this seems to be the exception as in the other library chambers many different subjects were stored together. Here a form of shelf classification was in use. For example, in the main palace library where 75% of the tablets were found, purely lexical texts were shelved against one wall and economic texts against another (Bradscher 1985:241). In another chamber, all syllabaries and dictionaries were shelved separately in one place, in this case along the northern wall of the room (Wellisch 1981:495).

Subject differentiation was also maintained by different tablet shapes (see 2.1.6.4). Whereas square tablets seemed to contain texts of all kinds, round tablets were inscribed

only with economic and administrative subject matter. Wellisch argues that "this arrangement must have served some definite archival ordering purpose" (1981:491).

The arrangement of tablets on the shelves followed a strict pattern (Wellisch 1981:492). Each individual tablet was placed upon the wooden shelves with its recto side facing outwards, leaning at an angle towards the wall so that the first line of the text was visible over the edge of the tablet succeeding it. With the tablets organized in this way, the librarian was able to identify and retrieve a specific tablet without having to move any of the other heavy and fragile tablets in the stack. Furthermore Bradscher (1985:239) notes that a number of tablets displayed "a brief identifying inscription on their edges" which resembled the title on the spine of a modern book.

The tablets containing the lists of items had their own arrangement. These were organized in an order of importance or precedence which, according to Wellisch, "may be considered as rudimentary classification tables" (1981:496).

That no catalogues or location guides as such have been identified has led Bradscher (1985:241) to conclude that memory and a thorough knowledge of the arrangement of the collection were the only retrieval aids available to the librarian or user seeking a specific tablet (see 2.1.5.4).

The wide variety of subjects discovered at Ebla and the efficient organizational methods that were employed presupposes that the collection was open to use, whether public or official. The fact that the library contained numerous copies of grammars, syllabaries and dictionaries points to their probable use in scribal schools (see 2.1.3). Furthermore, Wellisch notes that a number of tablets contained exercises written by students who had to copy examples compiled by their teachers. In a number of cases teachers had made correction marks in the margins (1981:495).

Wellisch goes on to maintain that evidence exists indicating that the Ebla collection served as a reference library for an academy. This has been concluded from a note appended to the end of texts which read "when the young scribes came forth from Mari".

Mari was an Akkadian city (see 2.1.6.2) with which Ebla maintained close cultural and trade links. Wellisch concludes that the Ebla library "was open to visiting scholars who compared texts and compiled their dictionaries cooperatively, perhaps under the guidance of a general editor". Indeed, it could be argued that the Ebla library served as a key institution for scholarly and educational studies (Wellisch 1981:498).

2.1.6.5 Lagash

Situated along the Tigris river in southern Babylon, Lagash dates to the period 2400-2000 B.C. Milkau (1955:25-27) goes on to record that a total of roughly 170 000 tablets have been discovered on the excavation site of the city, 30 000 of which are inscribed with cuneiform (Johnson 1965:22).

A number of tablet finds were made in the remains of large chambers. These chambers were arranged in a specific way, with the central chamber having smaller chambers constructed around it in concentric circles running in a clockwise direction (Milkau 1955:26). Dalby (1986:481) notes that these chambers lacked doors and windows, with entry being gained by means of a ladder which extended down from an opening in the roof (see 2.1.5.4). Inside these storage chambers tablets were discovered, packed in rows stacked up to five to six layers high (Milkau 1955:26). More tablet finds were made in the south western corner of the excavation site in an area bounded by what appears to be the remains of four walls. West of this square construction layers of tablets were uncovered at various depths in the ground arranged in a thirty-metre strip. The remains of another building containing tablets were found in the southern half of the site which is believed to have been constructed at the beginning of the reign of the Ur dynasty (Milkau 1955:27).

2.1.6.5a Collection development

The majority of tablets formed part of a business collection (Richardson 1963:45), although texts concerning religious and political affairs as well as votive offerings constituted a sizeable proportion of the collection (Kesting 1986:103). Milkau also notes

that a number of tablets recording the lease of land by kings to their subjects (probably a form of feudal land tenancy) were also identified (1955:26).

2.1.6.5b Collection accessibility

In most cases the tables were arranged by subject and stacked either in rows along walls and passage ways (De Vleeschauwer 1967:29) or on specially constructed brick galleries which had low ledges on both sides (Richardson 1963:45). The collection, nevertheless, will have been accessible to royal officials only.

2.1.6.6 Hattusa

Situated along the banks of the Halys river in Asia-Minor and 150 kilometres east of the modern Turkish capital of Ankara (Milkau 1955:37), Hattusa was the cultural centre and capital of the ancient Hittite empire (De Vleeschauwer 1967:27). Over 11 000 tablets (Milkau 1955:37), dated to 1400 B.C. (Vorstius 1954:5) have been discovered on the excavation site of the ancient city. They were found spread out within two chambers on the slope of a hill which formed part of a huge complex and in three chambers belonging to a temple (Milkau 1955:38).

The average size of the tablets is 30 x 20 cm, which Milkau maintains made them amongst the largest in the Middle East (1955:38). The language medium is Babylonian/Assyrian, although the cuneiform style with which the tablets are inscribed is considered unique and different from the known cuneiform styles of the greater Mesopotamian region. Milkau concludes that these tablets had formed part of the "Hittite state library" (1955:40).

2.1.6.6a Collection development

Historical documents, annals and religious texts formed a major part of the collection (De Vleeschauwer 1967:30). Tablets reporting instances of diplomatic exchange between Hattusa and Egypt have also been identified. Other texts include edicts, royal letters and speeches, testaments, state treaties, tribute lists and the private correspondence of priests and priestesses (Milkau 1955:39).

The extensive literature collection included the Hittite book of law which has been compared in size and extent to that of King Hammurabi's (see 2.1.4), having been compiled in a similar analytic way. The Epic of Gilgamesh was found in three versions including one translated into the Hittite language. Another extensive work uncovered was a work covering the subjects of horse racing and horse breeding (Milkau 1955:39).

2.1.6.6b Collection accessibility

No clear evidence has remained indicating that the collection was organized according to subject division, although Milkau (1955:38) suggests that some method of subject division may have existed. Nevertheless, Milkau notes that examples of author catalogues have been identified (1955:40). Contrary to general Middle Eastern practice the authors of literary texts are acknowledged on the respective tablets with the only exception being the older texts imported from Babylon, such as mythological accounts and the above mentioned Epic of Gilgamesh.

The colophon system was extensively utilized to aid in the arrangement of voluminous texts which were spread over a number of tablets. This procedure required that the last line of the preceding tablet be inscribed as the first line of the next tablet in the sequence (Milkau 1955:40). This method was adopted by the later library of Ashurbanipal in Nineveh (see 2.1.6.9b).

De Vleeschauwer (1967:30-31) observes that the librarians seemed to have exercised strict control over their holdings as gaps in the collection were quickly replaced. This was especially the case where tablets inscribed with original works were damaged in some way (Milkau 1955:40). A gap was left on the shelves or in the series from which the damaged tablet was removed. This was then recorded with the gap only being filled once a replacement had been drawn up or the damaged tablet repaired. The scribe and the official under whose authority the repairs were carried out were noted on the new tablet as follows:

Tablet 2
The Great King Tudchaliash
Concerning the oath
Ended

This tablet had crumbled away
In the presence of the Machuzi and of the Halva-lu have I, Pudash, repaired it.

The Hattusa collection underwent a periodic weeding process, as indicated by the many old and dated tablets found stacked under the floors of the chambers in the palace of Hattusa (Milkau 1955:49).

Situated in the cultural centre of the Hittite empire, scholars from far and wide must have been attracted by the library holdings. The fact that the Hittites showed such respect toward the written word presupposes that the collection was kept at all times in a state of efficiency and readiness for everyday use.

2.1.6.7 Ugarit

The city of Ugarit was situated along the northern Syrian Mediterranean Coast. Milkau (1955:41) found that this Phoenician harbour city was first mentioned in the Amarna letters and was also referred to in texts found at Hattusa (see 2.1.6.6) and in the Egyptian collections of Amenophis II and III (1411-1355 B.C.) at Amarna (see 2.2.6.2) and of Ramses II (1301-1255 B.C.) at Thebes (see 2.2.6.3). By 1400 B.C. the city had become a major trading port and was the commercial centre where trade routes from the north and Syria met with those from Egypt. It also had extensive trade relations with Cyprus and Minoan Crete (see 3.1). Ugarit could therefore aptly be described as the cosmopolitan centre of the ancient world. The city's demise occurred sometime between the thirteenth and twelfth centuries B.C. as a result of the collapse of the Hittite empire, which unleashed a mass movement of peoples from north eastern Asia-Minor (see 2.1.1).

The clay tablets found here were inscribed with cuneiform, while Johnson identifies the language medium as "Ugaritic" (1965:39). These tablets were discovered at two different places on the site, one find being made in chambers forming part of the temple of Ba'al Saphon and the other in chambers belonging to the royal palace. The tablet sizes vary between 3 x 3 cm and 16 x 21 cm (Milkau 1955:43).

2.1.6.7a Collection development

The libraries contained texts in a variety of languages which included Akkadian, Sumerian, Hittite and Egyptian. A number of multi- and bilingual dictionaries have also been found (De Vleeschauwer 1967:31).

The palace collection held mostly diplomatic correspondence, treaties, laws and commercial transactions. The temple library however, apart from a religious collection, also contained literary works. The subjects were diverse and ranged from epic poems, works on magic and historical accounts to scientific and medical texts (Johnson 1965:39).

2.1.6.7b Collection accessibility

Both the cylinder and stamp seal were used to identify tablets in the collection (Johnson 1965:39). Some tablets were arranged into small parcels which indicates that these were differentiated from the rest of the collection (Milkau 1955:44). Only one example of the use of a colophon was found (Milkau 1955:43).

A chamber was discovered reserved solely for the storage of unwanted tablets, suggesting that the collection was periodically weeded. The tablets were stacked neatly in one corner of the room in total disregard of subject arrangement. This practice, Milkau (1955:49) points out, was also found to be in use in the libraries of Jewish synagogues (see 2.3.3.3).

Although the nature of the content of the palace library would reserve it for official use only, the presence of the multilingual dictionaries in the collection may indicate that access to the library was provided to traders and merchants seeking aid in the translations of trade agreements and contracts. The temple library with its literature collection may also have been open to users other than priests.

2.1.6.8 Agene

Situated in Babylonia, this little known site housed a collection of tablets (Johnson 1965:28).

2.1.6.8a Collection development

Works contained in the library were largely made up of subject matter concerning astrology and astronomy (Johnson 1965:28).

2.1.6.8b Collection accessibility

This library had devised a procedure in which the user was requested to write down the number of the tablet that was required and to hand this to the librarian who would then retrieve it from the collection. This presupposes the existence of a detailed catalogue listing the contents of the library. Johnson (1965:28) suggests that this method of retrieval may have been common throughout the Babylonian region. In only allowing the librarian to remove and replace tablets from the collection indicates that not only was the collection very valuable but also that there was a substantially large user public. In this way the library of Agene resembles the modern national library with a closed collection.

2.1.6.9 Nineveh

Nineveh lies on the right bank of the upper reaches of the Tigris river. When Ashurbanipal (668-626 B.C.) ascended the Assyrian throne, he made the city of Nineveh his royal capital (Johnson 1965:23). In so doing Ashurbanipal transferred the royal library which was originally founded by his great-grandfather Sargon II (died c.705 B.C.) to his new capital. Under the personal direction of the king, the library of Nineveh was expanded both in extent and literary content to represent what Weimann (1975:20) sees as the pinnacle of Middle Eastern librarianship. Gormley argues that since so little evidence remains of libraries of this time from an architectural point of view, Nineveh can be considered as the "prototype of the style prevalent in the area at this time" (1974:5).

Apart from the royal library, Ashurbanipal also developed an extensive temple collection, the nature of which was "entirely religious and pseudo-scientific ..." (Johnson 1965:27).

More than 20 000 clay tablets have been retrieved from the excavation site (De Vleeschauwer 1967:32), mostly inscribed upon in cuneiform (Milkau 1955:45). Milkau

goes on to point out that when compared to other tablets extracted from the Mesopotamian region, the tablets found at Nineveh constituted a higher quality clay and displayed a superior workmanship as far as the preparation and firing went. Furthermore the cuneiform featured an extraordinary elegance which is much clearer and detailed than other cuneiform styles (Milkau 1955:46).

Archaeologists conclude that the Nineveh library complex was made up of two distinct libraries, although both, Richardson (1963:128) notes, are generally treated as one. The larger collection was housed in a series of chambers in the south western part of the palace. The floors of these chambers were covered in tablets and tablet-containers rising to almost one storey in height. The "second library" constituted what appears to be a single chamber and was found near the north entrance of the palace.

The fact that so much has remained of the Nineveh library Milkau attributes to the invading Medes, who razed the city to the ground in 612 B.C., rendering it uninhabitable (1955:46). The invaders appeared to show little regard for the written word as they simply destroyed the library chambers by pushing in the chamber walls with battering-rams (Johnson 1965:25), leaving the valuable texts buried under the rubble for the next two millennia.

2.1.6.9a Collection development

Ashurbanipal dispatched agents to all parts of the Assyrian kingdom as well as neighbouring lands "to collect written records of all kinds and on all subjects" (Johnson 1965:23). Once located, these texts were brought to Nineveh where they were carefully copied (Thompson 1962:11) and even translated if necessary. When this initial processing was completed, the copies were deposited in the library with the originals sent back to the owners. A letter has been preserved which Thompson believes illustrates the thoroughness of Ashurbanipal's collection development policy. The letter in question was sent to the "mayor" of the city of Sippara and commanded him to nominate officials who were to seek out all the tablets that were in the houses of the populace and stored in the temple. These then were to be sent to Nineveh.

The extensive holdings contained literary works of Assyrian and Mesopotamian origin (Weimann 1975:20), including a copy of the Epic of Gilgamesh (which incidentally spanned twelve tablets) and a history of the Great Flood (Lissner 1955:14). Poetry, myths and legends were also stocked.

Ashurbanipal himself had a great interest in religion and works dealing with every aspect of this subject were well represented (Johnson 1965:24). These included incantations, verbal charms, lists of deities describing their attributes and accomplishments, hymns, rituals and prayers.

Linguistic works such as bilingual dictionaries listing Sumerian words and their Semitic/Assyrian meanings (Lissner 1955:14), grammars, lexicons, lists of synonyms and dictionaries were held, as well as works covering such diverse themes as omens, educational text books (Thompson 1962:12), history, geography and law (Kesting 1986:104). The sciences were represented by biology, astronomy, medicine and mathematics (Johnson 1965:24). Administrative material included commercial calculations, transactions and tax lists.

One of Ashurbanipal's personal royal seals summarized his collection development policy which resulted in the Nineveh library containing copies of almost all the literature of the known world at that time (Johnson 1965:25):

I have collected these tablets, I have had them copied, I have marked them with my name and I have deposited them in my palace.

2.1.6.9b Collection accessibility

The collection was of such a magnitude that some system had to be devised to organize and control it (Weimann 1975:20). There is evidence that some form of subject division did exist, although Milkau points out that carelessness and indeed recklessness on the part of the early archaeologists had disrupted the original order of the tablets (1955:47). Nevertheless some form of subject arrangement has been identified, as one chamber was found to contain purely historical material. Another chamber's contents seem to have

been limited to geography. Other possible divisions include law, commercial transactions, mythology and legends (Johnson 1965:24).

Small catalogues were inscribed upon walls near the chamber entrances (Johnson 1965:25). These catalogues listed the particular chamber's contents. Catalogues have also been found inscribed on tablets, and Johnson goes on to suggest that these too may have been placed near the entrances of tablet chambers. According to Thompson (1962:13), the catalogue entries recorded the title of the work, the number of lines, contents, incipit and pointed out the important parts or subdivisions of the text.

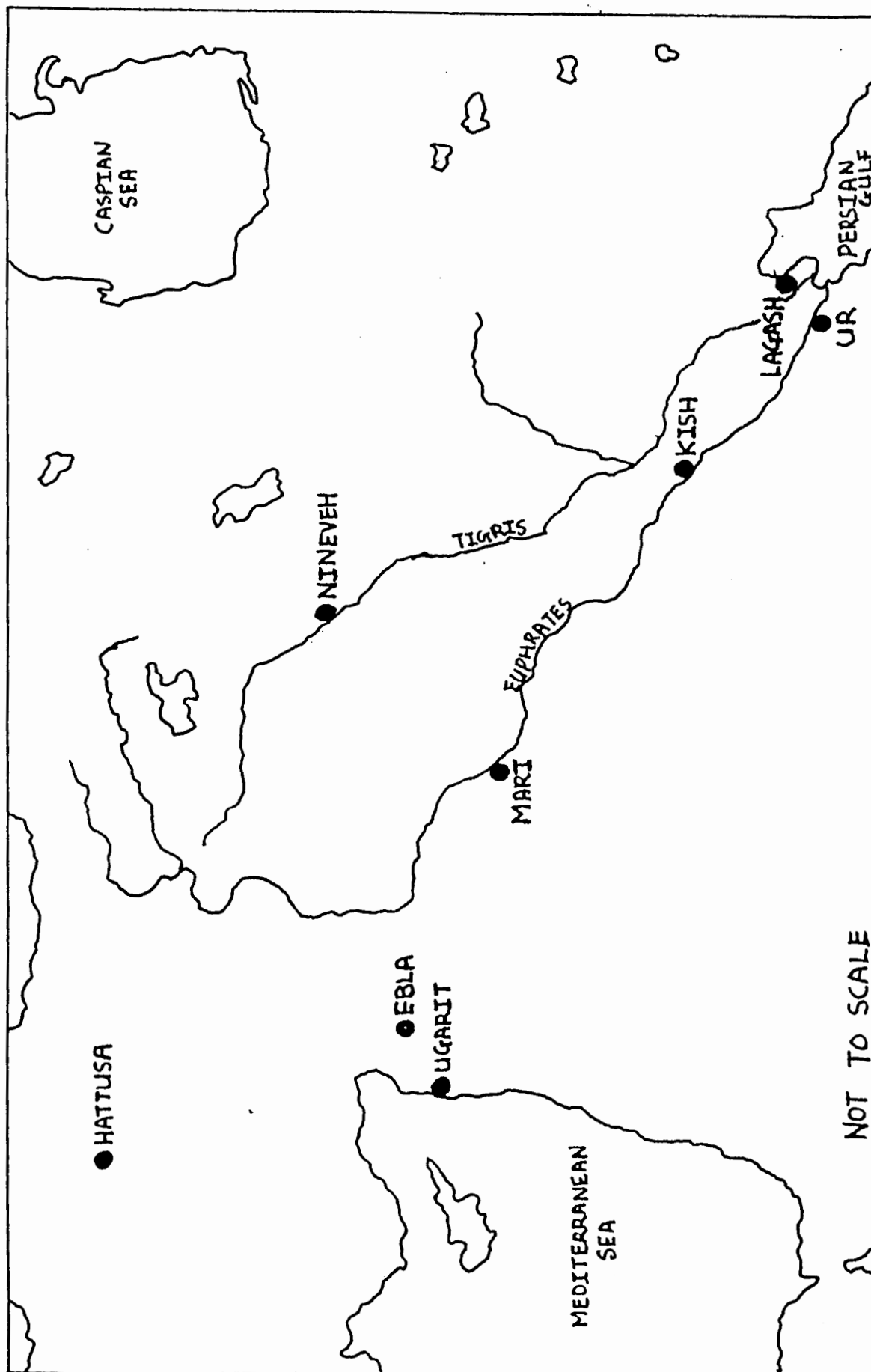
A large proportion of tablets were stored in clay jars and these in turn were placed on shelves. Each tablet contained in these jars bore an identification label which recorded the jar, shelf and chamber to which the specific tablet was allocated (Johnson 1965:24-25). The tablets themselves were inscribed with a colophon which in most cases indicated the particular tablet's place in its series, name of the author and the date (Thompson 1962:12). The date entry provided a wealth of information which included the name of the annual aponym, the year of the king's reign and the month and day the text was written. In addition Milkau (1955:47) found that a stamp or seal was appended at the end of the text on a tablet which identified the owner as:

Palace of Ashurbanipal
The King of the world
King of Assyria

The position of a tablet in a series was indicated, just as in Hattusa (see 2.1.6.6b), by the repetition of the last line of the preceding tablet in the first line of the tablet that followed (Hessel 1955:129, note 2). Series-lists were compiled on a single tablet which recorded the opening lines of all tablets making up a multi-tablet work. Tablets have also been uncovered containing lists of related series pertaining to similar subjects (Milkau 1955:47-48). Milkau also noted the use of little clay labels upon which were inscribed the name of a series title. These little labels were placed either on a stacked pile of tablets making up a series or on the reed or clay boxes which contained a multi-tablet work.

The library was used for academic and educational purposes as well as for public use (PRE Vol.3, 1899:407). Johnson argues that the only reason for the tablet collection to have been arranged and organized to facilitate easy access was for the express purpose of "quick consultation", whether official or unofficial (1965:25). Furthermore, Johnson points out that the condition of some of the catalogue tablets does indicate "that they were well used".

Map 1: Library Sites of Mesopotamia, Syria and Asia-Minor



2.2 PHARAONIC EGYPT

2.2.1 HISTORICAL OVERVIEW

The earliest evidence of an Egyptian people has been traced to roughly 5000 B.C. (Weimann 1975:14) when "Neolithic (New Stone Age) Egyptian cultures, with agriculture, irrigation, and village life, came into being ..." (CE Vol.8, 1965:652). These communities developed into a loose union of numerous small states (Weimann 1975:14) and by 3500 B.C. were unified into two larger kingdoms; Lower Egypt to the north centred around the Nile valley and Upper Egypt in the southern Delta region (CE Vol. 8, 1965:652). In roughly 3200 B.C. the more powerful Upper Egypt merged with Lower Egypt to form one single kingdom.

The new civilization that was established was "wealthy and productive" and was ruled by powerful pharaohs who "extracted from the land much wealth in the form of taxes and had at their disposal huge manpower resources", thereby at times expanding Egypt into extensive empires (CE Vol. 8, 1965:652). Two invasions, that of the Assyrians in 670 B.C. and the Persians in 525 B.C. (Johnson 1965:42-43) went on to mark the final decline of Egyptian Pharaonic civilization. The Persians proclaimed Egypt as a province of their empire (CE Vol. 8, 1965:661) installing their own rulers. Johnson (1965:42) maintains that these conquests had systematically destroyed the Egyptian civilization which had developed and survived for almost 3 000 years.

Thirty-one dynasties had ruled Egypt. The last, although being Persian, came to an end with Alexander the Great's arrival (see 4.1.1 and 4.3.1) in 332 B.C. (CE Vol. 8, 1965:655).

2.2.2 HIEROGLYPHICS AND PAPYRUS

The Egyptians developed their hieroglyphics shortly after the invention of the Mesopotamian cuneiform (see 2.1.2), and basically followed the same pattern of development (Weimann 1975:17). Hieroglyphics comprised of pictorial symbols representing letters and syllables. The Egyptians went on to develop an alternative

writing material to the clumsy clay tablet to record their written language upon. This was known as papyrus.

Papyrus comes from a plant that once grew in great abundance on the banks of the Nile river (Robinson 1979:7). Bushnell gives an account as to how papyrus first became used as a writing material. The "epoch-making affair" must have occurred when someone "stripped off the plant's outer skin and scribbled hieroglyphics on the fibre within" (1947:10). With the introduction of papyrus, scribes for the first time had a material which suited any forms of script, was durable and easily transportable (Robinson 1979:7). According to Bushnell (1947:10) the precise method of manufacture is uncertain. However, it is believed that once the outer skin of the stem was removed, the stem itself was cut into strips. These strips were laid side by side to form a base, with another layer of strips being laid crosswise at right angles. Although not essential, glue or gum seems to have been used to stick the two layers together.

A suitable writing surface was obtained by hammering the papyrus sheet and exposing it to the heat of the sun to rid it of any moisture (Bushnell 1947:11). Once the surface was polished with pumice stone (Robinson 1979:7), the production process was complete.

The average size of a papyrus sheet was five by eleven inches (Bushnell 1947:10). These could be stuck together producing scrolls over 150 feet long (Thompson 1962:58). The ends of the papyrus strip were attached to wooden handles, with the scroll being rolled up from the end where the last page was attached. In so doing "the first page would be under the eye of the reader, when he began to unroll it for reading purposes" (Thompson 1962:54).

The scribe would write on the papyrus with a stylus dipped in ink (Weimann 1975:17), beginning to write at the left end of the scroll, unrolling it as he progressed (Thompson 1962:55). The reader would then hold the scroll with the two handles and gradually roll up the scroll with his left hand as he read, thereby avoiding the need to unroll the scroll in its entirety. Once the scroll had been read, it had to be rolled up again "otherwise the next reader would have to read the book backward".

Thompson goes on to point out that the first and last sheets of the scroll which were attached to the handles "met with greater wear and tear than the body of the manuscript". These pages were therefore "reinforced by double sheets pasted together". However, Thompson concedes that despite this precaution "the ends of the roll especially were likely to become frayed and be torn off and lost".

Papyrus was not the only writing material utilized for the recording of information in Egypt. Johnson (1965:40) notes the use of clay and wax tablets as well as leather, the latter being in use before the advent of papyrus, and which "continued to be used for important documents". Letters, lessons and accounts were generally inscribed upon "simple wooden leaves with a coating of wax". Flat stones, bones and pottery pieces were also found inscribed with hieroglyphics.

2.2.3 THE EXTENT OF LITERACY

Archaeological evidence suggests that the mastering of hieroglyphics, and by implication literacy, was not limited to temple and royal officialdom.

Excavations at the site of EL-Lahun have uncovered the remains of numerous private houses belonging to upper class residents (Johnson 1965:36-37). Papyrus fragments were found in every one of these dwellings. These included legal papers, personal business files, wills, family correspondence and grocery lists, as well as material containing literature, ideology, history and even veterinary and medical works. Johnson concludes that these finds indicate "a high degree of literacy and literary interests" amongst the nobles and upper social strata.

Evidence, however, has come to light indicating that the lower classes possessed literary skills too. Remains have been found of a worker's colony established by Ramses II in the vicinity of Thebes at Der-el-Medine (De Vleeschauer 1967:26). Johnson (1965:37) suggests that these workers were probably engaged in the construction of a large monument dedicated to the pharaoh (see 2.2.6.3). The dwellings of these workers revealed papyrus fragments and ostraka in the form of letters, lawsuits, wage payments,

contracts and memoranda of all kinds as well as fragments of literature, magic and religious works. De Vleeschauwer argues that although these dwellings did not house slaves but the administrative personnel of the colony, these discoveries prove that literacy was indeed not limited to the nobility and was in fact common in the lower social strata (1967:26). Furthermore the remains found on this site "present as a whole a wonderful picture of the economic and social life of lower class Egypt" (Johnson 1965:37).

2.2.4 LITERARY OUTPUT

The fifth century B.C. Greek historian Herodotus described the Egyptians as a people who:

"... live in the cultivated parts of the country, by their practice of keeping records of the past, have made themselves much the most learned of any nation I have experienced". (Herodotus II.77)

Through the abundance of the raw materials required to manufacture papyrus (see 2.2.2), the Egyptians were able to produce a very extensive literature (Hessel 1955:1). Milkau suggests that by 2800 B.C. hieroglyphics had been fully developed and that already in 2500 B.C. the first book was produced (1955:5-6). By the time of Abraham's visit in the period between 1950 and 1900 B.C., book collections had been flourishing in Egypt for "a long time" (Richardson 1963:57-58). Richardson goes on to argue that "not merely public records but religious texts, medical texts, annals and the like had been common for nearly a thousand years and had possibly existed for about a thousand years before that". Johnson (1965:32) proposes that recorded history in Egypt may even go back as far as 3200 B.C.

A preserved example of a history is a collection of records describing the pharaoh Thutmose's Syrian wars which occurred in the late 1500s B.C. (Richardson 1963:66-67). The collection contains records which were drawn up on a daily basis and were recorded on a scroll. These, together with other scrolls containing accounts of tributes and commissary matters relating to the campaign, were used as primary sources to compile a history of the campaign drawn up on a leather scroll. This was deposited in a temple library while a summarized version of the history was inscribed on the walls of the

temple. Richardson concludes that "this represents in a nutshell the natural and usual manner and stages of record keeping and publication from that time on".

Dramatic works were also produced, as indicated by the contents of a chest discovered in a tomb dating to roughly 1800 B.C. (Milkau 1955:11). The chest was filled to about one-third of its height with dramatic literary texts. An example from this collection is a play describing the accession to the throne by Sesostris (1975-1934 B.C.). Milkau adds that this particular text with its accompanying illustrations could be considered the oldest surviving example of an illustrated book. A fragment of a passion play dated to 1800 B.C., the so-called "Drama of Osiris", was found in the remains of a temple (Johnson 1965:34).

2.2.5 EGYPTIAN LIBRARIANSHIP

A feature of Egyptian culture was its emphasis on the written word. This resulted in an extensive system of archives, libraries and public records (Hessel 1955:1). The storage of recorded materials took the form of private collections and deposits associated with palaces, temples and schools (Aman in ELIS 7, 1972:574). Yet, as De Vleeschauer (1967:24) points out amongst others, very little evidence has remained of what must have been vast Egyptian storehouses of records and recorded thought. Partly to blame was the very nature of the writing material itself - papyrus. It was very fragile and sensitive when exposed to the natural elements and only survived the ravages of time when enclosed in containers such as tombs, jars, barrels and boxes or simply buried in the desert sands, away from moisture (Milkau 1955:7).

2.2.5.1 Architectural layout

Milkau maintains that an illustrated inscription found in a tomb in the vicinity of Thebes provides an accurate description of what an ancient Egyptian library would have looked like (1955:14). Milkau explains that the inscription describes the profession of the deceased whose name was Tej. He was the secretary of the pharaoh Merenptah, the son of Ramses II, and worked in the "Place of letters of the Pharaoh in the house of Ramses"

(Die Stätte der Briefe des Pharaos im Hause des Ramses, der grossen Seele des Re). The modern equivalent would be the "Foreign Office". Illustrated is a large hall in which scribes are working on their knees, with chests for the storage of archival material lying at their feet. The overseer (presumably Tej) is proof-reading a document prepared by one of the scribes. Leading off this hall are several chambers, each containing wooden chests laid out in rows. Inscriptions in each of these chambers identify them as "the place of writings" (Stätte der Schriften). These chests would have stored the annals, letters and other writings produced by this institution.

2.2.5.2 Library personnel

Judging from the evidence supplied by inscriptions, Johnson believes that Egyptian librarians were highly educated men (1965:40). Known generally as the "Keeper of the books" or "Master of the rolls" the librarian also "corrected, translated, amended and criticized the material that passed through his hands - and probably censored it, too". The responsibility that the post entailed presupposes that a librarian was a senior state official.

Subordinate to the librarian no doubt was a staff of scribes, general assistants and slaves.

2.2.5.3 Collection development

Royal palaces situated in the capitals of the various dynasties contained archival libraries which served as storehouses for treasury records and records of all public departments (Richardson 1963:70-71). Within these collections everything of a documentary or business nature was organized with "great clerical detail".

Palace collections were not only limited to administrative material. The palace library of the pharaoh Neferikere which dates to roughly 2700 B.C. for example, contained medical papyri in portable cases (Richardson 1963:61).

Temple collections not only contained sacred scriptures, writings and instructional manuals outlining the methods of performing religious rites, but also secular texts concerning the sciences, astronomy and medical works (Johnson 1965:34). Furthermore, temples served as educational institutions, teaching skills in writing and the literary arts. Evidence has been found of special libraries serving these temple schools which made available reference works and textbooks for consultation. Materials such as business forms, grammars, histories and works on moral life and ethics formed part of temple school library holdings for the exclusive use of students (Johnson 1965:35). Johnson goes on to conclude that the Egyptian temple library developed into "a library in the fullest sense of the word" (1965:34).

Private collections were found to contain family histories, genealogical and business records, as well as travel tales and fictional works (Johnson 1965:36).

2.2.5.4 Collection accessibility

Each individual scroll was identified by a label which was pasted or tied to the knobbed end of one of the two handles to which the papyrus was attached (Esdaile 1932:34). The scrolls were placed in leather or cloth coverings and were stored in pigeon-holed walls or placed in containers on shelves. Valuable scrolls were preserved in metal containers which were often decorated with jewels (Johnson 1965:39-40).

Johnson goes on to suggest that some form of subject division must have existed with texts "of a similar nature" being placed together in a particular container. Lists of works were found to be inscribed on the walls of library chambers (see 2.2.6.1). These probably functioned as shelf-lists. Richardson (1963:164) maintains that an "alphabetic or dictionary arrangement" was utilized in Egyptian collections.

Palace collections were primarily reserved for the use of royal officials (Johnson 1965:33), while temple collections may have been divided into two distinct parts - one reserved for the exclusive utilization by palace staff and the other for public use (Johnson 1965:35; De Vleeschauwer 1967,25-26).

Richardson suggests that an inscription in the tomb of an official named Rekhmire, who was a vizier of Thutmose III (1580-1530 B.C.), provides some "interesting library hints" (1963:64). An illustration which formed part of the inscription shows Rekhmire presiding as a judge. At his feet are displayed forty law scrolls while the accused is being thrown before him (Milkau 1955:15-16). The script of the inscription sets out how "documents may be loaned from the various archives if not confidential" with the "matter of getting and returning under seal" being outlined (Richardson 1963:64). This confirms Johnson's general observation that the collections will have been organized in some way since "the 'keeper of the books' was supposed to be able to supply the demand for a book on request" (1965:40).

2.2.6 ANALYSES OF INDIVIDUAL LIBRARIES

2.2.6.1 Edfu

Edfu is situated in southern Egypt on the left bank of the Nile and was the cult capital of the sun god Horus. The library collection was found within the bounds of Horus temple complex which comprised of two large halls with chambers constructed alongside (Milkau 1955:12). Canfora believes that the book collection was stored in the dividing wall between the two halls (1987:158). The wall consisted of "six intercolumnar spaces closed off with curtain walling that runs halfway up the columns". It was in the middle of the wall that the book-cases were placed since the two niches which held them are still visible.

Conversely, Milkau (1955:12-13) argues that book storage facility as described by Canfora above would have contained too few scrolls to constitute the Edfu temple library. Instead, Milkau suggests that these bookcases probably only stored the rites for sacrificial rituals. The library itself may have been housed in a chamber situated on the eastern side of the first large hall.

Nevertheless, an inscription towards the eastern end of the wall between the two halls indicates that the book collection was known as the "House of papyrus" (Thompson 1962:3) and goes on to list its contents (see 2.2.6.1b).

Canfora (1987:160) and Milkau (1955:12) maintain that the temple was rebuilt during the Ptolemaic era with the original layout being retained.

2.2.6.1a Collection development

From the inscription it can be concluded that the collection contained "scrolls connected with the cult" (Canfora 1987:160). These included textbooks and literature covering a wide subject field including astronomy, magic, administration, instruction manuals for mural inscriptions as well as a list enumerating all the inhabited centres and the types of sciences practised within them.

2.2.6.1b Collection accessibility

Inscribed on a wall, whether enclosing the library it contained as Canfora suggests above or forming part of a larger library chamber, is a catalogue which Milkau considers to be the oldest existing library catalogue in Egypt (1955:12). Thirty-four works are listed under the heading "Lists of cases containing the books on great rolls of skins". The catalogue is divided into two, with twelve works listed in the first catalogue and twenty-two in the second (Thompson 1962:4). Thompson goes on to maintain that there is evidence of a logical classified arrangement in this catalogue, as the second part is reserved for works on magic only. Thompson reproduced a translated version of the catalogue as follows (1962:4-8):

First catalogue

- The Book of what is to be found in the temple.
- The Book of domains.
- Catalogue of all writings engraved on wood.
- The Book of the administration of the temple.
- The Book of the guardians of the temple.
- The Book of rites pertaining to the walls [for the protection of persons].
- The Book of the royal guards.
- The Book of incantations for warding off evils.
- The Book of the stations of the sun and the moon.
- The Book which governs the return of the stars.
- The Book of places and of what is in them.
- The Book of the risings of his majesty Horus.

Second catalogue

The Book for repulsing Set [Typhon, god of darkness and discord].

The Book of how to repulse the crocodile.

Horoscope.

The Book of how to protect the divine boat.

The Book of how to discover the sacred boat.

The royal Book.

The Book of incantations.

The great glorifications of the funeral couch.

The Book for protection of a city.

The Book for protection of a house.

The Book of protection of Upper Egypt.

The Book of protection of a place.

The Book of protection for the year.

The Book for consecration of a tomb.

The Book for the pacification of Sekhet.

The Book of officials.

The Book on the hunting of wild beasts.

The Book of protection against reptiles.

The Book of the ... guard.

The Book of protection against serpents.

The Book of all the mysteries [alchemical receipts].

The Book of mortmain.

This list probably reflects the order of the arrangement of the scrolls in the collection, and perhaps therefore should be considered as being more of a shelf-list than a catalogue. Thompson (1962:4) suggests that the titles recorded on the wall may list coffers employed to store works on a particular subject, although "there is no means of knowing how many manuscripts were contained in each coffer ...".

The Horus temple library was attached to an educational institution judging by the instruction manuals, textbooks and medical texts that have been discovered. Obviously students would have been given access to this temple school library and to promote easy access to the collection, the catalogue was displayed in a prominent position - inscribed on the wall for all to see. Further evidence that this library may have been well used, is that the material the library held was of the type that students would find very useful. For example, students wishing to specialize or undertake further study would be referred to the list containing the different centres and the sciences practised within them.

2.2.6.2 Amarna

The archaeological site of today's Tell-el-Amarna yielded the remains of the royal palaces of the pharaohs Amenophis III and IV who ruled during the period 1411 - 1358 B.C. (De Vleeschauer 1967:25). Milkau explains that Amenophis III left the then royal capital at Thebes and founded his new capital on the right bank of the Nile, halfway between Memphis and Thebes. However, a quarter of a century later his grandson abandoned the new capital and moved back to Thebes (1955:8). As a result the remains have been left undisturbed for thousands of years (Weimann 1975:20). Within the palace complex the remnants of a library have been found. It was situated in a chamber designated as the "Place of the records of the palace of the king" (Johnson 1965:33).

2.2.6.2a Collection development

370 Clay tablets have been uncovered in the library chamber inscribed with the Babylonian cuneiform script (see 2.1.2). On most of them the language medium is Babylonian-Assyrian (Milkau 1955:9). Johnson (1965:34) maintains that this language was "something of an international diplomatic language at various times in the ancient world" (see 2.1.1). The tablets contained mostly diplomatic correspondence between Amenophis III and IV and the princes of Palestine and Syria, as well as the kings of Babylonia, Assyria, Mitanni and the Hittites (see 2.1.6.6). Milkau goes on to note that a number of tablets were inscribed with extracts of Babylonian mythology (1955:9). Johnson adds that it is quite possible that this collection "contained other literature and government records in papyrus or leather that have failed to survive" (1965:34).

2.2.6.2b Collection accessibility

The discovery of alabaster and porcelain labels serving as identification tags confirms Johnson's contention that the library of Amarna contained perishable materials as part of its holdings. One of these porcelain labels was light blue in colour and had inscribed on its upper half in dark blue the words "King Amenophis III and Queen Tej" - the names of the owners of the now lost scroll. On its lower half, inscribed in the same way, was the title of the work: "The book of the sycamore and the olive tree" (Milkau 1955:9). Milkau goes on to suggest that it was probably laid or fitted onto the surface of the lid

of a wooden chest which contained papyrus scrolls since no holes or openings for attachment were found on the label itself (1955:13).

An example of the alabaster labels had holes "punched" into it. On it was inscribed the name "Amenophis" and probably was attached to a chest or case (Milkau 1955:14). Milkau concludes that the ornamental porcelain label must have been used to identify special valuable scrolls, while the alabaster labels had the function of identifying the owners of ordinary papyrus scrolls (1955:14).

It can be assumed that the collection of the Amarna library was reserved for official use in that it mostly contained tablets of diplomatic correspondence. However, the fact that the collection also contained literary material may indicate that members of the community besides the royal officials had access to the library. The discovery of the labels identifying the owners of the works presupposes that the material may have been loaned out, not only to the people of Amarna but also to outlying communities. Since the labels had been inscribed with the names of the pharaoh and his consort, the potential user would know that a particular scroll belonged specifically to the Amarna collection.

2.2.6.3 Thebes

In his description of the mausoleum of a pharaoh named Osymandyas situated at Thebes, Diodorus Siculus mentions the presence of a library:

"This is the monument of the king known as Osymandyas ... Beyond the Pylon, he [Hecataeus] says there is a peristyle ... By the last wall are two monolithic seated statues ... beside which are set three entrances from the peristyle, and by way of these entrances one comes into a hall whose roof was supported by pillars ... Next comes the sacred library, which bears the inscription 'Healing-place of the Soul', and contiguous to this building are statues of all the gods of Egypt ... Next to the library and separated from it by a party wall is an exquisitely constructed hall, which contains a table with couches for twenty ..." (Diodorus Siculus I, 47.6-49.3)

Lutz (1978:37) points out "that the name "Osymandyas" is a distortion of the ancient Egyptian royal title "usima-re" which belonged to Ramses II (1304-1237 B.C.).

Canfora notes that "archaeologists have sought in vain for the library of the Ramesseum" (1987:147) and ascribes this to the fact that Hecataeus, a third century B.C. historian

(Lutz 1978:37) from whom Diodorus Siculus derived his description of the mausoleum, "has simply been misunderstood" (Canfora 1987:77). Modern scholarship generally believes that the library "had occupied an entire wing of the mausoleum, taking up several rooms ..." (Canfora 1987:149). Instead, Canfora contends that the library was simply "a shelf or several shelves running along one side of the covered walk" of the mausoleum (1987:77).

Canfora bases his contention on the fact that in his account, Diodorus Siculus uses the term "Bibliotheke" to describe the library. This, Canfora argues, should be translated according to its original meaning - viz. "a shelf on whose surface scrolls are placed" (see 5.2.1). This would then obviously imply a "collection of scrolls". Canfora goes on to explain that "only by extension does it come to denote also the room (when such rooms begin to be built) in whom the bookshelves, bibliothekai, are placed" (1987:77). In this case, the description of Diodorus Siculus implies that the library was made up of shelves fitted in a recess along the covered walk and "did not consist of a separate room" (Canfora 1987:81).

The inscription "Healing-place of the Soul" ($\Psi\upsilon\chi\eta\varsigma\ \text{I}\alpha\tau\rho\epsilon\iota\omicron\nu$) is believed to be referring to the library (Aman in ELIS 7, 1972:574; Johnson 1965:33; Lutz 1978:36; Milkau 1955:10) and is seen "as an allusion to the benefit the human soul can derive from the reading of good books ..." (Canfora 1987:165). However, Canfora argues that it is a direct reference to the soul of the deceased pharaoh Ramses II. Canfora goes on to explain that the "soul" of the sovereign was "a 'force' with which the gods, and a few chosen mortals, are endowed". It was the task of the "soul" to "preserve the pharaoh alive after his death" (1987:164). The mistaken interpretation of the inscription Canfora ascribes to modern scholarship's "belief that the Ramesseum contained a library room with these words above its entrance" (1987:165). Canfora instead proposes that the inscription "should be taken to designate not the shelf below, but the room the visitor was about to enter ...". This was the chamber with the couches that Diodorus Siculus describes as immediately following the library wall. This chamber, Canfora maintains, was the "workshop" of the soul of Ramses II.

However, the discovery of two tombs allegedly belonging to two librarians in the south western area of the royal palace excavation site in Thebes, proves that a larger library had indeed existed. The two librarians were a father and son named "Neb-Nufre" and "Nufre-Heteb" (Aman in ELIS 7, 1972:574) and both have been dated to the period coinciding with the reign of Ramses II (Canfora 1987:149). The titles inscribed on the tombs were "In charge of books" and "Chief of books" (Milkau 1955:10). The existence of another library in Thebes is indirectly confirmed by Canfora who argues that the collection of the mausoleum was too small to warrant the employment of a staff of librarians (1987:149).

2.2.6.3a Collection development

It has been suggested that the holdings of a library at Thebes numbered over 20 000 scrolls covering diverse subject matter such as history, astronomy, irrigation, agriculture as well as works containing fiction, correspondence and poetry (Aman in ELIS 7, 1972:574). These no doubt were the holdings of the larger library. The mausoleum collection probably contained ritual and cult manuscripts.

2.2.6.3b Collection accessibility

The collection that had been placed in the mausoleum of Ramses II Canfora sees as "the exclusive property of the king, set apart and impenetrable to most people, as ... it lurked in the recesses of the monumental tomb" (1987:191).

Milkau (1955:12) maintains that the area around Thebes must have been an important spiritual and intellectual centre, with many temples and cities situated in the immediate vicinity. The larger library probably formed part of a temple situated in the greater palace complex, complementing the activities of a temple school. This presupposes that the collection was organized and accessible.

2.2.6.4 Heliopolis

Herodotus observed that:

"It is at Heliopolis that the most learned of the Egyptians are said to be found".
(Herodotus II.4-6)

Heliopolis must therefore have possessed impressive library facilities to cater for these learned men. Thompson points out that in 60 B.C., four hundred years after Herodotus made this observation, the temple school of Heliopolis had ceased to exist, yet the remains of the building could still be seen (1962:102, note 10). Unfortunately not much concrete evidence remains of the temple school library which was known as the "Hall of rolls" (Johnson 1965:35).

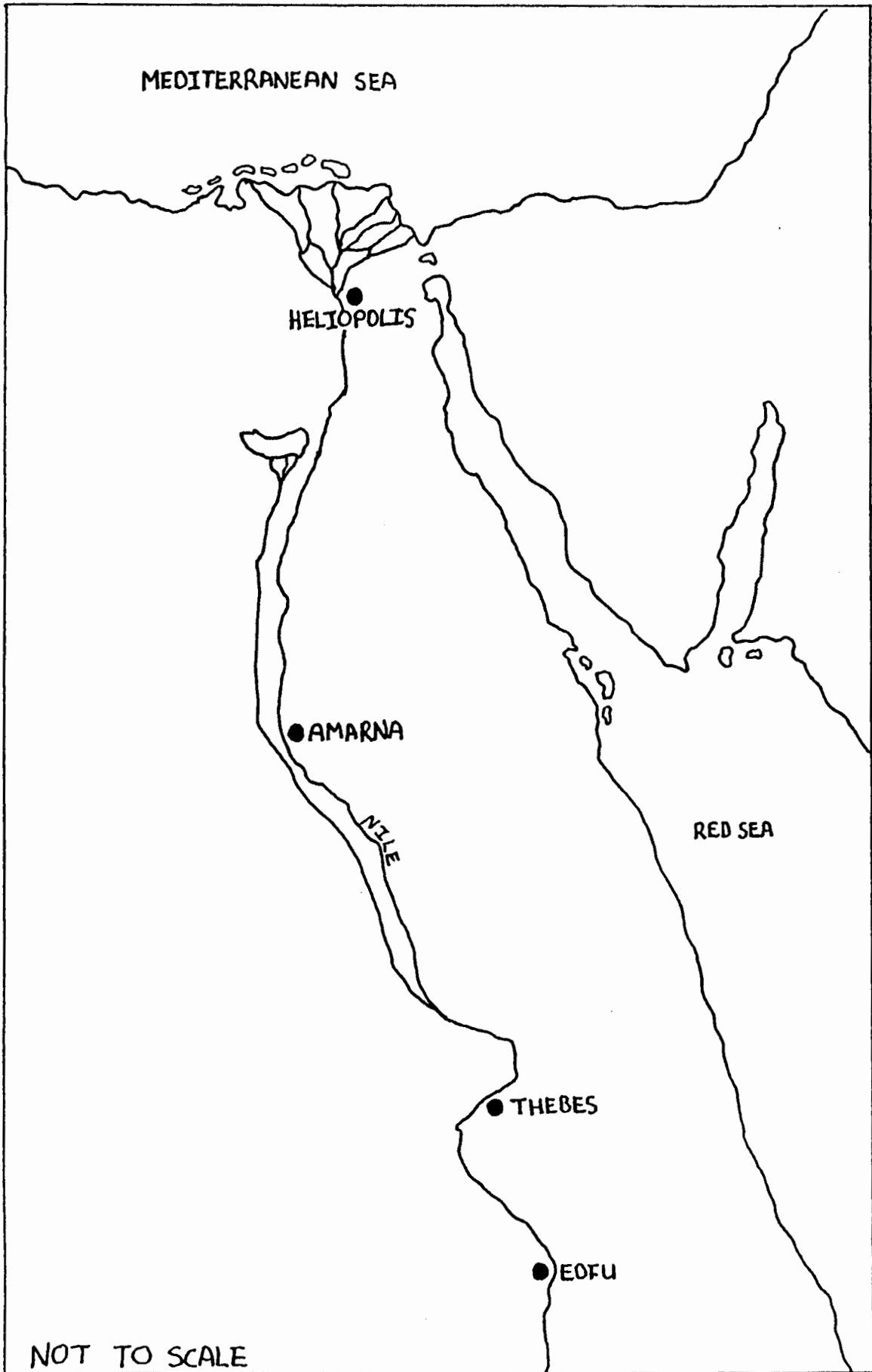
2.2.6.4a Collection development

The library contained medical texts (De Vleeschauwer 1967:26), which Johnson describes as "long works with lists of diseases and their cures ..." (1965:35). The library in all probability served a medical school.

2.2.6.4b Collection accessibility

Richardson (1963:63) provides an account of how a king named Neferhotep desired to see the ancient writings of Atum, which were preserved in the library of Heliopolis. The king was subsequently advised to proceed to the "house of writings" to "see every hieroglyph". According to Richardson's extract, "... his majesty proceeded to the library, his majesty opened the rolls together with his companions. Lo! His majesty found the rolls of the house of Osirus". The collection was therefore well organized and possessed efficient retrieval aids.

Map 2: Library Sites of Pharoanic Egypt



2.3. PALESTINE

2.3.1 HISTORICAL OVERVIEW

Situated as it was between Mesopotamia (see 2.1) and Egypt (see 2.2), Palestine had developed a sophisticated society by the second millennium B.C. which was derived from an "admixture" of these neighbouring civilizations together with "Minoan additions" (see 3.1). Harbours were constructed along the coastline and fortified towns and walled cities developed along the inland caravan routes. Various peoples populated the region which included nomadic and seminomadic Semitic groups such as the Amorites, Canaanites and Arameans (CE Vol. 18, 1965:364). By 1800 B.C. Abraham had led another Semitic people, the Hebrews, from Mesopotamia and settled in Palestine, while Joseph led a second group to settle in Egypt (Richardson 1963:54).

As the surrounding Egyptian, Hittite and the various Mesopotamian civilizations declined, their interest in the greater Palestinian region correspondingly diminished. This power vacuum allowed the various local ethnic groups to assert their independence. At this time the non-Semitic Philistines, who probably originated from Asia-Minor, invaded the region. The Philistines went on to establish a powerful kingdom, "and gave the country their name - Palestine" (CE Vol. 18, 1965:364). A second major incursion into Palestine occurred in roughly 1400 B.C. when Moses led the Hebrews back from Egypt.

Initially the Hebrews were subject to the Philistine kingdom. However in 1025 B.C. the Hebrew people gained their independence and with Saul as their first king established their own kingdom. The Hebrew kingdom continued to flourish under the succeeding kings David (c.1013-c.973 B.C.) and Solomon (c.973-c.933 B.C.). After Solomon's death the Hebrew state divided into two: the kingdom of Israel to the north and the kingdom of Judah to the south.

The kingdom of Israel lasted until 722 B.C. when the Assyrian king Sargon II conquered the Hebrew state and deported its people to various parts of the Middle East. The kingdom of Judah fell in c.586 B.C. to Nebuchadnezzar who was king of the Chaldeans,

a people who originated from Babylon. Zedekiah, the last king of Judah, and his people were deported to Chaldea, while the capital Jerusalem was destroyed.

The so-called "Babylonian captivity" of the Hebrew people ended in 539 B.C. when the Persians, a new emerging power in Mesopotamia, conquered the Chaldeans. Subsequently roughly 50 000 Hebrews returned to Palestine, restoring Jerusalem and their temple. Although under Persian domination, the Hebrew people enjoyed considerable autonomy, producing a "distinguished" Jewish literature and continuing with their theocratic rule.

Alexander the Great conquered Palestine in 333 B.C. and continued to allow the Jews their status of semi-autonomy. However, the imposition of the concept of Hellenism by those rulers after Alexander known collectively as the Successors (see 4.1.1) resulted in many Jews migrating to Egypt and other centres in the Hellenistic world (CE Vol.18, 1965:364-365).

2.3.2 THE EXTENT OF LITERACY AND LITERARY OUTPUT

Oral tradition dominated the culture of the nomadic inhabitants of the greater Palestinian region before 2000 B.C. The subsequent establishment of cities and towns and the sophisticated urban culture that came with it saw the development of writing. By the time of King David copyists and scribes were committing the sacred tradition to parchment (vellum) and papyrus scrolls in an alphabetic system known as early Hebrew (FBG 1984:10). It has been suggested however, that the earliest Hebrew document dates back to the twelfth century B.C. (CE Vol. 12, 1965:9).

From evidence provided by archaeological excavations, Dearman (1989:344) has divided the instances of written material uncovered in Palestine into three categories viz. - monumental, formal and occasional. Dearman goes on to define the monumental category as "those public inscriptions on stelae or plastered walls designed for public consumption". Very little evidence of this type has been found in Palestine. The formal material is made up of inscribed vellum, papyrus, seals (impressions) and ostraca. There

is an abundance of the latter two examples found all over the region. Finally, the occasional group includes graffiti and practice copies (Dearman 1989:353, note 1).

The large finds of ostraca and seals can be attributed to their mass production and preservation by the state administration (as public records) and private, mostly commercial concerns (see 2.3.4.1 and 2.3.4.2). Most of the ostraca that were discovered date back to the eighth century B.C. and later (Dearman 1989:344).

The most notable literary work produced in Palestine was the Old Testament Bible. The books that constituted this work were written over a period extending from the eleventh to the third centuries B.C., and perhaps were even based on traditions dating several centuries earlier (EJ Vol. 11, 1971:309). Indeed, modern scholarship is in agreement that the scriptures went through a number of preliminary stages "impossible to reconstruct at this distance in time" (FBG 1984:10). Earlier written material as well as oral tradition served as primary sources for the compilation of the Old Testament (Johnson 1965:38).

Controversy surrounds the settlement of Kiriath-Sepher which was later renamed Debir (Joshua XV:15-16 and Judges I:11-12). The Septuagint translates the name as Πόλις Γραμμάτων, which literally means "book town" (JE Vol. 8, 1904:71). Johnson maintains that this may indicate that the town "either contained a number of libraries, or at least was a centre of the book trade" (1965:38). The nineteenth century scholar Sayce saw the town as "the literary centre of the Canaanites in the south of Palestine" (JE Vol. 8, 1904:71). Unfortunately, as Johnson concedes, concrete evidence of the existence of such a centre is lacking.

It can therefore be assumed that apart from scribes (see 2.3.3.2), a large proportion of the Jewish population was literate. Judging by the emphasis on knowledge of the scriptures in Jewish culture, the priesthood will have imparted their literary skills upon a significant part of the general population.

2.3.3 LIBRARIANSHIP IN THE PALESTINIAN REGION

Very little is known of book collection and preservation in Palestine (JE Vol. 8, 1904:71). The reasons for this, as in the case in Egypt (see 2.2.5), are as a result of the organic nature of the writing materials employed in the region, together with the prevailing harsh climatic conditions (EJ Vol.3, 1971:374-375).

Richardson maintains that book collections were first accumulated in Palestine in roughly 1300 B.C. with the establishment of official chanceries (1963:83-84). This is indicated by the Egyptian Amarna letters (see 2.2.6.2a) and the Hittite archives of Hattusa (see 2.1.6.6) which were found to contain official correspondence from princes, elders and governors of the greater Palestinian region including centres such as Jerusalem, Gaza, Tyre, Acco and Lachish (see 2.3.4.2).

The so-called "period of the Judges" (c.1200-1000 B.C.) saw the rise of a sophisticated society in Palestine comparable to the civilizations of Mesopotamia and Egypt. Richardson argues that the "high state of organization" established by King David required an elaborate archival system and organization of public records (1963:97-101). Furthermore, Richardson points out that texts of this period point to the existence of both religious and administrative collections. Most of these writings were compiled from sources dating to an earlier period, thereby providing evidence for the existence of "many works and many collections of such books before the monarchy" (1963:99-100).

Between c.1010-567 B.C. Richardson (1963:106) observes that the libraries of Palestine appear "more and more clearly to correspond with that of the surrounding nations". The Bible records the use of a temple archive during the reign of Saul when Samuel deposited a written constitution in the sacred archives:

"Samuel explained to the people the regulations of the kingship. He wrote them down on a scroll and deposited it before the Lord ...". (I Samuel 10:25)

During the reign of Solomon, palace and temple collections were commonplace. The period after 600 B.C. saw the invasion of Palestine by the Babylonians (see 2.3.1),

resulting in the history of the region's libraries becoming "one with the history of the Babylonian libraries" (Richardson 1963:127).

2.3.3.1 Architectural layout

Book storage chambers were known as a "Liskah", a term generally used to describe a chamber within a palace complex where state officials and scribes had their work place. These chambers were utilized for the production and preservation of documents as well as record-keeping. Dearman maintains that "since it was the scribe's main duty to prepare and interpret documents, this job required appropriate rooms where documents were securely stored and information quickly retrieved upon need" (1989:351).

An example of a Liskah was an administrative complex found in the vicinity of a palace in the city of Samaria (see 2.3.4.1). The complex was made up of large rectangular halls on one side which Dearman suggests may have served as storerooms, and small chambers alongside which may have functioned as offices. Dearman (1989:352) suggests that the complex could have performed the dual role of a storehouse of materials as well as containing administrative offices and concludes that perhaps one of the offices, or indeed the whole complex, may have served as a Liskah.

Not much is known about temple libraries, although it can be assumed that a chamber will have been designated to function as a book storage facility and therefore may have resembled a Liskah.

2.3.3.2 Library personnel

Like his counterparts in Egypt, Mesopotamia and Syria, the librarian of the Palestinian region enjoyed a status of importance. It was the librarian's task, according to Dearman (1989:353), to interpret and preserve written documents. Dearman goes on to conclude that the librarians exercised their "professional skills and their religious concerns ... in helping to interpret the national history ...". These "professional skills" were that of a

scribe, which indicates that the librarian functioned in the dual role of writer and keeper of books.

By the time of King David, the royal court employed roughly six thousand official scribes or clerks (Richardson 1963:125). There seemed to exist a division of labour within the contingent of royal scribes, with a "recorder" differentiated from a "scribe". Richardson goes on to conclude that this "implies quite an evolution from the time when one official performed all functions" (1963:123).

2.3.3.3 Collection development and accessibility

Cities and towns boasted their own collections of public records and would have contained materials such as edicts, brief annals and treaties (Richardson 1963:115). Richardson goes on to maintain that palace and temple collections would have contained the "words" of kings, with these being defined as prayers, visions, letters, prophecies and poems (1963:115-116). Richardson concludes that "in short, Palace collections of Israel were no exception to the general rule of antiquity in containing besides palace archives proper, more or less of religious works and literary works, while the Temple collections contained more or less political records and literary works" (1963:117).

Sacred materials were also contained in other library collections. Johnson (1965:38) notes that there were small collections of scriptures contained in all synagogues dating to the later "pre-Christian years". These libraries, especially those attached to the larger synagogues of the major centres, reserved their collections for the use of students attending the schools for priests and can therefore be equated to the temple libraries of Egypt, Mesopotamia and Syria.

These synagogue libraries were stringently controlled and organized as all worn out scrolls and manuscripts were weeded out (EJ Vol.7, 1971:404). Jewish law stipulates that no texts or ritual objects inscribed with the name of God can be destroyed. This material was therefore set aside to be stored in a special chamber known as a "Genizah". In Hebrew this term literally meant "storing". Each synagogue possessed its own Genizah,

an indication that its collection was well used. Each synagogue library would therefore contain an ever increasing collection, although no longer in use.

2.3.3.4 Types of collections

Official archival collections were found to be housed in chambers located in the vicinity of the city gates, an area which many modern scholars believe contained the city's administrative offices - as for example at Lachish (see 2.3.4.2). Dearman (1989:347) notes that "some types of official (state) correspondence were kept in these chambers, including copies of communications sent and received by local officials". These were found to be inscribed on ostraca, a material which was durable and compact for easy storage.

An example of a private collection was uncovered during excavations in Jerusalem (Dearman 1989:350-351). The collection was found in a "scribal room" of an upper class dwelling situated in what was then a fashionable suburb of the ancient Jerusalem. More than fifty ostraca were found in a corner of the room and Dearman concludes that the chamber "probably functioned as a safe deposit for important documents". Traces of fire have been found within the confines of the chamber and this would have destroyed any papyrus or parchment manuscripts contained in the collection. It is believed that the part of the city in which this "scribal room" was situated was put to the torch by the besieging Babylonians in 587 B.C.

The temple in Jerusalem during the reign of King Hezekiah (715-687 B.C.) contained a substantial collection. Analogies have been drawn with the library of Ashurbanipal (EJ Vol. 3, 1971:374) in Nineveh (see 2.1.6.9), as Hezekiah was to have commanded his royal scribes to copy a substantial amount of works:

"These are more proverbs of Solomon, copied by the men of Hezekiah king of Judah ...". (Proverbs XXV.1)

The collection included exhortations of the prophets, the writings of Moses and Solomon, the books of the Law and the book of Joshua (Johnson 1965:37-38). Johnson goes on to maintain that all these works were preserved for posterity as well as for use in the temple itself. The library was destroyed during the period of the Babylonian captivity in 587 B.C.

Unfortunately archaeologists had been unable to pinpoint the exact location of the temple library (EJ Vol. 3, 1971:374).

With the return of the Hebrew exiles from Babylon a certain Nehemiah re-established the library in Jerusalem (Johnson 1965:38). Nehemiah had gained previous experience as regards book collections since he had served in the palace of Susa in Babylonia (Richardson 1963:146-147). Assisted by Esdras, who incidentally is reputed to have edited the first Pentateuch, Nehemiah retrieved the manuscripts which had survived the destructions caused by the invading Babylonians. These included the books of Moses, Kings, the Prophets, (Johnson 1965:38) and of David (Richardson 1963:146). However, according to Johnson (1965:38), this library too suffered a similar fate as that of its predecessor, being destroyed by the Seleucid king Antiochus (see 4.1.1) who conquered Jerusalem in the second century B.C.

2.3.4 ANALYSES OF INDIVIDUAL LIBRARIES

2.3.4.1 Samaria

The remnants of a large building consisting of several chambers have been excavated near the palace complex of Samaria, a city situated in central Palestine. Within these chambers numerous ostraca collections were found, dating to roughly the eighth century B.C. (Dearman 1989:344-345).

2.3.4.1a Collection development

The sixty-five legible ostraca uncovered record shipments in kind to the city (Dearman 1989:345). Each individual ostrakon has a few lines inscribed on it identifying the sender and recipient, as well as any other required information. Dearman has supplied an example of one of these ostrakon in translation:

Number 22

- (A) year 15
- (B) from Helek
- (C) to Asa(ben) Ahimelek
- (D) Helez
- (E) from Hazeroth

Line (A) supplies the date, (C) the recipient and (E) the place of origin. (B) indicates what could be a clan name and therefore the sender of the shipment, while (D) may constitute additional information which identifies the name of the specific individual who sent the goods. The example above does not record the commodity involved although in the majority of cases the Samarian ostraca record wine and oil as the most common goods. Dearman adds that where no recipient is indicated "the logical conclusion is that these commodities belong to the king".

2.3.4.1b Collection accessibility

The ostraca contained in the collection were differentiated by the number of the year inscribed on them. The year would obviously be counted from the start of the reign of a particular king. The collection is divided into two parts, with the ostraca dated to the years "nine" and "ten" forming one part of the collection, and those dated to year "fifteen" organized into another group. In both cases the king is not named (Dearman 1989:345). Furthermore, Dearman observes that only the group of ostraca dated to the years "nine" and "ten" name the commodity involved.

Dearman points out that since the ostraca were not found in an administrative setting (that is, within the remains of the "municipal" gate complex), they would not have constituted official records. Instead, the ostraca are more likely "the equivalent of the scratch pad for initial notation" (Dearman 1989:346). Dearman goes on to explain that once a consignment of goods had been delivered, a quick notation was made out on a potsherd. At a later date, additional records would be drawn up on papyrus and vellum scrolls and these then would be stored in specifically designated chambers. This would mean that only the royal scribe had access to the collection, as well as royal officials such as the treasurer.

2.3.4.2 Lachish

Excavations at Lachish, which lies southwest of Jerusalem, uncovered numerous ostraca in the remnants of a storeroom situated in the gate complex of the ancient city (Dearman 1989:347). The contents of this collection date to the sixth century B.C. (Johnson

1965:38), which Dearman places more precisely to the last months of the Judean kingdom before it fell to the invading Babylonians (1989:347).

2.3.4.2a Collection development

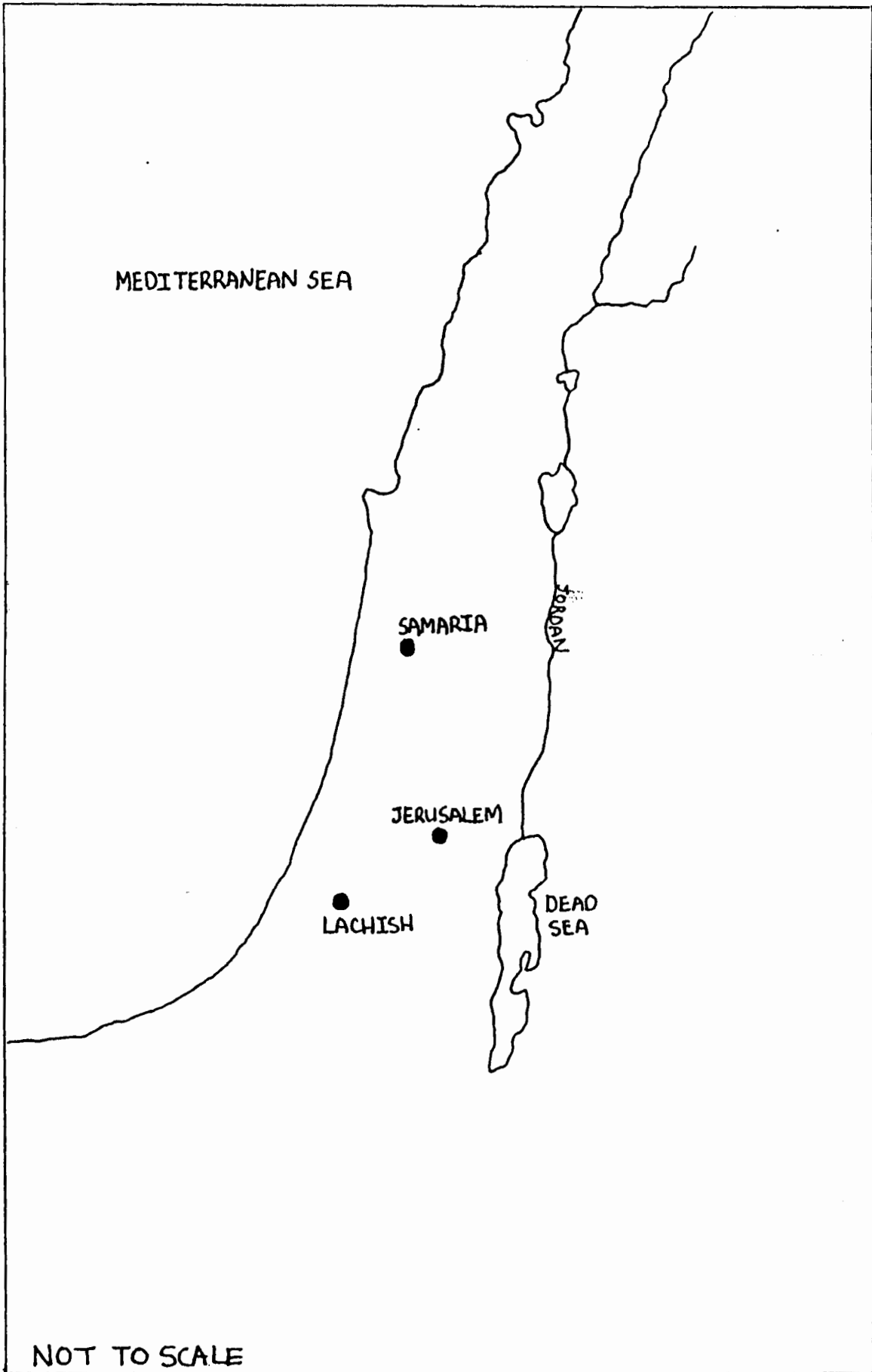
The contents of the chamber are dominated by ostraca relating to military correspondence that was circulated during one of the several sieges undergone by the city (Johnson 1965:38). Most of the "letters" were sent by a certain Hoshaiiah who was an official at an outpost situated in the immediate vicinity of Lachish. These letters were specifically addressed to the military commander of Lachish named Yaush (Dearman 1989:347). It also appears that many letters were forwarded from Lachish to other regional sites and then returned to the city for filing.

2.3.4.2b Collection accessibility

Dearman (1989:347) proposes that since so many of the ostraca found were inscribed with the correspondence between Hoshaiiah and his superior, it can be assumed that the letters were filed "according to officials or related topics". As the city was destroyed by the invading Babylonians it follows that only this particular part or subject group of the collection had survived.

Access to the collection was probably limited to the officials of the city as the storage chamber was situated in the area of the administrative offices in the vicinity of the main gate.

Map 3: Library Sites of Palestine



3. LIBRARIES OF GREECE

3.1 THE BRONZE AGE

3.1.1 HISTORICAL OVERVIEW

The study of the cultures of the Greek Bronze Age has been divided into two branches: that of the mainland is known as "Mycenean", whilst that on the island of Crete is termed "Minoan". Baumbach (1977:14, note 1) explains that the Mycenean civilization was established in about 1600 B.C. and the term describing this civilization was derived from the excavations of the Bronze Age palace at Mycenae (see 3.1.6.2), uncovered by the German archaeologist Heinrich Schliemann towards the end of the nineteenth century. The Minoan civilization on the island of Crete has been dated to the period 1400-1100 B.C. (Johnson 1965:45).

Tablets discovered both on the mainland and Crete indicate that the Bronze Age civilizations were literate. The subsequent decipherment of these tablets (see 3.1.2) has provided historians with an insight into these Bronze Age cultures (Baumbach 1977:8-9). The Mycenaeans had originally entered Greece in roughly 2000 B.C., settling in central Greece and the Peloponnesian peninsula. The Mycenaean civilization constituted numerous kingdoms, with the king supported by a warrior aristocracy. The monarchies had their power-base in the palaces, which served as the economic centres of the various kingdoms. Within the palace confines jewellery, pottery, weapons, clothing and other manufactured goods were produced, mostly for utilization by the king and his royal household. The Minoans on the island of Crete in turn, had established a "vibrant and artistically gifted civilization", much of which was adopted by the Mycenaeans (Mckay et al 1983:76) partly through trade no doubt.

However it is clear that sometime between 1450 and 1400 B.C. Knossos (see 3.1.6.1), a major centre on Minoan Crete, was ruled by the Mycenaeans from the mainland. Amongst the evidence for this occupation is that a similar script (see 3.1.2) was used on

the tablets from both the mainland and Crete at this time (Baumbach 1977:11). McKay et al believe that the wealth and prosperity of Minoan Crete had become targets for Mycenaean greed and ambition, with the result that an army of mainlanders had occupied the island in 1450 B.C. (1983:76-77). This hypothesis has been confirmed by Baumbach who has linked the great volcanic eruption on the island of Thera, roughly eighty miles to the north of Crete, with the Mycenaean occupation of the island (1977:11-13). Pottery uncovered from under the volcanic ash on Thera corresponds with that used on Crete at the time of the alleged Mycenaean invasion. Furthermore, volcanic ash found in the northern, southern and eastern coastal regions of Crete has been confirmed by marine geologists to have originated from the volcanic eruption on Thera. The volcanic explosion on Thera, which literally blew most of the island away (the remnants of which can still be seen today) will have resulted in a tsunamis tidal wave, which probably destroyed the Minoan navy. Evidence of the subsequent ecological disaster which resulted from the volcanic ash fall-out has been found in central and eastern Crete. Therefore in this weakened state, with no navy and an economy in ruins, Minoan Crete would easily have fallen prey to the invading Mycenaean. Once the island had been subjugated, the invaders established themselves in Knossos and from there ruled the remainder of Crete.

The final fall of the Bronze Age kingdoms has been placed at about 1150 B.C. What caused their collapse is still uncertain. Archaeological evidence has established that the palaces were destroyed by fire, which points to a violent overthrow (Chadwick 1959:106). An invasion from the north by Dorian Greeks has been discounted (Baumbach 1977:13), as evidence has shown them to have entered the region a long time after the fall of the Bronze Age palaces. McKay et al suggest that during the years 1300-1100 B.C. the Mycenaean kingdoms were in continuous conflict with each other and consequently "Mycenaean Greece destroyed itself in a long series of internecine wars ..." (1983:77). Conversely Baumbach maintains that an attack by a foreign enemy is a more likely hypothesis, as during the twelfth century B.C. there was widespread instability throughout the Mediterranean region (see 2.1.1). Homer's Troy was destroyed towards the end of the thirteenth century, Ramses III of Egypt repulsed an invasion from the "people of the sea" in the early twelfth century and Hittite and Egyptian accounts report of continuing turmoil throughout the region at this time. Archaeological evidence has indicated that

strong fortifications were constructed on the mainland at Mycenae, Tiryns, Athens and Corinth. Tablets found at Pylos report that the local inhabitants were expecting a seaborne invasion (see 3.1.6.3a). That the invasion came and obliterated the Bronze Age palaces is witnessed by the fire-hardened clay tablets found in the blackened remnants of the palace archives (Baumbach 1977:13).

3.1.2 LINEAR A AND B

On 5 April 1900 the archaeologist Sir Arthur Evans discovered a hoard of clay tablets on the site of the Bronze Age palace of Knossos (Pope 1975:152). The remains of the palace have been dated to the period 1400 to 1100 B.C. (Johnson 1965:45). The writing style inscribed upon the tablets is linear and was simply scratched or engraved upon the tablet (De Vleeschauwer 1967:34). Further finds on Crete at Chania, Hagia Triada, Phaistos and Kato Zakro reveal the existence of two different styles of linear writing. These Evans differentiated into Linear A and Linear B. Pope notes that although the two scripts shared "a large common element", they did reveal minor differences such as some signs being used in the one but not the other script, different forms for what appeared to be the same sign and the alternative use of dashes and dots for "tens" in Linear A (1975:154). Pope concludes that Linear B "almost certainly represented a different language from Linear A", and bases this hypothesis on the fact that Linear B contained numerous inflectual patterns lacking in the Linear A script (1975:159).

While finds of Linear A were limited to Crete, Linear B was also discovered during excavations of Mycenaean palace sites on the mainland. Those discovered at Mycenae, Pylos and Thebes have been dated to the twelfth century B.C. (Baumbach 1977:7). Other mainland finds were made at Eleusis, Tiryns and Orchomenos (Baumbach 1977:3). The fact that no finds have been made on the mainland dating to the period prior to 1200 B.C. Baumbach (1977:11) ascribes to the Bronze Age practice of not preserving tablets for more than a year or two (see 3.1.5.2). Baumbach goes on to point out that the only discernible differences between the Linear B script found on the mainland and that on Crete were only slight variations in spelling and concludes that "on the whole the language of the tablets seems to be uniform" (1977:7-8).

Upon discovering the tablets, Evans was convinced that neither Linear A or B had been used to write Greek. This theory was proved wrong by the philologist Michael Ventris. In June 1952 Ventris had completed the decipherment of the Linear B tablets by publishing his famous work A frivolous digression - are the Knossos and Pylos tablets written in Greek? (Baumbach 1977:3). Ventris' chief tool in his analyses was the concept of a "syllabic grid", a table showing which signs share the same consonant and vowel. Other studies he undertook were that of grammar, context and spelling (Pope 1975:163-166).

With the knowledge gained from the decipherment of the Linear B script, attempts have been made to trace its origins. Baumbach (1977:11) proposes that the Mycenaeans on the mainland adopted the Cretan accounting system in roughly 1600 B.C. The Mycenaeans then adapted this system into a written language, the result being the Linear B script. This Linear B script they introduced into Crete when they conquered the island between 1450 and 1400 B.C.

3.1.3 EXTENT OF LITERACY

The document finds made during the excavation of the Bronze Age palaces indicate that a number of people were literate by the thirteenth century B.C. (Davison 1962:143). There however does exist a certain amount of controversy as to the levels of literacy prevalent in Bronze Age society.

Chadwick (1959:129-130) argues that the belief that private citizens (those not in service at the palaces) were literate is questionable. It has been suggested that the Linear A script found in Crete was more openly used by the "common people" than Linear B (Johnson 1965:46). Although examples of Linear A have been found to be inscribed on religious objects (Pope 1975:156), there is no direct evidence to support this theory. A number of scholars believe that tablets have been found in what were once private dwellings and that these may have been the houses of merchants. Chadwick however maintains that these "private houses" may have been "appendages of the palaces" although they were found immediately outside the palace confines. That a practice of

free-trade existed outside the palaces is doubtful since most tablets indicate that this was the exclusive domain of palace officials.

Furthermore, Chadwick notes that there is "not a single stone-cut inscription known in Linear B". No public building is engraved with the name of the builder and no gravestone is inscribed with the name of the dead. However, numerous jar inscriptions have been uncovered, and because these inscriptions constitute personal names, the maker or even possibly the user may have been literate. This indicates that the knowledge of writing was not limited solely to palace scribes (1959:129-130).

What is certain is that the complete tablet collections of both Pylos and Knossos reveal thirty to forty different hands employed at each palace to record the daily economic and official activities (Chadwick 1959:127). Judging by the amount of tablets and the myriad of transactions they record, a very large percentage of the palace population, even if these were mostly officials, must have been able to read them.

Chadwick (1959:130) therefore concludes that the ability to write will have been limited to the administrative staff only, leaving both the upper and lower social stratas of Bronze Age society illiterate. The fact that the Linear B script failed to survive the final destruction of the Bronze Age palaces (see 3.2.2) proves that the art of writing and indeed literacy was strongly connected to the highly centralized monarchies of the Bronze Age.

3.1.4 LITERATURE

That no real evidence of literary works has been uncovered on Bronze Age excavation sites has led to the belief that no literature at all was produced during this period (De Vleeschauwer 1967:34). Johnson (1965:45-46) has outlined the possible reasons for this absence of a literary tradition. For one, it has been proposed that the literature of the period was embodied in a vibrant oral tradition. Another possibility is that the Linear A script has been utilized to record the literature of the Bronze Age. However, this hypothesis would limit the literary tradition to Crete only (see 3.1.2) and, although Linear

A has not yet been successfully deciphered, the script does not seem developed enough to record a written language.

A further explanation suggests that the literature was recorded on materials other than the clay tablets. Clay tablets, being cheaper to produce may have been used exclusively to record administrative material, while literary compositions were written on materials such as papyrus that will have decomposed or decayed over time.

3.1.5 BRONZE AGE LIBRARIANSHIP

3.1.5.1 Collection development

A strict control was exercised over Bronze Age collections. This is suggested by the absence of duplicate sets of records (Chadwick 1959:128). The documents recording transactions of the previous years are absent from the collections which means that all the records uncovered will have been compiled within the previous twelve months of the year they have been dated to.

3.1.5.2 Collection accessibility

The majority of tablets appear to have been stored in wicker baskets, as many of the tablets had a pattern of basketry imprinted on their reverse sides left by the pressing of soft clay against the wicker sides of their containers. Tablets were also found to be stored in wooden or gypsum boxes (Chadwick 1959:128). A number of clay labels were discovered on various excavation sites. Chadwick believes that these were attached to the containers identifying the contents, no doubt for easy retrieval. Furthermore Chadwick notes that most of the tablets are dated by mentions of "last year", "this year" and "next year". Chadwick concludes that "this seems to imply that at the beginning of every year the clay tablets were scrapped and a new series started".

3.1.6 ANALYSES OF INDIVIDUAL LIBRARIES

3.1.6.1 Knossos

Knossos is situated almost in the centre of the northern coast of Crete. On the site of the Bronze Age palace Evans made his first discoveries of clay tablets in April 1900. Examples of both Linear A and B were uncovered (Johnson 1965:45) and these have been dated to roughly 1400 B.C. (Baumbach 1977:7).

The tablets suggest that Knossos ruled the rest of the island, as a number of tablets record the place-names of other centres of Crete such as Phaistos and Tylissos amongst others (Baumbach 1977:11).

There is still controversy surrounding the date of the final collapse of Bronze Age Knossos. Although the traditional date has been placed in roughly 1400 B.C., a number of scholars date the destruction to the twelfth century B.C. (Baumbach 1977:13).

3.1.6.1a Collection development

Several thousand tablets and fragments have been excavated (Baumbach 1977:3), recording various materials and information.

A number of tablets list women textile workers and their places of origin (Baumbach 1977:9). A large proportion of tablets record the numbers of sheep kept for wool production (Hood 1971:93). Baumbach points out that the numbers of sheep are recorded in round numbers, and concludes that these figures therefore did not reflect census figures (1977:10).

Amongst the agriculture products listed is olive oil, which is divided into offerings to be sacrificed to the gods and rations destined for human consumption (Baumbach 1977:10).

A series of tablets lists 8 630 arrows as well as horns of wild goats for the manufacturing of bows (Hood 1971:120). A number of swords have also been recorded (Chadwick

1959:111). Chadwick goes on to note the discovery of the "master roll of the armoured brigade" which records "a man's name, a chariot complete with wheels, a cuirass and a pair of horses" (1959:108).

The few examples of Linear A scripts that were discovered in Knossos were inscribed on objects of a "religious nature" (Pope 1975:156).

3.1.6.1b Collection accessibility

Evans observed that the first tablets that were excavated were found "amidst a deposit of charred wood in a bath-shaped receptacle of terracotta set close against the wall" (Pope 1975:152). It is highly likely that these tablets were placed together in a container to serve the purposes of subject division. Johnson (1965:46) points out that no further clues as to the filing system employed at Knossos can be ascertained, since the remaining tablets were scattered over a large area. However it is clear that the tablets were dated by months, with the names of six months deciphered at Knossos alone (Chadwick 1959:128).

3.1.6.2 Mycenae

Situated in the north eastern Peloponnese, Mycenae is one of the most important Bronze Age sites and has lent its name to the study of the Bronze Age civilization on the mainland (see 3.1.1). Excavations have revealed numerous Linear B tablets (Johnson 1965:45), which have been dated to the twelfth century B.C. (Baumbach 1977:7).

3.1.6.2a Collection development

Tablets have been found inscribed with lists of herbs such as celery, cumin, cyprus, fennel, mint, pennyroyal, sunflower (both flower and seeds) and sesame (Chadwick 1959:120). Another tablet has been deciphered which lists seventeen bakers (Baumbach 1977:9).

3.1.6.2b Collection accessibility

The majority of tablets at Mycenae have been found in jars placed in a number of chambers on the remnants of what were once shelves (Johnson 1965:46). Again it can be surmised that these tablets were arranged in such a way as to facilitate easy access when required.

3.1.6.3 Pylos

The first Linear B tablets to be discovered on the mainland were excavated at Pylos (Pope 1975:170) which lies in the southwestern Peloponnese. The tablets, again dating to the twelfth century B.C. (Baumbach 1977:7) indicate that Pylos was a kingdom with a vibrant trading tradition (De Vleeschauwer 1967:34).

3.1.6.3a Collection development

Lists recording six hundred female slaves and the same number of child slaves have been deciphered (Chadwick 1959:115). The various occupations to which these slaves were assigned are listed, such as wool and flax workers, bath attendants, maid-servants and corn grinders. Another series of tablets record the slaves' origins which include place names such as Miletus, Knidos and Lemnos. Baumbach concludes that these slaves were war captives "brought to Pylos from the Near East" (1977:9). Rations listed on a number of tablets indicate that these slaves were fed on a diet of grain and figs (Chadwick 1959:120).

Local officials are named who appear to have been appointed to the position of "mayor" in various towns within the kingdom of Pylos (Baumbach 1977:9). Controversy surrounds the term "o-ka" found on numerous tablets (Chadwick 1959:105). It has been proposed that it may refer to a military unit or possibly a merchant ship.

On a number of tablets arable land is divided into two classes - that of "common" land which was farmed by the community and "private" land which is owned by private individuals (Chadwick 1959:114). Amongst the agricultural produce mentioned is olive oil, which, like at Knossos, was made available for human consumption and as a

sacrificial offering to the gods (Baumbach 1977:10). Twenty-five pigs are recorded which were to be found in various villages (Chadwick 1959:119).

The productive output of carpenters based at the palace is listed on another series of tablets (Chadwick 1959:117-118). Tables and chairs are inscribed, each with a separate designation which would allow for easy identification. Also, three bath tubs are recorded.

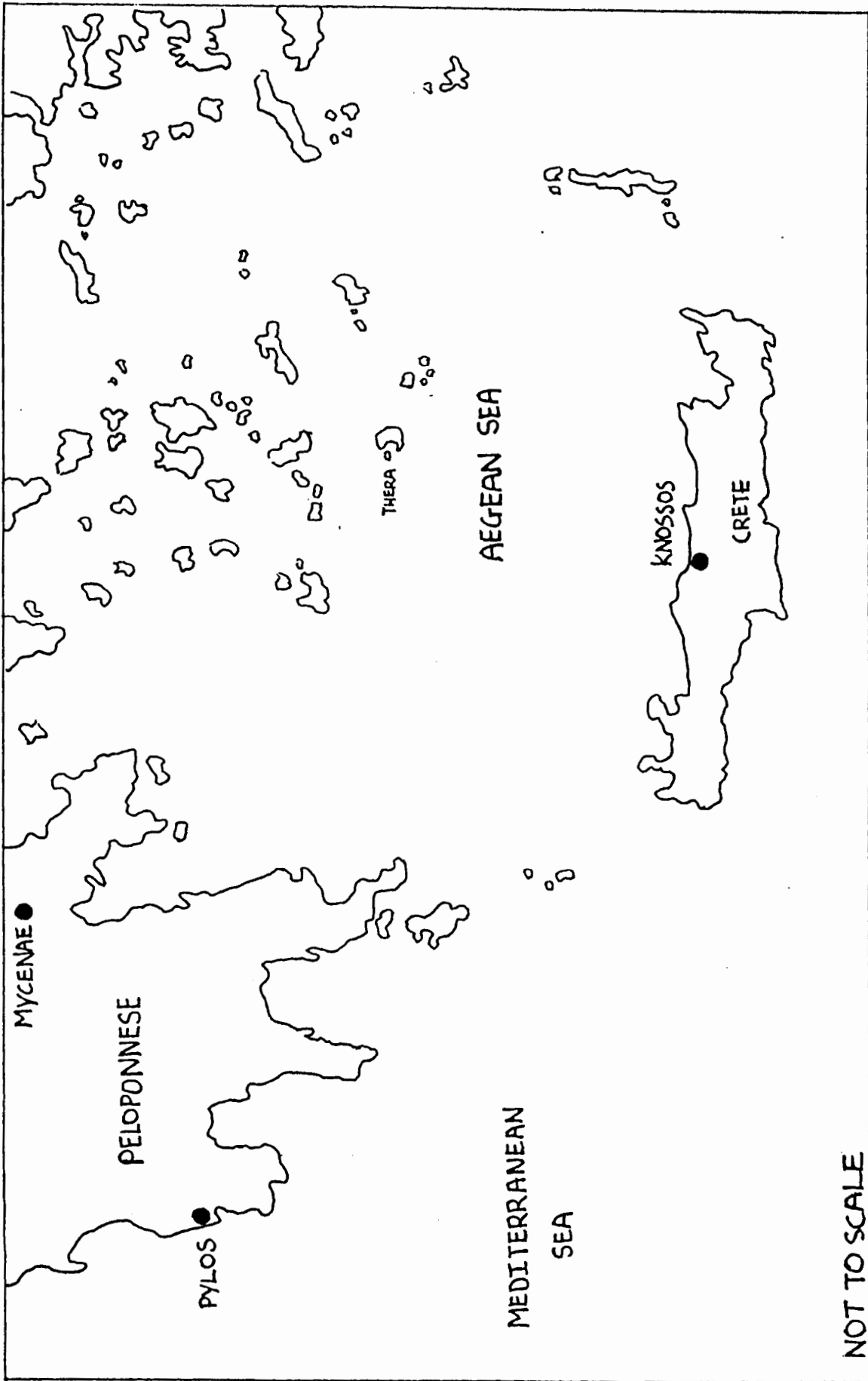
The production of weapons and military activity make up a large proportion of the information found on the Pylos tablets. A tablet records the requisitioning of bronze for the production of "points for spears and arrows" (Chadwick 1959:111). This bronze was part of the consignment collected by the officials of various towns in two provinces of the Pylos kingdom (Baumbach 1977:13). Furthermore, 143 bronze-smiths are listed together with their allocations of bronze which totalled 801 kilograms. A further tablet records the provision of 1 046 kilograms of bronze (Baumbach 1977:9).

A number of military units are recorded (Chadwick 1959:105). Their commanders are named, as well as the subordinate officers and the men assigned to each unit. Roughly 110 men served in a unit, which in turn was made up of detachments comprising men in multiples of ten. Baumbach (1977:13) points out that the series of tablets recording these military units begins with the words "thus the watchers are guarding the coastal areas" which may point to a general mobilization to counter an anticipated seaborne threat (see 3.1.1). A further series of tablets lists thirty rowers drawn from various coastal villages to be sent to Pleuron. Two other tablets record over four hundred rowers, while another names "rowers who were absent" (Chadwick 1959:104-105).

3.1.6.3b Collection accessibility

That such precise records were drawn up at Pylos does suggest that they were made available for future reference. Like at Knossos, the tablets were stored in jars which were neatly arranged on shelves (Johnson 1965:46). Again the tablets were dated by month, with the names of two of the months being identified on the Pylos excavation site (Chadwick 1959:128).

Map 4: Library Sites of the Greek Bronze Age



3.2 THE DARK AGES

3.2.1 HISTORICAL OVERVIEW

The centuries following the destruction of the Bronze Age civilizations (roughly 1100-800 B.C.) are known as the Dark Ages of Greece. It was a period marked by great disruption and poverty (Mckay et al 1983:77) and the absence of a written language (Johnson 1965:47). The knowledge of writing lay buried and forgotten in the ruins of the Bronze Age palaces (see 3.1.1).

A feature of this period was the continual movement of the Greek speaking peoples (Mckay et al 1983:77-78). New settlement along the Aegean coast of Asia-Minor by the descendants of the Mycenaeans provided "a link between the Mycenaean period and the Greek culture that emerged from the Dark Age". A people known as the Boeotians settled in the land to which they subsequently were to lend their name - Boeotia, situated to the north of Athens and the Attic peninsula. The Dorians established themselves in the Peloponnese.

3.2.2 POSSIBLE EXISTENCE OF WRITTEN DOCUMENTS AND BOOK COLLECTIONS

It is generally assumed that the Dark Ages featured an oral tradition handed down by succeeding generations, finally to be recorded once the alphabet had reached Greece (see 3.3.2) and subsequently to find its place in the book collections from the sixth century onwards (Johnson 1965:47).

Homer's epics are amongst the products of this vibrant oral tradition:

"Throughout the whole range of Greek literature no undisputed work is found more ancient than the poetry of Homer. His date, however is clearly later than the Trojan War; and even he, they say, did not leave his poems in writing. At first transmitted by memory, the scattered songs were not united until later, to which circumstance the numerous inconsistencies of the work are attributable again ..." (see 4.3.6.1). (Josephus Against Apion I.12)

Homer has been dated to the latter half of the eighth century B.C. (Baumbach 1977:5), with Davison arguing that "it is hard to believe that the Iliad can have taken anything like its present form much before 750 or at all after 700" (1962:149).

It is quite possible that Homer (or whoever was responsible for the Iliad and the Odyssey - a controversy which is of no consequence here) who was active during the tail-end of the Dark Ages, may have had access to records to complete his works. Both works are filled with factual details which required research in a number of sources, some of which may not have been purely oral. However Murray (1960:274, note 1) points out that only one passage in Homer's entire works "suggests knowledge of the art of writing":

"... but he sent him away to Lycia, and sent with him signs of disastrous meaning, many lethal marks that he wrote in a folded tablet, and told him to show them to his father-in-law, to ensure his death". (Homer Iliad VI, 168-170)

It is agreed that Homer was active during the early stages of the introduction of the alphabet. Davison (1962:149) suggests that although the poet may have been too old to have mastered the new art of writing, there may have been younger men who put to writing "a work which they must have recognized as a masterpiece, so that it could be preserved unaltered". Similarly Hesiod's Works and Days (roughly 700 B.C.) does not appear suited for entirely oral composition (Davison 1962:147) and must have been composed when the early influences of a written language became noticeable. Davison (1962:151) goes on to argue that although there may not have been a public demand for a written copy of the works, the "author himself or his authorized representative(s) would have a copy ...".

The late Dark Ages did see a certain amount of literary output. Platthy (1968:49) lists nine authors of the eighth and seventh centuries, besides Hesiod and Homer. These include Olen from pre-Homeric times; Syagrus, apparently Homer's rival and the Corinthian Eumelus, who was responsible for four works.

Inscriptions on vases dating from the late Dark Ages point to the "parallel existence of oral epics and written literature on an enormously widespread scale ..." (Platthy 1968:76). Various bronze and stone inscriptions have also been uncovered. A number of these

3.3 THE AGE OF GREEK CULTURAL DOMINANCE

3.3.1 HISTORICAL OVERVIEW

The Dark Ages had seen the peoples of Greece recover from the disruptions of the collapse of the Bronze Age civilizations (Mckay et al 1983:81). A newly found prosperity led to an increase in wealth and a rise in population, the immediate consequence being increasing land-hunger. The period of 750-550 B.C. was marked by mass Greek migrations into the lands of the Mediterranean basin, including the coastal regions of the northern Aegean, the Ionian and Black Seas, North Africa, Sicily, Southern Italy and France as well as Spain. Mckay et al conclude (1983:82) that this mass colonization by Greek peoples ensured that the prevailing culture of the Mediterranean region would be Greek.

This new emerging Greek culture differed from that of the Middle Eastern civilizations (De Vleeschauwer 1967:35). Middle Eastern civilizations displayed a collective tendency dominated by the ruler-prince and the High Priest. Conversely, Greek civilization was more fluid, with a grouping of aristocrats at the top of the social ladder and was not as rigid as the Middle Eastern caste system. Nevertheless, despite these apparent differences, De Vleeschauwer concludes that certain cultural elements of both Mesopotamian and Hittite origins had directly and indirectly moulded the original Greek cultures.

The autonomous city-state was at the centre of Greek political organization as the Greeks were unable to achieve the creation of a unified state, although there did exist an economic and cultural bond throughout the whole city-state system (Weimann 1975:22). At various stages of Greek history Sparta, Athens and Thebes by means of alliances attempted to gain hegemony over their fellow city-states. A series of wars were fought, the most destructive of which was the Peloponnesian War between Athens and Sparta in 432-404 B.C. Although Athens was defeated, Sparta was so weakened that Thebes stepped into the vacuum. Continuous conflict however led to Greece falling to a foreign invader - Philip II, King of Macedonia - when a combined Theban and

Athenian army was defeated at Chaeronea in Boeotia in 338 B.C. (Mckay et al 1983:90-105). The defeat at the hands of the Macedonians heralded the end of the freedom so long enjoyed by the autonomous Greek city-states (see 4.1.1).

Despite the continuous in-fighting, the Greek city-states on occasion did band together to defeat a foreign threat. Between 499 B.C. and 478 B.C. the Greeks finally despatched the Persians in an alliance known as the Delian League under the leadership of Athens (Mckay et al 1983:88-89).

A feature of the Greek city-state was the continuous evolution of the system of government. By the sixth century B.C., the monarchies were replaced by the tyrants, who had their powerbase in the ruling aristocratic families. These tyrants extended to their subjects certain entrenched rights and in a number of city-states this went on to evolve into the Greek form of democracy. A typical example of this is fourth century Athens (Weimann 1975:23) where all the male citizens (excluding the slaves and men who settled in the city from outside Athens) had the vote and the right to hold office.

3.3.2 INTRODUCTION TO THE ALPHABET

A form of writing already existed in Greece before the introduction of the alphabet (see 3.2.2). It appears that more than one writing style existed, although they have all been classed as "syllabic writing" (Irwin 1964:54). Literature had already been recorded by means of these "syllabic writing" styles before the adoption of the alphabet (De Vleeschauer 1967:36, Platthy 1968:70). It was the alphabet that "made possible the change from the short song of the solo-singer, to prolonged recitation by a team of rhapsodes. This alone could make possible full appreciation of the lengthy and complexity of the Iliad and Odyssey (Irwin 1964:54). Irwin goes on to conclude that the adoption of the alphabet "reduced the number of signs used very considerably and brought an immense gain in precision". Certainly these factors would have boosted the literary output of the Greek region as a whole, as there now existed a simplified and uniform written language.

Herodotus' account of the introduction of the alphabet into Greece has been accepted by modern scholars as accurate (De Vleeschauwer 1967:35; Johnson 1965:47; Platthy 1968:9; Weimann 1975:25):

"The Phoenicians who came with Cadmus ... introduced into Greece, after their settlement in the country, a number of accomplishments, of which the most important was writing, an art till then, I think, unknown to the Greeks. At first they used the same characters as all the other Phoenicians, but as time went on, and they changed their language, they also changed the shape of their letters. At that period most of the Greeks in the neighbourhood were Ionians; they were taught these letters by the Phoenicians and adopted them, with a few alterations, for their own use, continuing to refer to them as the Phoenician characters - as was only right, as the Phoenicians had introduced them". (Herodotus V.60)

Pliny provides more details as to the Greek modifications regarding the alphabet:

"... Cadmus imported an alphabet of sixteen letters into Greece from Phoenicia and that to these Palamedes at the time of the Trojan War added the four characters ZΨΦX, and after him Simonides the lyric poet added another four Y≡Ωθ, all representing sounds recognized in the Roman alphabet. Aristotle holds that the primitive alphabet contained eighteen letters, and that Ψ and Z were added by Epicharmus more probably than Palamedes ...". (Pliny Natural History VII,56.192-193)

Amongst the first inscriptions that were made using the letters of the new alphabet are the official lists of the olympic victors of 776 B.C. (Davison 1962:148; Platthy 1968:70). Although Davison goes on to point out that the alphabet could have been introduced later than 776 B.C. and that all the victor's names that could be remembered had been recorded, it is generally accepted that the alphabet was introduced in the first half of the eighth century B.C. However, a number of scholars prefer a date in the middle of the ninth century B.C. (Irwin 1964:54; Johnson 1965:47) while Platthy proposes a date "beyond the first millennium B.C." (1968:69). It can be safely assumed therefore that by the eighth century B.C. the Greeks had knowledge of the alphabet and that it was already in widespread use. The first Greek author to have applied the alphabet to his writings with a degree of certainty is Eumelus, who must have already been active by the 730s B.C. since he was said to have been a contemporary of Archias who founded Syracuse in 734 B.C. (Davison 1962:148-149).

Despite the obvious advantages of a written language, Plato, through his mouthpiece Socrates, issued a warning as to the long term effects writing (and by implication the adoption of the alphabet) was to have:

"For this invention will produce forgetfulness in the minds of those who learn to use it, because they will not practise their memory. Their trust in writing, produced by external characters which are no part of themselves will discourage the use of their own memory within them. You have invented an elixir not of memory, but of reminding; and you offer your pupils the appearance of wisdom, not true wisdom, for they will read many things without instruction and will therefore seem to know many things, when they are for the most part ignorant and hard to get along with, since they are not wise, but only appear wise". (Plato Phaedrus 274C - 275E)

3.3.3 THE EXTENT OF LITERACY

By the fifth century B.C. a reading public is already discernible amongst the general population of Greece (Davison 1962:143). The reason for this widespread literacy can be ascribed to the fact that "the Greek alphabet never was a religious tool, symbol or document, and it was not the property of the state or the priests, but of the whole community" (Platthy 1968:22).

References to literacy in the many tragedies produced in the fifth and fourth centuries B.C. (see 3.3.4) reveal that writing was not considered a status symbol since many slaves had the ability to read and write. Instead, being literate is viewed as a contribution to the power and well-being of the state (Platthy 1968:40). That the lower social strata of society was literate can be ascribed to the traditional aristocratic perception that working with the hands (as would be required with writing) was unworthy of the first rate citizen (De Vleeschauer 1967:36). In Athens therefore even women were encouraged to learn to read and write (Thompson 1962:17-18). Kesting goes on to conclude that literate ability "was deemed to be high in culturally advanced city-states", with an average 60% of men being able to read and write and 40% of women (in ELIS 39, 1985:376).

Davison (1962:156) maintains that the first reference to reading as a pastime was recorded by Euripides (c.480-406 B.C.) in his Erechtheus:

"Let my spear lie for spiders to spin a thread about it, and may I share my house in tranquillity with greyhaired Age; may I wreath my grey head with garlands and sing as I hang up a Thracian targe on Athena's colonnaded chambers, and may I unfold the voice of the tablets which wise men recite". (Fr. 370 Nauck, from Stobaeus)

Davison goes on to comment that this is an example of a man "who reads for pleasure and as a relief from the harsh realities of war". In such cases memories may decay while

booksellers flourish, giving every man the opportunity to collect about him his own book collection.

Platthy notes that in ancient literature the references to reading "appear just as numerous as to writing" (1968:45). Amongst the various words used for "reading" is the term ἀναγιγνώσκω as in the following extract from Demosthenes (384-322 B.C.):

"But although I suppose you all know that no one is exempt from the latter service, the clerk shall *read* [my italics] to you the actual statute ...". (Demosthenes Orations XX.27)

Also the term ἐπιλεγομενα was used by Herodotus (c.484-c.420 B.C.) in numerous passages of his work:

"Cyrus took the hare and slit it and *read* [my italics] the paper which was in it; the writing was as follows ...". (Herodotus I.124)

"... the interpreter when he *read* [my italics] me the writing said that sixteen hundred talents of silver had been paid". (Herodotus II.125)

The popularity of play festivals and recitals (see 3.3.4.5) gives a good indication as to the level of literacy attained by the general population. In most cases audiences were familiar with the text of plays and recitals being presented:

"... we shall remind you of what Antiphanes says in his Poesy. His words are these: 'the art of writing tragedy is fortunate in every way. For, first of all, the stories are well known to people in the audience; even before a character speaks a word, so that the poet merely has to remind them'. (Athenaeus VI.222)

Platthy maintains that this phenomenon "cannot be attributed to oral communication. The audience must have been literate enough to prepare themselves for the performance and to follow the performance" (1968:63). In fact, the chorus in the Frogs of Aristophanes comments on the practice of audiences attending performances and presentations with copies of the relevant texts at hand:

"Chorus: ... Fear ye this, that today's spectators lack the grace of artistic lore,
Lack the knowledge they need for taking
All the points ye will soon be making?
Fear it not: the alarm is groundless: that, be sure, is the case no more.
All have fought the campaign ere this:
Each a book of the words is holding; never a single point they'll miss". (Aristophanes Frogs 1110-1117)

Furthermore, it appears that Aristophanes included a number of satirical jobs at the book collecting and writing hobby of Euripides on the assumption that the audiences possessed a general literary knowledge to appreciate these remarks. For example, one scene centred around Euripides' work the Andromeda:

"Dionysus: I was serving lately.
Aboard the Cleisthenes.
Heracles: And fought?
Dionysus: And sank more than a dozen of the enemy's ships.
Heracles: You two?
Dionysus: We two.
Heracles: And then I awoke, and lo!
Dionysus: There as on deck, I'm reading to myself The Andromeda a sudden pang of longing shoots through my heart, you can't conceive how keenly".
(Aristophanes Frogs 48-54)

In another example Aeschylus and Euripides are sitting in Hades discussing their respective dramatic merits:

"Euripides: ... when first I took the art [of tragedy] from you [Aeschylus] ... I reduced and toned her down ... with ... a dose of chatterjuice distilled from books".
(Aristophanes Frogs 939)

In a final example Aeschylus says about Euripides:

"No more of 'line for line'; let him - himself,
His children, wife, Cephisophon - get in with all his books collected in his arms,
Two lines of mine shall outweigh the lot". (Aristophanes Frogs 1406-1410)

Cephisophon, incidentally, is a servant of Euripides. Wendel (in Milkau 1955:57) also observes that the theatre public must have had a reasonable knowledge of literary matters at the time for Aristophanes to even think of inserting such passages in his work.

Just how knowledgeable audiences had become is illustrated in Plutarch's Timoleon. A certain Euthydemus inserted a corrupted version of the following line from Euripides' Medea into a public speech:

"Medea: Corinthian dames, I have come forth my doors ...". (Euripides Medea 215)

Euthydemus enraged his listeners because of his unintentional slip:

"... Euthydemus, though a brave man in action and of surpassing coldness, found no pity because of a certain insult to the Corinthians which was alleged against him. It is said, namely, that when the Corinthians had taken the field against them, Euthydemus told the men of Leontini in a public harangue that it was nothing fearful or dreadful if '*Corinthian women came from their homes*' [my italics]. So natural is it for men to be more galled by bitter words than hostile acts ...". (Plutarch Timoleon XXXII)

A good indication of the level of literacy amongst the general population can be gauged from vase inscriptions. Platthy (1968:75) quotes Notopoulos (1960) who maintains that "the increasing use of inscriptions on the vases of this period (i.e. the decade of ca.580-570 B.C.) shows that the general public for whom these vases were meant was literate enough so that the vase painter could coordinate the scenes on his vases with the scenes in the Homeric poems which were now beginning to be popular in the Panathenaia" (see 3.3.4.5). Platthy adds that introducing the alphabet in this way, not only aided in popularizing a particular narrative, but also "helped to spread the knowledge of writing". Indeed, private use of the alphabet, as for example on vase illustrations, is a very important prerequisite for the widespread appearance of literacy and literature (Platthy 1968:23).

It can therefore be argued that by the fifth century B.C., "literacy was the trend of the day", especially so in Athens (Platthy 1968:24). For example, everyday activities like going to the theatre required a standard of reading ability, as the tickets (σὺμβολα) were marked and these were often coordinated with the seating arrangements (Platthy 1968:63).

Ostracism, a practice introduced into Athens by Cleisthenes in the early fifth century B.C., presupposed that the average citizen was literate to a certain extent. Ostracism was a means of exiling from Athens for ten years certain individuals whom the citizen body felt wielded too much power. Plutarch explains the procedure as follows:

"Each voter took an ostrakon, or potsherd, wrote on it the name of that citizen whom he wished to remove from the city, and brought it to a place in the agora which was all fenced about with railings. The archons first counted the total number of ostraka cast. For if the voters were less than six thousand, the ostracism was void. Then they separated the names, and the man who had received the most votes they proclaimed banished for ten years, with the right to enjoy the income from his property".
(Plutarch Aristides VIII.2-6)

Ostracism seemed to feature regularly in the early fifth century B.C., as in the years between 488 and 482 B.C. five individuals were ostracized ("Athenian politics c.493-460 B.C." - unpublished lecture notes of the Department of Classics, University of Cape Town). It has been proposed that the population of Athens totalled 310 000 in the second half of the fifth century B.C., 172 000 of these being classed as citizens - excluding

women, slaves and resident foreigners (Platthy 1968:66). If 6 000 votes is the required quorum, Platthy concludes that "this implicitly supposes that a much larger number of the population was able to read and write ...".

However it must be noted that in some cases names inscribed on these ostraka were found to be written by the same hand, which indicates that those citizens who were illiterate had their ostraka written for them:

"... as the voters were inscribing their ostraka, it is said that an unlettered and utterly boorish fellow handed his ostrakon to Aristides, whom he took to be one of the ordinary crowd, and asked him to write 'Aristides' on it. He, astonished, asked the man what possible wrong Aristides had done him, 'none whatever', was the answer, 'I don't even know the fellow, but I am tired of hearing him everywhere called *the Just*'. On hearing this, Aristides made no answer, but wrote his name on the ostrakon and handed it back". (Plutarch Aristides VII.5-6)

Writing requires a skill that has to be taught, and there is evidence of schools existing all over Greece. An example is a school in Messenia, a city in the Peloponnese:

"Then the Messanians took him [Timoleon] into the theatre, brought their children thither from their schools to behold, as a glorious spectacle, the tyrant's punishment, and put him to torment and death [c.334 B.C.]". (Plutarch Timoleon XXXIV.2-3)

Pausanias described the schoolmaster Tyrtaeus, who lived in the seventh century B.C., as a "teacher of letters" (διδασκαλός Ὑραμμάτω):

"There was a man Tyrtaeus, a teacher of letters, who was considered of poor intellect and was lame in one foot". (Pausanias IV, 15.6)

The only detailed information that has survived of Greek education systems is that of the Athenian model (Irwin 1964:59-60). Education in Athens was in private hands until the fourth century B.C. Schools first became evident in the seventh century although it is possible that some educational institutions date to an earlier period. At primary school level boys from the age of six years and upwards were given a grounding in reading, writing, simple mathematics, the arts and literature:

"... but just as writing masters first draw letters in faint outline with the pen for their less advanced pupils, and then give them the copybook and make them write according to the guidance of their lines ...". (Plato Protagoras 326D)

"The masters take pains accordingly, and the children, when they have learnt their letters and are getting to understand the written word as before they did only the spoken, are furnished with works of good poets to read as they sit in class, and are made to learn them off by heart: here they meet with many admonitions, many

descriptions and praises and eulogies of good men in times past, that the boy in envy may imitate them and yearn to become as they". (Plato Protagoras 325E-326A)

This was complemented with rigorous physical education.

On having graduated, the fourteen year-old entered secondary school, depending on whether his family had the financial resources. If this was not the case, the boy would be apprenticed to a craftsman or learn his father's trade. Secondary education entailed further study of literature, grammar and mathematics as well as rhetoric. The emphasis of the Athenian educational system was on the study of the "national literature", so that once the Athenian youth had completed his schooling he had "very sound knowledge indeed of his country's poetry, history and drama" (Irwin 1964:59). Platthy notes that one of the final examinations required the writing of a tragedy, with the best work being rewarded (1968:67-68).

Davison concludes that the majority of Greeks were illiterate, with some people, although capable of the basic literary skills "preferring to use their ears and memories rather than their eyes ...". However those who possessed the "absolute faculty of reading" and were capable of "the adequate use of a book" such as the poets, writers, actors, reciters and chorus members ($\chi\omicron\rho\epsilon\upsilon\tau\alpha\iota$) had increased in such numbers by the latter half of the fifth century B.C. that it became increasingly necessary "to organize machinery by which books could be copied and sold to people who were no longer content to wait for the annual Dionysia [see 3.3.4.2] or Lenaea, or still worse for the quadrennial Great Panathenaea [see 3.3.4.5], for their regular ration of new literature" (Davison 1962:231).

3.3.4 LITERARY OUTPUT

From the last half of the fifth century B.C. onwards "there was an amply sufficient corpus of literature, not merely to justify but indeed to compel the collection of books into libraries either by private people or by institutions" (Irwin 1964:56). There were vast quantities of texts available to writers and book collectors of this period, including information about various early institutions, vast quantities of religious material, mythological novels and special works and stories - all of these recorded in the medium

of writing (Platthy 1968:24). All this material will have accumulated from the seventh century through to the fourth century B.C., as during this time there emerged "a general tendency to set down in writing the religious and historical traditions then accumulating in great numbers" (De Vleeschauwer and Wright in Rawski 1973:98). This availability of texts gave rise to a new intellectual class centred around book collecting and reading:

"... And the treasures that the wise men of old have left us in their writings I open and explore with my friends. If we come on any good thing, we extract it, and set much store on being useful to one another". (Xenophon Memorabilia I, VI.14)

Platthy estimates that over 120 000 Greek inscriptions have been uncovered, excluding 10 000 vase inscriptions while the number of Greek papyri retrieved is set at 35 000 examples (1968:73, note 38). However, it must be remembered, as Kesting points out (in ELIS 39, 1985:376), that Greek culture was still based on an oral tradition and therefore there existed a "cavalier attitude" towards the preservation of written material. This haphazard attitude towards book preservation can also in part be ascribed to the perception some notable Greek scholars had of the written word and writers in general:

"... to Solon and whoever has written political compositions which he calls laws: if he composed his writings with knowledge of the truth, and is able to support them by discussion of that which he has written, and has the power to show by his own speech that the written words are of little worth, such a man ought not to derive his title from such writings, but for the serious pursuit which underlies them ... the name 'philosopher' that is, 'lover of wisdom', or something of the sort would be more fitting and modest for such a man ... on the other hand, he who has nothing more valuable than the things he has composed or written, turning his words up and down at his leisure, adding this phrase and taking that away, will you not properly address him as poet or writer of such speeches or laws?" (Plato Phaedrus 277D-278E)

The common book form in Greece was the Egyptian papyrus scroll (2.2.2) which "came to Greece quite early, through second or third hand" (Thompson 1962:62). Thompson goes on to note that the introduction of papyrus coincided with the sudden growth of Greek literature which at that time was developing "richly and many-sidedly".

Ancient sources refer to the length of a work in "lines", a practice which Platthy maintains "could point to the establishment of bookdealers [see 3.3.4.7], copyists and libraries where lines were counted and where it was important to know the length of the work" (1968:46). A "line" (which was called an ἐπιός by the early writers and a στίχος

(stichos) in the late post-Homeric period) constituted sixteen syllables (Platthy 1968:46, note 1). Roughly sixty-two known writers spanning the period of the eighth to the third centuries B.C. produced texts varying from 200 to 455 270 lines in length (Platthy 1968:47-49). Many of these works exist on fragments or have been identified through vague references in other works. Illustrated manuscripts were also produced:

"Anaxagoras [500-428 B.C.] was also the first to publish a book with diagrams".
(Diogenes Laertius II.11)

With new tragedies (see 3.3.4.2) and comedies (see 3.3.4.4) being produced year by year for the various Athenian play festivals (especially from the sixth century onwards) it can be assumed that numerous "acting" copies had to be produced as well as copies for the audiences (see 3.3.3). Davison (1962:151) maintains that the publication of the texts of plays became a "means of preserving literary works independently of the not always available (or, if available, not always reliable) human memory ...". It therefore became standard procedure for an author to have a copy made of his plays to ensure the existence of an authentic text for the benefit of future performances (see 3.3.6.3).

The beginning of the fifth century saw the emergence of the "professional poet" - a writer, Davison explains, who was no longer tied to a particular patron "but writing on commission for fees ..." (1962:154):

"Isocrates [436-338 B.C.] sold a single speech for 20 talents". (Pliny Natural History VII.10)

Another example is Pindar who charged 3 000 drachmas for an ode (Davison 1962:154, note 27).

The existence of public bookshops (see 3.3.4.7) indicates that individuals did collect the works of professional dramatists (PRE Vol. 3, 1899:408). Platthy argues that the very existence of these bookshops pre-supposes "that there must have been a supply, a selection, and various subjects on sale for the market, as well as for the reading public" (1968:82).

By the fifth century B.C. Athens had become the literary centre of the Greek world (Davison 1962:153-154). The influence of other Greek cities on the general Greek literary

output gradually waned with the result that "most of the literary production of the early years of the century was either aimed at, or at least strongly influenced by, the supposed tastes of the Athenian public". Xenophon (c.428 - c.354 B.C.) supplies evidence as to the export of books from Athens when describing the washed-up cargo of wrecked ships along the Black Sea coastline:

"... at Salmydesses ... Here there were found a great number of beds and boxes, quantities of written books ...". (Xenophon Anabasis VII, 5.14)

Indeed, despite the apparent Greek abhorrence of anything foreign, evidence does suggest that non-Greek works may have been available on Greek book markets. For example, Platthy (1968:57) notes that both Xanthus of Sardis and Plato make reference to works written by the Persian Zoroaster (see 4.3.5.2).

3.3.4.1 Early forms: Epic, Didactic and Lyric Poetry

Epic poetry represents the earliest form of Greek literature and existed before the development of drama, history and philosophy (OCCL 1937:160). It took the form of narrative poetry recording heroic, mythical and historical adventures. The origins of epic poetry can therefore be traced back to festivals where "primitive poets" composed hymns to be sung in praise of a particular deity.

A large amount of epic poetry was produced, although the Iliad and the Odyssey represent the only complete works that have survived. By roughly the sixth century B.C. composition of epic poetry was on the decline and only three poets are known to have produced epic works in the fifth century B.C. (OCCL 1937:160).

Before the introduction of the alphabet (see 3.3.2) teaching and instruction were undertaken by means of the recitation of verse. This early medium of teaching is known as didactic poetry, the most well known example being the Work and Days of Hesiod (OCCL 1937:145).

Lyric poetry originated in Lesbos and Ionia and took the form of songs "expressing the untrammelled and personal sentiments of the poets ..." (OCCL 1937:252). Lyric poetry

was therefore always recited to the accompaniment of a musical instrument - in most cases a lyre and/or a flute. This form of literature achieved its high-point during the time of Pindar (518-438 B.C.). After c.450 B.C. a form of lyric poetry was employed in the choruses of tragedies (see 3.3.4.2) and comedies (see 3.3.4.4).

3.3.4.2 Tragedy

The name of this popular form of Greek literature -

Τραγωδία - is derived from the word Τραγγοδοί which meant "a chorus who personated goats, or danced either for a goat (tragos) as prize or around a sacrificed goat" (OCCL 1937:434). The origin of the tragedy is therefore thought to be "in an elementary choral and rustic form of drama in use in the villages of Attica ..." (OCCL 1937:434) and was first performed at the Great Dionysia at Athens (see 3.3.4.6) in the latter half of the sixth century B.C. Originally tragedies involved stories of Dionysus but "later their range was extended to include the stories of heroes; they were only rarely drawn from history" (OCCL 1937:434).

Aristophanes gives an indication of the amount of tragedies produced:

"Heracles: But have you not a school of little songsters, Tragedians by the myriad, who can chatter a furlong faster than Euripides?" (Aristophanes Frogs 89-91)

The earliest known tragedians are four who were active during the sixth century B.C. One of these, a certain Choerilus, has been credited with 63 works (Platthy 1968:52, note 23). Forty-four tragic writers have been traced to the fifth/fourth century B.C. The number of works these dramatists produced ranged from one (for example Melanthius) to 160 (attributed to Carcinus the younger). Probably also active in this period are a further thirteen playwrights including Achaeus who was responsible for ten works and Timesitheus credited with thirteen dramas. The fourth century alone produced twenty-two known tragedians. Of these the most popular plays were written by Euripides and Aeschylus (90 each) and Sophocles, who was credited with 130. The tragedies of these dramatists were also performed in Egypt and Parthia, while Alexander the Great (356-

323 B.C.) dispatched his personal aide Harpalus to bring him copies of these plays while he was campaigning in Asia:

"... and when he [Alexander] could find no other books in the interior of Asia, he ordered Harpalus to send him some. So Harpalus sent him the books of Philistus, a great many of the tragedies of Euripides, Sophocles and Aeschylus ...". (Plutarch Alexander VIII.1-3)

The literary activities of a further twelve tragedians cannot be confirmed (Platthy 1968:53-56).

In all, Platthy estimates that over 12 000 tragedies were produced from the fifth century to the latter half of the fourth century B.C. Of these only 5 000, mostly in short fragments, have survived (1968:62).

The popularity and continuous output of this type of drama can be ascribed to "the loftiness in the style ... the moral courage which punctuates each line [and] the avoidance of trifling matters ..." (Platthy 1968:64). The output of these plays will have increased multifold as most members of the audience possessed their own outlines of the plays they were attending (see 3.3.3):

"Soon as they rise from bed at early dawn
They settle down on laws, as we on lawns
And then they brood upon their leaves and leaflets ...".
(Aristophanes Birds 1286-1288)

Furthermore Parsons (1952:7) quotes Hall (1913) who maintains that the "enthusiasm for Tragedy created a reading public, since but few Greeks could hope to see the masterpieces of the great dramatists performed in Athens. Thus an impulse was given to the production of books which ends in the growth towards the end of the fifth century of an organized book-trade with its centre in Athens".

3.3.4.3 Logography

Logographers can be divided into two groups (OCCL 1937:245). One group can be identified as "chroniclers" whose writings "marked the transition from the verse of the epic poets to prose". These writers produced narratives and records of the past, mostly

inscriptions record examples of pre-Homeric oral literature as well as Corinthian and Achaean epics. Amongst the items found to record this material are the Perachora inscriptions dated to 750-650 B.C., the Mantiklos bronze from the end of the eighth century B.C., an Athenian geometric "oinochoe" of the third quarter of the eighth century B.C. and a hexameter inscription on a vase which was found at Ithaca also dating from the eighth century B.C.

Most of the writing styles of the Dark Ages can therefore be classed as "Geometric" (Davison 1962:147) and were limited to simple inscriptions and engravings on various objects.

mythical, and therefore can be classed as the "predecessors of the true historians such as Herodotus". These proto-historians were active in the sixth and fifth centuries B.C.

In fifth and fourth century Athens, logographers also wrote speeches for litigants to deliver in legal disputes.

3.3.4.4 Comedy

Derived from the word *komos* which means "revel" (OCCL 1937:115), comedy of this period can be divided into the "Old" and "Middle" comedy (OCCL 1937:116). The former featured an imaginary story or fable which was both amusing and satirical and involved "a dispute on some subject of current interest ...". The *Middle Comedy* first appeared sometime after 400 B.C. and constituted a "ridicule of myths, and criticism of literature and philosophy".

There exists some controversy amongst the ancient sources as to the number of comedies that were produced (Platthy 1968:62). A prologue to Aristophanes' Scholia noted the existence of 365 plays of the *Old Comedy* and 617 of the *Middle Comedy*. However, Athenaeus (VIII. 336D) states that he personally had read 800 plays of the *Middle Comedy* type.

There is similar controversy concerning the number of playwrights. Aristophanes refers to 450 writers while Athenaeus places the figure at 700. Eustathius in his writings mentions 530 dramatists and Diogenes Laertius 250 (Platthy 1968:62). Although not as popular as tragedy, it can be concluded that there was an appreciative audience for this type of production - this no doubt goes for the book-trade too.

3.3.4.5 Play festivals

Although the earliest play festivals can be traced back to the seventh century B.C., it was in the sixth century that the festivals developed as an important element in the promotion of Greek literary culture, as it was through these "that literature gained its greatest hold

on the mass of Greek people" (Davison 1962:153). The most prominent of these festivals were the Great Panathenaea held every fourth year and the annual Panathenaea (Lamb 1962:407, note 2), both of which were staged in Athens. So popular had they become that greater financial contributions were made towards the staging of these festivals than to the compulsory payments required for the financing of naval expeditions:

"And yet, men of Athens, how do you account for the fact that the Panathenaic festival and the Dionysia are always held at the right date, whether experts or laymen are chosen by lot to manage them, that larger sums are lavished upon them than upon any one of your expeditions, that they are celebrated with bigger crowds and greater splendour than anything else of the kind in the world, whereas your expeditions invariably arrive too late, whether at Methone or at Pagasae or at Potidaea?" (Demosthenes First Philippic 35)

Two types of competitions were held at these play festivals (Davison 1962:153). One for original compositions and the other for "executants". The latter competition was open to musicians and the rhapsodes, the so-called "reciters of other men's works".

At each festival five comic writers entered and three tragedians (Platthy 1968:59). Comedy writers entered only one work (OCCL 1937:115) while tragic writers had to enter four works each, with the fourth being a satire (Platthy 1968:59). It is not known how many writers would apply to enter the competition, however there must have been some kind of preliminary elimination round as only the best three tragic writers could compete and these would be assigned choruses (Platthy 1968:60). The number of people constituting a chorus varied from twelve to fifteen persons (OCCL 1937:434). Five judges, chosen by lot, would preside over the competition, with the winner being allowed to select his actors for the next year's competition (Platthy 1968:60). Originally the winner was decided by public acclamation (OCCL 1937:434). During the course of the festival, the theatres were filled up to four times a day:

"At the jugglers' shows he will stay out three or four performances learning the songs by heart". (Theophrastus Characters XXVII.7)

Copies of the texts of the plays would have to be supplied to the actors and the chorus members, and Platthy notes that these may have been special copies containing stage directions as well as the text (1968:61). Also, Davison points out that a copy of the prizewinning texts would be preserved in a state record office (see 3.3.5.7 and 3.3.6.3) for

copyright purposes (1962:153). The main reason for the introduction of this measure was that this original authoritative text could be "imposed on the competing rhapsodes without fear of their refusing to compete if they were denied a chance to insert their own cadenzas".

Platthy analysed the career and lifestyle of a typical professional writer who would enter these play festivals (1968:60-61). As his model he took Sophocles (c.496-406 B.C.) who is said to have been responsible for 90-130 plays. When his first play was performed Sophocles was twenty years old, and he died when he was in his nineties. He therefore must have produced at least two plays a year and this would have required research on the subject and characters he chose to write his plays about as well as "superintending" the public performance and even directing the acting. Platthy concludes that professional writers would have "had little private life".

3.3.4.6 Commentaries

Davison points out (1962:222) that one can "collect quite an anthology of references to the style and content of literary works from authors earlier than Aristophanes" (before 450 B.C.). An example of a commentary dating from the fifth century B.C. is that of Democritus (c.460-c.370 B.C.) who compiled a dictionary with explanations of rare and ancient words to aid in the study of Homer. Aristotle, in the fourth century B.C., discussed the role of similes in Homer (Platthy 1968:83).

The production of commentaries represents a further step in the development of the literary output in Greece. Literacy levels had reached a stage where people not only read the original works of authors, but now saw a need to delve deeper than the mere literal meaning of words. To the educated Greek interpretative commentaries would have been a valuable addition to a book collection. That scholars such as Democritus and Aristotle are known to have produced these commentaries indicates that there existed a market for these works.

3.3.4.7 Publishing and bookshops

The literary market offered, apart from tragic and comedy works, texts embodying proverbs, oracles, mythographic and genealogical compilations, private works such as guides of physicists and priestly families and descriptions of journeys as well as historical accounts (Platthy 1968:90). At this time a professional scholarship emerged embracing a host of disciplines which required "the necessity of investigation, the accuracy of facts, the method of shifting sources and analysing results produced ..." (Platthy 1968:90). Thompson argues that the demand for reading material really emerged during the Peloponnesian War and increased once the protracted conflict (see 3.3.1) was over (1962:18).

The publication and subsequent circulation of texts was already a common occurrence in Plato's time (c.429-347 B.C.):

"Aristoxenus in his Historical Notes affirms that Plato wished to burn all the writings of Democritus that he could collect, but that Amyclas and Clinias the Pythagoreans prevented him, saying that there was no advantage in doing so, for already the books were widely circulated". (Diogenes Laertius IX.40)

Platthy maintains that the works of Euripides, amongst others, were so popular that they were published and republished and copies of these texts would certainly have been found in "every school library throughout the Greek world" (1968:89). If a writer was very popular, even his unacted dramas were published:

"I am aware that The Thurio-Persians, as well as Nicophon's play, was never produced, which is why I mentioned it last". (Athenaeus VI.270A)

However, as regards the works of a popular writer, it is often questionable if the texts available were accurate and the exact copies of the original. Publishers (in most cases book traders) anxious to meet the popular demand for the works of Homer for example, would produce their own version of the text with the help of a rhapsode (Davison 1962:224).

Davison goes on to suggest that "discrepancies between one version and another did not concern the ordinary reader, whose only concern was to own *a* text, or the bookseller, whose only concern was to have a saleable article" (see 4.3.6.1).

The earliest examples of bookshops where texts were for sale can be dated to the fifth century B.C. (Davison 1962:219). At this time the cost of a papyrus scroll was two drachmas. Although the average length cannot be ascertained, Davison maintains that it would "unlikely to have been long enough to hold more than a few books of the Iliad at the longest" (1962:151, note 17). The average Athenian earned 120 drachmas per annum in the fifth century B.C., of which 50 drachmas would have to be spent on food and clothing alone. Even if other expenses including rent are still to be subtracted from the total, a sizeable proportion of the population would have been able to afford to build up a book collection over the years. By the fourth century B.C. the average Athenian earned 60 drachmas more per annum, which will mean that the cost of living and indeed the price of books will have risen accordingly with the levels set by inflation ("Athens - Prices and incomes c.430-323 B.C." - unpublished lecture notes of the Department of Classics, University of Cape Town). A second-hand book trade also seems to have existed:

"... the books of Anaxagoras the Clazomenian ... which they can buy sometimes ... for a drachma ...". (Plato Apology 26D-E)

Davison (1962:221) considers this a low price for a manuscript. It is impossible to determine the effects of wear and tear on the text (see 2.2.2) which no doubt had an effect on the retail value of a papyrus scroll. However, there is some evidence as to the general quality of manuscripts produced for public consumption (Davison 1962:222). A papyrus fragment of Timotheus' work Persians which was circulated in the Greek world in the latter half of the fourth century B.C., was uncovered in Egypt in the late 1890s. Davison describes the text as being "markedly irregular" with the lines "not set out with any regard for metre", while the left-hand margin was "roughly vertical" and the right-hand margin "very irregular indeed". Although the letters were clear and well formed and the ends of the stanzas clearly marked off, Davison concludes that the text had a "rough-and-ready appearance" despite being generally considered an example of "high quality fourth-century book production". Given the fact that most writers knew that they were producing texts for a market, no effort was made to aid the reader to "grasp the general plan of the book" (Davison 1962:231). Davison goes on to note (1962:232, note 17) that none of the popular writers such as Herodotus, Thucydides or Plato organized their works into standard lengths, with book divisions simply being imposed at will (see 4.3.6.1).

Although writers like Pindar and Isocrates earned money with the sale of their manuscripts (see 3.3.4), no real evidence has been found suggesting the existence of a financial incentive for the composition of original material (Davison 1962:232). It must also be remembered that Greek writers composed their works for only a small proportion of the population, a factor limiting any form of potential gain if indeed a market had existed.

3.3.5 GREEK LIBRARIANSHIP

The libraries of Greece were in general very limited in size and content when compared to the earlier Middle Eastern (see 2.1.5) and later Hellenistic collections (see 4.1.4 and 4.3.5). The reason for this was that the Greeks "never aimed at the procurement of massive collections, and transcription was usually accomplished by the library itself or by the private industry of individual copyists" (De Vleeschauwer and Wright in Rawski 1973:104). The Greeks were never oppressed by despotic rulers or enslaved by foreign powers, and this freedom enabled them to "ask questions about the world, and about man's place in it" (RDLMK 1978:634). The consequence of this was that "their questioning led them to lay the foundations of systematic inquiry and so begin the process of expanding and defining human knowledge". These circumstances enabled the individual Greek to begin his own book collection containing texts which satisfied his own individual interests. Therefore it is not surprising that the history of Greek librarianship centred around the tastes and requirements of the individual-independent of the state. Certainly there were state initiatives as far as book collecting was concerned (the libraries of the tyrants Peisistratus (see 3.3.6.1) and Polycrates (see 3.3.6.2) and the Metroon (see 3.3.6.3) spring to mind) but these were created to maintain and stimulate public interest in the literary heritage of Greece. However, in this respect De Vleeschauwer and Wright advise caution in that although the state was never regarded the agent of culture and education (thereby implying the intellectual life and library policy) this aversion of state intervention "cannot be pressed too far, as the polis did organize the palaestrae, ephebea, and gymnasia, for instance ..." (in Rawski 1973:99-100). As educational institutions, these must have possessed book collections (see 3.3.5.5).

Libraries in Greece can begin to be identified from the sixth century B.C. onwards (Johnson 1965:47) although Richardson argues that examples of private and archival collections existed before 610 B.C. (1963:149). Concrete evidence of these libraries is "notoriously scanty" (Kesting 1986:156) and modern scholars have to rely upon references made to libraries in texts of ancient Greek and Roman writers which have survived (Johnson 1965:47). Unfortunately, as Parsons points out (1952:6), the few contemporary accounts that have survived were recorded by Athenian writers, while the remaining sources date from Hellenic-Roman times "when there was much travel and intercourse". Wendel maintains that it is not surprising that Athens possessed the most noteworthy collections, as after the defeat of the Persians in 478 B.C. and through the sponsoring of the Delian League maritime alliance (see 3.3.1), the city-state had emerged as the political and economic leader in Greece (in Milkau 1955:56). Athens therefore became the centre of Greek civilization and this was in part reflected in the city's literary collections - both private and official.

To add to the scarcity of sources, Gormley found that architectural evidence is virtually non-existent (1974:6-7).

Johnson (1965:61) has attempted to explain the reasons for the existence of "only fragmentary, incidental references to libraries". The fact that only 10% of all ancient Greek literature has survived makes it a distinct possibility that the works dealing exclusively with libraries as well as the histories of towns and temples in general have been lost. Another reason, which represents the more "probable answer" according to Johnson, is that "libraries were considered so natural, so necessary to well-ordered society, that writers did not consider it of importance to mention them". That 10% of the ancient Greek literature had survived at all surely indicates that these were preserved in some kind of library collection, whether public or private.

3.3.5.1 Collection development

The collection of a Greek library would be decided by the interests and occupation of its owner, who in most cases would invariably be a private citizen. A library could therefore

contain anything from the *urtexts* or copies of the major tragedies, comedies, epics and lyric poetry (Kesting in ELIS 39, 1985:376), personal notes and scholarly observations and theses to private family documents (Platthy 1968:90). The documents preserved in these collections would be inscribed either on wooden tablets, papyrus or stone (Platthy 1968:69).

3.3.5.2 Collection accessibility

Responsibility or authorship of a written document was identified by means of a personal seal (σφραγίς) attached to a text (Platthy 1968:92):

"... and as a token point him out this seal, the impress of my signet-ring, that he will surely recognise". (Sophocles Trachiniae 614-615)

A seal was more a statement of authorship than simply a signature and sometimes it would be incorporated in the text in a metaphorical sense. Platthy notes that from the sixth century B.C. it became standard practice for a writer to affix some type of statement of responsibility to his work.

Originally manuscripts were identified by the opening words of the work. However from the fifth century B.C. onwards the practice was adopted of writing the official title of the work after the name of the author (Platthy 1968:93) at the beginning of a text:

Πλάτωνος Φαιδρος	-	<u>Phaedrus</u> of Plato
Πολυκρατους βούσειρις	-	<u>Busin's</u> of Polycrates
βακχυίδου διθραμβά	-	dithyrambs of Bacchylides
Σώφρονος μιμναιχία	-	female mimes of Sophron

A colophon would be inscribed at the end of the text listing contents, title and information concerning the origin of the writer. Supplementary notes would identify the individual scrolls which made up one large multi-scroll work. Labels were attached to scrolls indicating the title of the work - the forerunner of the modern bookspine (Weimann 1975:28). Such detailed bibliographic descriptions would only be necessary in a library containing a large collection which was well used.

De Vleeschauer and Wright point out that in general the Greeks "never faced the necessity of arranging their small papyrus collections ..." (in Rawski 1973:106). Bibliographic activity would therefore have been very limited. This is proved by the difficulties and frustrations faced by Aristotle when he attempted to locate the constitutions of 150 city-states (De Vleeschauer and Wright in Rawski 1973:105) in his bid to determine the ideal polis-constitution (see 3.3.6.1a).

Nevertheless collections had to be arranged in some way to facilitate the loan of works:

"Yet even that was not enough for Phaedrus, but at last he borrowed the book, and read what he especially wished and doing this he sat from early morning". (Plato Phaedrus 228B)

3.3.5.3 Commerce collections

Documents recording various commercial transactions have been uncovered at numerous sites in Athens, pointing to the existence of archives attached to large trading houses. By the sixth century B.C. Athens was involved in a vibrant trade with many communities along the Black Sea and Mediterranean coastlines which saw the emergence of a professional merchant class known as the "nauceroi" and the "emporoi", owning large merchant fleets (Platthy 1968:70-71).

Inventories listing the cargo carried by the merchant ships to various destinations have been discovered. The goods recorded include various luxury items, pottery, grain, wine, bronze and iron vases, slaves, carpets, precious and cheap metal products, wood and cowhides (Platthy 1968:71).

3.3.5.4 Private collections

Texts and documents of a personal nature (as opposed to religious and state documents) had to be preserved somewhere, for how would it be possible as Davison asks (1962:151), that the personal poetry of a Sappho (born c.612 B.C.) or an Alcaeus (c.600 B.C.) and the secular poems of a Solon (c.640-c.560 B.C.) or a Stesichorus (early sixth century B.C.) were preserved to be uncovered over two thousand years later? Judging by the quantity

of literary material in circulation dating especially from the fifth century B.C. onwards (see 3.3.4), private collections must have existed (De Vleeschauwer and Wright in Rawski 1973:95; Irwin 1964:69; Vorstius 1954:6).

Sophists, who were professional teachers giving instruction in many subjects for a fee (Radice [comp] 1973:223), were a major influence in encouraging individuals to collect books. People were in most cases able to purchase copies of the lectures these Sophists delivered (Wendel in Milkau 1955:56). Indeed Wendel goes on to argue that anyone with funds available (see 3.3.4.7) could collect his own home library by purchasing copies of the works of philosophers and poets as well as plays (Kesting in ELIS 39, 1985:376).

These private collections were deemed so valuable that in some cases they were passed on as inheritance:

"Thrasylus, the father of the testator, had inherited nothing from his parents, but having become the guest-friend of Polemaenetus, the soothsayer, he became so intimate with him that Polemaenetus at his death left to him his books on divination ... Thrasylus, with these books as his capital, practiced the art of divination". (Isocrates XXIV.5)

3.3.5.5 School libraries

Upon graduation from secondary school (the gymnasia or ephebea for example), the young Greek would have displayed a thorough knowledge of his people's literature (see 3.3.3). To achieve this standard of education access must have been provided to a school library (Irwin 1964:59-60; Johnson 1965:48). Irwin goes on to propose that the emphasis of the school curriculum would have been on dictation, which made the scholar's access to texts an essential part of the education process (see 3.3.3). Evidence in this regard comes from a vase painting depicting a classroom with baskets of books hanging from the walls (Irwin 1964:60).

3.3.5.6 Schools of philosophy and academies

The philosopher schools (see 3.3.6.5 and 3.3.6.7) have been defined as institutions that promoted the study of the sciences (Vorstius 1954:6). The research undertaken would

include the study of mathematics, natural science, astronomy, physics, medicine and geography. From originally being purely research academies, these institutions developed into philosopher schools (Weimann 1975:29). The characteristics displayed by these tertiary institutions would be a "large-scale organization of cooperative work under the leadership of a single individual" (Hessel 1955:3). Davison (1962:221) argues that the prerequisite for the existence of such institutions was the availability of large quantities of manuscripts with people "interested in their collection, use and, preservation".

3.3.5.7 State and administrative archives

Although the Greeks never established official state sponsored libraries, the existence of state archives is beyond dispute. Once again Athens stands out as the example for Greek states to follow in this respect. Being the economic and political giant of the ancient Greek world, Athens required a well organized and efficient administrative system to ensure the control and exploitation of all available resources (Platthy 1968:70). A major reason for Athenian dominance over the Greek states was that the Athenian internal administrative system was well organized, the evidence for which comes from the many archival records and documents that have survived.

Amongst the various archival materials that have been identified are census figures, land registers, rent and mortgage records, lists of slaves sold at auctions upon which a 1% sales tax was imposed, records of payments paid to the state by resident foreigners who were required to pay a yearly twelve drachma "alien tax", fines for disorderly conduct in public, the intricate laws involving marriage and divorce which were deposited in the state archives for future reference as well as written loan and lease agreements (Platthy 1968:71-72). Accounts of battles were also preserved:

"Here a gilded throne had been set for him [Themistocles c.528-c.462 B.C.] at his command and many secretaries stationed near at hand, whose task was to make due record of all that was done in battle". (Plutarch Themistocles XIII.1)

Another important function of the state archive was the preservation of the cultural heritage of the state. Not only were accounts of myths and customs preserved (Platthy

1968:72) but also the original texts of plays which would be deposited for copyright (see 3.3.6.3) and censorship purposes (Holmes 1980:286; Johnson 1965:11-12).

The staff who ensured the efficient functioning of the archival system as well as the accessibility of the collection were known as "keepers", "superintendents" or "secretaries" (Richardson 1963:154).

3.3.5.8 Temple libraries

Johnson (1965:9) maintains that in Greece "the temple collection certainly was among the earliest and most important forms of the proto library". By their very nature it can be assumed that the larger temples and oracles had their own record collections (Irwin 1964:55) as in most cases temples had ritual customs and traditions, the procedures of which had to be handed down to the succeeding members of the priestly office and assistants (Irwin in ELIS 1, 1968:400).

Many temples also served as record repositories and contained subjects of a diverse nature preserved in various ways. These included legal documents:

"In the temple of Heracles in Cynosarges there is a tablet on which is a decree proposed by Alcibiades ...". (Athenaeus VI.234e)

Certain temple libraries contained specialized collections:

"The subsequent story of medicine, strange to say, lay hidden in the darkest night down to the Peloponnesian War, when it was restored to the light by Hippocrates [469-399 B.C.], who was born in the very famous and powerful island of Cos, sacred to Aesculapius. It had been the custom for patients recovered from illness to inscribe in the temple of that god an account of the help that they had received, so that afterwards similar remedies might be enjoyed. Accordingly Hippocrates, it is said, wrote out these inscriptions, and as our countryman Varro believes, after the temple had been burnt, founded the branch of medicine called "clinical". Afterwards there was no limit to the profit from medical practice ...". (Pliny Natural History XXIX.II.4)

Other materials preserved in temple confines include land registers (Irwin 1964:55) as well as genealogical lists and documents relating to banking (Irwin in ELIS 1, 1968:400).

It was a common practice for poets and writers to deposit their texts in temple collections for safe-keeping (Davison 1962:151; Irwin 1964:55; Richardson 1963:156-157).

Apart from housing secular materials, temples also contained sacred cult collections which were only accessible to members of the priestly caste:

"They also brought back another response from Delphi, and caused it to be circulated in Sparta, which declared that sundry very ancient oracles were kept in secret writings by the priests there, and that it was not possible to get these, nor even lawful to read them, unless someone born of Apollo should come after a long lapse of time, give the keepers an intelligible token of his birth, and obtain the tablets containing the oracles". (Plutarch Lysander XXVI.2)

3.3.6 ANALYSES OF INDIVIDUAL LIBRARIES

3.3.6.1 The Peisistratids

The following account has been received with scepticism in modern scholarly circles:

"The tyrant Peisistratus [ruled 561-527 B.C.] is said to have been the first to establish at Athens a public library of books relating to the liberal arts. Then the Athenians themselves added to this collection with considerable diligence and care, but later Xerxes, when he got possession of Athens and burned the entire city except the citadel, removed the whole collection of books and carried them off to Persia ...". (Aulus Gellius VII,17.1)

Hessel (1955:2) believes that this statement "does not deserve belief". Irwin argues that because neither the earlier writers Herodotus (c.484-c.420 B.C.) nor Thucydides (c.460-c.400 B.C.), or any other writers of the period for that matter, mention the Peisistratid library makes it possible that the story was "invented" (1964:57). Canfora sees this account of Aulus Gellius as "a fine example of the fantasies and learned inventions ..." (1987:183) and concludes (1987:185-186) that it "can be seen as an assertion of Athenian prestige in response to the traditional stories about the library of Polycrates of Samos" (see 3.3.6.2).

However Isidorus (c.A.D.560-636), writing almost four centuries after Aulus Gellius, confirms the existence of the Peisistratid library, although it is possible that he used Gellius as his source:

"Peisistratus is credited first among the Greeks with the establishment of a library which, after the Athenians had increased the collection, was carried off to Persia by Xerxes ...". (Isidorus Etymologiarum sive originum VI,111.3-5).

De Vleeschauer (1967:37) points out that when regimes take power through unconstitutional means as Peisistratus had, they seek legitimacy by pursuing extravagant "cultural policies". That Peisistratus attempted to win justification through these means is supported by the fact that he "was a builder of temples, a lover of music and art ..." (Johnson 1965:48). Parsons confirms this and the credibility of the sources that Peisistratus "built temples to the gods, inaugurated the great festival of the Panathenae" (see 3.3.4.5) and that he was "a lover of music and recitative" (1952:8). Johnson concludes that it is therefore not difficult to believe "that he could and did compile a collection of books ..." (1965:48). The fact that absolute rulers of the Middle East built up library collections (see 2.1) makes it highly likely that Peisistratus, a despot, accumulated one too (PRE Vol.3, 1899:408). Furthermore, that Peisistratus was actually credited with a founding of a library despite being one of the most unpopular figures of the ancient world makes the statement that he had established a library all the more credible:

"Peisistratus it is true did no service to his fellow-citizens, but he was so distinguished for his eloquence that he was an outstanding figure in literature and learning". (Cicero De oratoria XXXIV,137).

Peisistratus had been a student of the great Athenian constitutional reformer Solon (c.640-c.560 B.C.) and therefore his subsequent rule as tyrant was "enlightened and benevolent" (Irwin 1964:57). In fact, he "prepared the way for the more democratic reforms of his successors" (Radice [comp] 1971:197). On his death in 527 B.C. the library was inherited by his son Hipparchus. When the Peisistratid dynasty finally collapsed the library was taken over by the Athenian state (Wendel in Milkau 1955:55), only to have the collection removed to Persia when Xerxes conquered Athens in 480 B.C. as reported in the extracts quoted above (see 4.1.5.3).

3.3.6.1a Collection development

The most noteworthy works in the library holdings were those of Homer:

"They go on to say that ... Peisistratus collected the poems of Homer, which were scattered and handed down by tradition, some in one place and some in another ...". (Pausanias VII,26.13)

Wendel argues that since Hipparchus is reputed to have recited the whole of Homer, the library holdings would not only have included the Iliad and the Odyssey, but also the epics of the Cyclos (in Milkau 1955:55).

Furthermore Wendel believes that the collection may have contained numerous scholarly works, as Peisistratus invited a number of sophists to his court. His sons Hippias and Hipparchus would have collected, through the endeavours of Oromacritus, the proverbs of the oracle at Musaios. Hipparchus also attempted to write epigrammatical poetry and his efforts no doubt were deposited in the library holdings. Also, Hipparchus had surrounded himself with the poets Simonides, Anacreon and Lusus of Hermione. The works of these writers will have been well represented in the collection (Wendel in Milkau 1955:55). De Vleeschauwer suggests that copies of Hesiod's poems and writings and examples of Ionian lyric poetry as well as earlier historical texts may have also formed part of the collection (1967:38).

3.3.6.1b Collection accessibility

The outstanding achievement of the Peisistratid institution was the reorganization of the works of Homer:

"He [Peisistratus] is said to have been the first person who arranged the previously disordered books of Homer in the order which we now have them". (Cicero De oratorio XXXIV.137)

This also included the Iliad:

"Afterwards the various lays of the Iliad were put together into one epic, and this was accomplished by many hands but chiefly by Peisistratus himself, the tyrant of Athens". (Suida S.V. Ομηρος)

The task of editing and arranging Homer's works was originally entrusted to four scholars:

"Now Peisistratus, 200 years before Ptolemy Philadelphus [see 4.3.6.1] and with all the more ingenious care, gathered into the volumes that now exist the poetry of Homer, which had previously been scattered, bring for this divine purpose the enduring of four very famous and learned men namely: Coneylus, Onomacritus of Athens, Zopyrus of Heraclea and Orpheus of Croto. For before that time Homer was to be read in separate pieces and with great difficulty ...". (Tzetzes The Plautine Scholium)

However, this Peisistratid sponsored project in some cases created more errors and inaccuracies:

"... then either he [Peisistratus] or one of his colleagues perverted the name [of Homer] through ignorance". (Pausanias VII,26.13)

An example of the corruption of the Homeric texts caused by the Peisistratids was the arbitrary insertion of lines or words:

"... he [Peisistratus] inserted into The Inferno of Homer the verse: 'Theseus, Peirithous, illustrious children of Heaven' [Odyssey XI.631] and all to gratify the Athenians". (Plutarch Theseus XX.1-2)

Nevertheless, the consequence of these Peisistratid endeavours was that the people of Greece now had access to the combined works of Homer.

Wendel argues that the Peisistratid library holdings, because they were open to public use, will have been arranged in some manner to ensure the accessibility of individual manuscripts (in Milkau 1955:55-56). That the collection was at all open to the public has been challenged by a number of modern scholars. Johnson (1965:48) maintains that it is doubtful that the works "ever constituted a public library". Thompson takes a similar view, stating that the library being "opened to the public is not credible" (1962:19, note 36).

Conversely Parsons maintains that "it is most reasonable to believe that a man of Peisistratus' taste, who certainly affected learning and patronized men of letters, should have had a collection of books to which he gave access to the public ..." (1952:8). Indeed, judging by Peisistratus' extravagant attempts (see 3.3.6.1) to mobilize support behind his regime (De Vleeschauwer 1967:37-38), making the collection available to the people of Athens would have been a logical action on Peisistratus' part and thereby would have enhanced his prestige and popularity.

3.3.6.2 Polycrates

Polycrates ruled the island of Samos (situated along the western coast of Asia-Minor) as a tyrant between c.546-522 B.C. (Irwin 1964:56). Like most tyrants Polycrates was powerful, wealthy and extravagant:

"It is not long before the rapid increase of his power became the talk of Ionia and the rest of Greece. All his campaigns were victorious, his every venture a success. He had a fleet of a hundred fifty-oared galleys and a force of a thousand bowmen. His plundering raids were widespread and indiscriminate ... He captured many of the islands and a number of towns on the mainland as well". (Herodotus III,40-41)

Parsons observes that judging by the island's strategic position and the fact that Polycrates' fleet dominated the seas of the eastern Mediterranean region, he was in a good position to "gather manuscripts" (1952:9). He also invited a number of poets and artists to his court (Irwin 1964:56). All these factors would have made possible the creation of a "royal palace library".

Although evidence for the existence of Polycrates' library is scarce, Athenaeus believed it to be one of the largest:

"In explanation, Athenaeus says that he [Larensis] owned so many ancient Greek books that he surpassed all who had been celebrated for their large public libraries, including Polycrates of Samos ...". (Athenaeus I,3a-b)

Some modern scholars, particularly Hessel (1955:2), do not believe that Polycrates possessed a book collection. However support for the existence of a library comes from Wendel (in Milkau 1955:55), Dziatzko in the PRE (Vol.3, 1899:408) and De Vleeschauer (1967:37-38) amongst others.

3.3.6.2a Collection development

A number of poets established themselves in the court of Polycrates:

"Others (but fewer) say that when Oroetes sent a herald to Samos with some request (it is not said what this was), the herald found Polycrates lying in the men's apartments, in the company of Anacreon of Teos ...". (Herodotus III,121-122)

Another well-known poet to have settled on Samos during the reign of Polycrates was Ibycus. Davison maintains that "it would be unnatural for their poems not to be preserved by the patrons for whom they wrote" (1962:152). Of course Ibycus and Anacreon would have been only two of the contemporary poets to have been attracted by the splendour of Polycrates' Samos.

Not much is known of the subjects represented in Polycrates' collection. However, it is quite possible that part of the holdings contained archival material such as written communications of diplomatic exchange:

"... he [Amasis] wrote this letter and sent it to Samos [to Polycrates]". (Herodotus III.40)

"... he [Polycrates] wrote a letter and sent it to Egypt, telling all that he had done, and what had befallen him". (Herodotus III.42)

Pythagoras (c.582-500 B.C.), born on Samos, left the island in c.531 B.C. to found his school at Croton, where he continued his famous studies in mathematics and music (Irwin 1964:56-57):

"After that [a visit to Crete] he [Pythagoras] returned to Samos to find his country under the tyranny of Polycrates; so he sailed away to Croton in Italy, and there he laid down the constitution for the Italian Greeks ...". (Diogenes Laertius VIII.3)

Pythagoras may have been first introduced to these subjects through the library of Polycrates while growing up on Samos.

3.3.6.2b Collection accessibility

That Polycrates had invited scholars to Samos and permitted them to make use of his collection (Johnson 1965:50) - and no doubt hoped that they would add to its holdings - presupposes that it was arranged in such a manner as to facilitate easy access.

3.3.6.3 The Metroon

In the late fifth century B.C. a central archive was established in Athens (OCD 1970:101). The institution was known by the name of the building that housed it - the Metroon (Μητροῶν), which was the "temple of the mother of the gods" (Gulick 1957:471, note c). It was situated in the agora (market place) adjoining the council chamber (Richardson 1963:152).

Richardson goes on to note that the Metroon was under the direction of a scribe who bore the title of "chancellor". The rest of the staff was made up of a "sub-chancellor" and scribes while the "archival work" was the responsibility of public slaves.

The Metroon is best known for its safe-guarding of original texts through "copyright". By the latter half of the fourth century B.C. theatre audiences began objecting to deviations from the original texts made by the actors of certain plays (see 3.3.4.7). These "deviations" took the form of unnecessary additions and corrections (Johnson 1965:51). The fact that many tragedies contained "ancestral customs" which "were written down that all men might see and compare them with practice" (Platthy 1968:64) and combined with the possibility that these may be lost through future corruptions of texts, spurred the

authorities into action. In 330 B.C. Lycurgus' proposal for the creation of an official archive for the depositing of the official copies of plays to serve "as a check on textual corruption by producers" was adopted (Irwin 1964:55) and was subsequently established within the Metroon. Theatre personnel were now no longer permitted "to perform the text differently from the text so established" (Platthy 1968:61-62).

The Metroon continued to function for a further five centuries after its foundation (Richardson 1963:152).

3.3.6.3a Collection development

Administrative documents had to be produced in two copies, with one being deposited in local magistracy and the other in the Metroon (Richardson 1963:153). The Metroon contained therefore "all the usual kinds of general public documents" such as lists of epebes (Richardson 1963:152) as well as legal documents in the form of wills (OCD 1970:101) and contracts, for example.

As stated above (3.3.6.3), literary material was also held:

"He [Lycurgus] also introduced laws ... that the bronze statues of the poets Aeschylus, Sophocles and Euripides be erected, and their tragedies be written out and kept in a public depository ...". (Plutarch Vitae decem oratorum 841f)

With Euripides and Aeschylus both producing ninety tragedies and Sophocles 130 (see 3.3.4.2), the Metroon will have held a substantial literary collection.

3.3.6.3b Collection accessibility

The holdings had to be accessible for quick reference:

"... and that the clerk of the state read them to the actors who were to perform their plays for comparison of the texts and that it be unlawful to depart from the authorized text in acting ...". (Plutarch Vitae decem oratorum 841f)

This presupposes that the holdings (especially the literary texts) had been arranged to facilitate easy access, with the works grouped by author and sub-divided chronologically or alphabetically.

The archival material also had to be organized as documents were regularly loaned out for copying (Richardson 1963:152), research purposes and for quotation in public speeches (OCD 1970:101).

It has been argued that where such copyright collections had been organized and made available for use, these collections became "public libraries" (Johnson 1965:12). The holdings of course could not be removed, but "anyone could read them and copy them" (Johnson 1965:51).

Galen (Epidemics III 239-240) reports that Ptolemy I Soter (323-283 B.C.) borrowed some of the original texts deposited in the Metroon to make copies for his Royal Alexandrian Library. However, Ptolemy kept the originals and sent back the copies, thereby forfeiting his deposit (see 4.3.5.1).

3.3.6.4 Euthydemus

A contemporary of Socrates (469-399 B.C.), Euthydemus was to have owned a library of considerable holdings. Euthydemus was a wealthy young Athenian who had been educated by sophists (Wendel in Milkau 1955:57).

3.3.6.4a Collection development

Euthydemus continually added to his collection:

"Tell me, Euthydemus, am I rightly informed that you have a large collection of books written by the wise men of the past, as they are called?" 'By Zeus, yes, Socrates', answered he, 'and I am still adding to it, to make it as complete as possible'". (Xenophon Memorabilia IV,2.8)

Among the works Euthydemus collected were poetry, including a complete set of Homer's works (Johnson 1965:50) and works of noteworthy scholars and philosophers (Wendel in Milkau 1955:57).

3.3.6.4b Collection accessibility

Euthydemus arranged his collection by subject (Davison 1962:220) with the principal subdivisions including medicine, architecture, mathematics, astronomy and narrative poetry (Xenophon Memorabilia IV,2.10).

3.3.6.5 Plato's Academy

Plato (c.429-347 B.C.) founded his school in the olive-grove of Academus on the outskirts of Athens (Radice [comp] 1971:197) in roughly 385 B.C. (Irwin 1964:64). Although the ancient sources do not record the existence of a library collection at the school, modern scholars believe that one must have been established. Irwin (1964:65) argues that the dialectic of philosophical research which formed the basis of study and teaching at the Academy "was built squarely on a long preliminary discipline of reading and study in literature and music and mathematics (especially geometry)". Davison (1962:221), Hessel (1955:3) and Johnson (1965:48) believe that a library must have complemented the academic activities of the Academy. Wendel suggests that Plato's colleagues, friends and students will have contributed to its holdings (in Milkau 1955:58).

The method of teaching at the Academy may have been one of "discussion and debate, of question and answer, rather than on private and solitary study of other men's writings" (Irwin 1964:65). Yet Irwin goes on to point out that both Plato and Socrates (Plato's tutor and later mouthpiece for his theories) emphasized the need for study (see 3.3.3) and always assumed "that their students are soundly versed in their national literature" (1964:66). With this in mind, the Academy must have provided access to a library collection.

On Plato's death in 347 B.C. the responsibility for the running of the Academy was passed on to Plato's nephew Speusippus (Irwin 1964:65). Johnson (1965:49) notes that Aristotle, an ex-pupil of Plato's, may have purchased part of the collection from Speusippus (see 3.3.6.7a).

3.3.6.5a Collection development

Plato added to the Academy's library holdings through purchases:

"... the Philosopher Plato was a man of very slender means, but that nevertheless he bought three books of Philolaus the Pythagorean for ten thousand denarii, that sum, according to some writers, was given him by his friend Dion of Syracuse". (Aulus Gellius III,17)

The fact that this account is mentioned in the satirical comedies of the time proves that this purchase had in fact taken place (Wendel in Milkau 1955:58). For example, further on in the above extract Gellius quotes from Timon's Lampoon:

"The bitter satirist Timon wrote a highly abusive work, which he entitled Lampoon. In that book he addresses the philosopher Plato in opprobrious terms, alleging that he brought a treatise on the Pythagorean philosophy at an extravagant figure, and that from it he had compiled the celebrated dialogue the Timaeus, here are Timon's lines on the subject:

Thou, Plato, since for learning thou did'st yearn, a tiny book for a vast sum did'st thou buy which thee a Timaeus to compose".

Diogenes Laertius summarized the foregoing affair as follows:

"He [Philolaus] wrote one book, and it was this book which, according to Hermippus, some writer said that Plato the philosopher, when he went to Sicily to Dionysius's court, bought from Philolaus's relatives for the sum of forty Alexandrine minas of silver, from which also the Timaeus was transcribed. Others say that Plato received it as a present for having procured from Dionysius the release of a young disciple of Philolaus who had been cast into prison". (Diogenes Laertius VIII.85)

Amongst the other works owned by Plato were:

"Plato, it seems was the first to bring to Athens the mimes of Sophron, which were neglected, and to draw characters in the style of that writer. A copy of the mimes was actually found under his pillow as they say". (Diogenes Laertius III.18)

"Heraclides Ponticus says, that the works of Choerilus were famous at that time, but Plato preferred the poems of Antimachus to those of the former and persuaded Heraclides himself to go to Colophon and to collect the poems of that man". (Proclus Platonis Timaeum Commentaria A28c)

Plato indulged in methodological studies in the fields of mathematics and the natural sciences (Hessel 1955:3) and therefore would have accumulated a comprehensive scientific book collection. Plato's findings will have been deposited in the collection as well as the works of Speusippus who was a biologist and "prolific writer" (Irwin 1964:65). Diogenes Laertius (IV.4-5) lists 39 books of Speusippus (head of the Academy 347-339 B.C.) which totalled all together 43 475 lines. Parsons (1952:11) points out that Plato had ample opportunity to continually add to his collection as he embarked on numerous

travels after the death of Socrates in 399 B.C. Parsons goes on to conclude that "it is unreasonable to assume that in his sojourns in the cultured cities of ... Greece he failed to gather manuscripts of the writings of the amazing fifth century B.C. and records of earlier learning".

3.3.6.5b Collection accessibility

Plato's collection will have been available for use by staff and students of the Academy. It is possible that after Plato's death the library loaned out copies of Plato's works for a fee:

"As Antigonus of Carystus says in his Life of Zeno, when the writings [of Plato] were first edited with critical marks, their possessors charged a certain fee to anyone who wished to consult them". (Diogenes Laertius III.66)

If the works in question were indeed of the Academy, strict control will have been exercised over the collection with a catalogue compiled for potential users to identify the manuscripts they required. If a fee had been charged, it may have been for users outside the Academy.

3.3.6.6 Linos

Linos was a sophist (De Vleeschauwer 1967:38) who lived during the fourth century B.C. Like most of his contemporaries Linos collected a large private library.

3.3.6.6a Collection development

A good indication of the holdings of Linos' library is provided by Athenaeus who quoted extracts from a play written by the *Middle Comedy* writer Alexis (c.372-270 B.C.). In this satirical play (titled Linos since the sophist is the principal character) the following dialogue appeared:

- Linos: Go up
and take whatever book from there you wish;
then looking carefully at the titles,
quietly and at your leisure, you shall read.
Orpheus is there, Hesiod, tragedies, Choerilus, Homer, Epicharmus, histories
of all sorts. For thus shall you show the bent of your nature.
- Heracles: This is the one I shall take.
- Linos: Tell me first what it is.
- Heracles: Cookery, as the title declares.

Linos: You are a philosopher, that's very plain; for paying no attention to all these other writings, you have picked up the treatise of Simus".
(Athenaeus VI,164B-D)

3.3.6.6b Collection accessibility

From the above extract it can be assumed that Linos arranged his collection by subject-division, such as "tragedy" and "histories". The recipe book would probably have been placed under the "miscellaneous" section (Davison 1962:221). The manuscripts themselves were clearly marked by their titles in such a way that a potential user only needed to browse over the collection to identify the text he required. These title slips also identified the author.

3.3.6.7 Aristotle

Strabo states that:

"... Aristotle ... is the first man, so far as I know, to have collected books and to have taught the kings in Egypt how to arrange a library". (Strabo XIII,1.54)

Modern scholars agree that Aristotle was not the pioneer in this respect (see 4.3.2) but there is no doubt that his collection was vast (Davison 1962:225; De Vleeschauwer 1967:39; Hessel 1955:3; Johnson 1965:49; Parsons 1952:12; Thompson 1962:20; Weimann 1975:29; Wendel in Milkau 1955:59). In comparison however, with the state libraries of the Middle Eastern kings (see 2.1), his library would be "disappointing and would have seemed ridiculous ..." (De Vleeschauwer and Wright in Rawski 1973:95).

Aristotle was born the son of a Macedonian court physician (see 4.3.2) in 384 B.C. and at the age of seventeen entered Plato's Academy (see 3.3.6.5) in Athens. On Plato's death in 347 B.C. Aristotle left the Academy and embarked on private travels and research throughout the islands of the Aegean. In 342 B.C. he was invited to become tutor to the young Alexander, son of the Macedonian king Philip II. In 336 B.C. with the accession of the future Alexander the Great to the Macedonian throne on the death of his father, Aristotle returned to Athens to found his own school. This was known as the Lyceum as it was situated in the gardens of Apollo Lyceus and the Muses (Irwin 1964:66). It was also known as the Peripatetic school - a name derived from the colonnaded building (περιπατητικός) in which it was housed.

The purpose of the school was to undertake research in various subjects and to record and organize existing knowledge (Irwin in ELIS 1, 1968:400). To supplement these activities a large library was established. Furthermore Aristotle arranged a monthly symposium at the school "which must have been a general assembly of faculties or departments to discuss reports of progress in various fields of study" (Irwin 1964:66-67).

Failing in health (Parsons 1952:13) and fearful of repercussions on the death of Alexander in 323 B.C. (Alexander had donated 800 talents to the school during his reign), Aristotle named Theophrastus his successor as principal of the school (see 4.1.5.1). He retired to Chalcis where he died one year later (Irwin 1964:67).

3.3.6.7a Collection development

Parsons maintains that "no individual collector ever had greater opportunity to bring together the manuscript records of human knowledge" (1952:12). The reason for this was that Aristotle's science of philosophy depended on facts and not upon abstract induction (De Vleeschauwer 1967:39). His collection would therefore have constituted two parts: that of books of "universal character" and a "school archive" containing lectures, readings and preparatory texts produced by scholars and students of the school.

Hellenistic estimations put the total holdings of Aristotle's library at 1 000 texts (Platthy 1968:48), while a number of modern scholars prefer to put the figure at roughly 700 works (De Vleeschauwer and Wright in Rawski 1973:95). The Latin poet Andronicus (c.284-c.204 B.C.) is quoted as stating that the library holdings were "actually a thousand in number" (Platthy 1968:124). The Arabian $\Pi\acute{\iota}\nu\alpha\xi$ records that the collection alone contained 600-700 examples of Aristotle's own works (Platthy 1968:48). Parsons puts the figure of his own writings to 400 books or 445 270 lines (1952:13). However, Diogenes Laertius (V.22-27) lists an estimated 541 books produced by Aristotle, including the 158 constitutions of the various city-states Aristotle had collected - with each counting as one separate book.

Aristotle preserved the original sources from which he compiled his own works for future reference (Johnson 1965:50). These included manuscripts which Aristotle had purchased:

"Aristotle too, according to report, bought a very few books of the philosopher Speusippus, after the latter's death, for three Attic talents ...". (Aulus Gellius III.16)

This particular transaction is confirmed later by Diogenes Laertius:

"Favorinus, also in the second book of his *Memorabilia* relates that Aristotle purchased the works of Speusippus for three talents". (Diogenes Laertius IV.5)

Aristotle specialized in philological criticism and literary history (Hessel 1955:3) and he therefore must have possessed a sizeable literature collection. It is certain that this collection contained his own recension of Homer (Parsons 1952:12).

Given that Aristotle's collection was universal in character, there is debate within scholarly circles as to whether this included foreign non-Greek works. De Vleeschauwer and Wright maintain that the holdings did not include the sciences of all nations as "Athens showed precious little respect for the literary monuments of the barbarians ..." (in Rawski 1973:99). However Parsons (1952:12) argues that "some oriental manuscripts from conquered cities" will have found their way into Aristotle's library "if only as rarities", since Alexander the Great had "collections made for and sent to him of the natural curiosities encountered by the Greeks in their conquests of Egypt and the kingdoms of Asia and the East" (see 4.1.1). Furthermore, since Johnson notes that Aristotle's friends and students often embarked on extensive travels outside Greece and brought him back numerous botanical and geological specimens (1965:50), they may have included the odd foreign manuscript or two.

3.3.6.7b Collection accessibility

Wendel maintains that seeing Aristotle's collection was so vast, he would have had to organize it in such a way to facilitate easy access (in Milkau 1955:59). Subject division would therefore be the logical organizational method to have been applied. To achieve this, a large staff would no doubt have been required. Indeed, Wendel envisages what would have been the forerunners of the modern subject-librarian, with a staff member being assigned to the organization of texts concerning a specific subject. No doubt these "proto-librarians" were members of the academic staff and would have been allotted to the subject they had specialized in. This intimate knowledge of the particular subject-field together with the knowledge of what texts were available in the collection would have

greatly promoted efficient retrieval if a query had arisen. In this way the collection was "methodically arranged for the convenience of students ..." (Davison 1962:225).

As regards the existence of a catalogue, a fragment in the Vita Aristot collection recorded the following:

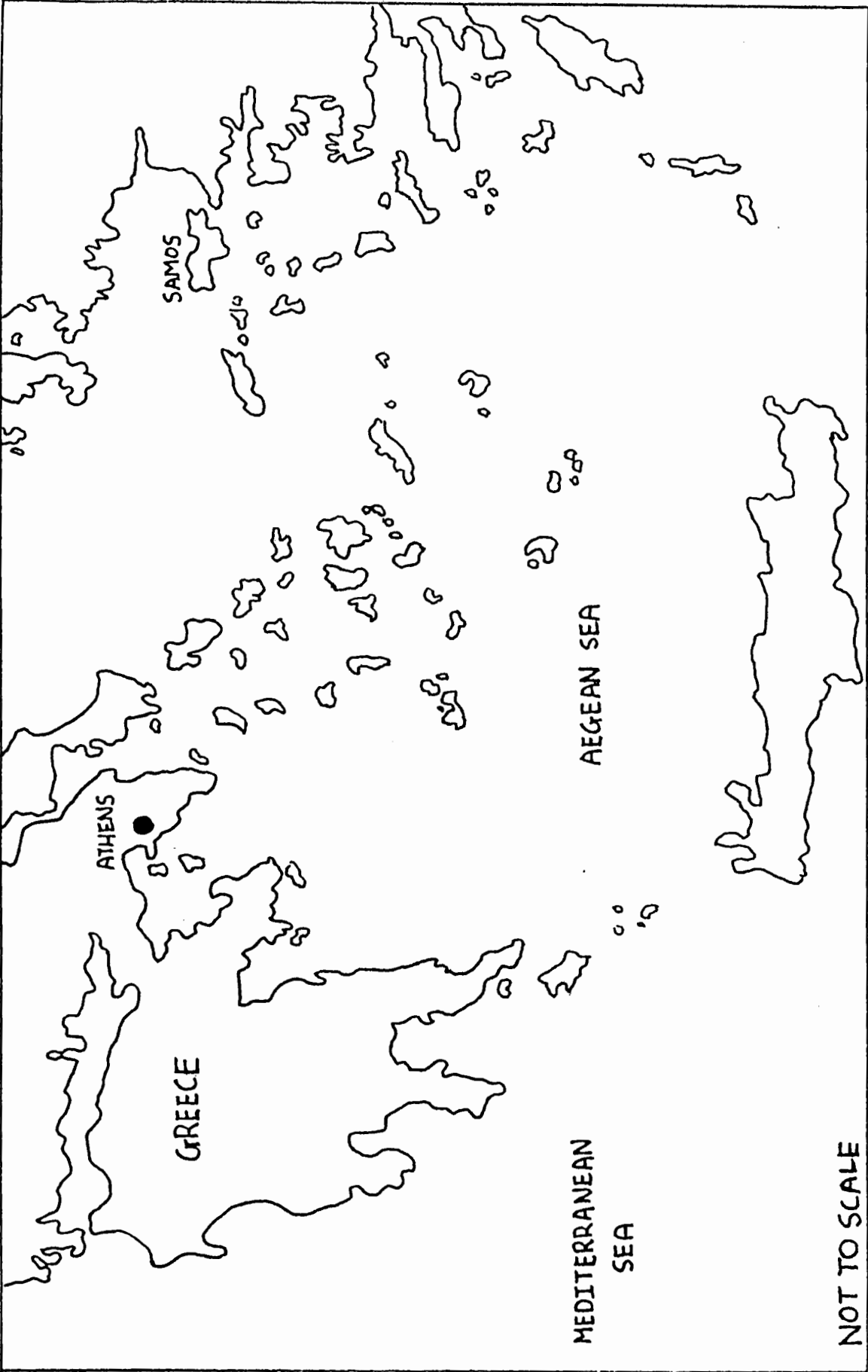
"... and he (i.e. Aristotle) died leaving a written will which is recorded by Andronicus and Ptolemy with the catalogue of his writings" (Platthy 1986:125).

Platthy (1986:125-126) reproduced an extract of this catalogue as it was recorded by the scholar Ptolemaios (c. A.D. 300). It no doubt contained similar information the original catalogue of Aristotle's library would have listed:

84. The books which were found in the library of Apellicon [a number of books]
85. A book from him (i.e. Aristotle) which he entitled: ὑπομνήματα α̃
86. A book in which Artemon collected the letters of Aristotle in eight volumes. (ἐπιστολί ἅς ἐν ὀκτώ βιβλίοις συνηγάγεν Ἀρτεμων τίς).
87. [A] book from him (i.e. Aristotle) entitled Life of the Cities called Πολιτεία(ι) β.
88. Other letters, found by Andronicus, in twenty volumes. (ἐπιστολαί, ἀλλαι, αἷς ἐνέτυχεν Ἀνδρονικος [ἐν βιβλίοις]κ).
89. And books, which cannot be classed under Hypomnemata, whose incipit and length you will find in the fifth book of Andronicus' work "On the Catalog of the Book of Aristoteles" (Χαί ἀλλα τινὰ ὑπομνηματί κα̃).
90. His (i.e. Aristotle's) book about "Questions", tied to "Recondite problems in the poetry of Homer" in ten volumes (ἀπορήματα ὁμηρία) ι.
91. His (i.e. Aristotle's) book about "Summary of the knowledge of Medicine" called Περὶ ἰατρικῆς.

The "library of Apellicon" mentioned in entry "84" would be the collection of Apellicon of Teos which allegedly contained Aristotelian works (see 4.1.5.10).

Map 5: Library Sites of the Period of Greek Cultural Dominance



4. THE HELLENISTIC PERIOD

4.1 THE AGE OF THE SUCCESSORS

4.1.1 HISTORICAL OVERVIEW

While Johnson maintains that the Hellenistic era of antiquity extends from 500 B.C. to A.D. 100 (1965:61), De Vleeschauwer (1967:34) argues that politically the Hellenistic period began after the Macedonian victory over the Greek alliance at Charonea in 335 B.C. (see 3.1.1) and culturally at the death of Aristotle in 322 B.C. However the generally accepted date for the beginning of the Hellenistic period is 323 B.C. - the year of the death of Alexander the Great.

After the defeat at Chaeronea, a new order prevailed in Greece. The Macedonian conquerors under Philip II and subsequently his son Alexander the Great, reorganised the up to now autonomous city-states into a confederation through conquest and occupation (Weimann 1975:22). The loss of independence by the Greek polis saw the once powerful and autonomous city-states lose their status, turning them into 'third rate powers' (Mckay et al, 1983:113). Athens, for example, once the political centre of the Aegean became a 'quiet university city' (Irwin 1964:60). This new Greek confederation was later dominated by leagues of city-states, the most powerful of which was the Achaean League centred in the Peloponnese and the Aetolian League of western and central Greece (Mckay et al, 1983:113).

With the Greeks firmly entrenched within the new alliance, Alexander led his combined Macedonian-Greek invasion force into Asia-Minor in 334 B.C. (Mckay et al, 1983:110). The pretext for this campaign was the invasion of Persia - an "act of revenge for the Persian invasion of Greece in 480 B.C." (see 3.1.1). By 331 B.C. Alexander had led his army to victories at the Granicus River, Issus and Gaugamela and had sacked the Persian capital of Persepolis. In 330 B.C. the once mighty Persian empire had finally fallen with the capture of the last capital city, Ecbatana.

However, Alexander continued his march eastwards (Mckay et al, 1983:111). After dismissing his Greek troops (although some continued to serve as mercenaries) he attempted to fulfil his personal ambition of conquering the whole of Asia. After four years of hard and bitter campaigning, Alexander had crossed the Indus River into India. Advancing as far as the Hyphasis River in 326 B.C., his army refused to continue. Alexander was forced to turn back and he returned to his camp at Susa in Asia-Minor in 324 B.C. With the great expedition over, Alexander died one year later in Babylon at the age of thirty-two.

Upon the sudden death of Alexander, his vast empire was divided up amongst his generals, all of whom were members of the Macedonian nobility. Antigonus claimed Macedonia and Greece, Seleucus Asia-Minor and Syria, with Ptolemy, a member of the Lagid family, settling in Egypt. Later, in 263 B.C., the Attalids founded the Pergamene monarchy in western Asia-Minor after winning their independence from the Seleucids (Mckay et al, 1983:112; De Vleeschauwer 1967:41; Weimann 1975:23). These men, known as the Successors or Diadochi of Alexander, ruled as monarchs and went on to establish ruling dynasties in their respective territories (De Vleeschauwer 1967:41).

With the establishment of this new "world order" the concept of "Hellenism" was born. In the various Hellenistic monarchies, the Greek-Macedonian and the native upper classes merged to form a new ruling nobility (Weimann 1975:23). Although Greek civilization dominated the social, economic and political systems of these states (Johnson 1965:51; Hessel 1955:3) there was an underlying fusion between the native Middle Eastern cultures and that of the conqueror (Weimann 1975:24). This new culture of Hellenism resulted in the synthesis of both worlds, bringing about major socio-economic advances never seen before in the ancient world. Mckay et al conclude that "Hellenism became a common bond among the East, peninsular Greece and the western Mediterranean" (1983:114).

From a cultural perspective, Hellenism did have a major disadvantage. Hellenistic cultural diffusion put traditional Greek and Middle Eastern cultural beliefs and value

systems under threat (De Vleeschauwer 1967:42) particularly so in the latter case as with, for example, the Jews in Palestine (see 4.1.5.8).

Furthermore, the Hellenistic period was marked by incessant warfare and political instability (Mckay et al, 1983:113). The Hellenistic kings "never forgot the vision of Alexander's empire, spanning Europe and Asia, secure under the rule of one man". By reconquering what was once Alexander's vast empire, the kings strove to become Alexander the Great's true successor. As a result "the states of ancient Greece, once the homes of individual freedom and national liberty, were now, like all the countries of the Eastern Mediterranean, pawns in the hands of the diadochi ... the successors of Alexander and their progeni" (Parsons 1952:129). This continuous state of conflict ensured that one by one, the Hellenistic kingdoms fell to a new foreign power - Rome (see 4.2.1).

4.1.2 THE EXTENT OF LITERACY

The relatively high standard of literacy prevalent among the populations of certain city-states of the Classical Greek period (see 3.3.3) became more widespread throughout the newly established Hellenistic kingdoms. This trend developed despite that:

"... the entire system of general education had broken down by reason of the continually recurring disturbances which took place in the period of Alexander's successors". (Athenaeus IV,184C)

Indeed, Davison concludes that by the second century B.C. the Greek world had finally "learned to read" (1962:233). The Hellenistic world had become so proficient in literary skills that they were able to pass this knowledge on to the Romans (see 4.2.2 and 4.2.3). De Vleeschauwer even maintains that one can compare the extent of literacy of the Hellenistic period with that of the Enlightenment of eighteenth century Europe (1967:54-55). This assumption is based on the fact that during the Hellenistic period emphasis was placed more on literature produced for reference and relaxation.

A number of reasons for this general increase of literacy during the Hellenistic period can be identified. With the advent of the Successor states, the "free school of philosophers turned into a monarchical organization" (Hessel 1955:3). The reason for this

was the active propagation and fostering of Greek culture. This would especially have been the case in the Hellenistic kingdoms where the native populations constituted mostly non-Greek peoples. Education therefore became a policy of the Hellenistic state, thereby becoming more accessible to the general population.

Furthermore, with the decline of the city-states, the emphasis of military training as a chief component of the education system had diminished. This occurred gradually after 305/4 B.C. (Wendel in Milkau 1955:96). The result was that "the rigour of the [education] system was relaxed" (Irwin 1964:60). This allowed easier access into educational institutions such as the gymnasia, with foreigners (mostly non-citizens of a particular city-state) now being admitted, especially after 300 B.C.

During the Hellenistic period there developed "a change in the direction of scholarly endeavour" (Hessel 1955:3). Subject specialization replaced the all-embodying philosophy of Aristotle (De Vleeschauwer 1967:55; Weimann 1975:25), or as Hessel put it "the unifying bond with which the master had connected the special fields of knowledge became more relaxed ... individual fields of knowledge became independent ..." (1955:3). The immediate consequence of this change in emphasis was the establishment of numerous schools and academies from the late fourth century B.C. onwards (Weimann 1975:25). Many of these institutions specialized in subjects such as law, medicine, critical philology and the agricultural sciences. A number of institutions took on the guise of the modern university by offering studies in various subject-fields.

4.1.3 LITERARY OUTPUT

Not only did the Hellenistic period inherit the vast amount of literature produced during the Classical Age of Greece (see 3.3.4) during which over 1 100 writers were active (Johnson 1965:59), but also itself produced "an enormous body of verse and prose and endless commentaries and books on books, as well as the records of amazing discoveries in the sciences" (Parsons 1952:173). The Hellenistic period was marked by extensive and widespread academic and scientific research resulting in a vast output of publications produced "from the private studies or professional scriptoria of Athens, Rhodes, Cos, the

other inland cities, Antioch, Pergamum, Tarsus, Nicaea, Byzantium and the literate Asian littoral, Syracuse, Cumae and the seats of Magna Graecia, of Pella and the mountain towns and inland cities" (Parsons 1952:174). Furthermore, philological criticism came into its own as scholarly attempts were made "to tidy up the texts of authors, and also to interpret them ..." (Davison 1962:230). The result was often an unintentional corruption of the text, as illustrated in the following account of a dialogue involving the scholar Timon (c.320-230 B.C.):

"Aratus is said to have asked him how he could obtain a trustworthy text of Homer, to which he replied, 'you can, if you get hold of the ancient copies, and not the corrected copies of our day'". (Diogenes Laertius IX.113)

With large amounts of older texts available and a continuous literary output, a vibrant book trade was established (White 1914:xviii; Davison 1962:228) in which Athens still held a pre-eminent position:

"Demetrius the Magnesian says of him in his work on Homonymous Names that his father, Mnaseas, being a merchant, often went to Athens and brought back many books about Socrates for Zeno while still a boy. Hence he was well trained even before he left his native place". (Diogenes Laertius VII.31)

Athens continued as a book centre well into the Hellenistic period:

"... he [Zeno, 333-261 B.C.] went into Athens and sat down in a bookseller's shop, being then a man of thirty. As he went on reading the second book of Xenophon's Memorabilia, he was so pleased ...". (Diogenes Laertius VII.2)

By the third century B.C. "books were disseminated broadcast throughout the Greek world ..." (White 1914:xviii) with book collecting becoming a common profession and pastime (Johnson 1965:59). So popular had book collecting become that Artemon of Cassandreia wrote two works on the subject in the third century B.C. entitled On collecting books (Περὶ βιβλίων συναγωγῆς) and On the use of books (Περὶ βιβλίων χρῆσεως) (Platthy 1968:80).

The establishment of the Hellenistic state libraries, in particular those at Pergamum (see 4.1.5.7) and the Royal Alexandrian Library (see 4.3), had a profound effect on Hellenistic literary output which Galen explains as follows:

"Before the inauguration of kings in Alexandria and Pergamum, who competed with each other in gathering old books, there was not a work with a faked title. But when those, who offered the relics of some old writer, were rewarded, many works appeared with false titles". (Comment in Hippocratis De natura hominis liber II,127)

Similarly, in another account, Galen states that:

"At the time of the Attalid and Ptolemaic kings, who were competing with each other in purchasing books, they, who formerly used to bring the works of famous writers to the kings, because of the grind for money, began to be negligent about the titles and arrangements of books". (Comment in Hippocratis De natura hominis liber II,128)

Canfora (1987:45) concludes that a consequence of this rivalry in the acquisition of books was that the market was flooded with "counterfeit antique scrolls" which were "patched up from oddments or simply produced from scratch ...". However, Davison suggests that by the second century B.C., the general public "had learned something of the value of accuracy and wanted texts which were not only readable and intelligible, but as accurate as (under the conditions of manual copying) they could be made" (1962:233). Although the Royal Alexandrian Library (RAL) may have inadvertently promoted the production of forgeries and poor quality texts owing to its rigorous acquisition policy, it did set the standards and guidelines for Hellenic book production (see 4.3.6.1). For example, all scrolls were made to conform to the same size - a standard adopted by the majority of institutions throughout the Hellenistic world (Wendel in Milkau 1955:81).

4.1.4 HELLENISTIC LIBRARIANSHIP

Greek librarianship reached the peak of its development during the Hellenistic period (Weimann 1975:26). Johnson (1965:59) maintains that by the end of the third century B.C. "libraries were common in all parts of the [Greek] peninsula", with public libraries being established in cities and towns of all sizes, both inland and along the coastal regions. In Athens alone there were to have existed so many libraries at this time that the Sicilian historian Timaeus (356-260 B.C.) spent fifty years researching in them (Johnson 1965:59; Platthy 1968:81). This widespread incidence of libraries throughout the Hellenistic world is corroborated by Polybius:

"Inquiries from books may be made without any danger or hardship, provided only that one takes care to have access to a town rich in documents or to have a library near at hand. After that one has only to pursue one's researches in perfect repose and compare the accounts of different writers without exposing oneself to any hardship". (Polybius XII,27. 4-6)

That libraries had become a way of life is alluded to by Athenaeus who, while discussing the achievements of Ptolemy Philadelphus (see 4.3.2), noted that:

"... concerning the number of books, the establishing of libraries, and the collection in the hall of the Muses, why need I even speak, since they are in all men's memories?" (Athenaeus 203c)

Apart from the large royal state libraries founded by the various Successors (see 4.1.4.8), other library types can be identified. Libraries attached to academies continuing in the tradition of the old Athenian schools of philosophy such as Plato's Academy (see 3.3.6.5) and the Lyceum of Aristotle (see 3.3.6.7 and 4.1.5.1) were very common and widespread (see 4.1.4.5). Gymnasia (see 4.1.4.6) and temples (4.1.4.9) continued their established book collecting traditions throughout the Hellenistic period.

Besides these established institutions, the Hellenistic world boasted a number of libraries of a miscellaneous kind. In Egypt at Fayum for example, the remnants of a technical library were discovered (Johnson 1965:57), containing material concerned with the reclamation work being carried out in the region. In addition, family, business and local government records were uncovered. In Syria, a library of 20 000 volumes was excavated at Apamea (Johnson 1965:58-59) while in Palestine "public archives, temple libraries, and very many private libraries, small and great existed in Judea throughout the whole Greek period" (Richardson 1963:165-166), an example of which is the library at Qumran (see 4.1.5.8). Of course, because of the well established and competitive book trade (see 4.1.3) private library collections were very much in evidence (see 4.1.4.7).

4.1.4.1 Architectural layout

Hellenistic libraries were in most cases linked to a temple or a sacred sanctuary (Vorstius 1954:8; PRE Vol.3, 1899:421). Collections were not housed directly inside the temple (Parsons 1952:367) but were generally placed in chambers immediately outside the temple confines.

Large libraries were made up of a number of storage chambers arranged around a stoa, (Weimann 1975:27; PRE Vol.3, 1899:421) which was a colonnaded hall, usually constructed to resemble a corridor. The stoa functioned as a general debating and meeting centre for scholars and may have evolved from the gardens or groves which

formed part of the earlier Lyceum and Academy of Athens (Richardson 1963:160). A number of libraries often had a larger storage chamber adapted to function as a reading room (Gormley 1974:7; Richardson 1963:175). Smaller libraries would consist of simply one chamber functioning both as a reading and storage chamber (PRE Vol.3, 1899:421).

The library chambers would be so designed that maximum exploitation of the sunlight was possible:

"Private rooms and libraries should look to the east, for their purpose demands the morning light. Further, the books in libraries will not decay. For in apartments which look to the south and west, books are damaged by the bookworm and by damp, which are caused by the moist winds on their approach, and they make the papyrus rolls mouldy by diffusing moist air". (Vitruvius VI, 4.1)

The chambers and the stoa, furthermore, were designed in most cases to accommodate the busts and statues of various literary figures - a practice which Pliny (A.D. 23/24-79) comments on:

"We must not pass over a novelty that has also been invented, in that likenesses made, if not of gold or silver, yet at all events of bronze are set up in the libraries in honour of those whose immortal spirits speak to us in some places ... whether this practice began earlier, with the kings of Alexandria and of Pergamum, between who had been such a keen competition in founding libraries, I cannot say". (Natural History XXXV. 10-11)

4.1.4.2 Library personnel

The personnel was made up of the scholars (Johnson 1965:60; DKP Vol.1, 1964:896; PRE Vol.3, 1899:422) who were engaged in academic research at that particular library (Weimann 1975:27). The head librarian was known as the ἐπί τῆς βιβλιοθήκης or the ἐπίτροπος (ἐπιστάτης?) βιβλιοθήκης (PRE Vol.3, 1899:422). The scholars were responsible for the administration of the library as well as the organization of the collection, regulation of its use (Weimann 1975:27) and various bibliographic activities. The status and position of librarian was held in high esteem throughout the ancient world (Johnson 1965:60) especially that of head librarian, which was considered a highly attractive position by learned men and scholars in general (Weimann 1975:27).

The menial and practical tasks were undertaken by library assistants who in most cases were slaves. These slaves would be employed as scribes, book tenders, general assistants to scholars (Weimann 1975:27) and retrievers of book rolls on demand (Vorstius 1954:9).

4.1.4.3 Collection development

The aim of the Hellenistic large library was to possess an "universal literature", while the smaller specialized library attempted to acquire all the material pertaining to the subject of its specialization (Weimann 1975:28). This would often involve:

"... getting books of the various nations and of translating them into Greek through interpreters, which was accomplished together with other kings and cities". (Isidorus Etymologiarum sive originum VI. III. 3-5)

Weimann suggests a number of acquisition methods employed by libraries to add to their holdings (1975:27-28). Collections could be supplemented and replenished by the copying of texts - an internal form of book production. The book market of the Hellenistic period enabled libraries to purchase materials from private individuals or traders. Another source of books were the libraries themselves, with different institutions exchanging texts or employing a form of "inter-library loan" where materials were borrowed for copying. Finally gifts, inheritance and war booty could substantially increase a library's collection.

4.1.4.4 Collection accessibility

With the rise of the Successor states, libraries of all sizes had to cater for a growing demand from an ever-expanding intellectual community and an increasingly literate society (see 4.1.2). The need arose for the bibliographic organization of library holdings to facilitate easier access to collections on a scale never seen since the royal libraries of the Middle East such as Hatussa and Nineveh (De Vleeschauwer and Wright in Rawski 1973:104; Wendel in Milkau 1955:73). While the modest collections of Classical Greece (in comparison to some of the vast Hellenistic library holdings) required only a limited form of bibliographic description (see 3.3.5.2), the only models the librarians of the Hellenistic period had were those they came across in the conquered territories of the Middle East (see 4.1.4.8).

As was common throughout antiquity, individual scrolls contained an incipit supplying brief bibliographical information such as author, title, contents and the origin of the particular scroll. "Linking notes" indicated the order of the scrolls which made up one work (Weimann 1975:28).

Book scrolls were often stored in clay jars and wooden boxes which served as protection against the dangers posed by the natural elements. These were placed on wooden shelves or in cupboards attached to walls by means of horizontal niches (Vorstius 1954:9; Weimann 1975:27). These containers aided in maintaining subject divisions, with a set of scrolls being placed in a particular box or jar. Furthermore, the containers allowed for a chronological or subject arrangement according to the order in which they were stored (Weimann 1975:27). Conversely, scrolls were simply stacked in cupboards or on shelves, with partitions demarcating subject differentiation (PRE Vol.3, 1899:422). Valuable scrolls were differentiated from the rest by being wrapped in a protective covering either of cloth or leather (Johnson 1965:60).

An identification label was attached to each scroll (Johnson 1965:60; Vorstius 1954:9) which performed the same function as a modern book spine (Weimann 1975:28). Each scroll, therefore, had to be placed in such a way that the end to which the identification label was attached to was clearly visible (PRE Vol.3, 1899:422).

The catalogues that were compiled usually took two forms - either as tables (Greek : pinakes) resembling inventory lists (Johnson 1965:60; Weimann 1975:28) or lists made up of the names of authors arranged alphabetically (DKP Vol.1, 1964:896). In both cases entries were divided into subject groups (Johnson 1965:60; Wendel in Milkau 1955:73). Weimann (1955:28) points out that where inventory lists contained biographical information, these then would take the form of fully fledged "bibliographies of literature" - an example of which are the Pinakes of Callimachus (see 4.3.6.2).

Catalogues were either inscribed on walls or compiled on separate scrolls (Johnson 1965:60). The latter were often attached directly to shelves or containers indicating what specific works were to be found there (Weimann 1975:28).

Despite this detailed bibliographic description of collections, the use of libraries was limited at first. However with the establishment of the Hellenistic royal libraries, collections were made available for utilization by a wider range of users (Weimann 1975:28-29). These included regents, courtiers, administrators, priests, scholars and ordinary citizens. Owing to the absence of copyright laws, the wealthy often dispatched their scribal slaves to copy works of libraries with the aim to add to their own private collections. The collections of academies and gymnasia were open to teachers, lecturers and students, while in some cases members of the general public could gain access to these with special permission. Libraries situated in smaller cities and towns were limited to local public use only (Weimann, 1975:29). Libraries were generally open for use during the morning for not more than six hours (DKP Vol.1, 1964:896) when maximum exploitation of sunlight was possible.

Conversely, it can be argued that since not much is known about the general utilization of library collections, libraries in most cases may have been reserved for the exclusive use of library personnel and the staff and members of the institution of which the library was a subsidiary.

4.1.4.5 Libraries of the academies

Higher or tertiary education in the Hellenistic world was the responsibility of the academies (DKP Vol.1, 1964:893). The Hellenistic period saw the adoption of a more specialized approach to the study of the sciences and philosophy (see 4.1.1). Consequently, academies became specialized institutions, limiting themselves to the study of one branch of the sciences. The most common and well known institutions were those that specialized in law, medicine or a particular school of philosophy.

Athens still remained the "philosophical" centre of the ancient world, as a fragment quoted by Platthy (1968:110) indicates:

"Furthermore, they were busying themselves with studying under Zenodotus in the Ptolemaion [see 4.1.5.5] and in the Lyceum [see 4.1.5.1], and under other philosophers in the Lyceum and at the Academy as well, during the entire year".

Wendel argues that the high point of medical science had been achieved by the third century B.C. (in Milkau 1955:101). By this time an enormous amount of medical literature had been produced by institutions situated throughout the Hellenistic world. Medical academies such as those at Cos, Cnidos, Rhodes, Cyrene (Johnson 1965:60), Carthage and Sicily (De Vleeschauwer 1967:56) would have boasted large medical library collections (Wendel in Milkau 1955:101). However, Wendel goes on to point out that the Mouseion of Alexandria would have been the main centre of medical research, as all the other academies sent their research findings and relevant literature to the RAL.

4.1.4.6 Gymnasia

Schools or gymnasia were common in all the cities of the Hellenistic world (Johnson 1965:59), with the majority of them establishing comprehensive library collections (DKP Vol.1, 1964:893; Wendel in Milkau 1955:95), which in the Hellenistic period had taken an increasing importance in the general education of the ephebes. These libraries were in most cases the responsibility of the directors or principles of the particular gymnasium they were attached to (PRE Vol.3, 1899:420).

Gymnasia collections contained a wide range of subjects, which included poetry, grammatical works, mathematics, geometry, astronomy, musical theory, rhetoric and philosophy (Wendel in Milkau 1955:95). Library holdings were mostly supplemented by donations, as for example at Rhodes (see 4.1.5.6). Wendel maintains that because the gymnasia functioned as a general meeting place for the male citizens of a city, they too in this way would gain access to the collections (in Milkau 1955:96).

4.1.4.7 Private Collections

The absence of libraries designed exclusively for public use presupposes the existence of numerous private libraries. Hellenistic culture was dominated by the intellectual, thereby emphasizing the need to possess books (Wendel in Milkau 1955:109). Scholarly activity was not limited to academies or the mouseions of the royal libraries, but individuals also undertook their own research relying on private resources (De Vleeschauwer 1967:54).

In this way large private collections were accumulated, made possible through the existence of a competitive book trade (see 4.1.3).

Wendel suggests that the rich findings of Hellenistic book materials made during excavations at Oxyrhynchos in Egypt originally came from private collections, indicating that private collections were accumulated despite the large universal holdings of the royal libraries (in Milkau 1955:110-111) and their aggressive collection development policies.

4.1.4.8 Royal libraries

Isidorus observed that:

"... Alexander the Great and his successors took an interest in building libraries, full of books ...". (Etymologiarum sive originum VI,III. 3-5)

This has led De Vleeschauwer to conclude that because all the Successors had founded libraries in their respective kingdoms, the establishment of these institutions formed part of a general cultural trend and was not motivated by personal ambition (1967:41). Indeed, it could be seen as having "an ulterior political objective in addition to its cultural aims" (De Vleeschauwer and Wright in Rawski 1973:100). Hellenization, as an instrument of cultural diffusion, had placed traditional Greek culture in crisis (see 4.1.1) and in an effort to prevent the loss of Greek cultural identity, state sponsored libraries became efficient vehicles of preserving and promoting Greek literature in the new Successor states (De Vleeschauwer 1967:42). Conversely, Canfora (1987:25) points out that although the Greek-Macedonian ruling classes did not learn the languages of the native populations, they realized "that if they were to rule them they must understand them, and that to understand them they must collect their books and have them translated". Canfora goes on to conclude that the royal state libraries therefore became "instruments of Greek rule" with the "sacred books of the subject peoples" having "a special place in this systematic project of collection and translation ..." (see 4.3.5.1).

These libraries became the intellectual centres of the Hellenistic kingdoms (De Vleeschauwer 1967:43) attracting large communities of scholars and poets, all working under the protection and patronage of the monarch (De Vleeschauwer, 1967:52). What

now developed was an academic research institution - the museum (*mouseion*), which was attached to the library (Weimann 1975:26). Consequently the royal library "acquired a truly public character" with its holdings being made accessible to a "broad circle of educated men in general" (Hessel 1955:5). With more scholars being afforded the opportunity to undertake research in these libraries, a new type of scholar emerged - a development which Polybius (c.200-118 B.C.) criticized:

"Some of those again who appear to be justified in undertaking the composition of history, just like the theoretical doctors, after spending a long time in libraries and becoming deeply learned in memoirs and records, persuade themselves that they are adequately qualified for the task, seeming indeed to outsiders to contribute sufficient for the requirements of systematic history, but, in my own opinion, contributing only a part". (Polybius XII, 25e).

De Vleeschauwer maintains that although the royal libraries subscribed to Aristotle's all embracing "universal concept" as regards holdings and subject matter, the origin of these large institutions was essentially Middle Eastern (1967:42). Although the libraries of Hattusa (see 2.1.6.6) and Nineveh (see 2.1.6.9) for example, no longer existed, they had served as models for numerous smaller later institutions established in the cities of Asia-Minor from the Hellespont to Susa. It was these libraries that the future Successors came across during their campaigns with Alexander. They were primarily state-run institutions, established not only to enhance the prestige of the various Persian princes, but also to serve as instruments for intellectual and cultural development (De Vleeschauwer 1967:41-42). It was with these libraries in mind that the Successors went about establishing their own institutions - the Ptolemies at Alexandria (see 4.3), the Antigonids at Pella (see 4.1.5.4), the Seleucids at Antioch (4.1.5.3) and the Attalids at Pergamum (see 4.1.5.7).

4.1.4.9 Temple collections

Temples continued to function as safe repositories for documents and texts of all kinds (see 3.3.5.8), with those at Delos, Ephesus and Rhodes being the most well-known (Davison 1962:228-229). However, a major Hellenistic development was the establishment of fully fledged temple libraries attached to a state-cult serving the purposes of cultural unity on a religious level (Wendel in Milkau 1955:107). An example of this is the Ptolemaic Serapeum (see 4.1.5.2).

4.1.5 ANALYSES OF INDIVIDUAL LIBRARIES

4.1.5.1 The Lyceum

With Aristotle on his deathbed in 322 B.C., a successor had to be chosen to replace the founder and first director/principal of the Lyceum Peripatetic school (see 3.3.6.7):

"The philosopher Aristotle, being already nearly sixty-two years of age, was sickly and weak of body and had slender hope of life. Then the whole band of his disciples came to him begging and entreating that he should himself choose a successor to his position and his office ... his [chosen] successor ... was Theophrastus, from Lesbos, a man equally noted for the fineness of his eloquence and of his life. And when ... Aristotle died, they accordingly all became followers of Theophrastus". (Aulus Gellius XIII, 5.1-4; 10-12)

Theophrastus' promotion to the leadership of the Lyceum is also recorded by Strabo:

"...Aristotle bequeathed his own library to Theophrastus, to whom he also left his school ...". (Strabo XIII, 1.54)

Theophrastus ensured that the Lyceum continued to function just as it had under Aristotle for the next thirty-five years. In 387 B.C. Strato (head of the Lyceum from 386-368 B.C.) was selected to succeed Theophrastus (Canfora 1987:27-28). The Lyceum library, however, was bequeathed to Neleus:

"From Scepsis came ... Neleus the son of Coriscus, this last man who not only was a pupil of Aristotle and Theophrastus, but also inherited the library of Theophrastus, which included that of Aristotle". (Strabo XIII, 1.54)

Diogenes Laertius (V.52) recorded the relevant part of the will of Theophrastus: "... The whole of my library I give to Neleus". As Irwin notes (1964:69), Strato, the newly elected head of the Lyceum, did not inherit the library. Weimann (1975:29) and Wendel (in Milkau 1955:60) explain that this occurred probably because the library did not belong to the Lyceum proper, but to the head of the institution. It was up to the out-going director or principal to decide who would inherit the library. This tradition was upheld by Strato, who expressly bequeathed the library of the Lyceum to the new in-coming head Lyco:

"But to return to Strato the physicist. His will is also extant and it runs as follows: ... I also give and bequeath to him [Lyco] all my books, except those of which I am the author ...". (Diogenes Laertius V.62)

Wendel suggests another possible reason why Neleus, and not Strato, inherited the original library. He argues that Theophrastus may have believed that Neleus would

succeed him as head of the Lyceum and therefore bequeathed him the library. However, for some reason he was unable to name Neleus as his successor and the circle of scholars chose Strato instead (in Milkau 1955:60).

After Strato was appointed the new head of the Lyceum, Neleus left Athens, taking the library with him. There are two traditions amongst the ancient sources as to the subsequent fate of the library. Firstly Strabo maintains that:

"... Neleus took it to Scepsis and bequeathed it to his heirs, ordinary people ...".
(Strabo XIII, 1.54)

which Plutarch, possibly using the same source, corroborates:

"... the estate of Neleus of Scepsis, to whom Theophrastus bequeathed his books, came in the hands of careless and illiterate people". (Sulla XXVI, 1-2)

However Athenaeus (I,3A-B) records that:

"... Aristotle the philosopher, Theophrastus and Neleus, who preserved the books of the last two named. From Neleus, he says, our king Ptolemy, surnamed Philadelphus, purchased them all and transferred them ... to his beautiful capital, Alexandria".

Judging by the fact that the book collector Apellicon of Teos had indeed owned texts written by Aristotle and Theophrastus (see 4.1.5.10) and that similar works appeared later in Rome as part of Sulla's war booty after the sacking of Athens in 86 B.C. (see 4.2.5.4), the hypothesis of Strabo and Plutarch is more credible. However, most classical scholars believe that both accounts are partly correct, with Neleus selling part of the collection to agents of the Ptolemies for the Royal Alexandrian Library and taking the rest to Scepsis (Johnson 1965:49; Parsons 1952:14; Wendel in Milkau 1955:61). Irwin however, maintains that the account of Athenaeus is simply an attempt to "glorify" Alexandria, and if the Royal Alexandrian Library had indeed obtained any of the Lyceum texts, these would have come by the way of the Royal Alexandrian Library's first librarian Demetrius of Phaleron, who had himself been a student at the Lyceum (see 4.3.2). The texts in the possession of the Royal Alexandrian Library would therefore have been copies and lecture notes - and not "master copies" (1964:67-68). Conversely De Vleeschauwer and Wright (in Rawski 1973:101) argue that the purchase of the collection of Neleus was "a transaction of such importance that Ptolemy would have negotiated even with his worst enemy for it", and conclude that the account of Athenaeus is "the most likely version".

Nevertheless, the initial loss of the library to Neleus was keenly felt by the scholars of the Lyceum (see 4.1.5.10b):

"The result was that the earlier school of the Peripatetics who came after Theophrastus had no books at all, with the exception of only a few, mostly exoteric works, and were therefore able to philosophise about nothing in a practical way, not only to talk bombast about commonplace propositions ...". (Strabo XIII, 1.55)

Similarly Plutarch (Sulla XXVI, 1-2) notes:

"The older Peripatetics were evidently of themselves accomplished and learned men, but they seem to have neither a large nor an exact acquaintance with the writings of Aristotle and Theophrastus ...".

The Lyceum continued to function throughout the Hellenistic period, experiencing a revival and renewed interest in 40 B.C. with the restoration and revision of Aristotle's original teachings (see 4.2.5.7b). Well into the Roman period the Lyceum appears to have lost its separate identity, having merged with various other academic institutions (Irwin 1964:68).

4.1.5.1a Collection development

Before Neleus had inherited the library of the Lyceum in 368 B.C., the holdings, in addition to the roughly 540 books of Aristotle (see 3.3.6.7a), would have also contained the texts produced by Theophrastus. Diogenes Laertius (V. 42-50) lists an estimated 475 books written by Theophrastus and these, together with Aristotle's works, meant that Neleus removed roughly 1016 books of the Lyceum library holdings. The works of Theophrastus, just like those of Aristotle, reflected the universal approach to academic study which the Lyceum pursued and contained such diverse subject matter as grammar, meteorology, astronomy, biology, medicinal cures, geology, politics, literature, music, religion, mathematics and law.

Strato, who succeeded Theophrastus as head of the school for the next eighteen years, produced only 57 books (Diogenes Laertius V. 59-60) also covering a large variety of subject-matter. However this small amount was little compensation for the number of books lost to Neleus making it hardly surprising that it was only in 40 B.C. (Irwin 1964:68) that the Lyceum collection was restored to its former size and authoritative content. No doubt this was achieved through the academic contributions of staff and

students as well as through purchases from the book trade. The book market probably provided copies as well as the odd original manuscript of the lost works of Aristotle and Theophrastus.

4.1.5.1b Collection accessibility

That Diogenes Laertius was able to reproduce such detailed book-lists of the works of various heads of the Lyceum presupposes the existence of detailed catalogues. The books listed do not appear to be arranged in any particular order, although in some cases a number of works covering similar subject-matter are placed together. For example, in the list of the books of Theophrastus six individual works covering various aspects of animals are grouped together (V.43-44).

It was clearly indicated where more than one book made up a single work or fell under one title:

Περὶ συσσειῶς	ῥβγ	-	On Nature, three books.
Περὶ συσσεικῶν	αβγδεζηθι ια ιβ ιγ ιδ ιε ιζ ιξ ιη	-	On Physics, eighteen books.
Περὶ φυσικῶν (Diogenes Laertius V.46)	ἐπιτομῆς αβ	-	An Epitome of Physics, two books.

It is highly likely that these lists were compiled from the actual combined catalogue of the Lyceum, with only the works of one particular scholar selected from under the various subject divisions. This would explain why the book-lists of Diogenes Laertius appear to be arranged in such a disorderly manner. It can be assumed, therefore, that the method of bibliographic control adopted at the time of Aristotle would have been applied during the Hellenistic period (see 3.3.6.7b).

Since the library belonged to the head of the Lyceum (see 4.1.5.1) it would have been his prerogative as to who would be permitted to have access to the collection.

4.1.5.2 The Serapeum temple library

In a bid to unify his people under his newly established monarchy, Ptolemy I Soter (ruled 323-283 B.C.) established the Serapis cult. This was a continuation of the Egyptian tradition dating back to pharaonic times, when each new incoming dynasty adopted a god as patron (De Vleeschauwer 1967:45).

The Ptolemaic state deity Serapis was created out of a merger of the local Osiris and Apis cults, thereby representing elements of both the Hellenistic and Egyptian belief systems (De Vleeschauwer 1967:45; Weimann 1975:30; Wendel in Milkau 1955:64-65). However, Von Graberg points out that Serapis had existed before the Ptolemies had established their monarchy in Egypt (1974:285-288). A Serapis cult had long been established in Babylon and Sinope, the latter a city situated on the Black Sea coast of Asia-Minor. Indeed, during Alexander's last days in Babylon in June 323 B.C., Plutarch records that:

"During this day too, Python and Seleucus were sent to the temple of Serapis to enquire whether they should bring Alexander thither, and the god gave answer that they should leave him where he was, and on the twenty-eighth [13 June], towards evening he died". (Alexander LXXVI.4)

Von Graberg argues that because Serapis had prophesied Alexander's death, Ptolemy introduced the Serapis cult to Egypt, adopting it as the state-cult to lend legitimacy to his claim as Alexander the Great's true successor. Tacitus also touched on the controversy concerning the introduction of the Serapis cult into Egypt:

"... tradition says that the god himself, voluntarily embarking on the fleet that was lying on the shore, miraculously crossed the wide stretch of sea and reached Alexandria in two days. A temple, befitting the size of the city, was erected in the quarter called Rhacotis ... there are some who maintain that the god was brought from Seleucia in Syria in the reign of Ptolemy, still others claim that the same Ptolemy introduced the god, but that the place from which he came was Memphis, once a famous city and the bulwark of ancient Egypt". (Histories IV, 84)

Finally, there exists the possibility that Alexander the Great himself had introduced the Serapis cult into Egypt (Von Graberg 1974:289). On his visit to Egypt in 332 B.C., Alexander had created the Isis cult, establishing Serapis as its *Kultgenosse*. This is partly confirmed by Tacitus who, in discussing the construction of the Serapis temple in the same passage quoted above, states that:

"... there had previously been on that spot an ancient shrine dedicated to Serapis and Isis".

The temple known as the Serapeum was built, as Tacitus mentions above, in Rhacotis which was in the Egyptian quarter of Alexandria (Canfora 1987:63; Johnson 1965:52-53; Parsons 1952:71). Wendel believes that the Serapis cult was adopted as the Ptolemaic state-cult by 312 B.C., with the Serapeum being completed not later than 296 B.C. (in Milkau 1955:65). However Holmes (1980:288) points out that archaeological evidence indicates that the "Ptolemaic" temple may only have been constructed during the reign of Ptolemy III Euergetes (246-221 B.C.). A possible explanation is that Ptolemy III rebuilt or replaced the original temple with another construction on the same site.

Nevertheless, it is generally believed that the original Serapeum temple library was founded by Ptolemy II Philadelphus (Canfora 1987:63; Johnson 1965:52-53; PRE Vol.3, 1899:410; Kesting 1986:156; Von Graberg 1974:293) although Irwin, probably taking into the account the speculation as discussed in the preceding paragraph, proposes Ptolemy III Euergetes as the original founder (in ELIS I, 1968:402).

The library was situated at the southern end of the temple complex (Holmes 1980:288) and not inside the temple itself (Parsons 1952:367). The entrance to the temple building was preceded by a double row of "red granite columns" which had been roofed over "forming a series of spacious porticoes ..." (Parsons 1952:349). A number of these porticoes functioned as the storage chambers and reading rooms of the library. The holdings of the library were simply "arranged on shelves beneath the porticoes ..." (Canfora 1987:81).

The Serapeum library was originally established as a teaching aid in the training of the resident priesthood (De Vleeschauer 1967:45). With the Serapeum library holdings gradually expanding owing to the addition of surplus stock from the Royal Alexandrian Library (Thompson 1962:22), the Serapeum became a more general educational institution. Kesting concludes that "the research tradition of the Royal Library was complemented by the teaching tradition of the Temple Library of the Serapeum" (in

ELIS 39,1985:376). This continuous interaction with the RAL has resulted in the Serapeum being referred to as the "daughter library" of the larger institution (Canfora 1987:63; Johnson 1965:53; Parsons 1952:204).

The Serapeum was finally destroyed in 391 A.D. by the Archbishop Theophilus after Christianity had become the state religion of the Roman empire (Kesting 1986:157).

4.1.5.2a Collection development

There is no evidence to suggest that the Serapeum library holdings were purely of a theological nature (Parsons 1952:161). With its collection originating from the surplus holdings of the RAL (Canfora 1987:63; De Vleeschauwer 1967:46; Wendel in Milkau 1955:68), White observes that the Serapeum library did not differ "either in character or in quality from the greater library immediately connected with the Museum" (1914:xxxvii). The Serapeum collection therefore also displayed a "universal character" (Von Graberg 1974:290) contained in "copies, excellent copies, of the good editions prepared in the Museum" (Canfora 1990:63-64). The total holdings during the third century B.C. were:

"In the other library [the Serapeum] there were 42 800 volumes ... according to Callimachus, a man of the court and royal librarian ...". (Tzetzes The Plautine Scholium)

According to Parsons, this figure of 42 800 represents single scrolls with a scroll containing either a single work of an author or one book of a much larger work spread over more than one scroll (1952:204-205). Parsons (1952:349) goes on to speculate that the holdings will have expanded to well over 100 000 scrolls in the centuries following the death of Callimachus (c.235 B.C.). In 41 B.C. the 200 000 scrolls from Pergamum which Antony had given Cleopatra as a gift (see 4.1.5.7 and 4.3.5) were placed in the Serapeum library (Thompson 1962:23), increasing the library holdings to over 300 000 scrolls (Parsons 1952:349).

4.1.5.2b Collection accessibility

It can be assumed that the texts contained in the Serapeum Library, since they had originally formed part of the RAL holdings, will have already been processed, corrected and catalogued (De Vleeschauwer 1967:47). The Serapeum catalogues and inventory lists will therefore have been compiled from the original bibliographic descriptions and lists

of the RAL (see 4.3.6). The scrolls were arranged and stacked in the niches of the stoa and in the porticoes serving as storage chambers, with headings identifying the various sections and subject divisions.

The temple served as a teaching institution for both priests and laymen (Kesting in ELIS 39, 1985:375) with the result that the collection will have been available for use by people outside the immediate circle of the Mouseion and the royal court (PRE Vol.3, 1899:410-411). Wendel argues that the Serapeum also functioned as a vehicle of indoctrination, introducing the local Egyptian population to the Greek language and the "Hellenistic way of thinking" (in Milkau 1955:68). The Serapeum temple library was therefore a true public institution (Johnson 1965:53) and remained as such into the days of the historian Tertullian (A.D. 160-240):

"To this day in the temple of Serapis, Ptolemy's library is displayed together with the Hebrew originals. Why, yes! and the Jews openly read the books ... every Sabbath day there is common access to those books". (Apologeticus XVIII, 5-8)

Conversely, De Vleeschauwer argues that the Serapeum collection was made available to a far more limited group of users who were mostly members of the scholarly community (1967:46) and goes on to suggest that the Serapeum served as a temple school in the old Middle Eastern tradition (see 2.1.3).

4.1.5.3 Antioch

Seleucus, the founder of the Seleucid dynasty has been described as:

"... the greatest king of those who succeeded Alexander, and of the most royal mind, and ruled over the greatest extent of territory, next to Alexander, all this I regard as irrefragable". (Arrian Anabasis VII, 22.5)

At its height, the Seleucid empire stretched from the Mediterranean to India, a territory which the dynasty ruled from 312-65 B.C. (Parsons 1952:32). Seleucus founded Antioch as the capital of his empire along the banks of the Orontes River in Syria and named it in the memory of his father (Parsons 1952:34-35). Indeed, another sixteen cities spread throughout the vast empire carried the same name (Parsons 1952:32). The capital, like the rest of the Seleucid empire, contained a mixed population made up of Greek-

Macedonians, Phoenicians, Syrians and Jews (Parsons 1952:45). It was under Antiochus III (224-181 B.C.) that Antioch grew to be "one of the greatest and busiest cities of the Eastern Mediterranean" (Irwin 1964:71) and during the reign of his successor, Antiochus IV, the city became "the centre of Hellenic culture and art" (Parsons, 1952:49). Cicero, in a speech delivered in 62 B.C., described second century Antioch as:

"... a place which in those days was a renowned and populous city, the seat of brilliant scholarship and artistic refinement ...". (Pro Archia Beta II,4)

The royal library, which was situated within the palace confines (DKP Vol.1, 1964:893) was initially established by Antiochus I (280-261 B.C.). Antiochus III, also known as "Antiochus the Great", went on to enlarge the library (Wendel in Milkau 1955:92) in order to rival the libraries of Ptolemaic Alexandria in the south and Attalid Pergamum to the north (Parsons 1952:47). To organize the much enlarged collection, Antiochus III appointed Euphorion of Chalcis as head librarian:

"He [Euphorion] went to Antiochus the Great who ruled Syria and who appointed him as head of the public library there". (Suida S.V. Εὐφορίων (Euphorion) Ad a.233-187a)

Euphorion, born in Euboea between 276 and 274 B.C. was a poet, grammarian and historian (Parsons 1952:49) and had been educated in the Platonic/Peripatetic tradition (Wendel in Milkau 1955:92). Johnson (1965:58) suggests that his appointment to head librarian must have occurred sometime around 200 B.C. Unfortunately, Euphorion is the only known staff member of the royal library of Antioch.

In the first century B.C., Antioch possessed another library when Antiochus XIII founded a mouseion with a library (Irwin 1964:72; Parsons 1952:50). Platthy (1968:171), however, suggests that both these institutions were founded either by Antiochus IX (114-95 B.C.) or Antiochus X (95-92 B.C.). Nothing is known about this second state library at Antioch except that it was funded by a donation:

"... the shrine of the Muses which was built by Antiochus Philopater with the money left in his will by Maron of Antioch, who had emigrated to Athens and had then stipulated that there should be built the shrine of the Muses and a library with his money". (Malalas Chronographia LX)

Parsons observed that now "Antioch, like Alexandria, had at least two libraries and a Museum" (1952:50).

By this time however, the Seleucid empire was in decline. Continuous frontier wars, foreign invasions and dynastic in-fighting had by 95 B.C. reduced the once vast Seleucid empire to the territory of Syria, which itself was now divided into three separate kingdoms "ruled by two brothers and a cousin respectively" (CE Vol.20, 1965:578). Finally, in 65 B.C. this "now utterly exhausted and functionless Hellenistic kingdom" (CE Vol.20, 1965:578) became a Roman province (Parsons 1952:50).

4.1.5.3a Collection development

During the invasion of Greece by Persia in 480 B.C., Xerxes is said to have confiscated the library of Peisistratus (see 3.3.6.1). Subsequently it is recorded that:

"... a long time afterwards, King Seleucus, who was named Nicator, had all those books taken back to Athens". (Aulus Gellius VII,17. 1-2)

Irwin argues that in supposing the whole account of the theft of the Peisistratid collection were true "it seems improbable that Seleucus would have returned the books to Athens at the very time that the Ptolemies were seizing books from Athens and elsewhere for their own new library at Alexandria" (1964:58). Parsons (1952:5) confirms this view by maintaining that "in the *Historian of the House of Seleucus* we find no reference to the return of the library". If the Peistratid collection had indeed remained in the hands of the Seleucids, it would certainly have formed an important part of the holdings of the royal library of Antioch (see 3.3.6.1a).

Numerous scholars were attracted to the Seleucid court at Antioch and the works they produced would no doubt have formed part of the library holdings. Among them were the linguist Hegesianax of Alexandria in the Troad and the poet Simonides of Magnesia who wrote a work glorifying the deeds of his newly adopted patron (Wendel in Milkau 1955:92). The Stoic philosopher Apollophanes also established himself at the court, as well as Phoebus who wrote a work on dreams and Aratus of Soli who edited Homer's Odyssey (Parsons 1952:47).

4.1.5.3b Collection accessibility

The library holdings would certainly have required some sort of organization, especially since the *Suida* (Εὐφοριῶν) states that it was a public library (see 4.1.5.3). With the Seleucid empire encompassing the territories of the old Middle Eastern empires of Mesopotamia and Assyria, all of which had had great bibliographic traditions (see 2.1), the librarians of the royal library of Antioch would have had numerous models and examples to adopt or learn from (see 4.1.4.8).

4.1.5.4 Pella

In 276 B.C. Antigonus Gonatas (c.320-239 B.C.) finally secured Macedonia and its capital Pella as the seat of the Antigonid monarchy. He was the son of Demetrius (338-283 B.C.) and the grandson of Antigonus the One-Eyed (383-301 B.C.) both of whom had unsuccessfully campaigned to establish the Antigonid house as a monarchy (*CE* Vol.2, 1965:321).

A substantial library already existed in Pella before Antigonus Gonatas had ascended to the Macedonian throne (De Vleeschauwer 1967:52; Irwin 1964:71; Wendel in Milkau 1955:90). It was founded by Archelos towards the end of the fifth century B.C. and Irwin describes it as a palace library (1964:71). In the fourth century B.C. the Argeadae family of Alexander's father, Philip II, became the ruling house in Macedonia after a protracted power struggle for the Macedonian throne by a number of noble families (*CE* Vol.15, 1965:158). It was during Philip's reign (359-336 B.C.) that Aristotle was present at the court in Pella as tutor to Alexander, the heir to the throne. Under Aristotle's guidance, the library will have considerably expanded and developed (De Vleeschauwer 1967:52).

With a royal library already fully established in Pella, Antigonus attempted to attract scholars to his capital to found a mouseion to rival that of Alexandria (De Vleeschawer 1967:52). To enhance the prestige of his newly established mouseion, Antigonus invited Zenon of Citium who was the founder of Stoicism, to his capital. However, owing to his advanced age, Zenon sent two of his younger disciples, Persaeus and Philonides, instead (De Vleeschauwer 1967:52; Wendel in Milkau 1955:90). Nevertheless, with a steady flow

of scholars and learned men accepting the patronage of the Antigonids, the royal library of Pella compared well to the libraries of the other Successors.

The political history of the Antigonids was dominated by their attempts to subdue mainland Greece and the Greek islands. This was achieved with a varying degree of success by the successors of Antigonus, namely Demetrius II (ruled 240/39-229 B.C.), Antigonus Doson (ruled 227-221 B.C.) and Philip V (ruled 221-179 B.C.). The Antigonid line ended with Perseus when he was defeated by Rome at the battle of Pydna in 168 B.C. - the first of the Hellenistic monarchies to fall to the new emerging power (CE Vol.2, 1965:321-322). The victorious Roman general Aemilius Paulus entered Pella and seized the royal library as war booty, taking it with him to Rome (see 4.2.5.1).

4.1.5.4a Collection development

Aristotelian writings dating from the time of Aristotle's tutelage of the young Alexander will have been preserved in the library holdings. Amongst other scholars enjoying the patronage of the Antigonids was Alexander of Aetolia who had left Ptolemaic Alexandria to establish himself at Pella. His numerous tragedies, elegies, epics and epigrams would have found their way into the Pella collection (Wendel in Milkau 1955:90). Other scholars present at the court were the historian Hieronymus of Cardia and Aratos of Soloi, who was commissioned by Antigonus Gonatas to edit the $\phi\alpha\iota\nu\omicron\mu\epsilon\nu\alpha$ of Eudoxos of Cnidos, an important work concerning the art of navigation. Aratos also went on to edit the Odyssey as well as Alexander's personal edition of the Iliad (Wendel in Milkau 1955:90-91). Also invited to study at Pella was the poet Antagoras of Rhodes and the teachers Bion of Borysthenes and Timon of Phleius.

Wendel concludes that judging by the scholars present at Pella, the library holdings would have concentrated on history, philosophy and poetry. If indeed the library had contained works covering various aspects of medicine, mathematics and the sciences, these would have been collected by Alexander the Great (Wendel in Milkau, 1955:91).

Diogenes Laertius (VII.36) records that Persaeus of Citium had been "tutor to Antigonus's son Halcyoneus", and goes on to list a number of works he had produced:

"The following works are by Persaeus:

of Kingship
 The Spartan Constitution
 of Marriage
 of Impiety Thyestes
 of Love Exhortations
 Interludes
 Four books of Anecdotes
 Memorabilia

A reply to Plato's *Laws* in seven books". No doubt this is only a selection of his writings, as Persaeus is said to have left 700 volumes in total (DKP Vol.1, 1964:895). A large proportion of these will have been produced during his stay at Pella.

4.1.5.4b Collection accessibility

That the library holdings were indeed well organized for easy access is illustrated by the case of Hieronymus of Cardia, whose history of the Successors was compiled wholly from material contained in the Pella collection (Wendel in Milkau 1955:90).

An example of this bibliographic organization was that works covering the same subject were differentiated by means of their origin, as for example in the case of a criticism of the *Iliad* which was entitled $\eta \ \delta\epsilon\ \tau\omicron\upsilon\delta\ \nu\alpha\rho\Theta\eta\chi\omicron\varsigma$ (Wendel in Milkau 1955:91).

4.1.5.5 The Ptolemaion

The gymnasium known as the Ptolemaion was donated by Ptolemy Philadelphus (ruled in Egypt 285-246 B.C.) to the city of Athens in 275 B.C. (Canfora 1987:184; De Vleeschauwer 1967:56; DKP Vol.1, 1964:893; Wendel in Milkau 1955:96). The Ptolemaion consisted of lecture chambers and a library (Parsons 1952:16) constructed in the architectural style of the Mouseions of Alexandria and Pergamum (Richardson 1963:177).

The Ptolemaion attracted especially the Roman intelligentsia as this letter of Cicero (106-43 B.C.) indicates:

"My dear Brutus - Once I had been attending a lecture of Antiochus, as I was in the habit of doing, with Marcus Piso, in the building called the School of Ptolemy, and

with us were my brother Quintus, Titus Pomponius and Lucius Cicero ... my first cousin". (De Finibus V,1-1)

Nothing is known of the fate of Ptolemaion and its library.

4.1.5.5a Collection development

Each year, the Ephebes who had attended the Ptolemaion, would donate 100 scrolls to its library. Platthy (1968:110-112) has listed a number of inscriptions recording successive graduating classes honouring this tradition. For example, the class of 96/5 B.C. upheld the tradition in the following way:

"They dedicated a vase to the mother god and Stephanophorus seventy drachmas, according to the decree proposed by Dioscorides son of Dioscorides of Phegai. They also dedicated one hundred books for the library in the Ptolemaion in accordance with the decree".

With the Ptolemaion being compared to a modern day university (Hessel 1955:5) its library holdings would have taken on a universal nature. Copies of the texts contained in the neighbouring Lyceum (see 3.3.6.7 and 4.1.5.1) and the Platonic Academy (see 3.3.6.5) libraries would no doubt have found their way into the Ptolemaion's holdings. Various works of Greek literature would have also featured strongly in the collection. It can also be assumed that texts will have been obtained from the RAL, since Ptolemy Philadelphus himself had founded the Ptolemaion.

4.1.5.5b Collection accessibility

Parsons believes that the students used the texts from the library collection as they were being studied in the lectures (1952:6). This presupposes that the library holdings were well organized allowing for easy and efficient access.

4.1.5.6 The Rhodes Gymnasium

An inscription, dated to sometime between 200-175 B.C. (Irwin 1964:62), records a decision by the people of the island of Rhodes (situated off western Asia-Minor) to establish a library for the gymnasium:

"... according to the decree of the people ... let them make [the subscriptions ...] to the officials of pr[ytaneis] whoever intend to donate [books?] ... let the gymn[asiarchs] record [the names?] ... for the [public] library". (Platthy 1968:151)

The gymnasium of Rhodes became a highly rated "university" during the Hellenistic period and like the Ptolemaion of Athens (see 4.1.5.5) was attended mostly by young Roman citizens completing the ancient equivalent of modern tertiary education (Irwin 1964:60); Thompson 1962:24).

4.1.5.6a Collection development

With Rhodes boasting a vibrant book trade (De Vleeschauwer and Wright in Rawski 1973:99) the gymnasium will have had ample opportunity to add to its holdings. The island's inhabitants were encouraged to donate books to the institution as indicated by numerous inscriptions (Johnson 1965:51) similar to the one above.

Politics and rhetoric were two subjects that formed part of a wide-ranging collection (Parsons 1952:17).

4.1.5.6b Collection accessibility

A piece of marble inscribed with part of a catalogue discovered on the island is believed to have belonged to the gymnasium (Irwin 1964:62; Parsons 1952:17; Vorstius 1954:5). It has been dated to a period not later than 100 B.C., although the works catalogued date mostly from the fourth and third centuries B.C. (Irwin 1964:62). The catalogue inscription has been recorded by Platthy (1968:149-150):

The Boeotian Aristaichmus	one
Cleon	one
Phaidondas, or about the [oligarchy?]	
About the Legislation	
at Athens, fi[ve]	
About the Const[itutions]at Athens, two	
Of Hegesias Speeches in favour of Athens	
Aspasia	one
Alcibiades,	one
Art of Theodectes, four [books]	
Amphictyonicus,	one
Of Theopompus Laconicus,	one
Corinthiacus,	one
Maussolus	one

Olympicus,	one	P
Philippus,	one	
Enkomion of Alexander,	one	
About the Olp...	one	
About the -ius	one	Dionysius
To Evagoras, Cyprians	two	About
Letter to Antipater,	one	About the
Advice-giving speech		About children
Alexander		Diodotus About
Panathenaicus		Harmod-
Assault on the way of life		Damacleides
[or school] of Plato		About coming-to-be
Another Theopompus		To Alexander
About kingship	[one]	Eratosthenes

The three major authors, namely Hegesias, Theodectes and Theopompus, are listed alphabetically, although their respective works which are immediately recorded under their names do not seem to be arranged in any particular order. The numbers appearing beside the titles indicate the number of scrolls that make up the complete work (Irwin 1964:63; Thompson 1962:25).

The names and titles inscribed to the right of the numbers column appear to be part of another catalogue. Hence the authors Dionysius, Diodotus, Damacleides and Eratosthenes also appear to be arranged in some type of alphabetical order.

It is generally believed that the inscription is a fragment which formed part of a subject catalogue, as most of the material listed pertains to the closely related subjects of politics and rhetoric (Irwin 1964:62-63; Parsons 1952:17; Thompson 1962:24-25).

As was generally the case with collections of gymnasia (see 4.1.4.6), the Rhodes gymnasium library will have allowed access to the general public, especially since in this case, the people of Rhodes were the major contributors of book materials to the library holdings.

4.1.5.7 Pergamum

The city of Pergamum is situated in north-western Asia-Minor. Its origins are unknown as it has no recorded early history. The city became a centre of major political importance during the age of the Successors (Parsons 1952:19). The rise of the Attalid dynasty and the establishment of Pergamum as the capital of their kingdom is recorded in an account by Strabo (XIII, 4.1-2):

"A thing of hegemony is held over these places by Pergamum, which is a famous city and for a long time prospered along with the Attalic kings: indeed I must begin my next description here and first I must show briefly the origin of the kings and the end to which they came. Now Pergamum was a treasure-hold of Lysimachus, the son of Agathocles, who was one of the successors of Alexander ... The custody of this stronghold and the treasure, which amounted to nine thousand talents, was entrusted to Philetaerus of Tieium, who was a eunuch from boyhood ... Lysimachus, beset with domestic troubles was forced to slay his son Agathocles, and Seleucus Nicator invaded his country and overthrew him, and then he himself was overthrown and treacherously murdered by Ptolemy Cerounus. During these disorders the eunuch continued to be in charge of the fortress ... he continued lord of the stronghold and the treasure for twenty years. He had two brothers, the older of whom was Eumenes, the younger Attalus. Eumenes had a son of the same name, who succeeded to the rule of Pergamum, and was by this time sovereign of the place round about ... He died after a reign of twenty-two years [263-241 B.C.]. Attalus, the son of Attalus ... succeeded to the throne and was the first to be proclaimed king, after conquering the Galatians in battle ... He died in old age, having reigned as king forty-three years [241-197 B.C.]. ... he left four sons by Apollonis, a woman from Cyzicus - Eumenes, Attalus, Philetaerus and Athenaeus. Now the two younger sons remained private citizens, but Eumenes the elder of the other two, reigned as king. Eumenes fought on the side of the Romans against Antiochus the Great and against Perseus, and he received from the Romans all the country this side of the Taurus that had been subject to Antiochus. But before that time the territory of Pergamum did not include many places that extended as far as the sea at the Elaitic and Adramythene Gulfs. He built up the city and planted Nicephorium with a grove, but the elder brother [Attalus?] from love of splendour, added sacred buildings and libraries and raised the settlement to what it now is. After a reign of forty-nine years [197-159 B.C.] Eumenes left his empire to Attalus, his son by Stratonice, the daughter of Ariathes, the king of the Cappadocians. He appointed his brother Attalus [Attalus Philadelphus] as guardian both of his son, who was extremely young, and of the empire. After a reign of twenty-one years [159-138 B.C.] his brother died an old man, having won success in many undertakings ... and he left his empire, under a guardian, to Attalus. Attalus, surnamed Philometer, reigned five years [138-133 B.C.] died of disease, and left the Romans his heirs. The Romans proclaimed the country a province, calling it Asia, by the same name as the continent".

More precisely, the library of Pergamum was founded in roughly 200 B.C. (Weimann 1975:31) during the reign of Attalus I (Parsons 1952:24). His successors Eumenes II (197-159 B.C.) and Attalus II (159-138 B.C.) expanded and developed the royal library to rival

the example set by the RAL established almost a century before (Irwin in ELIS I, 1968:401 and 1964:71; Johnson 1965:57; PRE Vol.3, 1899:414; White 1914:xxxviii). At its height the Pergamum royal library was considered to be one of the few libraries that could compare to Alexandria and to have come close to the standards set by the Alexandrian institution (Weimann 1975:31). Richardson (1963:172) considers Pergamum "after Alexandria ... the greatest and most famous library of the ancient world", while De Vleeschauwer observes that the Pergamum institution was "... 'n biblioteek wat in elke opsig met die Alexandrynse biblioteek kon wedywer" (1967:53).

Excavations at Pergamum have uncovered the remains of the royal library (Canfora 1987:81; De Vleeschauwer 1967:54; DKP Vol.1, 1964:893; Gormley 1974:7; Hessel 1955:5; Johnson 1965:58; PRE Vol.3, 1899:414-415; Richardson 1963:172-176; Weimann 1975:31; Wendel in Milkau 1955:86-87). The library formed part of the Athena temple complex and was situated along the slope of a hill. It consisted of a colonnaded hall or stoa; storage chambers, reading room and a large hall. The library chambers appear to have occupied the upper floor of a two storey building, leading onto the two storey colonnade (Gormley 1974:7; Richardson 1963:175; Wendel in Milkau 1955:86).

The stoa was seventy meters in length (DKP Vol.1, 1964:892-893; Weimann 1955:31) and served as a general discussion and debating area in the tradition of Aristotle's Lyceum (see 3.3.6.7) and Plato's Academy (see 3.3.6.5). Three chambers, leading off the stoa, have been uncovered designed exclusively for the storage of scrolls on wooden shelves (DKP Vol.1, 1964:892). A fourth chamber, larger than the other three, contained a narrow platform or bench constructed along three sides. In the walls immediately behind and above this platform were holes, presumably serving the purpose of supporting shelf brackets. The platform therefore, may either have been used as a step to aid in reaching the shelves, or act as a barrier to protect the book rolls. In the centre of this chamber a large statue of Athena was placed (Johnson 1965:58). Inscribed on the remaining wall space were names, illustrated representations with busts of various authors including Herodotus, Timotheus of Miletus, Alcaeus and Homer placed alongside. Also, the titles of two comedies were inscribed on the walls (Richardson 1963:174). This chamber has been identified as the "reading room".

Finally, also leading off the stoa, was the so-called "assembly hall". This large chamber was decorated with inscriptions, illustrations and statues (Wendel in Milkau 1955:87), while no traces of niches or holes have been discovered in the walls for the supporting of shelves (PRE Vol.3, 1899:415). However furrows that appear to be part of a drainage system line the walls of the hall, ending in large basins or cisterns. Wendel has therefore suggested that this hall was where the staff and scholars of the Pergamene library and mouseion worshipped Athena, the sacred patron of the library, and attended to their rituals. The furrows would have drained away the blood and water resulting from the sacrificial ceremonies (in Milkau 1955:87). Other suggestions are that the hall functioned as a general assembly or lecture hall (Gormley 1974:7; Richardson 1963:175) or possibly as a banqueting hall (De Vleeschauwer 1967:54; PRE Vol.3, 1899:415).

Wendel points out that as the library holdings expanded, so more chambers surrounding the original library complex would have been made available for storage space (in Milkau 1955:87).

While the Pergamum royal library was undoubtedly modelled on the RAL (Canfora 1987:81), it went on to set the architectural standards for the later Hellenistic libraries (Richardson 1963:174) and subsequently those of Rome.

The only known head librarian of the Pergamum royal library is mentioned by Diogenes Laertius (VII.34):

"Isidorus likewise affirms that the passages disapproved by the school were expunged from his works by Athenodorus the Stoic, who was in charge of the Pergamene library ...".

It is clear then that as at other Hellenistic institutions, librarians at the Pergamum library were at the same time scholars involved in academic research. Athenodorus was head of the library during the reign of Attalus II.

It is widely believed that Crates of Mallos not only headed the Pergamene mouseion, but also the library during the reign of Eumenes II (Irwin 1964:71; Johnson 1965:57; Parsons 1952:23). Wendel, however, cautions that this may not have been the case (in Milkau 1955:85) even though he was one of the most prominent scholars present at Pergamum.



Other scholars who established themselves at Pergamum were the mathematician Apollonius of Perge (De Vleeschauwer 1967:53), the poet Nicander, the philosopher Antigonus of Carystos, the historian Apollodorus from Athens (Parsons 1952:24) and Artemon of Cassandreia who specialized in music (Wendel in Milkau 1955:85) and was responsible for works on book collecting (see 4.1.3). Milkau concludes therefore that Artemon may have been a librarian of the Pergamum royal library.

These scholars were amongst those who contributed to Pergamum becoming an intellectual centre second only to Alexandria.

This status, however, was to cause friction with Ptolemaic Alexandria:

"Subsequently, also according to Varro, when owing to the rivalry between Ptolemy and King Eumenes about their libraries, Ptolemy suppressed the export of paper, parchment was invented at Pergamum and afterwards the employment of the material on which the immortality of human beings depends spread indiscriminately". (Pliny Natural History XIII, 21.70).

White (1914:xxxviii) argues that the imposition of a ban on the export of papyrus to Pergamum by the Ptolemies would have had a negligible effect on their rival. The ban would have simply raised the price of book scrolls and papyrus paper on the open market, and by this time the papyrus collection of the Pergamum royal library was of a substantial size - especially if it already raised the ire and jealousy of the Ptolemies. As parchment or leather paper was already in use in the Middle East for a number of centuries (Canfora 1987:48; Johnson 1965:57-58) and with Pergamum itself being the centre of the leather trade in Asia-Minor (De Vleeschauwer 1967:54) the adoption of parchment by Pergamum as a writing material would have been a logical and sound economic measure, a much cheaper alternative to the imported papyrus from Ptolemaic Egypt (Wendel in Milkau 1955:83).

However, it was the intervention of Rome that finally ended Pergamum's status as the only worthy rival to the RAL. As we have seen, the last sovereign of Pergamum, Attalus III, bequeathed his empire to Rome on his death in 133 B.C. The Attalid royal library remained in the city for roughly the next one hundred years (Parsons 1952:29). Then Plutarch reported the following occurrence:

"Calvisius, who was a companion of Caesar, brought forward against Antony the following charges also regarding his behaviour towards Cleopatra: he had bestowed upon her the libraries from Pergamum in which there were two hundred thousand volumes". (Antony LVIII.9)

After the defeat of the Republican faction led by Brutus and Cassius, the then Roman world was divided up between the victors, with Octavian (the future emperor Augustus Caesar) taking the West and Antony the Eastern domains (Parsons 1952:29). In 41 B.C. Antony was in Asia-Minor and later that year visited Cleopatra in Alexandria (Scullard 1982:xvi). It may therefore be perfectly possible that Antony, in a bid to guarantee the loyalty of one of his rapidly diminishing allies, presented Cleopatra with 200 000 scrolls from the Pergamum holdings to add to her Royal Alexandrian Library collection. This could also have been a form of compensation for the Royal Alexandrian Library scrolls destroyed by Caesar during the Alexandrian War of 48 B.C. (see 4.3.5.1 and 4.3.7).

If this hypothesis were true, Richardson believes that these 200 000 rolls that were sent away constituted the entire holdings of the library (1963:173). Wendel (in Milkau 1955:69) however, maintains that in the case where more than one copy of a particular text existed, only one example would have been sent to Alexandria. It has been argued that the so-called "large hall" discussed earlier had originally housed the 200 000 rolls, and once these had been removed, the hall had to be rebuilt to enable it to be utilized for other purposes (PRE Vol.3, 1899:415). Nevertheless, both Irwin (in ELIS 1, 1968:401) and Johnson (1965:58) argue that the whole account concerning the 200 000 rolls is more than likely "improbable" and "untrue". The true fate of the Pergamum royal library therefore remains unknown.

4.1.5.7a Collection development

The Pergamum library holdings expanded rapidly once the Attalids (starting with Eumenes II) actively began to pursue the task of book collecting (De Vleeschauer 1967:53; White 1914:xxxvii-xxxviii). The accumulation of a large book collection in such a short period of time occurred despite the fact that "most of the cream must have been gathered in the fabulous campaign of Demetrios for the first Ptolemy" (Parsons 1952:25) (see 4.3.5). Nevertheless, this feat was probably achieved through forceful and high-handed collection development policies (Parsons 1952:25; Thompson 1962:29) and with

the aid of the enormous financial resources of the Attalid monarchy (Wendel in Milkau 1955:82). An indication of how determined the Attalids were in the collecting of texts for their library comes from Strabo, who, while discussing the fate of the books of the Lyceum inherited by Neleus (see 4.1.5.1 and 4.1.5.10b) stated that:

"But when they heard how zealously the Attalid kings to whom the city [Scepsis] was subject were searching for books to building up the library in Pergamum, they hid the books underground in a kind of trench". (Strabo XIII, 1.54-55).

Not much is known of the texts contained in the Pergamum holdings (Thompson 1962:24), although White (1914:xxxviii) maintains that the library "had the best collection of the masters of prose". Nevertheless, the works produced by scholars known to have established themselves in Pergamum give an indication of some of the texts contained in the collection. For example Neanthes compiled a History of Attalus, Musaeus of Ephesus wrote numerous odes to his Attalid patrons, Bitan undertook a study of the engines of war while Apollonius of Perge wrote a work entitled Conic Sections. Crates of Mallos is known to have been responsible for numerous works, including commentaries on Aristophanes, Euripides, Hesiod and Homer as well as works on the Attic dialect, natural history and geography (Parsons 1952:23-24).

Purchased rolls will have formed a large percentage of the collection and these no doubt would have contained countless forgeries which the agents of the Attalids overlooked as they bought up all the rolls the markets could offer (Canfora 1987:45-46; Parsons 1952:25; Wendel in Milkau 1955:83). The Pergamum royal library would also have had its own scriptorium where texts could be reproduced from works on loan from other collections and institutions (Wendel in Milkau 1955:83).

The total holdings of the royal library are impossible to assess, but at its height it would certainly have contained more than the 200 000 rolls that Antony had removed as a gift for Cleopatra and the RAL.

4.1.5.7b Collection accessibility

The existence of a catalogue at Pergamum is alluded to by the ancient sources, as in the following examples:

"Against the transgressions of Demosthenes: 'you are used ... O men', is entered in the bibliographical lists of Pergamum as the work of Kallikrates". (Dionysius Halicarnassensis De Dinarcho C.I)

and

"I have not found The Teacher of Profligacy and I do not even know of anyone who thought it worth cataloguing ... nor have even those who compiled the catalogues in Pergamum". (Athenaeus VIII, 336 d-e)

It is believed that this catalogue would have been modelled on those that had been compiled at the RAL (DKP Vol.1, 1964:893; Irwin 1964:71; Thompson in ELIS 36, 1983:93-94; Wendel in Milkau 1955:84). Nothing is known about the compilers of the Pergamum royal library catalogue, although Cratos of Mallos has been proposed as being chiefly responsible for its compilation (Parsons 1952:23; Thompson 1962:105, note 47). Wendel (in Milkau 1955:84) notes that this catalogue has been referred to in the following three ways: οἱ περγαμηνοὶ πίνακες; αἱ ἐν περγαμῷ ἀναγραφαί and οἱ ἐκ περγαμῶν γραμματεῖοι.

The Pergamum catalogue would have listed prose and poetical works (Parsons 1952:23). These works will have been arranged by subject and identified by means of an incipit and the author. In most cases the origin of the work would also be noted (Wendel in Milkau 1955:84). The catalogues also contained inventory lists, two types of which were generally drawn up: one listing the complete holdings including duplicates, and the other excluding duplicates. Differentiation would also be made between "summigeis" works (where a number of scrolls make up one work) and "ammigeis" texts (where a single scroll contains one complete work) (see 4.3.5.2). In the case where a pure bibliographical list of the library holdings was drawn up, only the best preserved example of a specific text would be recorded (Wendel in Milkau 1955:84-85). Supplements to the original catalogues were probably published annually.

The scrolls themselves were stored in the numerous niches and recesses of the colonnaded hall and on the shelves and in containers of the storage chambers. Here they were either arranged by subject or by a particular class of authors (Canfora 1987:81). Each subject class or section would be distinguished from the other by means of "an appropriate heading" (Canfora 1987:81) attached to the various containers, shelves and

walls. No doubt the location of the scrolls would have been indicated on the catalogues and inventory lists.

Access to the collection does not seem to have been limited only to scholars:

"The Attalid kings impelled by their delight in literature established for general perusal a fine library at Pergamum". (Vitruvius On architecture VII, Preface 4).

The royal library of Pergamum may indeed have been a public library (Richardson 1963:173; Weimann 1975:31).

4.1.5.8 Qumran

West of the Dead Sea in Palestine, the first of the so-called Dead Sea scrolls were discovered in a cave situated in the valley of Qumran (FGB 1984:12). Subsequent discoveries of scrolls in nearby caves and the excavation of ancient ruins at the foot of these caves led scholars to conclude that Qumran contained the remnants of the Essene community with the scrolls constituting the remains of its library (Peck 1977:5). Pliny describes the Essenes as follows:

"On the west side of the Dead Sea, but out of range of the noxious exhalations of the coast, is the solitary tribe of the Essenes, which is remarkable beyond all the other tribes in the whole world ... Day by day the throng of refugees is recruited to an equal number by numerous accessions of persons tired of life and driven thither by the waves of fortune to adopt their manners". (Natural History V.XV,73)

Peck explains that the Essenes were an out-growth of the Hasidim, a sect which in the first half of the second century B.C. resisted Seleucid attempts to Hellenize the Jews (1977:5). They withdrew into the desert where they led a communal life centred around a monastery at Qumran (Kesting 1986:263). Habitation of the monastery has been more precisely dated to the period between 150 B.C. and A.D. 68 (Kesting in ELIS 39, 1985:371). The period was interrupted by an earthquake in 31 B.C., with the Essenes returning again in A.D. 4. The community finally fell to Roman invaders under Vespasian in A.D. 68. It was during the defence of the monastery that the Essenes removed the contents of their library into the surrounding caves (Peck 1977:6) for safe-keeping for the next roughly two thousand years.

Archaeologists have identified the original library as a centrally located chamber in the main building of the community centre (Peck 1977:8-9). According to Kesting (in ELIS 39, 1985:371) this chamber measured 13 x 4 metres and contained a five metre long plaster table, two shorter tables as well as a low bench. Two inkwells were found amongst the debris of this chamber, with one still containing the dried residue of a vegetable-based ink (Peck 1977:9). Peck goes on to suggest that this particular chamber, which archaeologists believe was on the second floor of the building, was used as a scriptorium since a low rimmed plaster platform containing two shallow basins was uncovered. This plaster platform may have been utilized for the mixing and preparation of inks and pastes, with the tables being used for the actual copying itself. The chamber directly below the scriptorium is believed to have housed the library collection, functioning at the same time as a reading room.

Eleven caves have been discovered within a two kilometre radius from the community ruins. All of these contained fragments of papyrus, parchment and copper scrolls which have been traced to the Essene community of Qumran (Kesting in ELIS 39, 1985:370). A cave designated by archaeologists as "cave 4" however, is generally considered to contain the holdings of the library, although Kesting adds that it is clear that the cave itself did not appear to have functioned as the main library.

4.1.5.8a Collection development

The fragments recovered from the eleven caves make up roughly six hundred texts (Peck 1977:10). Two broad groups of literature have been identified - that of scriptural and sectarian writings (Kesting 1986:263). Cross (1958:31) notes that a quarter of the texts identified are biblical texts. This confirms the contention of Josephus that the Essenes:

"... display an extraordinary interest in the writings of the ancients ...". (The Jewish war 136)

Cave 4, situated roughly 200 yards from the community centre (Cross 1958:19; Kesting in ELIS 39, 1985:370), yielded all the books of the Hebrew canon, with the exception of the book of Esther (Cross 1958:31; Kesting in ELIS 39, 1985:370). Cross goes on to list the finds of "apocryphal and pseudo-epigraphical" works in both the Hebrew and

Aramaic language medium. Texts included in this category are the Psalms of Joshua, Testaments of Levi and Naphtali, sources for the later Testaments of the Twelve Patriarchs and apocryphal Daniel texts (1958:34). Amongst the sectarian manuscripts found in this cave were manuals concerning the rules and constitution of the Essene community (1958:35) as well as numerous hymns of thanksgiving, psalters, wisdom books and liturgies (Peck 1977:12). Biblical commentaries on books such as the Psalms, Hosea and Isaiah were also discovered (Cross 1958:35).

Situated roughly one mile to the north of the community centre (Cross 1958:22) cave 3 was found to contain fragments of some 320 manuscripts which were mostly duplicates of the texts contained in cave 4 (Kesting in ELIS 39, 1985:370). In addition, this cave also yielded two copper scrolls which made up one work in much the same format as that found on typical papyrus and parchment scrolls. The text listed various treasures and their hiding places (Cross 1958:16-17).

The other caves also produced textual fragments which may once have been housed in the Qumran library chamber. Cave 1, for example, contained seven texts (Cross 1958:23) one of which was a manual prescribing "the military order the community was to follow in the coming armageddon" and was entitled The war between the Sons of Light and the Sons of Darkness (Peck 1977:11-12). Cave 11 yielded what is believed to be a relatively intact example of the complete book of Psalms and a copy of Leviticus. Here also five non-biblical works were discovered, with one being identified as a fragmentary copy of the Description of the New Jerusalem (Cross 1958:25-26). Caves 5 and 6 contained only minor finds (Cross 1958:20), while caves 2 and 7 through to 10 revealed a few fragments which indicate that manuscripts had at one time been deposited in them (Cross 1958:22).

Cross (1958:34) maintains that the biblical scrolls found at Qumran span a period of three centuries, with the earliest text dating back to the end of the third century B.C. which is roughly fifty to seventy years before the founding of the Essene community centre (Kesting in ELIS 39, 1985:371). Kesting goes on to conclude that the "founders of the community had brought manuscripts which had been in use for a considerable time

to their retreat near the Dead Sea". Peck suggests that these early manuscripts may have been utilized as copy-texts (1977:10-11).

Non-literary material discovered amongst the cave deposits may have also been part of the original holdings of the library. These included membership rolls, property and financial accounts, receipts and agricultural and craft manuals (Peck 1977:11).

4.1.5.8b Collection accessibility

Peck (1977:10) suggests that the library would have contained "a simple array of shelves or niches ...". Consequently "a very rough classification arrangement would probably have sufficed". Library shelf-lists have been discovered amongst the surviving deposits in the caves (Peck 1977:11).

Cross (1958:20, note 32) points out that the library probably did not store its material in clay jars since not many potsherds had been discovered amongst the scrolls of cave 4.

A considerable amount of duplicate and multiple copies of texts existed in the Qumran collection which indicates that members of the community had access to the holdings with their most popular tastes catered for (Cross 1958:34; Kesting in ELIS 39, 1985:371). For example, the book of Deuteronomy had fourteen copies, Isaiah twelve, the Psalms ten, with the book of the Twelve Prophets appearing in eight copies (Cross 1958:34). Non-theological material was also accessible to the members of the community:

"... with the help of these [texts], and with a view to the treatment of diseases, they make investigations into medicinal roots and the properties of stones". (Josephus The Jewish war 136)

Kesting proposes that the users of the Qumran library will have been "the residents of the monastery and followers of the sect, who temporarily squatted in caves and tents nearby ..." (in ELIS 39, 1985:371) with material being distributed "among members of this self-effacing sect living in the villages of Palestine ..." (in ELIS 39, 1985:372). Cross (1958:18, note 29) believes that the remnants of texts found in the "minor caves" may have been scrolls in private use which were originally "lent out from the main library, so to speak". Conversely, Peck (1977:9) argues that since the scrolls were considered to be

holy articles, these would not have been arbitrarily loaned out to members of the sect. Instead, he suggests that outside use will have been "regulated and communal".

Nevertheless, it is highly likely that the contents of the Qumran library were made available for use in some form since the scriptorium had its own efficient repair centre (Peck 1977:10) as indicated by the careful repair work carried out on texts of Samuel and Isaiah. The library could therefore deal with any contingency resulting from the wear and tear suffered by scrolls through continuous use and handling.

4.1.5.9 The Jerusalem public archive library

The archive occupied a single building "just outside the temple wall, close to the Maccabean palace ..." (Richardson 1963:171). The architectural plan of the building later resembled that of the library of Pergamum (see 4.1.5.7) since Richardson maintains that "an actual influence of this architecture, direct and indirect, was embodied in the buildings of all Palestine from the middle of the second century, and notably in the libraries of the temple and in the Archive" (1963:172). The building housing the archive will have been rebuilt according to this Pergamum design, after the original building was allegedly burnt down during the Maccabean uprising. The revolt began in 167 B.C., when the Jews rose against the Seleucid occupiers and their Hellenized Jewish allies:

"The victors ... next carried their combustibles to the public archives ... The keepers of the Record Office, having fled, they set light to the building". (Josephus Wars II, 427)

4.1.5.9a Collection development

The collection functioned as the archive of the Seleucid and the later Roman administrations (Richardson 1963:171). It would therefore have contained official documents such as tax records; copies of treaties, laws and regulations, deeds documenting the leasing and purchasing of land, local family genealogies and the like.

4.1.5.9b Collection accessibility

In the extract of Josephus quoted above, the historian referred to the collection as "public archives". That the collection was indeed "public" can be gauged later in the same extract (Wars II, 427) where Josephus explains the reason for the destruction of the archive:

"... to destroy the money-lenders' bonds and to prevent the recovery of debts ...".

The archive was therefore open to money-lenders to deposit their "bonds" for safe-keeping and then to retrieve them when required.

Another example of the use of the archives comes from Josephus' Apion (I,31):

"A member of the priestly order must, to beget a family, marry a woman of his own race, without regard to her wealth or other distinctions; but he must investigate her pedigree, obtaining the genealogy from the archives ...".

Both the examples mentioned above require a collection which has been organized to facilitate prompt and efficient access. Since it was a public archive, and judging by the very nature of the material stored, the collection would have been utilized on a regular basis by a wide-range of users. Therefore the catalogues or inventory lists must have been compiled in a simple way indicating the location of the documents contained in the collection. These catalogues, of course, had to be displayed in such a way that potential users would have access to them. Conversely, the library may have been a closed collection, with only the "keepers of the Record Office" as Josephus calls them (Wars II, 427) being able to retrieve the required document for the user.

4.1.5.10 Apellicon of Teos

Athenaeus described Apellicon of Teos as follows:

"... had been made an Athenian citizen and had been a chequered and novelty-seeking career". (Athenaeus V. 214 d-e)

Living at the turn of the second century B.C., Apellicon professed to be a great admirer of the Peripatetic school of philosophy (Canfora 1987:51; Parsons 1952:14; Thompson 1962:29), although that he was a philosopher seems rather dubious. A man of great wealth, he was also an avid book collector (Johnson 1964:49; Parsons 1952:14).

When Mithridates, the king of Pontus, marched on Greece in defiance of Rome, Apellicon allied himself with Aristion, one of Mithridates' allies who had established himself as tyrant in Athens (Canfora 1987:55; Parsons 1952:14). Apellicon was now able to resettle in Athens after initially being forced to flee the city after allegedly stealing documents from the Metroon (see 3.3.6.3) for his private collection.

Apellicon was dispatched by Aristion to secure Delos for the Mithridatic cause. However in 86 B.C., owing to military incompetence, Apellicon was surprised by the Romans and was killed while fleeing after having lost the battle for the island (Canfora 1987:55; Parsons 1952:14). The way to Athens was now open and:

"... immediately after the death of Apellicon, Sulla who had captured Athens carried off Apellicon's library to Rome ...". (Strabo XIII,1.55)

4.1.5.10a Collection development

Apellicon had the distinction of acquiring texts which "the old Hellenistic rulers, with all their wealth, had been unable to obtain" (Canfora 1987:51):

"... their descendants sold them to Apellicon of Teos for a large sum of money, both the books of Aristotle and those of Theophrastus". (Strabo XIII,1.54)

The descendants in question were those of Neleus who had inherited the Lyceum library from Theophrastus (see 4.1.5.1). The acquisition of these texts in roughly 100 B.C. made Apellicon's private library one of the most valuable in the Hellenistic world.

Athenaeus confirms that Apellicon had acquired the Lyceum collection, and goes on to describe the further purchases he made to add to his collection:

"When, for example, he professed the Peripatetic philosophy, he bought up Aristotle's library and many other books (for he was very rich) and began surreptitiously to acquire the original copies of the ancient decrees in the Metroon as well as anything else in other cities which was old and rare". (Athenaeus V,214 d-e)

4.1.5.10b Collection accessibility

The majority of the texts Apellicon had bought from the descendants of Neleus had been damaged and were in poor condition:

"... his [Neleus] heirs, ordinary people ... kept the books locked up and not even carefully stored. But when they heard how zealously the Attalid kings to whom the city was subject were searching for books to build up the library in Pergamum, they

hid the books underground in a kind of trench ... much later ... the books had been damaged by moisture and moths ...". (Strabo XIII,1.54-55)

No doubt the texts Apellicon had purchased were in total disarray. Missing scrolls and gaps in the texts had to be replaced and restored to be made readable and usable again:

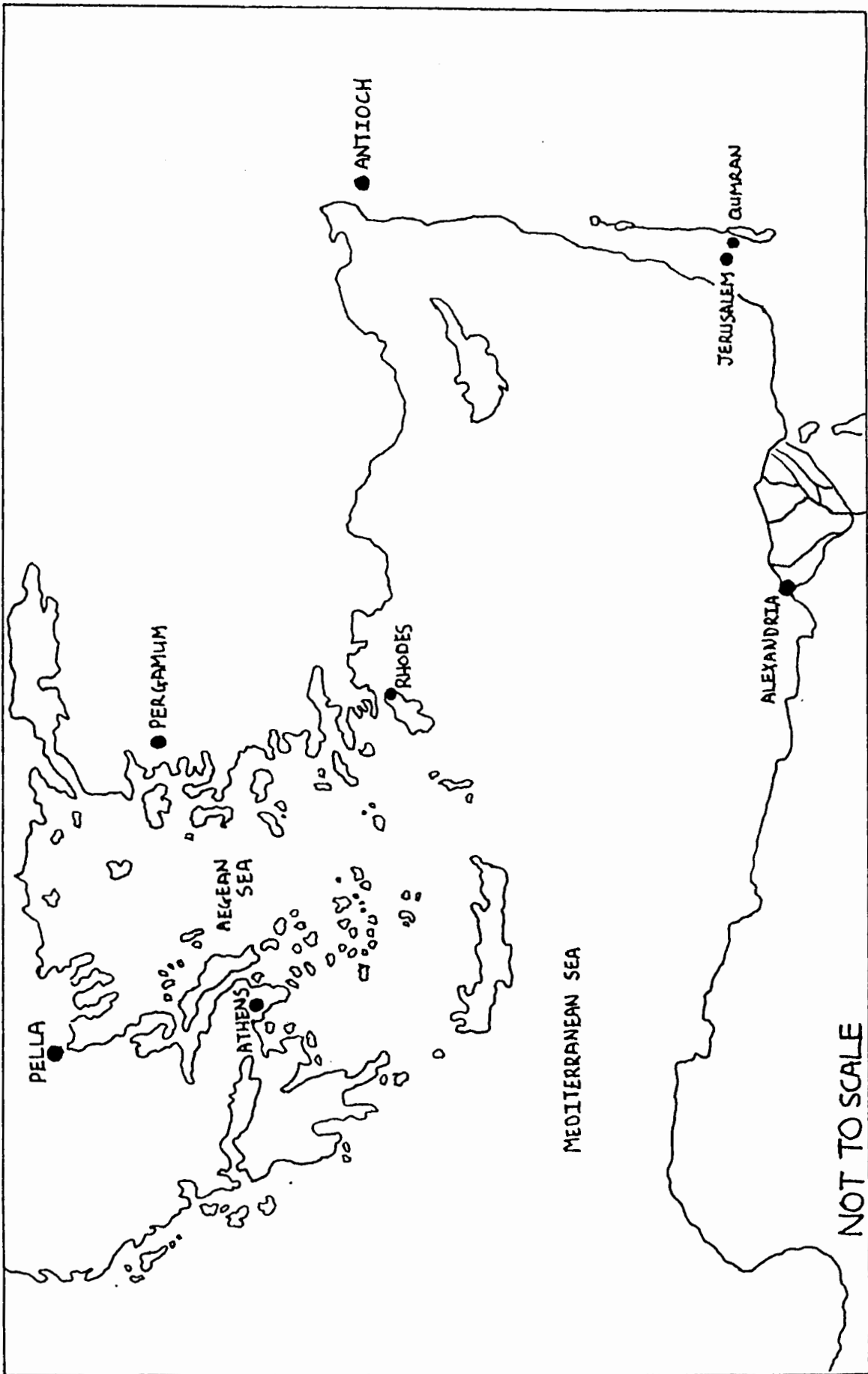
"But Apellicon was a bibliophile rather than a philosopher; and therefore, seeking a restoration of the parts that had been eaten through, he made new copies of the text, filling up the gaps incorrectly and published the books full of errors". (Strabo XIII.1.55)

However, the consequence of his attempts at restoration made the texts even less usable and accessible to the user. The effects of Apellicon's work is well illustrated by the reaction of members of the Lyceum in Athens when he sold them "restored" copies of their venerated master's works:

"... the later school, from the time the books in question appeared, though better able to philosophise and Aristotelise, were forced to call most of their statements probabilities, because of the large numbers of errors". (Strabo XIII,1.55)

As regards the other texts in his collection, they mostly appeared to be official documents of city administrations and the like. Apellicon probably stored them in the same way they were arranged originally, in most cases chronologically and by subject (see 3.3.6.3b).

Map 6: Library Sites of the Age of the Successors



death in 133 B.C. Attalus III bequeathed the kingdom of Pergamum (see 4.1.5.7) in Asia-Minor to Rome, presumably in so doing "to get the best terms for his subjects and to spare them unnecessary bloodshed" CE Vol.3, 1965:201). Next to fall to Rome was the once vast Seleucid empire (see 4.1.5.3) which had declined to such an extent, owing to fragmentation and dynastic in-fighting, that in 64 B.C. Rome refused to recognize the remaining Seleucids as the legitimate heirs to the territory and proclaimed it as a province (Parsons 1952:50). Ptolemaic Egypt (see 4.3.1) was the last Hellenistic kingdom to submit to Rome, initially becoming a Roman protectorate after 168 B.C. and finally being absorbed into the Roman empire as a province in 30 B.C. on the death of Cleopatra - the last of the Ptolemaic dynasty (CE Vol.19, 1965:478).

The Romans recognized their intellectual inferiority when they encountered examples of the highly developed Hellenistic art, literature and scholarship during the course of these conquests (De Vleeschauwer 1967:56-57). The result was a gradual cultural Hellenization of Rome as victorious generals returned from their campaigns with countless Hellenistic cultural artifacts (Johnson 1965:64).

With the addition by 44 B.C. of Spain and Gaul to its now extensive possessions, the rapid transformation of the Roman Republic from city-state to empire was complete. However this was achieved at the cost of tremendous social upheaval within the Republic itself (RDMLK 1978:559). The Republican senate was found to be inadequate in the governing of the newly acquired provinces, and the economy was placed under great strain owing to the many wars and military campaigns that had been undertaken. Furthermore, the large influx of slaves from the captured territories put many peasants and artisans out of work and gave rise to the formation of large estates.

Consequently the power of the Republican senate gradually diminished, making way for the rise of a line of military dictators. The first of these was Sulla, who in 83 B.C. was appointed dictator of the Roman Republic until his voluntary retirement in 79 B.C. The period 79-60 B.C. saw the Republic convulsed by a series of civil wars until the generals Pompey, Crassus and Julius Caesar established a joint dictatorship known as the "First Triumvirate". In 48 B.C. Caesar defeated Pompey and his supporters to assume the

sole-dictatorship until his assassination in 44 B.C. Subsequently the "Second Triumvirate" was formed in 43 B.C. by Mark Antony, Octavian and Lepidus. In 31 B.C. Octavian defeated Antony, his last remaining rival, at the battle of Actium and four years later was declared "Princeps" - effectively emperor, with wide-ranging powers. The era of the Roman Republic had ended.

4.2.2 THE EXTENT OF LITERACY

The Roman education system was based on the Hellenistic model (Scullard 1982:201). Families who could not afford a private tutor sent their children to a primary school, which were generally privately run institutions. Here boys and girls were taught to read, write and count by a *magister ludi*. Secondary school education was available to those children fortunate enough to be able to proceed with their studies. Here a *grammaticus* introduced pupils to Latin literature through the study of works by Ennius, Livius Andronicus and the comic poets. Later, Latin grammar also formed part of the secondary school curriculum.

Tertiary education was devoted almost entirely to the study of Greek rhetoric (Scullard 1982:202). Many young Romans went on to study at Greek "universities" such as the Ptolemaion in Athens (see 4.1.5.5) and the Rhodes gymnasium (see 4.1.5.6). Greek rhetoricians also gave classes in Italy, as this account of Cicero's dating from 62 B.C. indicates:

"In southern Italy at that time [late second century B.C.] the arts and studies of Greece had great vogue, and excited more ardent interest in the towns of Latium also than even today, while here at Rome, too, owing to the rest from civil strife, they were not neglected". *Pro Archia Poeta* III,5)

Children of more affluent families were taught Greek by Greek slaves, thereby ensuring that education became bilingual, especially in the case of "upper class" Romans (Irwin in *ELIS* 1, 1968:404; Scullard 1982:202).

4.2 THE HELLENISTIC LEGACY OF THE ROMAN REPUBLIC

4.2.1 HISTORICAL OVERVIEW

The first Roman settlement on the seven hills on which the future city of Rome was founded has been dated to the first half of the eighth century B.C. (McKay et.al. 1983:145). By the seventh century B.C. a number of communities had established themselves in the region and "came together to found a single city as a centre for trade, religion and government" (RDLMK 1978:558). The Romans and their city were ruled by Etruscan kings who dominated much of the Italian peninsula at that time (McKay et.al. 1983:145).

Towards the end of the sixth century B.C. Etruscan power was on the decline - weakened by continuous internal strife and unsuccessful wars to dislodge the Greek colonies in the south. Taking advantage of the situation, the Romans expelled the Etruscan king Tarquinius Superbus in 509 B.C. and established a republic. During the next two centuries the city of Rome systematically conquered the various peoples of Italy and by 264 B.C. became the master of the entire peninsula (RDMLK 1978:558).

Carthage, situated on the coast of North Africa and the dominant maritime power in the Western Mediterranean at that time, interpreted the newly established Roman hegemony over Italy as an immediate threat to her interests in Sicily. The result was a series of three wars known as the "Punic Wars". The first lasted from 264-241 B.C., the second 218-202 B.C., with the final war in this protracted conflict starting in 149 B.C. and ending three years later in the final destruction of the city of Carthage (McKay et.al. 1983:153).

Rome was initially drawn into the Hellenistic Eastern Mediterranean region when the Antigonids of Macedonia (see 4.1.5.4) allied themselves with the Carthaginians during the Punic Wars (Thompson 1962:27). This first confrontation with a Hellenistic kingdom heralded the beginning of the Roman conquest of the Hellenistic East. The Antigonid king Perseus was defeated at the battle of Pydna in 168 B.C., resulting in Macedonia and the Greek mainland (excluding the Peloponnese) falling under Roman control. On his

4.2.3 LITERARY OUTPUT

Book production in the Republic was dominated by the reproduction of Greek literature with Greek works receiving precedence over Roman productions:

"Greece, the captive, made her savage victor captive and brought the arts into rustic Latium ... Thus the stream of that rude Saturnian measure ran dry and good taste banished the offensive poison; yet for many a year lived on, and still live on, traces of our rustic past. For not till late did the Roman turn his wit to Greek writings and in the peaceful days after the Punic wars he began to ask what service Sophocles could render, and Thespis and Aeschylus. He also made essay, whether he could reproduce in worthy style, and took pride in his success, being gifted with spirit and vigour; for he has some tragic inspiration, and is happy in his ventures, but in ignorance, deeming it disgraceful, hesitates to blot". (Horace Epistles II,1.156)

With a continuous flow into Rome of manuscripts and library collections from the newly acquired territories in the Hellenistic East, Canfora (1987:57) notes that "book collecting had become all the rage among the Roman plutocracy" (see 4.2.4). To exploit the huge demand for Greek texts, booksellers flooded the market "with a torrent of copies, made by third-rate copyists" (Canfora 1987:57).

It was not long before Latin works began to appear in the Roman book markets. Scullard (1982:192-193) explains the development of an indigenous literature as follows: "Early Latin literature had been born under the inspiration of Greek, starting with translation from the Greek classics, then imitating them, and finally, still under their spell, developing into a national literature".

Amongst early Latin writers were composers of epic poetry (see 3.3.4.1), a genre described as "the most enduring form of poetry at Rome" (OCCL 1937:161). A "developed form" of epic poetry was introduced into Rome by Livius Andronicus (died 204 B.C.) with his translation of the Odyssey. Amongst the first original Latin works was a poem composed by Naevius (died 199 B.C.) on the Punic Wars. Another noteworthy epic work was produced by Ennius (died 169 B.C.) in the form of a history of Rome (OCCL 1937:161).

Livius Andronicus was also responsible for one of the earliest examples of Latin lyric poetry (see 3.3.4.1), while Laevius, Catullus and Horace were active lyric writers in the first century B.C. (OCCL 1937:252).

The development of Roman comedy is believed to have been influenced by various elements originating from within the Italian peninsula. These elements include Etrurian mimetic dances, Fescennine dialogue, Atellan farce and the medley (OCCL 1937:117). In the third century B.C. Livius Andronicus introduced the first Greek comedy into Rome. Naevius, and later Plautus (died 184 B.C.), Caecilius (c.219-c.166 B.C.) and Terence (c.185 - after 160 B.C.) amongst others, adapted the Greek comedy to produce original Latin works. So popular had Roman comedy become during the Republican period that comedy writers were rated in specially compiled "merit lists". In one such list Caecilius was rated first, Plautus second, Naevius third while Terence was placed sixth (OCCL 1937:117). One of the most prolific comedy writers was L. Africanus (born c.150 B.C.) who was responsible for forty-four works (Scullard 1982:194).

Roman tragedy was also adapted from Greek forms, which had been introduced by Livius Andronicus. Naevius was the first to produce Latin tragedies with a Roman theme (OCCL 1937:435-436). Other writers include Ennius, Pacuvius (died 130 B.C.) and Accius (c.170-85 B.C.) - the latter being responsible for over forty dramas (Scullard 1982:193).

Roman histories in Latin were first produced in the second century B.C. Cato the Censor (234-149 B.C.) wrote a complete history until his own day. L. Calpurnius Piso completed a similar work. In roughly 123 B.C. an official publication published by the Pontifex Maximus known as the Annales Maximi contained material provided by the Tabulae Pontificum in eighty books. Between 123 B.C. and 78 B.C. a further five major histories were written, including that of Valerius which extended over seventy-five books. Greeks interned in Rome also produced Roman histories, those of Polybius (c.200-c.118 B.C.) and Posidonius (c.135-51/50 B.C.) being the most noteworthy (Scullard 1982:196-198).

Biographies, memoirs and autobiographies featured strongly in the literary output of the late Republican era. Public figures such as Q. Catulus, Rutilius Rufus, Aemilius Scaurus

and Sulla compiled their own memoirs. Cornelius Nepos wrote an extensive biographical work in which he compared the lives of prominent Greeks and Romans. He also produced individual biographies of Cicero and Cato the Censor. Atticus, a friend of Cicero's (see 4.2.5.6), produced a chronology of Roman history which included genealogical tables of famous Roman families (Scullard 1982:198).

A substantial amount of literary output emanated from private literary circles (Scullard 1982:195). Poems and other works were written by individuals to be exchanged between friends. An example of this practice comes from Cicero who sent a steady stream of texts to his friend Atticus:

"I will send you the bits of speeches you ask for and some more too, as you find some interest in things which I write to satisfy young admirers ... I will see that you have the whole corpus; and since both my writing and my achievements interest you, you will see from them what I have done and what I have written or else you should not have asked for them: I was not the one to obtrude them". (Cicero Ad Att. II.1)

Copies of the poems of Catullus (c.84-c.54 B.C.), of which 116 have survived (Scullard 1982:195) no doubt were circulated amongst a circle of friends in a similar manner.

Roman writers also produced original works written in Greek exclusively for a Greek audience. For example, early histories dealing with the Punic Wars were written in Greek "to justify and explain Roman policy to the Greek world" (Scullard 1982:196-197). In the same letter quoted above, Cicero expressed the hope that Atticus would promote his Greek works amongst potential Greek readers (see 4.2.5.2).

4.2.4 LIBRARIANSHIP IN THE ROMAN REPUBLIC

Early Roman librarianship was dominated by archival collections attached to various temples, commercial concerns and the Republican administrations (Kesting 1986:221). This was a reflection of Roman society which up till then was governed by "a passion for order [and] bureaucracy ..." (Kesting in ELIS 39, 1985:377). The historian Pliny (A.D.23/24-79), when discussing the activities of the early Romans, referred to the existence of state archives:

"The archive-rooms were kept filled with books of records and with written memorials of official careers". Natural History XXXV,ii.7)

The archive Pliny is referring to may be that which was attached to the temple of Moneta, the goddess of memory. Here the names and "official actions" of magistrates were recorded in a series of books known as the Libri Magistratum and were preserved in the temple which was situated on the Capitol Hill (Johnson 1965:64). The eighty volume Annales Maximi (or Annales Pontificum) containing historical chronologies (see 4.2.3) was stored in an archive which formed part of the official residence of the *Pontifex Maximus* or Chief Priest (Johnson 1965:64). Roman temples also accumulated book collections to aid in the training of priests. The holdings mostly contained formal religious manuscripts and were stored in the temple sanctuary (Johnson 1965:65).

It was only after the Romans were exposed to Hellenistic culture during their conquests in the Eastern Mediterranean that literature collections began to appear in the Roman Republic (Kesting 1986:221; PRE Vol.3, 1899:415). Johnson (1965:64) sees Roman librarianship in general as "a direct inheritance from those of Greece, in types, organization, and contents ... This cultural inheritance was a part of the general succession of the Roman world over that of classical Greece". Thompson points out that as the Romans proceeded to add one Hellenistic kingdom after another to their now vast expanding empire (see 4.2.1), "physical manifestations of Greek culture were visible to the eyes of the Roman conquerors, and in areas such as sculpture, painting, and book production there was no reason to change existing forms. The same applied to libraries" (in ELIS 26, 1979:19-20).

Consequently, the first libraries of the Roman Republic containing literature collections were acquired as spoils of war by victorious generals (Hessel 1975:6; Johnson 1965:64; Kesting 1986:221; Thompson 1962:28; Thompson, L.S. in ELIS 26, 1979:20; Vorstius 1954:8) such as Aemilius Paulus (see 4.2.5.1) who captured the Pella royal library (see 4.1.5.4) and Sulla (see 4.2.5.4) who claimed the valuable collection of Apellicon of Teos (see 4.1.5.10). Indeed, an intense rivalry existed amongst Roman soldiers and generals in the accumulation of the most valuable book collections (PRE Vol.3, 1899:415).

By the first century B.C. the exposure to Hellenism had resulted in the emergence of a new class of Roman intelligentsia (De Vleeschauwer 1967:58). Stimulated by the

achievements of Hellenistic scholarship Roman intellectuals such as Atticus (see 4.2.5.6), Cicero (see 4.2.5.5) and Varro (see 4.2.5.3) began to accumulate large literature collections containing texts in both Latin and Greek. Numerous other scholars, especially physicians and lawyers, also "built up sizeable libraries" (Johnson 1965:68). From being purely Hellenistic libraries transplanted to Rome, Roman private collections now began to take on a character of their own (De Vleeschauwer 1967:57; Wendel in Milkau 1955:111) or more precisely as Bruce (1985:90) concludes "the Romans were always conscious of Greek conventions, nonetheless their innovative ideas and particular social values inevitably led to new library concepts and features".

Private libraries were not only limited to scholars. The abundance of manuscripts available in the book markets resulted in libraries becoming status symbols of the wealthy (Irwin in ELIS 1, 1968:404), a practice which aroused criticism from Seneca (c.55 B.C.-A.D. 37/41):

"What excuse have you to offer for a man who seeks to have bookcases of citrus-wood and ivory, who collects the works of unknown or discredited authors and sits yawning in the midst of so many thousand books, who gets most of his pleasure from the outsides of volumes and their titles? Consequently it is in the houses of the laziest men that you will see a full collection of orations and history with the boxes filled right up to the ceiling; for by now among cold baths and hot baths a library also is equipped as a necessary ornament of a great house. I would readily pardon these men if they were led astray by their excessive zeal for learning. But as it is, these collections of the works of sacred genius with all the portraits that adorn them are brought for show and a decoration of their walls". (De Tranquillitate Animi IX.4-7)

The concept of a state sponsored public library emerged during the dictatorship of Julius Caesar (49-44 B.C.) but was only realized in 39 B.C. (see 4.2.5.8). The absence in Rome of large state libraries can simply be explained by the fact that "they were not considered necessary" (Bruce 1985:102). The state public library can therefore be seen as a development of the many large private collections existing in Rome and its surrounding centres at that time (Kesting 1986:221).

4.2.4.1 Architectural layout

During the Republican era no elaborate library buildings had been constructed (Wendel in Milkau 1955:88) since most libraries were private collections and housed in villas (De Vleeschauwer 1967:58; Irwin in ELIS 1, 1968:404). The extent of library storage facilities within a private home would be decided by the size of the collection and the wealth of the owner (Johnson 1965:75). A small collection could simply be stored in a wooden box, while a larger collection will have been housed in a separate chamber.

This library chamber, usually 15 by 23 feet in size (Johnson 1965:75), would serve as both storage facility and reading room. Scrolls were stored in wooden containers known as "amaria" (Irwin 1964:87) which were roughly three feet high and five feet wide and were either built into the walls of the chamber or remained as separate "movable pieces of furniture" (Johnson 1965:75-76). Irwin (1964:87) notes that amaria "were normally surmounted by portrait busts with inscriptions". Desks and works of art such as statues made up the remaining furnishings of the library chamber (Johnson 1965:75).

Not much architectural evidence has remained of Republican archive libraries. Temple collections no doubt were stored in chambers within the temple complex, while administrative and commercial collections may have been housed in chambers similar to those of private villa libraries.

The library chamber itself would be constructed in such a way as to allow for the maximum exploitation of sunlight:

"... there will be natural seemliness if light is taken from the east for ... libraries ...".
(Vitruvius I,2.7)

4.2.4.2 Library personnel

While temple libraries and the state archives were the responsibility of the resident priests and officials respectively, the larger private libraries were administered by educated Greek slaves and freedmen (Johnson 1965:76; Vorstius 1954:8). Their tasks

included the organization of the collection, copying and the repairing of texts (see 4.2.5.3b).

4.2.4.3 Collection development and accessibility

Since the majority of libraries during the Republican era were private collections, their holdings would have contained works that were available in the book-markets and for copying through loan from other collectors (see 4.2.3). The personal literary preferences of the owner or his specialization as a scholar would decide the nature of his collection.

Individual scrolls were secured with a string, with more valuable manuscripts being wrapped in a linen cloth and placed in envelopes of leather or parchment. The scrolls were then placed for storage in the *armaria* which were divided into shelves by vertical and horizontal planking. The contents of an *armarium* were identified by a medallion placed above it. In a large collection, individual *armaria* would aid in maintaining subject division by containing works pertaining to one specific subject only, for example the collected works of a particular author, school of philosophy or religious cult (Johnson 1965:75-77).

Two types of catalogues were used to facilitate easy access to collections (Johnson 1965:77). No doubt the most common type in use was the shelf-list, which listed the contents of the collection in the same order as they were arranged in storage. The more sophisticated bibliographical catalogue listed works by author. Titles or the opening words of texts contained in the collection would be arranged below the name of the author responsible for the work or works. The number of lines that made up a complete work and biographical information about the author were also supplied. Most of these biographical catalogues will have been adapted versions of the original Hellenistic catalogues. Larger collections brought to Rome as spoils of war will have come complete with their own catalogues. Nevertheless, it was not long before the Romans produced their own bibliographies, an example of which is the *Index Philosophorum* (Parsons 1952:206), probably first compiled at the end of the Republican period.

Owners of private libraries made the contents of their collections available to scholars and friends while the holdings of public archives and public libraries (see 4.2.5.8b) were "apparently circulated to influential people, if not to the ordinary borrower ..." (Johnson 1965:75).

4.2.5 ANALYSES OF INDIVIDUAL LIBRARIES

4.2.5.1 Aemilius paulus

In 168 B.C. after the battle of Pydna:

"Aemilius Paulus was the first who brought large quantities of books to Rome after he defeated Perses, king of Macedonia ...". (Isidorus Etymologiarum VI,V.I)

Consequently the library that Aemilius Paulus established in Rome with the collection of Perseus (see 4.1.5.4) has been described as the "first notable Roman library" (Johnson 1965:65) and "the first library, public or private, in Rome" (Kesting 1986:221). Aemilius Paulus has been characterized as symbolizing "the union of Roman tradition with Hellenism, cultured yet conservative, a fine soldier and just administrator ..." (OCD 1970:792) and his interest in Greek culture and academics (Wendel in Milkau 1955:111) was one of the reasons for claiming the holdings of the Pella royal library:

"It was only the books of the king that he allowed his sons, who were devoted to learning, to choose out for themselves ...". (Plutarch Aemilius Paulus XXVIII.6)

Polybius, the Greek historian who later was to write a history of Rome, was at the same time taken back to Rome as a political hostage (Radice [comp] 1971:200) and served as tutor to the two sons of Aemilius Paulus (Irwin in ELIS 1, 1968:404).

Aemilius Paulus died in 160 B.C. and his library was passed on to his sons, the younger of whom was Scipio (184-129 B.C.) who conquered Carthage in the third Punic War (Radice [comp] 1971:215; Thompson 1962:28).

4.2.5.1a Collection development

The collection was made up of the original holdings of the Pella royal library (see 4.1.5.4a) and therefore would have provided a comprehensive coverage of Hellenistic

history, philosophy and poetry. Valuable Aristotelian manuscripts would also have been included.

4.2.5.1b Collection accessibility

Catalogues that had originally been compiled when the collection had been housed in the royal library of Pella will have been brought back to Rome along with the rest of the holdings. Once in Rome the library would have been reorganized to enable the sons of Aemilius Paulus to use it effectively in their Greek studies and education.

4.2.5.2 Lucullus

At one time a Roman Senator, Lucullus (c.117-55 B.C.) enjoyed a successful military career (Radice [comp] 1971:156). He was also an intellectual:

"He was fond of all philosophy, and well-disposed and friendly towards every school, but from the first he cherished a particular and zealous love for the Academy ...".
(Plutarch Lucullus XLII.1-2)

It comes with no surprise therefore that he returned from his campaigns in the Hellenistic East with "great quantities of books ..." (Johnson 1965:65). These included numerous temple and private collections (Kesting 1986:221), the most noteworthy of which was the library of King Mithridates of Pontus in Asia Minor:

"Aemilius Paulus was the first who brought large quantities of books ... then Lucullus carried the loot from Pontus ...". (Isidorus Etymologiarum VI,V.1)

In 64 B.C. Lucullus retired to his estate in Tusculum where his by now extensive library was housed (Irwin in ELIS 1, 1968:404; Wendel in Milkau 1955:112). Here the last ten years of his life were spent in "sybaritic luxury" (Radice [comp] 1971:156) with Lucullus enjoying the vast wealth he had accumulated during his campaigns (Wendel in Milkau 1955:112).

On his death in 55 B.C. the library was passed on to his youngest son who later became involved in Caesar's assassination. After the battle of Philippi in 42 B.C. during which the main perpetrators involved in the assassination were defeated by Antony and Octavian

(Scullard 1982:160-161), the Lucullan estate was ransacked with the contents of the library scattered (Wendel in Milkau 1955:113).

4.2.5.2a Collection development

Since the collection of Mithridates formed a major proportion of the Lucullan library holdings, detailed medical texts will have formed part of it, as Pliny noted the following about Mithridates:

"He then, with his brilliant intellect and civil interests, was an especially diligent student of medicine, and collected detailed knowledge from all his subjects, who comprised a great part of the world, leaving among his private possessions a bookcase of these treatises ...". (Natural History XXV,iii.6-7)

Mithridates also had a great interest in Greek literature and he collected large amounts of texts dealing with poetry, history and rhetoric (Wendel in Milkau 1955:94). All these fell into the hands of Lucullus.

With philosophy being the special interest of Lucullus, he would have accumulated a vast philosophic literature from the various libraries he came across on his campaigns (Wendel in Milkau 1955:112-113).

4.2.5.2b Collection accessibility

Evidence suggests that the library of Lucullus took on the guise of a public library:

"His libraries were thrown open to all, and the cloisters surrounding them, and the study rooms, were accessible without restriction to the Greeks, who constantly repaired thither as to an hostelry of the Muses, and spend the day with one another, in glad escape from their other occupations. Lucullus himself also often spent his leisure hours there with them, walking about in the cloisters with their scholars, and he would assist their statesmen in whatever they desired". (Plutarch Lucullus XLII,1-2)

Subject catalogues such as the Index Tragicorum were drawn up (Parsons 1952:206) and a passage from Cicero points to the existence of one for philosophy:

"I was down at my place at Tusculum, and wanted to consult some books from the young Lucullus, so I went to his country-house, as I was in the habit of doing, to help myself to the volume I needed. On my arrival, seated in the library I found Marcus Cato; I had not known he was there. He was surrounded by piles of books on Stoicism; for he possessed, as you are aware, a voracious appetite for reading ...". (Cicero De Fin. III,7)

4.2.5.3 Varro

Described as the "greatest scholar of the Roman Republic" (Radice [comp] 1971:245), Marcus Terentius Varro was born in 116 B.C. and was educated in Rome and Athens. He specialized in philology (Hessel 1955:6) and philosophy (Kesting in ELIS 39, 1985:377). Through his studies he became acquainted with Atticus (De Vleeschauwer 1967:59), who no doubt provided much of the material for his private library (see 4.2.5.6).

He achieved the rank of praetor and in 49 B.C. joined the Pompeian cause. He attempted to secure Spain for Pompey but was defeated and captured by Caesar. After the fall of the Pompeian faction Varro was pardoned and Caesar, recognizing his talent and reputation as a bibliophile, appointed him librarian of the proposed first Roman public library (see 4.2.5.8) in 47 B.C. (OCD 1970:1107; Radice [comp] 1971:245). Three years later, after initial delays, the project was shelved owing to Caesar's assassination. In the political turmoil that followed, Varro was outlawed by Antony and narrowly escaped with his life (OCD 1970:1107). He suffered great personal losses, including the works he had written and collected:

"... a considerable number were destroyed when his library was plundered, at the time of the proscription". (Aulus Gellius III,10.17)

At the conclusion of the civil wars Varro was permitted to return to Rome to continue his studies (Irwin 1964:76-77; (OCD 1970:1107). Amongst the works he produced was a treatise on library theory entitled De Bibliothecis (De Vleeschauwer 1967:59; Weimann 1975:27). He died in 27 B.C. at the age of eighty-nine.

4.2.5.3a Collection development

In addition to numerous manuscripts on philosophy and philology written by both Greek and Roman scholars, Varro's collection also contained a large number of his own works:

"Then he [Varro] adds ... that he has entered upon the twelfth hebdomad of his age, and that up to that day he has completed seventy hebdomads of books ...". (Aulus Gellius III,10.16-17)

From this passage it is estimated that Varro edited 490 books by the time he was seventy-eight years old (OCD 1970:1107-1108), and it has been suggested that he was

responsible for a total of seventy-four works comprising 620 books (Rolfe 1961:272, note 3).

These works include an encyclopaedia of the liberal arts, forty-one volumes on antiquities, a three volume work concerning agriculture and twenty-five books covering various aspects of the Latin language (Radice [comp] 1971:245).

4.2.5.3b Collection accessibility

Parts of a catalogue of Varro's works have been recorded by Jerome (OCD 1970:1108; Rolfe 1961:272, note 3).

It can be assumed that since Varro had compiled a detailed study on library theory, he would have employed all the known methods of bibliographic control to organize and administer his collection.

4.2.5.4 Sulla

Sulla was born to a patrician family in 138 B.C. By 88 B.C. he was elected to the consulship after distinguishing himself as an able leader on the battlefield. That year he was appointed by the senate to take command in the war against Mithridates. His appointment, however, was disputed by the veteran general and politician Marius. In an unprecedented move Sulla responded by marching the army he had gathered for the campaign on to Rome and routed the Marian faction, after which he proceeded with his mission against Mithridates (CE Vol.21, 1965:620). In 86 B.C., after capturing Athens, a Mithridatic stronghold:

"... Sulla ... carried off Apellicon's library to Rome ...". (Strabo XIII,1.55)

Sulla installed this collection (see 4.1.5.10) in his country-estate at Cumae (De Vleeschauer 1967:57; Wendel in Milkau 1955:112). Because he preserved this library with its valuable manuscripts, Davison concludes that Sulla "had at least some feeling for literature ..." (1962:227).

was however, recalled to Rome one year later (CE Vol.6, 1965:422-423). During the civil wars, Cicero supported the Pompeian faction and after Pompey's defeat was pardoned by Caesar. In the aftermath of Caesar's assassination he became a vehement opponent of Antony in a bid to have the Republic restored. However this led to his downfall, and in 43 B.C. he was put to death by Octavian and Antony (Radice [comp] 1971:89).

Cicero was one of Rome's leading intellectuals and besides his many political and legal speeches, he wrote numerous works on philosophy and oratory (Radice [comp] 1971: 89). He was an ardent book collector and his libraries were spread over his residences in Rome and his seven villas in the Campagna (De Vleeschauwer 1967:59) - an area situated in the immediate vicinity of the city of Rome. On his exile in 58 B.C., his mansion in Rome and his country homes were ransacked, resulting in the almost complete destruction of his book collections. What had remained of his libraries was gathered at his residence in Antium on his return. Here Tyrannion (see 4.2.5.7) helped to reorganize the manuscripts which formed part of a still substantially large library collection (De Vleeschauwer 1967:59; Wendel in Milkau 1955:114). The bulk of Cicero's book collections seems to have originally been housed at Antium, as borne out by a letter he wrote to Atticus dated April 59 B.C.:

"... I ... enjoy myself with my books, of which I have a jolly good lot at Antium ...".
(Cicero Ad Att. II.6)

The fate of Cicero's library at Antium is unknown. Wendel suggests that it was moved at a later date to the villa of Hortensius which was situated on an island in the Astura River (in Milkau 1955:114-115).

4.2.5.5a Collection development

De Vleeschauwer comments that Cicero's book collection had to be enormous to be spread over his various landed estates (1967:58). Cicero was able to increase his library holdings with material supplied by numerous sources. No doubt his most important supplier was Atticus (see 4.2.5.6) and the following request in a letter Cicero wrote to him in 45 B.C. must have been one of many:

"Please send me Dicaearchus' two books About the Soul and the Descent. I can't find the Mixed Constitution and the letter he sent to Aristonexus. I should much like to

On his return to Rome in 83 B.C., Sulla found that a member of the Marian faction, L. Cornelius Cinna, had held the consulship successively for the years 87-84 B.C. (CE Vol.21, 1965:620), although Marius himself had died in 86 B.C. (Scullard 1982: xii). Sulla once again defeated the Marians in the "Battle of the Colline Gate" just outside the city of Rome (CE Vol.21, 1965:620). This decisive victory brought the protracted civil war to an end, with Sulla assuming the dictatorship of the Republic in 82 B.C.

After introducing "sweeping changes in the constitution and the jury system in order to give more power to the senate and create an efficient administration" (Radice [comp] 1971:229) Sulla relinquished the dictatorship in 79 B.C. (CE Vol.21, 1965:620). He retired to his estate at Cumae, where he died one year later.

He left the library to his son Faustus Cornelius Sulla (Johnson 1965:65), who later was forced to auction the collection owing to financial difficulties (Wendel in Milkau 1955:112). Cicero (see 4.2.5.5a) and Asinius Pollio (see 4.2.5.8a) were to have purchased parts of the collection.

4.2.5.4a Collection development

The manuscripts and texts collected by Apellicon of Teos made up a large proportion of Sulla's library holdings:

"... and [Sulla] seized for himself the library of Apellicon of Teos, in which were most of the treatises of Aristotle and Theophrastus, at that time not yet well known to the public". (Plutarch Sulla XXVI,1)

Thompson (1962:29) points out that Apellicon's collection would have also contained the library of Speusippus which Aristotle had bought for three talents and placed in the Lyceum library (see 3.3.6.7a).

During the conquest of Athens Sulla also removed various other collections, including that of the orator Demosthenes (384-322 B.C.):

"... collect and keep all those manuscripts of Demosthenes that the orator wrote with his own hand, and those of Thucydides that were found to be copied, likewise by Demosthenes eight times over, and even all the books that Sulla sent from Athens to Italy". (Lucian Ad. indoct. 4)

4.2.5.4b Collection accessibility

Initially Sulla personally organized the collection once it had been installed in his residence at Cumae (Wendel in Milkau 1955:112). Sometime after Sulla's death in 78 B.C., while the library still belonged to the Sullan family, the Greek scholar Tyrannion (see 4.2.5.7) assisted in organizing the collection:

"... it is said that after the library was carried to Rome, Tyrannion the grammarian arranged most of the works in it ...". (Plutarch Sulla XXVI,1-2)

Amongst other things, Tyrannion probably updated the catalogues as numerous manuscripts may have been lost during the shipment to Rome from Athens. Canfora maintains that Sulla made the library available for use of only a "few intimates" and goes on to state that "Sulla's personal librarian was charged with unrolling these scrolls so that his master's visitors could examine them, and he would remain to keep an eye on them should they wish to copy a passage" (1987:56). The "personal librarian" Canfora refers to was probably a slave who served as caretaker of the library while the "few intimates" were no doubt scholars eager to gain access to this valuable collection (Johnson 1965:65). Indeed, the collection was on occasion utilized by Cicero (De Vleeschauwer 1967:58; Wendel in Milkau 1955:112) and the Greek scholar Andronicus (see 4.2.5.7b):

"... Andronicus of Rhodes was furnished by him [Tyrannion] with copies of them ...". (Plutarch Sulla XXVI,1-2)

Later the collection appears to have been made accessible to a wider group of users since Strabo, in discussing the use of the Sullan collection, mentions that:

"... also certain booksellers who used bad copyists ... would collate the texts - a thing that also takes place in the case of the other books that are copied for selling, both here [Rome] and at Alexandria". (Strabo XIII,1.55)

4.2.5.5 Cicero

Marcus Tullius Cicero was born in 106 B.C. and received his education in Rome and Athens. He went on to become a leading political figure and "the greatest orator of his day" (Radice [comp] 1971:88). In 63 B.C. he became consul and was the major force behind the suppression of the Catiline conspiracy. However in 58 B.C. he fell victim to a newly introduced law which exiled anyone who had "executed a Roman citizen without the authority of the assembly of the Roman people". Owing to the loss of Roman lives under his authority during Catiline's bid for power, Cicero was exiled to Thessalonica. He

have those three books now; they would bear on what I am planning ...". (Cicero Ad Att. XIII.32)

Donations and gifts greatly added to the size and value of Cicero's library holdings. For example, he acquired the collection of the grammarian Servius Claudius through his friendship with L. Papinius Paetus, the half-brother of the scholar (Wendel in Milkau 1955:114). After the death of Servius Claudius, Cicero informed Atticus in 60 B.C. that Paetus had donated the collection to him:

"Paetus, as I have already mentioned, has given me the books left him by his brother; but this gift depends on your kind services. As you love me, see that they are preserved and brought to me. You could do me no greater favour. And I should like the Latin books kept as well as the Greek. I shall count them a present from yourself". (Cicero Ad Att. II.1)

Auctions also provided opportunities for Cicero to add to his collection. In this way in 55 B.C. he allegedly acquired parts of the library of Sulla (see 4.2.5.4) when Faustus Cornelius Sulla, who had inherited the collection, was forced to sell it to settle his debts (Wendel in Milkau 1955:112).

Cicero's library therefore was large and varied, containing a large proportion of the works produced through the ages by Roman, Hellenistic and Greek scholarship. His library enabled Cicero to compile his own works through analysis of conflicting sources concerning a particular subject:

"At writing my soul rebels utterly. The geographical work I had planned is a big undertaking. Eratosthenes, whom I had taken as my authority, is severely criticized by Scapaeion and Hipparchus". (Cicero Ad Att. II.6)

4.2.5.5b Collection accessibility

An indication of the organizational procedures that Cicero adopted to ensure easy access to his library comes from after his exile with the reorganization of his collection at Antium. In 56 B.C. Cicero made the following request in a letter to Atticus:

"I shall be delighted if you can pay me a visit. You will be surprised at Tyrannio's excellent arrangement in my library. What is left of it is much better than I expected: still I should be glad if you would send me two of your library slaves to Tyrannio to employ to glue pages together and assist in general, and would tell them to get some bits of parchment to make title pieces which I think you Greeks call 'sillybi'. That is only if it is convenient to you". (Cicero Ad Att. IV.49)

The "title pieces" Cicero refers to above were labels (σιλλυβοι) attached to individual scrolls (Thompson in ELIS 36, 1983:93). Cicero later expressed his satisfaction at the work carried out by Tyrannion and the two slaves:

"Since Tyrannio has arranged my books, the house seems to have acquired a soul: and your Dionysius and Menophilus were of extraordinary service. Nothing could be more charming than those bookcases of yours now that the books are adorned with title slips". (Cicero Ad Att. IV.8)

The bookcases Cicero mentions above were probably armaria donated by Atticus after his homes were ransacked with his exile in 58 B.C. In another letter to Atticus, Cicero again expressed his appreciation:

"Your men have beautified my library by binding the books and affixing title-slips. Please thank them". (Cicero Ad Att. IV.5)

Catalogues, the special arrangement of the collection by armaria, identification labels and the repair of scrolls and texts were all employed to ensure efficient utilization and accessibility to Cicero's library.

4.2.5.6 Atticus

Born in 110 B.C. into a noble family, Titus Pomponius Atticus was later adopted by a rich uncle whose wealth he inherited. In 85 B.C. he left Rome to settle in Athens where he stayed until the mid-sixties B.C. Here he studied the Epicurean philosophy and established a thriving business in the book trade (OCD 1970:146), with which he "dared even to compete with the Alexandrian book trade" (Hessel 1955:6). Hessel goes on to note that Varro (see 4.2.5.3) was a member of his staff (all of whom were educated in philology) employed to run his business.

Atticus was a close friend of Cicero (see 4.2.5.5) since childhood (OCD 1970:146) and the letters which Cicero sent to Atticus that have been preserved provide various insights into the Roman book trade and librarianship in general. Not only did Atticus provide Cicero with numerous manuscripts, but many modern scholars believe he acted as a publisher (Bruce 1985:102; Hessel 1955:6). An extract from one of Cicero's letters to Atticus does seem to indicate that Atticus did distribute copies of Cicero's works:

"On the first of June I met your boy as I was on my way to Antium ... He delivered your letter, and a memorial of my consulship written in Greek. I felt very glad that I gave L. Cossinius the book. I had written in Greek on the same subject to take to you some time ago. For, if I had read yours first you would say that I had plagiarized from you. You scanned it through, as you tell me in another letter, at Corcyra, before you had received it from Cossinius, I suppose. If you like the book you will see to it that Athens and other Greek towns have it in stock; for I think it may add some lustre to my achievements". (Cicero Ad Att. II.1)

The library of Atticus was housed in his mansion on the Quirinal (Wendel in Milkau 1955:115). Its extensive holdings (see 4.2.5.6a) enabled Atticus to compile and write numerous historical works, the most well-known being the Liber Annalis which was a chronological table of the world with emphasis on Roman history (OCD 1970:146).

Atticus died in 32 B.C., committing suicide after he contracted an "incurable illness" (OCD 1970:146).

4.2.5.6a Collection development

The library of Atticus contained original manuscripts and high quality copies (PRE Vol.3, 1899:416) and totalled roughly 20 000 scrolls (Johnson 1965:69). He accumulated most of his works through his involvement in the book trade, making copies of originals available for purchase (De Vleeschauwer 1967:58). He also received manuscripts as gifts and donations from scholars such as Cicero:

"Catulus and Lucullus I believe you have already. I have added new prefaces to the books, in which each of them is mentioned with honour. These compositions I would like you to have, and there are some others too". (Cicero Ad Att. XIII.32)

An indication of the value of the collection, with its precious and carefully selected texts covering a wide range of subjects, was given by Cicero:

"Keep your books and don't despair of my making them mine some day. If I ever do, I shall be the richest of millionaires and shan't envy any man his manors and meadows". (Cicero Ad Att. I,4)

4.2.5.6b Collection accessibility

The collection was administered by slaves, two of whom Atticus sent to Cicero to help reorganize his collection for him (see 4.2.5.5b). Title slips identified the contents of the

scrolls, and in all probability these were recorded in elaborate and efficient catalogues drawn up by experienced Greek slaves.

Atticus placed his library at the disposal of his friends. The most regular user once again appears to have been Cicero (De Vleeschauer 1967:58-59), who had the privilege of having manuscripts he required being sent to him while he was away at his country-estates (Wendel in Milkau 1955:115). He even had access to the collection while Atticus himself was away:

"Cicero to Atticus, Greetings, ... Would you please write home telling them to give me the run of your books, more especially of Varro, just as though you were there? I shall have to use some passage from those books for the works I have in hand, which I hope will meet with your hearty approval". (Cicero Add Att. IV.14)

However, seeing that the collection was so well organized and administered by a specialized staff, it can be supposed that the collection was open to a wider range of users - mostly Atticus' friends and acquaintances no doubt.

4.2.5.7 Tyrannion

A Greek scholar, Tyrannion was taken captive on the island of Rhodes by Lucullus (see 4.2.5.2) and brought to Rome as a prisoner of war in 72 B.C. After his release he established himself as a teacher in the city (Johnson 1965:76; OCD 1970:1101). He soon gained a reputation as a "serious scholar and a bibliophile" (Canfora 1987:56) and wrote works on metre and grammar as well as numerous criticisms and exegeses (OCD 1970:1101). He became well known in Roman intellectual circles and befriended men such as Atticus, Cicero and Caesar.

Sometime in the sixties B.C. Tyrannion was informed of the existence of the Sullan library with its valuable collection of original Peripatetic manuscripts (Wendel in Milkau 1955:61). This he helped organize (see 4.2.5.4b) and later assisted Cicero in arranging his book collection at Antium (see 4.2.5.5b).

Tyrannion became very wealthy through his dealings in the book trade (Johnson 1965:76). He died towards the end of the first century B.C.

4.2.5.7a Collection development

The library of Tyrannion contained roughly 30 000 scrolls (De Vleeschauwer 1967:58; PRE Vol.3, 1899:416; Wendel in Milkau 1955:110). The most noteworthy works contained in the collection were the texts of Aristotle which had originally formed part of the collection of Apellicon of Teos:

"... Sulla ... carried off Apellicon's library to Rome, where Tyrannion the grammarian, who was fond of Aristotle, got it in his hands by paying court to the librarian ...".
(Strabo XIII,1.55)

It is believed that Tyrannion had either bought the collection (De Vleeschauwer 1967:59) or had obtained the scrolls on loan to make copies (Canfora 1987:57; Wendel in Milkau 1955:61). The latter hypothesis is more probable.

The remainder of the collection was made up of various Greek and Latin manuscripts acquired through the book trade or exchange with fellow intellectuals.

4.2.5.7b Collection accessibility

Besides arranging his own vast collection as he had Cicero's (see 4.2.5.5b), Tyrannion attempted to edit and restore the texts of Aristotle and Theophrastus (Canfora 1987:57). The manuscripts had been inherited by Neleus (see 4.1.5.1) and were damaged when his descendants had stored them underground. Apellicon's attempts at restoration after he had purchased them only compounded the damage (see 4.1.5.10b).

However, it was not long before Tyrannion "lost heart and gave up" (Canfora 1987:57). Subsequently he entrusted the whole project to Andronicus of Rhodes, who was the head of the Lyceum school in Athens at the time, allowing him access to the copies in his own collection as well as to the originals in the Sullan library. In this way the Lyceum once again owned the true works of Aristotle (Wendel in Milkau 1955:61), albeit in a corrected form (see 4.1.5.1).

4.2.5.8 The Roman public library

Julius Caesar (102-44 B.C.) was the first to contemplate the establishment of a public library in the city of Rome:

"In particular, for the adornment and convenience of the city, also for the protection and extension of the Empire, he formed more projects and more extensive ones every day ... to open to the public the greatest possible libraries of Greek and Latin books, assigning to Marcus Varro [see 4.2.5.3] the charge of procuring and classifying them ... All these enterprises and plans were cut short by his death". (Suetonius Caesar XLIV)

The inspiration for this endeavour was provided by the RAL which Caesar had visited during his sojourn in Egypt in 48/47 B.C. (De Vleeschauwer 1967:59-60; Johnson 1965:66; Kesting in ELIS 39, 1985:377; Weimann 1975:32). It has been suggested that Caesar attempted to transplant a large proportion of the RAL holdings to Rome to form the basis of the proposed new public library collection (Hessel 1955:6; Irwin in ELIS 1, 1968:403; White 1914:xxxii). However, several scholars claim that this project was thwarted owing to a fire which destroyed the manuscripts awaiting shipment during the so-called Alexandrine War (see 4.3.7).

Caesar's ambition to establish a public library in Rome was finally realized a few years later by Gaius Asinius Pollio (76 B.C.- A.D. 5). A successful general, Asinius Pollio sided with Caesar and Antony during the civil wars (Radice [comp] 1971:70) and was elected consul in 40 B.C. (Thompson 1962:30). In his youth he studied in Athens (Thompson 1962:30) and was a close friend of the Roman poets Horace, Catullus and Virgil (Irwin 1964:77). As a writer he was responsible for numerous tragedies, poems and orations as well as a history known as the Historiae which covered Roman history from 60 B.C. to the battle of Philippi in 42 B.C. (OCD 1970:852).

Described as an "intimate" friend of Caesar's (Hessel 1955:6), Asinius Pollio took it upon himself to revive Caesar's original plans for the founding of a public library (De Vleeschauwer 1967:60; Thompson in ELIS 26, 1979:21; Wendel in Milkau 1955:119). The wealth and manuscripts accumulated on his final victorious Parthian campaign in 39 B.C. enabled Asinius Pollio finally to establish the public library in the city of Rome (Irwin 1964:77; OCD 1970:852; PRE Vol.3, 1899:417). He was also able to purchase further book collections for use in the library (Johnson 1965:66). De Vleeschauwer argues that in establishing the first public library, Asinius Pollio was able to promote his own literary works and those of other writers amongst the general populace. Furthermore, the texts

of original works would be protected and their authenticity guaranteed with the placing of original texts into the library holdings. In this way Asinius Pollio was able to dominate the literary output in Rome, or as De Vleeschauwer put it, achieve a "soort van literêre diktatorskap in Rome ..." (1967:60).

The library was established sometime between 39 and 33 B.C. (Irwin 1964:78) in the Atrium Libertatis situated near the Forum on the Aventine Hill (Thompson 1962:30; Thompson L.S. in ELIS 26, 1979:21; Vorstius 1954:8; Weimann 1975:32; Wendel in Milkau 1955:119) and was known as "the library of the Temple of Liberty" (Kesting 1986:221). This is confirmed by Ovid:

"Nor did Liberty allow me to touch her halls, the first that were opened to learned books". (Tristia III,1.71-72)

Johnson notes that originally the building had housed a public archive and that this was incorporated into the new public library (1965:66).

The library contained numerous busts and statues of famous poets and scholars with Pliny commenting:

"In the library founded at Rome by Asinius Pollio ... the only statue of a living person erected was that of Marcus Varro ...". (Natural History VII.115)

Irwin (1964:77) suggests that the presence of this representation of Varro in the library may have served to indicate that Asinius Pollio had established the library "to fulfil Varro's abandoned scheme", or that Varro had made substantial contributions to the holdings of the library. It has been proposed that Varro may even have been its first librarian (Radice [comp] 1971:70).

Nothing is known about the subsequent history of the library (Thompson in ELIS 26, 1979:21; Wendel in Milkau 1955:119) although De Vleeschauwer suggests that it may have formed part of a new library established by the Emperor Vespasian in the Templum Pacis in A.D. 71 (1967:60).

4.2.5.8a Collection development

The library holdings were made up of Greek and Latin works (Thompson 1962:30, Thompson L.S. in ELIS 26, 1979:21; Vorstius 1954:8). These included texts of most of

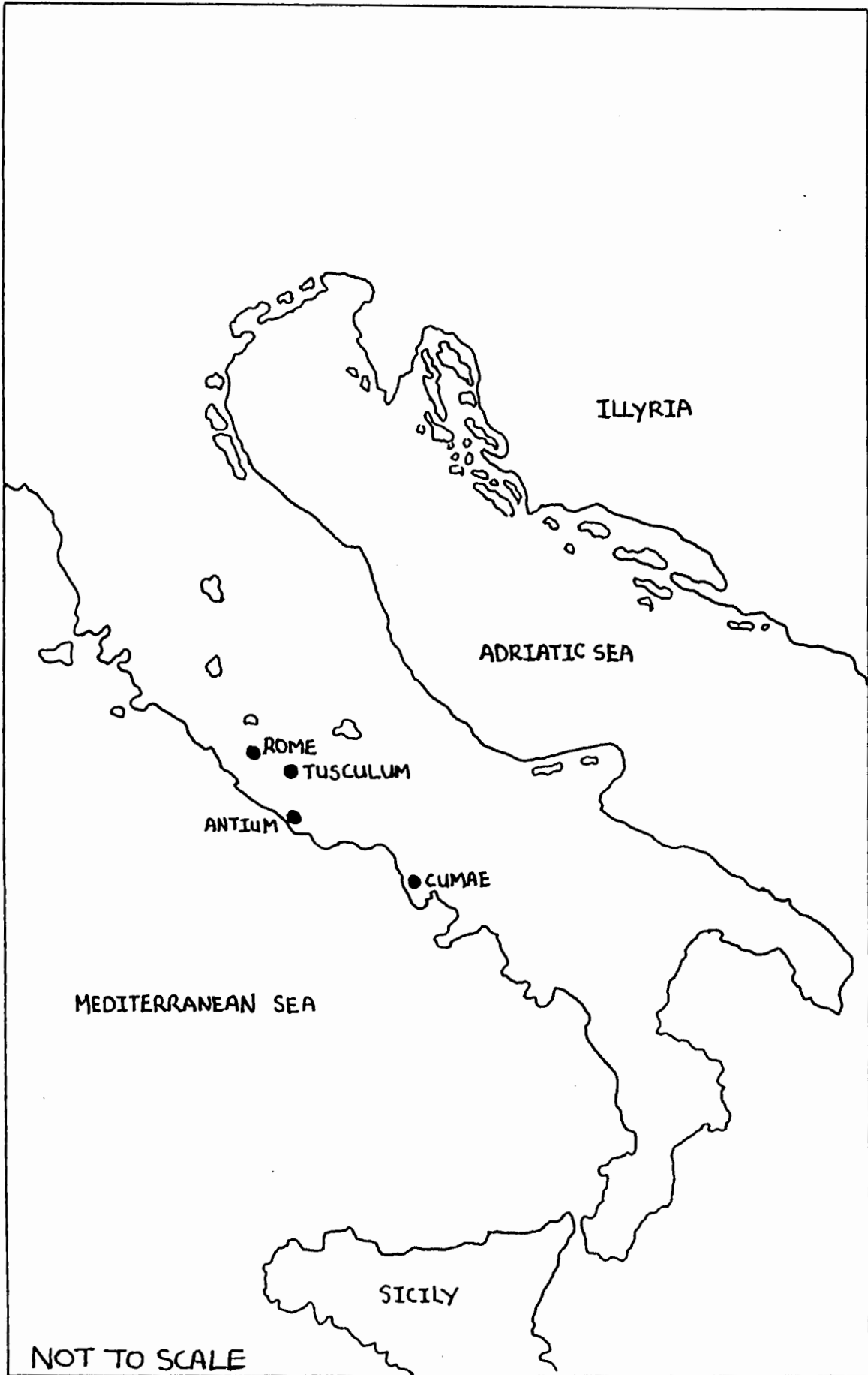
the Latin writers active at the time as well as Asinius Pollio's own works since the library acted as a repository for original manuscripts (see 4.2.5.8). It has been suggested that the collections of Varro and remnants of Sulla's library (see 4.2.5.4a) were added to the collection (Johnson 1965:66; Kesting 1986:221). The latter was acquired probably by auction, since Cicero managed to buy a large proportion of Sulla's collection in this way (see 4.2.5.5a). Archival material was also contained.

4.2.5.8b Collection accessibility

"At Rome ... Asinius Pollio ... by founding a library made works of genius the property of the public". (Pliny Natural History XXXV,2.10)

Pliny's statement presupposes that the library holdings were organized to allow easy access for the general populace. Simple yet efficient retrieval aids and methods were implemented, such as prominently displayed catalogues, shelf-lists, signs demarcating the subject divisions of the collection and individual amaria, as well as scroll identification labels.

Map 7: Library Sites of the Roman Republic



4.3 THE ROYAL ALEXANDRIAN LIBRARY

4.3.1 HISTORICAL OVERVIEW

After capturing the eastern Mediterranean port-city of Tyre in 332 B.C., Alexander the Great advanced unopposed into Egypt (White 1914:ix) which was at the time under Persian occupation (see 2.2.1). The Persian governor surrendered without offering resistance. On his return from Memphis, which he had visited to pay homage to the Egyptian deities, Alexander founded the city of Alexandria "on the coast of the western Delta previously occupied by the native village of Rhacotis ..." (CE Vol.8, 1965:642):

"He [Alexander] was therefore filled with eagerness to get to work, and himself marked out the ground plan of the city ...". (Arrian Anabasis III,1.5)

The founding of the city occurred on the "twenty-fifth of Tybi", which has been dated to 20 January 331 B.C. (Parsons 1952:54, note 1).

The layout of the city followed a rectangular pattern with "broad straight streets intersecting at right angles ..." (Parsons 1952:54, note 3). The city was divided into three "ethnic regions" (Parsons 1952:56) or suburbs - the original Egyptian quarter known as the Rhacotis, a Jewish quarter and the Brucheion, housing the Macedonian-Greek ruling class (De Vleeschauwer 1967:44). The Brucheion also contained the public buildings of the city including administrative offices, commercial businesses and theatres (Parsons 1952:56).

Alexandria soon grew in "imperial magnificence", being "lavishly embellished by almost every ruler of the Ptolemaic line" (Parsons 1952:55). The reasons for the rapid development of Alexandria into one of the most important centres of the Hellenistic world can be easily identified:

"Among the happy advantages of the city, the greatest is the fact that this is the only place in all Egypt which is by nature well situated with reference to both things - both to commerce by sea, on account of the good harbours, and to commerce by land, because the river easily conveys and brings together everything into a place so situated - the greatest emporium in the inhabited world". (Strabo XVII, 798)

The death of Alexander in 323 B.C. heralded the dissolution of his vast empire (see 4.1.1). Ptolemy, one of Alexander's generals, laid claim to Egypt. After beating off the other Successors in the power struggle that followed, Ptolemy assumed the title of king in 305 B.C., adopting the city of Alexandria as the royal seat of a dynasty that was to rule Egypt for almost three hundred years.

The Ptolemaic dynasty was recognized by the native Egyptian population as the successor of the pharaohs and at its height ruled an empire which included Egypt, Cyprus, southern Syria and Cyrene (CE Vol.19, 1965:478). With long periods of peace and the accumulation of enormous wealth through trade (Wendel in Milkau 1955:62), the reign of the Ptolemies was marked by "commercial prosperity and cultural grandeur ..." (Parsons 1952:x).

However, already by the late third century B.C. the power of the Ptolemies began to weaken. In 217 B.C. the native population had to be conscripted to stave off the on-going threat posed by the Seleucids from the east. Consequently the local Egyptians began to participate more fully in administration and policy decisions. In 168 B.C. an alliance was established with Rome to defeat the invading Seleucid king Antiochus IV. As a result Ptolemaic Egypt took on more and more the guise of a Roman protectorate.

With the advent of the civil wars in Rome, Egypt "became a pawn in the game of Roman politics ..." (CE Vol.19, 1965:478). As Rome's chief source of grain, the various opposing factions in the civil wars attempted to coax Ptolemaic Egypt into their sphere of influence. Consequently Cleopatra, the last Ptolemaic ruler of Egypt, became the mistress of Julius Caesar (see 4.3.7) and later of Mark Antony. In 30 B.C., after both Cleopatra and Mark Antony had committed suicide, the latter's rival, Octavian, incorporated Egypt into the Roman empire as a province.

4.3.2 THE FOUNDING

Having proclaimed himself king and adopting the title Soter (saviour), Ptolemy I attempted to justify and legitimize his claim as Alexander the Great's true successor (see

4.1.1). A way to achieve this was to emphasize the newly established Ptolemaic dynasty's links to Alexander himself. Apart from being related to Alexander (Kesting in ELIS 39, 1985:375), Ptolemy traced his descent through Alexander's father Philip, and encouraged "the story that Philip had been his real father ..." (Canfora 1987:17). Furthermore, since Aristotle's father had been Philip's personal physician and Aristotle himself had been tutor to the young Alexander, this continuity with the royal house of Macedon could be strengthened by attracting Peripatetic scholars to his court. In this way the prestige and status of Alexandria would further be enhanced with the presence of outstanding and well-known intellectuals.

Amongst the scholars Ptolemy invited to his court was Theophrastus, the head of the Lyceum and successor of Aristotle (see 4.1.5.1):

"... Ptolemy made overtures to him [Theophrastus]". (Diogenes Laertius V.37)

Theophrastus, however, declined the invitation (De Vleeschauwer 1967:44). Stilpo was another scholar who was approached:

"Ptolemy Soter, they say, made much of him, and when he had got possession of Megara, offered him a sum of money and invited him to return with him to Egypt. But Stilpo would only accept a very moderate sum, and he declined the proposed journey ...". (Diogenes Laertius II,115)

Nevertheless, many scholars took up Ptolemy I's offer. Amongst these were Hecateus, who went on to write a history of Egypt; the philosopher and dialectician Diodorus of Caria; Strato, pupil and future successor of Theophrastus as head of the Lyceum; the mathematician Euclid; Herophilus the physician who specialized in anatomy and physiology and the philosophers Theodorus and Hegesias of Cyrene (White 1914:x). Sometime between 307 and 290 B.C. (Parsons 1952:132, note 6), although more generally accepted as 297 B.C. (Irwin in ELIS 1, 1968:402; Parsons 1952:132) or 296 B.C. (De Vleeschauwer 1967:44; Wendel in Milkau 1955:64), Demetrius of Phaleron also established himself at Ptolemy's court:

"Hermippus tells us that upon the death of Cassander, being in fear of Antigonos, he [Demetrius of Phaleron] fled to Ptolemy Soter. There he spent a considerable time and advised Ptolemy ...". (Diogenes Laertius V.78)

Similarly, Plutarch records that:

"For Demetrius was after his banishment first among the friends of Ptolemy at Alexandria ...". (On exile 601f)

Demetrius was born in Phaleron, one of the regions of Athens, sometime between 354 and 348 B.C. and "received the liberal education of an Athenian youth of the upper class" (Parsons 1952:124). He attended the Lyceum at Athens and was a pupil of Theophrastus. By 317 B.C. Demetrius had established himself as a public orator, a "distinguished Peripatetic philosopher and all-round man of letters ..." (White 1914:x-xi, note 5). That year he was appointed governor of Athens by Cassander, the son of Antipater who was one of Alexander's generals attempting to gain control of the Greek-Macedonian mainland. The administration of Demetrius, which was marked by "moderation and considerable success" (Parsons 1952:126), ended in 307 B.C. when the Antigonids led by Demetrius Poliorcetes captured Athens. Demetrius was subsequently exiled to Thebes (Parsons 1952:125-130) from where he later went to Alexandria as reported by Diogenes Laertius and Plutarch in the extracts quoted above.

With the arrival of Demetrius in Alexandria, Ptolemy I not only had an experienced statesman present at his court, but also a learned scholar and intellectual:

"... the distinguished Demetrius of Phalerum, the most elegant, to my thinking, of all that school, and others like them". (Cicero De Oratore II.95)

"In the number of his works and their total length in lines he has surpassed almost all contemporary Peripatetics. For in learning versatility he has no equal". (Diogenes Laertius V.80)

Ptolemy I, no doubt recognizing his talents, appointed Demetrius as his personal aide and counsellor. It was in this position that Demetrius was able to suggest to Ptolemy I the establishment of a mouseion in Alexandria, together with a library to complement its activities (Canfora 1987:18; Davison 1962:225,227; DKP Vol.1, 1964:892; Irwin in ELIS 1, 1968:402; Johnson 1965:51-52; Parsons 1952:xi, 92; PRE Vol.3, 1899:410; Wendel in Milkau 1955:64; White 1914:x). It no doubt proved a very feasible proposition as Ptolemy I certainly possessed the financial resources required and a large number of scholars were already assembled at the time in Alexandria. The fact that the institution was referred to as the "Mouseion" is an indication of Demetrius of Phaleron's influence in its founding, since he, as a scholar educated in the Peripatetic tradition, would have first come across

the concept during his student days at the Lyceum in Athens (De Vleeschauwer 1967:45; Parsons 1952:135).

The founding of the Royal Alexandrian Library (RAL) therefore occurred sometime between 300 and 290 B.C. (Parsons 1952:89). Richardson (1963:160-161), however, suggests that the Mouseion and the RAL may have been founded before the reign of Ptolemy I "under the direct advice of Aristotle and in his lifetime". He bases this hypothesis on the fact that Alexandria was founded in 331 B.C. and that Aristotle died in 322 B.C. This may be true, but the majority of ancient sources do not support Richardson's hypothesis. Furthermore, as De Vleeschauwer and Wright point out, the idea of a vast library the size of the RAL could not have originated solely from the "modest library of Aristotle" and the Lyceum (in Rawski 1973:95-96). In addition, Davison (1962:225) notes that Aristotle had died "before Ptolemy Soter was firmly enough established in his kingdom to start thinking of founding a great research institute ...".

A number of sources suggest that the RAL was established during the reign of Ptolemy II Philadelphus (285-246 B.C.):

"When the most erudite of the Ptolemies, whom they surname Philadelphus, the most deeply versed in all literature, was emulating Peisistratus in his interest in libraries ... he, on the advice of Demetrius of Phaleron, the most noted grammarian of the time, whom he had appointed the keeper of the library ...". (Tertullian Apologetics XVIII.5)

Vitruvius proposes that the Attalid dynasty (ruled 280-133 B.C.) provided the motivation for the founding of the RAL, again by inference implying that Ptolemy II Philadelphus was the founder:

"The Attalid kings impelled by their delight in literature, established for general perusal a fine library at Pergamum. Then Ptolemy, moved by unbounded jealousy and avaricious desire, strove with no less industry to establish a library at Alexandria after the same fashion". (Vitruvius On architecture VII, Preface 4)

However, Ptolemy II Philadelphus had banished Demetrius from the royal court immediately after his succession to the throne. As Diogenes Laertius explains, Demetrius had advised Ptolemy I to name as his successor one of Philadelphus' half-brothers:

"... he [Demetrius of Phaleron] ... advised Ptolemy ... to invest with sovereign power his children by Eurydice. To this Ptolemy would not agree, but bestowed the diadem on his son by Berenice, who, after Ptolemy's death, thought fit to detain Demetrius as a prisoner in the country until decision should be taken concerning him. There he lived in great dejection, and somehow, in his sleep, received an asp-bite on the hand which proved fatal - he is buried in the district of Busiris near Diospolis". (Diogenes Laertius V,78)

Ptolemy II reigned as co-regent with his father from 285 B.C. until the latter died in 282 B.C. It was in that year that Ptolemy II exiled Demetrius and shortly afterwards had him murdered (Canfora 1987:19; Parsons 1952:114). Parsons goes on to conclude that "Demetrius and Ptolemy, the son of Soter, were naturally opposed and could hardly have been associated in this great intellectual movement ..." (1952:137).

Because Ptolemy II Philadelphus was very active in enlarging the library holdings during his reign (see 4.3.5.1), many sources have wrongly credited him with the founding of the RAL (Davison 1962:225; Johnson 1965:52; Parsons 1952:91-92; Weimann 1975:30; White 1914:x-xi, note 5). However Von Graberg argues that no ancient source directly ascribes the founding of the RAL to Ptolemy I Soter or Demetrius of Phaleron and appears therefore to be in agreement with Vorstius (1954:6) that the RAL was founded by Ptolemy II Philadelphus (1974:295, note 3).

It must be remembered that Ptolemy I Soter himself was a man of letters. As a member of Macedonian Lagid noble family he had received a good education (Kesting in ELIS 39, 1955:375; Wendel in Milkau 1955:63) and later went on to produce a history covering the campaigns of Alexander (White 1914:ix). With his background and knowledge of Greek literature and the large financial resources at his disposal, it would have been a logical step for Ptolemy I Soter to authorize the establishment of a Mouseion and the RAL, whether on the advice of Demetrius of Phaleron or not.

4.3.3 ARCHITECTURAL LAYOUT

Strabo (c.64/3 B.C. - c.A.D.21) had visited Alexandria and described the Mouseion complex as follows:

"The Museum is also a part of the royal palaces, it has a public walk, an Exedra with seats and a large house in which is the common mess-hall of the men of learning who share the Museum". (Strabo XVII. 793-794)

The exedra was a large lecture chamber while the "large house" or "mess-hall" was made up of:

"Spacious exedras within three porticoes with seats, where philosophers, rhetoricians and all others who take delight in studies can engage in disputation". (Vitruvius On architecture V,11.2)

That Strabo made no mention of a separate library building leads Holmes to argue that "it seems sensible to conclude that the library was not only part of the intellectual community of the Mouseion but also housed in it" (1980:288). Holmes goes on to describe the RAL as made up of "abundant courtyards and stoas which could have served as reading rooms while bookstacks and administration could have been accommodated in rooms attached to the stoa". Canfora (1987:141) concurs with this hypothesis and sees the RAL "as consisting of all the bookshelves located in the Museum precincts". This is in part confirmed by Vitruvius who mentions that the RAL librarian Aristophanes (see 4.3.4.4):

"... relying upon his memory produced a large number of papyrus rolls from certain bookcases ...". (On architecture VII, Preface 7)

Conversely Parsons (1952:71) suggests that the RAL was contained in a building set aside exclusively for the library, although it was "architecturally harmonious, indeed forming an integral part of the vast pile ...". This library building was made up of ten halls in which were stored the library holdings and were also "used by the scholars for general research, although there were smaller separate rooms for individuals or groups engaged in special studies". The structure that constituted the RAL was connected by means of "a covered marble colonnade" to the Mouseion proper.

Since the Mouseion formed part of the royal palace complex as stated by Strabo (XVII. 793), the RAL was situated in the Brucheion quarter of Alexandria. It can therefore be assumed that a library was originally seen as an integral part of the Mouseion when the idea of establishing a mouseion was first mooted (Holmes 1980:287).

4.3.4 LIBRARY PERSONNEL

Amongst the hoard of papyri found at the site of the ancient city of Oxyrhynchus in 1914, was a papyrus fragment inscribed with various lists of persons, including that of the "librarians" of the RAL (Parsons 1952:153-154; Vorstius 1954:6; Wendel in Milkau 1955:73-74). Parsons explains that the papyrus was divided into six columns, with the list of the alleged librarians starting at the end of column one and continuing into column two. Unfortunately the names in column one are indecipherable since that part of the papyrus has been mutilated, but those in column two have been preserved for roughly 20½ lines. Parsons (1952:154) reproduced the list as follows:

"... the son of Sillius, of Alexandria called the Rhodian, disciple of Callimachus; he was also the teacher of the first king. He was succeeded by Eratosthenes, after whom came Aristophanes son of Apelles of Byzantium and Aristarchus. Then Apollonius of Alexandria called the Eidograph, and after him Aristarchus son of Aristarchus of Alexandria, originally of Samothrace; he was also the teacher of the children of Philopator. After him Cydas of the bodyguard (or of the Spearmen). After under the ninth king there flourished Ammonius, Zenodotus, Diocles and Apollodorus, the grammarian ...".

Modern scholarship has attempted to use this information as the basis for drawing up a chronological list of successive head librarians of the RAL. Although the Papyrus supplied no dates of office, it is generally believed that Aristarchus of Samothrace was the last distinguished scholar to hold the post, with his term of office ending sometime after 145 B.C. during the reign of Ptolemy VII Physcon (145-116 B.C.) who banished numerous scholars from Alexandria (see 4.3.4.3):

"I say, then, a rejuvenation of all culture was again brought about in the reign of the seventh Ptolemy who ruled over Egypt, the king who received from the Alexandrians appropriately the name of Malefactor. For he murdered many of the Alexandrians; not a few he sent into exile, and filled the islands and towns with men who had grown up with his brother philologists, philosophers, mathematicians, and many other men of skill in their profession. And so they, reduced by poverty to teaching what they knew, instructed many distinguished men". (Athenaeus IV, 184c)

It has been suggested that Cydas, whom the Papyrus lists as succeeding Aristarchus, was an army officer appointed by Ptolemy VII Physcon in order to ensure that the Mouseion and its remaining scholars remained under his control (Parsons 1952:160; Wendel in Milkau 1955:75). Holmes (1980:289) concludes that after 145 B.C. "the library went

somewhat into obscurity as the librarians were no longer leading intellectual figures and practising critics in every Hellenistic sense of the word".

Indeed, it appears that some of the later Ptolemies appointed their personal favourites to the office of head librarian. For example in 88 B.C., Ptolemy X Soter II gave the post to Onesander of Cyprus because he had constructed a temple in his homeland to honour the Ptolemaic king (Wendel in Milkau 1955:75). Johnson however, places Onesander's tenure as head librarian between 100 and 89 B.C. (1965:53). Wendel goes on to point out that Ptolemy X's successor, Ptolemy XI Auletes (81-52 B.C.) entrusted the position to the scholar Ammonias, thereby restoring the reputation of the institution somewhat.

Attempts have been made at identifying the names that had been lost with the mutilation of the first column of the Oxyrhynchos Papyrus. The Suida names Zenodotus of Ephesus as head librarian (Wendel in Milkau 1955:73) with Apollonius of Rhodes (see 4.3.4.2) fitting the description of the librarian mentioned in the first line of the second column of the Papyrus viz. "The son of Sillius, of Alexandria called the Rhodian, disciple of Callimachus ...". It has been suggested that Callimachus of Cyrene (see 4.3.4.5), the same one mentioned in the line of the Papyrus just quoted, may also have been head librarian:

"... Callimachus, a man of the court and royal librarian, who also wrote the titles for several volumes". (Tsetses The Plautine Scholium)

If this was indeed the case, then Apollonius of Rhodes would have succeeded Callimachus as head librarian. Parsons therefore concludes that "anyone had the equal right to say that towards the end of column one the following names were found: Zenodotus-Callimachus or the names of Demetrios-Zenodotus-Callimachus" (1952:154).

From the available evidence tentative chronological lists of the RAL head librarians have been drawn up. Two examples are listed below, with the dates of office as proposed by Johnson (1965:53) and Parsons (1952:160) represented in the left-hand column and those of Holmes (1980:289) on the right:

Demetrius of Phaleron (? - 282 B.C.)		
Zenodotus of Ephesus (282 - c.260)	(c.285 - 270)	
Callimachus of Cyrene (c.260 - c.240)		
Apollonius of Rhodes (c.240 - c.230)	(c.270 - 245)	
Eratosthenes of Cyrene	(c.230 - 195)	(245 - 204/1)

Aristophanes of Byzantium	(195 - 180)	(204/01-189/86)
Apollonius the Eidograph	(180 - c.160)	(c.189/86-175)
Aristarchus of Samothrace	(c.160 - 131)	(c.175? - 145)

Wendel (in Milkau 1955:74-75) draws attention to the argument that Apollonius of Rhodes and Apollonius the Eidograph may have been confused by the compiler of the Oxyrhynchos Papyrus and were in fact the same person. This would necessitate a change in the sequence of the librarians as follows:

Zenodotus of Ephesus
 Callimachus of Cyrene (?)
 Eratosthenes of Cyrene
 Apollonius the Eidograph
 Aristophanes of Byzantium
 Aristarchus of Samothrace

However Parsons maintains that placing Apollonius after Eratosthenes would make him too old to have become head librarian (1952:149).

As can be seen the Oxyrhynchos Papyrus has caused much confusion in scholarly circles and has raised numerous historical and chronological problems in the compilation of the list of RAL head librarians. Wendel concedes that the Papyrus cannot be used as a reliable source (in Milkau 1955:74), while Parsons sees it as a "scrap of papyrus ... full of errors, and probably the innocent if not careless jotting of some student, without research, for his own convenience, never expecting that in some two millennia scholars would by it correct all their previous views" (1952:156).

Although the names of the RAL and the Mouseion appear nowhere on the Oxyrhynchos Papyrus (Parsons 1952:154) there is no doubt that the scholars mentioned therein contributed in some way to the functioning of the RAL. This they did as librarians proper, research librarians, library assistants, and, in some cases, as head librarians as the following individual analyses will show.

4.3.4.1 Alexander of Aetolia

Born in 315 B.C., Alexander of Aetolia gained a reputation as a poet and grammarian and was active in Alexandria during the reign of Ptolemy II Philadelphus. While in Alexandria:

"Alexander of Aetolia ... at the request of King Ptolemy, Philadelphus by surname ... gathered together the poetical books of Greek authorship and arranged them in order ...". (Tzetzes The Plautine Scholium)

The Scholium goes on to record that Alexander of Aetolia was assigned the tragedies. In undertaking this project Alexander was involved in organizing part of the RAL library holdings. It is assumed therefore that he was a library assistant (Parsons 1952:139).

Alexander later settled in Pella at the court of the Antigonids (see 4.1.5.4) after leaving the Ptolemaic capital in 276 B.C. (Parsons 1952:139).

4.3.4.2 Apollonius of Rhodes

It was only with the discovery of the Oxyrhynchos Papyrus that speculation arose over the issue of Apollonius of Rhodes having held the post of head librarian of the RAL (see 4.3.4).

A former pupil of Callimachus (see 4.3.4.5), Apollonius was a native Alexandrian and at some stage left the city to settle on the island of Rhodes. Canfora (1987:44) suggests that he was head librarian until the death of Ptolemy II Philadelphus in 246 B.C. and left Alexandria during the reign of Ptolemy III Euergetes in order to retire to Rhodes. Conversely, Parsons argues that Apollonius had settled on Rhodes before he had become head librarian, being driven from Alexandria by the "powerful strongly entrenched hierarchy of scholars that ruled the Alexandrian Museum and Library ...". Parsons goes on to propose that it was during the reign of Ptolemy III Euergetes (247-221 B.C.) that he returned or was recalled to Alexandria to become "the librarian of the Alexandrian Library, succeeding Callimachus on his death" (1952:147). Owing to these chronological problems Dziatzko does not consider Apollonius as having held the post (in PRE Vol.3, 1899:412).

4.3.4.3 Aristarchus of Samothrace

Ammianus Marcellinus records that:

"... the district called Bruchion ... had long been the abode of distinguished men. From there came Aristarchus, eminent in thorny problems of grammatical lore ...". (XXII, 15-16)

Probably because of his specialization as a grammarian, Aristarchus was assigned to reorganize the RAL's collection of the works of Homer:

"... after the care of Pisistratus and diligence of Ptolemy, Aristarchus attended still more carefully to the perfecting of the collection of Homer ...". (Tzetzes The Plautine Scholium)

This task Aristarchus performed under Ptolemy Philometor, whose reign extended from 181 to 146 B.C. (PRE Vol.3, 1899:412; Rolfe 1963:305, note 2), although Parsons suggests that he was only driven out of Alexandria in 131/130 B.C. during the reign of Ptolemy VII Physcon (1952:151-152). During his stay in Alexandria Aristarchus achieved the rank of head librarian of the RAL and his departure not only marked the end of "the line of the known great librarians" (Parsons 1952:152) but also the end of the developmental phase of the RAL (PRE Vol.3, 1899:412).

After his exile, Aristarchus spent his final days on the island of Cyprus where he died by starving himself to death after "suffering from an incurable dropsy" (Parsons 1952:152).

4.3.4.4 Aristophanes of Byzantium

An account related by Vitruvius gives the impression that Aristophanes of Byzantium was appointed head librarian of the RAL quite by chance after being afforded the opportunity to display his ability to manage the RAL collection:

"When the arrangements were completed, and the games were at hand, learned judges had to be chosen to examine the competitions. When the king had chosen six persons from the city and could not quickly find a seventh person suitable, he consulted the governors of the library whether they knew anyone prepared for such a duty. They gave the name of Aristophanes, who read each book in the library systematically day by day with comprehensive ardour and diligence ... Amid a general silence he [Aristophanes] informed them that only one of the competitors was a true poet; the others recited borrowed work, whereas the judges had to deal with original compositions not with plagiaries. The assembly were surprised and the king was doubtful. Aristophanes relying upon his memory produced a large number of papyrus

rolls from certain bookcases, and comparing these with what had been recited he compelled the authors to confess they were thieves. The king then ordered them to be brought to trial for theft. They were condemned and dismissed in disgrace, while Aristophanes was raised to high office and became librarian". (Vitruvius On architecture VII. Preface 7)

Aristophanes was born in c.257 B.C. and emigrated to Alexandria as a youngster with his father who was a professional soldier (White 1914:xviii). He studied under the scholars Callimachus, Eratosthenes (Parsons 1952:149) and possibly Zenodotus (Thompson in ELIS 36, 1983:15) all of whom were closely connected with the RAL. Aristophanes specialized in philology (White 1914:xix) and was responsible for a large output of academic works. He edited the texts of Homer, Hesiod, Alcman, Alcaeus, Pindar, Euripides and the comedies of Aristophanes (Thompson in ELIS 36, 1983:15). He also edited the works of his mentors:

"Aristophanes the grammarian, in his commentaries on the Portraits of Callimachus, ridicules those who do not know the difference between the terms 'over the hand' and 'handwash' ...". (Athenaeus IX 408f)

He was also responsible for developing a system of punctuation and accentuation (Thompson in ELIS 36, 1983:15), and made important contributions in the field of lexicography (Hessel 1955:4).

Aristophanes became head librarian of the RAL in 195/94 B.C. when he was in his early sixties (Parsons 1952:150; PRE Vol.3, 1899:412; Thompson in ELIS 36, 1983:15; White 1914:xix) although Holmes (1980:289) places the date nearer to 204/201 B.C. (see 4.3.4). His appointment nevertheless came during the reign of Ptolemy Epiphanes. It was probably during this period as head librarian that Aristophanes produced supplements to the Pinakes of Callimachus (see 4.3.4.5 and 4.3.6.2) as well as making adjustments to the original catalogues Callimachus had compiled (Thompson in ELIS 36, 1983:15; Wendel in Milkau 1955:75).

He was head librarian for roughly fifteen years (Thompson in ELIS 36, 1983:15-16) before relinquishing the post in 181 B.C. (PRE Vol.3, 1899:412). Although it is possible that he may have been forced to retire for reasons of ill health since he died only one year later, the Suida suggests (Thompson in ELIS 36, 1983:15; Parsons 1952:151) that

Aristophanes was imprisoned by Ptolemy Epiphanes after he had received an invitation from the rival Attalid king Eumenes II (197-159 B.C.) to head the administration of the Pergamum royal library (see 4.1.5.7).

4.3.4.5 Callimachus of Cyrene

Probably the most well-known scholar associated with the RAL, Callimachus was born in 310/305 B.C. in Cyrene, a city situated west of Alexandria along the North African Coast. He joined the Mouseion during the reign of Ptolemy Philadelphus where he soon gained the reputation of being an able poet and philologist (Robie 1974:271). As a teacher his students included the future RAL head librarians Eratosthenes, Aristophanes and Aristarchus (Irwin in ELIS 1, 1968:402) as well as Apollonius of Rhodes (Robie 1974:271).

Callimachus was very active as a writer, with Thompson describing him as the "most famous and popular of all Hellenistic poets" (in ELIS 36, 1983:93). His works are said to have numbered over eight hundred (Robie 1974:271) and included such diverse literature as hymns, epigrams, lyrics and more comprehensive works such as a study known as the Αίτια which traced the origins of local religious traditions (Thompson in ELIS 36, 1983:93). However, Callimachus is best known for his bibliographical work entitled Πίνακες τῶν ἐν πασῇ παιδείᾳ διαλαμμ φαντων καὶ τῶν συνἔγραφον, ἐν βιβλῶς x και P

- Tables of all those who are eminent in any kind of literature and of their writings, in 120 books (Thompson in ELIS 36, 1983:93-94; Parsons 1952:208-209; Wendel in Milkau 1955:70). Simply known as the Pinakes, Thompson describes it as "a monumental bibliographical work ... based on the collections of the mouseion" (see 4.3.6.2). The fact that Callimachus produced this work indicates that he had worked at the RAL and had assisted in arranging the library's vast holdings. Johnson therefore sees Callimachus as having been a "classifier as well as a cataloguer" (1965:54).

Despite Callimachus having produced the Pinakes it is generally believed that he never held the post of head librarian (Hessel 1955:4; Irwin in ELIS 1, 1968:402; Robie

1974:271; Thompson in ELIS 36, 1983:93) and Canfora suggests that it was under the authority of Apollonius of Rhodes that Callimachus compiled his Pinakes (1987:43). Only the twelfth century Plautine Scholium of Tzetzes records Callimachus as having been head librarian of the RAL (see 4.3.4) but Parsons concludes that although Callimachus "was for his time a universal scholar, the Father of Bibliography, the greatest bookman of his age, [this] would not alone justify the inference that he was the king's director or chief librarian" (1952:142).

If indeed Callimachus had held the post, he would probably have succeeded Zenodotus as head librarian during the reign of Ptolemy II Philadelphus and would have continued in that office until his death in roughly 240/235 B.C. under Ptolemy III Euergetes (Parsons 1952:144). Alternatively, if, as according to general consensus, Callimachus had not served as head librarian, Johnson suggests that he may have fallen into disfavour with Ptolemy II Philadelphus who subsequently exiled him to upper Egypt where he died during the reign of Ptolemy III Euergetes (1965:54).

4.3.4.6 Eratosthenes of Cyrene

A native of the same city as Callimachus where he was born in c.275 B.C., it probably was Eratosthenes' reputation as a universal scholar that induced Ptolemy III Euergetes "to call him to the Mouseion" (Thompson in ELIS 39, 1985:184). Here he became tutor to the royal heir as well as head librarian of the RAL

"... Eratosthenes, not so much later [after Callimachus] the custodian of the same library". (Tzetzes The Plautine Scholium)

His teachers included distinguished scholars such as Zenodotus, Callimachus, Ariston of Chios and Zeno (Thompson in ELIS 39, 1985:184) and the subjects Eratosthenes specialized in included mathematics, geography, astronomy, philology, history, philosophy. He also proved to be an able chronographer and poet (Parsons 1952:145).

The works Eratosthenes produced are indicative of his universal interest. In studies of a scientific nature, he was responsible for a three book work in which he succeeded in measuring the circumference of the earth while in another study "he investigated

problems such as the duplication of the cube and the 'sieve' method of identifying prime numbers" (Thompson in ELIS 39, 1985:185). An example of his works in philology is recorded by Diogenes Laertius:

"According to Eratosthenes in his eighth book On the Old Comedy, the name of Stoic had formerly been applied to the poets who passed their time there, and they had made the name of Stoic still more famous". (Diogenes Laertius VII.5)

He also produced a philological criticism entitled On Homer (Parsons 1952:146). Furthermore, Eratosthenes compiled a historical political-literary chronology and wrote a history of philosophy. As a poet he produced numerous elegies and epics (Thompson in ELIS 39, 1985:185). Eratosthenes is said to have owned a large private library (PRE Vol.3, 1899:412) and no doubt his own works formed a large proportion of the collection.

Eratosthenes' tenure as head librarian spanned the reigns of Ptolemy III Euergetes, Ptolemy IV Philopator and Ptolemy V Epiphanes (PRE Vol.3, 1899:412). He is to have succeeded either Zenodotus, Callimachus or Apollonius of Rhodes (see 4.3.4). Eratosthenes died at the age of eighty in c.196 B.C. by starving himself to death after losing his eyesight (Parsons 1952:145) although it has been suggested that he died in 202 B.C. (Thompson in ELIS 39, 1985:184).

4.3.4.7 Lycophron of Chalcis

Not much is known about the life of Lycophron (Parsons 1952:140). He was adopted by the historian Lycus and probably arrived in Alexandria after the dismissal of Demetrius of Phaleron in 283 B.C. He established himself at the Mouseion as a grammarian and poet. Amongst his more renowned works was the following:

"Lycophron, too, in the ninth book of his work On Comedy also cites the lines from Phenebrates and explains that the Lepastê is a king of Cylix". (Athenaeus XI, 485D)

Lycophron, along with Alexander of Aetolia (see 4.3.4.1) and Zenodotus (see 4.3.4.8) was instructed by Ptolemy II Philadelphus to assist in organizing the RAL holdings:

"... Lycophron ... at the request of King Ptolemy, Philadelphus by surname ... gathered together ... and arranged ... in order ... the comedies ...". (Tzetzes The Plautine Scholium)

4.3.4.8 Zenodotus of Ephesus

Zenodotus is seen by many modern scholars as the first head librarian of RAL (PRE Vol.3, 1899:412). This is probably based on the assumption that Demetrius of Phaleron was solely occupied with the accumulation and collecting of the RAL holdings and that the RAL collection was only made available to the scholars of the Mouseion and the public under Zenodotus (Parsons 1952:138). Zenodotus was born between 325 and 320 B.C. and became a pupil of the elegiac poet Philetas. As a grammarian he went on to become the tutor of the future king Ptolemy II Philadelphus, who later instructed him to arrange a part of the RAL holdings:

"... and Zenodotus the poems of Homer and of other illustrious poets". (Tzetzes The Plautine Scholium)

It has been proposed that Zenodotus may have held the post of head librarian well into the reign of Ptolemy III Euergetes (PRE Vol.3, 1899:412). This hypothesis however is based on the supposition that neither Callimachus (see 4.3.4.5) nor Apollonius of Rhodes (see 4.3.4.2) had held the post (see 4.3.4).

4.3.5 COLLECTION DEVELOPMENT

4.3.5.1 Methods of acquisition

Initially the "aim and guiding principle of the library at Alexandria was to bring together all Greek literature ..." (Kesting 1986:157). This policy was later extended to the proposed attainment of a "universal comprehensiveness" amongst the RAL holdings (Kesting in ELIS 39, 1985:375). The enormous financial resources of the Ptolemies went a long way in achieving that goal:

"For that king [Ptolemy Philadelphus], well acquainted with the philosophers and other famous authors, having had the volumes sought out at the expense of the royal munificence all over the world as far as possible by Demetrius of Phalerum (and other counsellors) ...". (Tzetzes The Plautine Scholium)

Agents were dispatched to purchase manuscripts on the open book market (see 4.1.3) as well as from private collections:

"From Neleus, he says, our king Ptolemy, surnamed Philadelphus, purchased them all [see 4.1.5.1] and transferred them with those which he had procured at Athens and at Rhodes to his beautiful capital Alexandria". (Athenaeus 1.3B)

Copies of particular texts were also bought if their condition warranted it (Wendel in Milkau 1955:65).

In addition to purchasing books directly from the owners, the RAL adopted a procedure whereby original manuscripts would be exchanged for copies specially prepared in the RAL scriptorium:

"They say that Ptolemy [Euergetes], king of Egypt, was so ambitious about books, that he ordered the books of all those who arrived at Alexandria by sea to be brought to him; and these he had copied on new papyrus and gave the copies to the owners whose books had been brought to him on their arrival in harbour". (Galen Epidemics III)

The Ptolemaic authorities would also accept manuscripts in lieu of harbour dues (Weimann 1975:30). A deposit was paid for the loan of original texts and manuscripts from places outside Alexandria. Once copies had been made for the RAL, the originals would then be returned to the owners. However, on occasion the deposit was forfeited, as in the case with the Metroon in Athens (see 3.3.6.3) during the reign of Ptolemy III Euergetes:

"The interest which the famous Ptolemy took in collecting ancient books is mentioned as not a small sign of interest for the people of Athens, inasmuch as he gave as a deposit 15 silver talents and received the books of Aeschylus, Sophocles and Euripides, but only to copy and return them intact in no time. When he had prepared a magnificent copy on the best of paper, he kept the books which he received from the Athenians and he sent the copies back to them, asking them to keep the 15 talents and accept the new books instead of the old originals which they had given him. Even had he not sent the new books back to the people of Athens and kept the old ones, they could have done nothing since they had accepted silver on condition that they might keep it if he would keep the books. Therefore they accepted the new books, and kept the money". (Galen Epidemics III 239-240)

The problems posed by forgeries (4.1.3) were in part solved by the imposition of uniform standards as regards the size of the scrolls and the length of the lines comprising the texts (De Vleeschauwer 1967:48-49). In prescribing the uniformity of incoming copies, RAL agents and staff members could more readily identify forgeries (see 4.3.6.1).

Canfora (1987:20) maintains that "Ptolemy composed a letter 'to all the sovereigns and governors on earth' imploring them 'not to hesitate to send him' works by authors of every kind: 'poets and prose-writers, rhetoricians and sophists, doctors and soothsayers, historians and all others too'". Texts of non-Greek origin were added to the RAL holdings by means of translations:

"These learned volumes which he [Ptolemy] was able to obtain were of all peoples and languages; and the king caused them to be translated into his own language, with the utmost diligence, by excellent interpretations". (Tzetzes The Plautine Scholium)

Wendel argues that the existence of a detailed account in the letter of Aristeas written in 100 B.C. describing how the RAL acquired the Greek translations of the Hebrew Septuagint, proves that the RAL actively pursued the acquisition of "foreign" works (in Milkau 1955:68). This account as recorded by Aristeas was reproduced by various sources:

"He [Demetrius of Phaleron] added that he had been informed that among the Jews also there were many works on their law, which were worthy of study and a place in the king's library, but, being written in the script and language of this people, they would be no small trouble to have translated into the Greek tongue. There was, however, nothing, he said to prevent them having these books translated and having the writings of this people in their library, for he had abundant resources from which to meet the expense. And so the king, deciding that Demetrius had given him excellent advice as to how to realize his ambition of obtaining a large number of books wrote to the high priest of the Jews that this might be done". (Josephus Antiquities XII,12-15)

Tertullian takes up the story:

"Ptolemy, then, asked the Jews also for their books, their own literature in their own tongue, which they alone possessed ... But that understanding of their books might be wanting, the concession was made to Ptolemy by the Jews, and seventy-two interpreters were given to him ...". (Tertullian Apologetics XVIII, 5-8)

The task of translating was underway:

"They, for they were at that time still subject to the Macedonians, sent to Ptolemy seventy [seventy-two?] elders, the most experienced they had in the scriptorium and in both languages ... But Ptolemy, wishing to make trial of them in his own way, and being afraid lest they should have made some agreement to conceal by their translation the truth in the scriptures, separated them from one another and commanded them all to write the same translation. And this he did in the case of all the books. But when they came together to Ptolemy, and compared each his own translation ... they all rendered the same things in the same words and the same names ...". (Eusebius Ecclesiastical History V,8.11)

While Glover considers the letter of Aristeas as "historically worthless" (1960:93, note a) and therefore by implication the above accounts, Irwin does concede that they are based

on legend but "almost certainly had some foundation in fact" (in ELIS 1, 1968:402). The Greek translation of the Septuagint occurred in roughly 270 B.C. (Kesting 1986:156) and was carried out "ostensibly for the benefit of Greek-speaking Jews in Alexandria who were ignorant of Hebrew and Aramaic" (Irwin in ELIS 1, 1968:402).

Original and contemporary works were added to the library holdings by the regular staging of play festivals in Alexandria (see 4.3.4.4):

"When he [Ptolemy Soter] had completed it [the RAL] with great diligence, he did not think it enough unless he should provide for its increase by sowing and planting. So he consecrated games in honour of the Muses and Apollo, and established prizes and honours for the successful writers of the day, in the same way as for successful athletes". (Vitruvius On architecture VII, Preface 4)

Scholars of the Mouseion contributed to the RAL holdings, not only to ensure the safe-keeping of their manuscripts, but also for reasons of "copyright". When a scholar died, his works or copies thereof were deposited in the RAL holdings (White 1914:xxiii). In addition White notes that "newly written books came in from other centres of study, Athens, Pella, Antioch, Pergamum, Tarsus, Cos and Rhodes".

The most noteworthy and controversial donation the RAL had received was that made by Mark Antony in roughly 41 B.C. It is alleged by Plutarch (see 4.1.5.7) that Antony gave the Ptolemaic queen Cleopatra "two hundred thousand volumes" of the Pergamum royal library holdings. This was apparently done to compensate for the losses suffered by the RAL during the Alexandrian War of 47 B.C. (see 4.3.7). Much speculation exists in scholarly circles as to whether this act on Antony's part ever took place (De Vleeschauwer 1967:50; Irwin in ELIS 1, 1968:403). Canfora for one concludes that there "was no truth in the story" and argues "imagine giving books (which belonged, properly speaking, to the state of Rome) to the woman who owned the world's greatest and most famous library!" Instead Canfora sees the story as "a jibe at Antony's ignorance of literary matters" (1987:72). However, the fact that Plutarch had used the biblio-technical Greek term ἁμύχεις βιβλοὶ (see 4.3.5.2) to describe the manuscripts that Antony had donated to Cleopatra, may indicate that Plutarch had received the information from a reliable source (PRE Vol.3, 1899:413). Yet Wendel maintains that if Antony had given Cleopatra part of the Pergamum library holdings, it is highly likely that he would have given her scrolls of which copies existed, with these copies remaining in Pergamum (in

Milkau 1955:69). Furthermore, it has been suggested that the 200 000 scrolls were placed in the Serapeum library (see 4.1.5.2), the so-called "daughter library" of the RAL.

Nevertheless, Parsons concludes that "with the addition of the rich parchment-papyrus manuscripts of its only rival, the Alexandriana must have achieved its ultimate height" (1952:403).

4.3.5.2 The holdings

The RAL "contained most if not all of the extant literature of the period" (Johnson 1965:55). The holdings therefore displayed a truly universal character (Weimann 1975:30). Greek literature dominated the collection (Irwin in ELIS 1, 1968:402; Kenyon 1919:10) with the RAL boasting the largest accumulated collection of the old Greek classics and poetical works (White 1914:xxiii-xxiv, xxxviii). Parsons (1952:136) goes on to maintain that the RAL "preserved all the extant wisdom, knowledge and information of Hellas". The collection would therefore have embodied diverse subject matter such as rhetoric, poetry, the sciences and philosophy (Vorstius 1954:6) with Robie concluding that "the library ... included everything from Homeric manuscripts to contemporary cookery books" (1974:271).

The value of the library holdings were further enhanced by the efforts to acquire the original manuscripts of authors (Thompson 1962:22). In cases where this proved impossible scribes reproduced exact and accurate copies (see 4.3.5.1). Very little success in this regard was achieved by the RAL in the accumulations of the texts of Aristotle (Irwin 1964:69). Ptolemy II Philadelphus allegedly was able to purchase copies of Aristotle's lectures from Neleus (see 4.1.5.1), although it is generally believed that Aristotle's popular essays had been lost (Canfora 1987:40; Parsons 1952:14; Thompson 1962:107, not 55). If anything of Aristotle's Treatises had been acquired by the RAL, these would have been contained in "spurious texts which had crept into the canon, and which were to prove very difficult to dislodge" (Canfora 1987:40). However, it appears that by the first century B.C. the RAL had managed to acquire a substantial amount of Aristotle's manuscripts since they were known to Cicero and his contemporaries (Davison

1962:226). Davison goes on to conclude therefore that these Aristotelian texts "were probably in the Alexandrian library".

In the bid to collect the complete corpus of Greek literature it followed that numerous textual variants of one particular work would have been acquired by the RAL. For example, different versions of the texts of Homer arrived from far flung places such as Argolis in the Peloponnese, Aiolis and Chios along the west coast of Asia-Minor, the Black Sea port of Sinope, Cyprus and Crete as well as from Massilia (today's Marseilles) in the west (Wendel in Milkau 1955:65-66). Consequently the grammarians and philologists of the Mouseion "had before them the complete works on which they commented, and not merely excerpts and elegant extracts" (Kenyon 1919:10). Many librarians of the RAL were also responsible for numerous commentaries and interpretative studies of texts that had been written in the preceding centuries (see 4.3.4). Canfora (1987:38) concludes that the RAL holdings were therefore "further swollen by the scholar's own ponderous commentaries". By 30 B.C. White maintains that "there must have been thousands of commentaries" in the RAL (1914:lxii).

Because the concept of Hellenism had brought Greek and non-Greek into such close contact which ultimately resulted in a form of cross-cultural pollination (see 4.1.1), it can be assumed that non-Greek works formed part of the RAL holdings (Parsons 1952:136, 191). In reply to the proposition that no Greek sources as yet have produced any concrete evidence as to the preservation of non-Greek materials in the RAL, Parsons argues "should we not say that very few Greek writers extant if any, have much to say concerning the non-Greek books in the Alexandriana as likewise how very few Greek authors or ancient writers extant have anything much to say concerning over the Greek books of the library" (1952:175).

It is generally believed that non-Greek works in the RAL were translated into Greek (Holmes 1980:290; Johnson 1965:55; Wendel in Milkau 1955:67) as illustrated with the acquisition of the Hebrew Septuagint (see 4.3.5.1). Amongst the Egyptian works contained in the RAL were those of Manetho (Canfora 1987:24-25; Holmes 1980:290; Johnson 1965:55). A native Egyptian appointed as priestly advisor to Ptolemy Soter,

Manetho wrote Greek works on Egyptian religion and history. His sources included materials from ancient temple collections, palace libraries, administrative archives of sacred towns, annals of the pharaohs up-dated through the centuries by priests, economic records of estates and temples as well as general Egyptian prose literature and poems (Parsons 1952:184-186). In effect, Manetho's works represented a direct translation of pharaonic Egyptian manuscripts.

Historical works concerning Phoenicia were also very much in evidence (Parsons 1952:194). The Phoenician historians Theodotos and Hypsicrates both had their histories translated into Greek. Menander, Dius, and Philostratus all wrote Phoenician histories after gaining access to primary sources such as the city archives of Tyre and Sidon.

During his Persian campaign, Alexander the Great had ordered that all Persian manuscripts relating to philosophy, astronomy, medicine and agriculture, were to be translated into Greek and Coptic. These later found their way into the RAL holdings (Platthy 1968:58; Von Graberg 1974:279). Ctesias wrote a Persian history using the Persian βασιλικαὶ διφθέραι as his primary source (Platthy 1968:57, note 42). A commentary was written on the works of the Persian Zoroaster:

"Hermippus, a most studious writer about every aspect of magic, and an exponent of two million verses composed by Zoroaster, added summaries too to his rolls ... assigning to the man himself a date five thousand years before the Trojan War".
(Pliny Natural History XXX.2)

Hermippus was a student of Callimachus (OCD 1970:504) and his commentary "suggests the availability of Persian texts or translations thereof" at the RAL (Holmes 1980:290). Von Graberg maintains that even older Babylonian texts had been translated into Greek (1974:278).

The size of the RAL holdings is mentioned by various ancient sources. As can be seen below, these totals differ widely. This discrepancy can be explained by the fact that the various totals were given at differing periods during the history and development of the RAL (De Vleeschauwer 1967:46; Parsons 1952:165; PRE Vol.3, 1899:410):

"Now, when Ptolemy [Soter] once asked him [Demetrius of Phaleron] how many tens of thousands of books he had already gathered together, he replied that the present

number was about two hundred thousand but that within a short time he would assemble some five hundred thousand". (Josephus Antiquities XII, 12-14)

It is quite possible that a rapid growth in the RAL holdings would have occurred in the years immediately following the institution's founding in the 290's B.C. (see 4.3.2). Manuscripts and texts of every kind, no matter the condition or state of repair, would have been accumulated in the initial frenzied enthusiasm that greeted the establishment of the RAL. A total of over two hundred thousand scrolls would therefore in all probability have constituted the RAL's holdings at the death of Demetrius in 282 B.C.

Demetrius of Phaleron's projected total of half-a-million scrolls was almost achieved during the reign of Ptolemy II Philladelphus:

"... in the palace library 400 000 mixed volumes and 90 000 single volumes and digests, according to Callimachus, a man of the court and royal librarian ...". (Tzetzes The Plautine Scholium)

This total of 490 000 scrolls would have been the RAL's holdings in roughly 250 B.C. (De Vleeschauwer 1967:46). Such a large total being achieved during the reign of Ptolemy Philadelphus is highly likely, giving his reputation as a book collector (see 4.3.2 and 4.3.5.1). Holmes believes the this figure of 490 000 scrolls also represented multiple copies of individual works (1980:289). Of this total, almost seventy thousand were religious works:

"Not only the scriptures of the pagans but also the holy books were collected in his [Ptolemy Philadelphus] library. For seventy thousand books were to be found at Alexandria in his time". (Isidorus Etymologiarum sive originum VI,III. 3-5)

By the middle of the first century B.C. the holdings had almost doubled:

"At a later time an enormous quantity of books, nearly seven hundred thousand volumes, was either acquired or written in Egypt under the kings known as the Ptolemies ...". (Aulus Gellius VII,17.3)

Probably receiving his information from the same source, Ammianus Marcellinus recorded the same figure:

"In this [the Serapeum temple complex] were valuable libraries, and the unanimous testimony of ancient records declares that 700 000 books, brought together by the unremitting energy of the Ptolemaic kings ...". (Ammianus Marcellinus XXII,16.13)

This last account has been given to mean that both the holdings of the RAL and that of the other Alexandrian library, the Serapeum (see 4.1.5.2), together totalled 700 000 scrolls. However it is highly likely that Ammianus has confused the two libraries (Rolfe

1963:302, note 1). White argues that the figure of 700 000 rolls in the RAL "is not itself incredible ... even if the special liability of papyrus books to decay (less, however, in Egypt than elsewhere) is taken into account, and proper deductions are made for loss from use and accidental causes" (1914:xxx). This large total will again have been made up of "works ... most probably present in many editions or copies ..." (Johnson 1965:54). 700 000 scrolls may seem an exaggerated figure, but Canfora (1987:189) points out that "hundreds of thousands of scrolls: figures less impressive than they seem at first glance, for they derive from the practice of counting not works but scrolls".

Parsons (1952:275) concludes that the 700 000 scrolls reflected the epitome of the development of the RAL collection, and would have been the total RAL holdings before the advent of the Alexandrine war of 48 B.C. (see 4.3.7). That the RAL holdings had indeed reached such a high figure can be ascribed to the fact that the RAL as an institution had "escaped all the elemental dangers of nature and all the vicissitudes of ages of war ...". Indeed, if Ptolemy Soter had collected 200 000 scrolls as did Philadelphus, and with Euergetes and the remaining members of the dynasty consistently ensuring the development of the collection (Parsons 1952:404, note 1), the total of 700 000 would have been easily achieved.

It has been argued that there was not sufficient literature in existence at the time, both prose and poetic, to have filled 700 000 scrolls (De Vleeschauwer 1967:46). However, granted that the RAL contained duplicates and multi-scroll works, Parsons (1952:173) points out that the Hellenistic age was marked by a considerable output of critical scholarly studies and saw major advances in the sciences (see 4.1.3). With the Mouseion of Alexandria being the centre of Hellenistic scholarly activity, the RAL would surely never have been found wanting as regards academic contributions (see 4.3.5.1).

The holdings of the RAL, as in any library of antiquity, have been identified as either ἀμιγεῖς (amigeis) or συμμίγεις (summigeis) scrolls. The meaning of these two terms has caused much controversy in scholarly circles. The extract from the Plautine Scholium of Tzetzes quoted earlier, translates amigeis as meaning "single volumes" and summigeis "mixed volumes". Amigeis is therefore taken to mean a scroll which contains only one

complete work or one "book" of a "multi-book" work, while summigeis scrolls contain two or more single works, or two or more "books" of a work spread over more than one scroll (Holmes 1980:289; White 1914:xiii, note 1). Canfora, however, argues that only the latter meaning of summigeis is acceptable, since it is improbable that summigeis scrolls made up of more than one single complete work would have formed the larger proportion of the RAL holdings (1987:188).

An alternative interpretation is offered by De Vleeschauwer, amongst others, who sees amigeis scrolls as bibliographically processed and catalogued, while the summigeis scrolls were still to be processed and sorted (1967:47). This interpretation is plausible only if, (going back to the extract of Plautine Scholium of Tzetzes quoted above) during the time of Callimachus and roughly forty years after the founding of the RAL, only 90 000 of the 490 000 scrolls then in the RAL holdings had been catalogued and processed.

Yet another interpretation finds support in Wendel (in Milkau 1955:68-69). The 400 000 summigeis scrolls mentioned by Tzetzes are the total mass of scrolls that had been accumulated at that time. Once all the duplicate copies had been removed, the RAL was left with 90 000 amigeis scrolls. However, Wendel concedes that any attempted interpretation of these two terms will always be doubtful on philological grounds.

The RAL, with its collection development policy which had accumulated its impressive holdings from all over the then known world, using all possible means, still found no favour with some:

"... let someone else praise this library as the most noble monument to the wealth of kings as did Titus Livius; who says that it was the most distinguished achievement of the good taste and solicitude of kings. There was no 'good taste' or 'solicitude' about it, but only learned luxury - nay, not even 'learned', since they had collected the books, not for the sake of learning, but to make a show, just as many who lack even a child's knowledge of letters use books, not as tools of learning, but as decorations for the dining-room. Therefore, let just as many books be acquired as are enough, but more for mere show". (Seneca De Tranquillitate Animi IX.4-7)

4.3.6 COLLECTION ACCESSIBILITY

4.3.6.1 General retrieval methods

The masses of in-coming texts needed to be organized and catalogued before any form of textual criticism and interpretation could be undertaken (Davison 1962:230). By all accounts this proved to be a painstaking exercise since many texts arrived at the RAL without titles, chapter headings, prefaces or introductions and no statement of responsibility. Furthermore short texts such as poems and elegies had no incipit (Parsons 1952:204) while dramatic texts often did not indicate the names of the various speakers (Davison 1962:230).

Bibliographic information that was supplied often caused more confusion (Canfora 1987:40). Works displayed the same titles although written by different authors and numerous works were written by authors with the same name. De Vleeschauwer observes therefore that it would not have been surprising if there had existed a continuous backlog at the RAL of unprocessed scrolls and manuscripts (1967:47). Indeed, it has been suggested that after the first forty years of existence of the RAL, only 90 000 of 490 000 manuscripts had been processed (see 4.3.5.2).

The first step in the organization of the masses of texts was the identification of the individual manuscripts. This involved establishing the authorship, date and origin of the text (White 1914:xxiv). A scroll processed in this way would be recorded as follows: "*during the reign of Ptolemy Philadelphus - the books of Aristotle and Theophrastus, from Neleus of Scepsis*" (Canfora 1987:29). A preliminary list of authors and their works contained in the RAL holdings was therefore compiled.

However, in cases where the authorship of the text was unknown, at least the origin of scroll had to be determined. For example, those texts acquired by the RAL from ships visiting the harbour of Alexandria (see 4.3.5.1) were processed as follows:

"... The books thus acquired were put away on the shelves, and over them was written the inscription, Τῶν ἐκ τῶν πλοίων [from the ships]". (Galen Epidemics III)

A manuscript that fell under this category would then have the name of the ship's origin after that particular voyage inscribed on it or its label, as for example: *εκ πλοίων, Μνήμωνος* (Wendel in Milkau 1955:70).

Where texts had been purchased or acquired from a private collection or book trader, the name of the seller or donor would be inscribed after the term *Κατ' ανδρα* (literally: from the man). In this way the age of the document could be determined if, for example, the scroll had been received from the collection of Euripides (c.480-406 B.C.). Similarly, the identifying labels or inscriptions on the texts acquired in various cities would be prefixed *Κατὰ Πολεις* (from the city), followed by the name of the city in question. It is known that the numerous versions of the Homeric texts were identified in this way (Holmes 1980:290-291).

Once the initial process of "identification" had been completed, the manuscripts had to be arranged into divisions or groups. Parsons suggests that the scrolls may have been "assorted into divisions according to the form or kind of writing, by era of the script, or by authors or by subject matter" (1952:205-206). However, it is generally assumed that some form of subject grouping was adopted (PRE Vol.3, 1899:413; Wendel in Milkau 1955:70). This is confirmed by the Plautine Scholium of Tzetzes, which appears to suggest that the first attempt at subject division of the RAL holdings identified three major categories viz. tragedy, comedy and miscellanea, with the latter embodying "the poems of Homer and of other illustrious poets". Organization of the miscellanea was the responsibility of Zenodotus of Ephesus (see 4.3.4.8) while Lycophron of Chalcis (see 4.3.4.7) organized the comedies and Alexander of Aetolia (see 4.3.4.1) the tragedies. Within these three broad subject groups the texts were in all probability arranged by author.

These three scholars were responsible for the "classification and description of the thousands of rolls committed to their charge" (White 1914:xxiv) while Parsons maintains that they had "assorted, corrected, revised and edited the dramatic writers ..." (1952:207). The Plautine Scholium simply states that the texts "were arranged in order" by the three scholars. No doubt these initial attempts at organizing the RAL holdings formed the basis

for the Pinakes compiled by Callimachus (see 4.3.6.2) a few years later (Parsons 1952:208; White 1914:xxiv).

Scrolls of the RAL holdings could now be identified by means of catalogues or shelf-lists derived from the lists compiled by the three scholars. This information was inscribed upon tablets or "pinakes" which were placed above the storage containers or within easy reach of a particular series of pigeon-hole shelves thereby "signifying the classes of literature contained on the rolls therein" (Witty 1958:132). The tablets may also have listed the names of authors with the titles of their works, as well as stating how many lines and verses made up each text (PRE Vol.3, 1899:413).

During the course of the history of the RAL further catalogues and bibliographic lists were compiled. Apart from his famous Pinakes, Callimachus was responsible for separate bibliographical lists. One listed "the glosses and compositions of Democritus" (Witty 1958:133) while another was entitled Tables and Register of dramatic poets chronologically from the earliest times, although Parsons suggests the latter may have formed part of the Pinakes (Parsons 1952:211). Hermippus of Smyrna, a contemporary of Callimachus, compiled a bibliography of works pertaining to the subject of magic entitled περί μαγίον (see 4.3.5.2). The number of lines contained in each work was indicated (Wendel in Milkau 1955:71-72) and it has been suggested that Hermippus drew information from Callimachus' Pinakes (Parsons 1952:209). At some stage all the medical works contained in the RAL were listed under the subject-heading "Hippocrates" (Wendel in Milkau 1955:72). Eratosthenes of Cyrene (see 4.3.4.6) produced a work entitled On the Old Comedy which was compiled through the use of existing RAL catalogues (White 1914:xxiv). Aristophanes of Byzantium (see 4.3.4.4) was responsible for a revised edition of the Pinakes of Callimachus (Parsons 1952:209).

The ever increasing RAL holdings (see 4.3.5.2) meant the storage space was at a premium. Such a mass of manuscripts furthermore, required that the individual scrolls be easily accessible and easy to handle. Initially scrolls were of varying length and width (Wendel in Milkau 1955:81) thereby compounding the problems associated with storage and handling.

The difficulties posed by uneven scrolls were overcome by Callimachus who initiated the concept of dividing texts into parts or "books" (Johnson 1965:54). Each book was equivalent in size to the writing surface of a scroll. The size of the scroll was therefore standardized by means of pre-determined measurements (De Vleeschauwer 1967:49; Irwin in ELIS 1968:402). For example, Zenodotus of Ephesus divided Homer's Iliad and Odyssey into twenty-four books each, with each book made up of roughly 1 000 verses (Parsons 1952:205). The twenty-four books therefore took up twenty-four equally sized scrolls with the latter in turn corresponding in size to the other scrolls held in the RAL holdings. The scrolls of the entire collection were gradually made to conform to the new measurements by the various "subject specialists" who systematically processed that part of the holdings they were responsible for (Irwin in ELIS 1, 1968:402).

Owing to its rigorous collection development policies, the RAL received differing versions of particular works. The librarians soon discovered that various interpretations, translations and dialectal adaptations had corrupted the original texts. By comparing the various versions and together with the philological and literary knowledge of the specific scholar engaged in the task, an almost authentic or "true" version of such texts was once again obtained (De Vleeschauwer 1967:49-50). In this way Aristarchus of Samothrace, as recorded by Tzetzes in the Plautine Scholium was able to "perfect" the collection of Homer (see 4.3.4.3).

That the RAL had become the centre of the Hellenistic book trade and produced copies of manuscripts for worldwide distribution (Vorstius 1954:7; Weimann 1975:30; Wendel in Milkau 1955:66-67) presupposes that the RAL collection was well organized and could easily be accessed for materials required for studying and copying. Judging by the evidence available, this appears to have been the case.

4.3.6.2 The Pinakes of Callimachus

Titled Tables of all those eminent in any kind of literature and of their writings, in 120 books (see 4.3.4.5) the Pinakes of Callimachus laid the foundation for future bibliographic description in the ancient world (DKP Vol.1, 1964:892; Robie 1974:271;

Wendel in Milkau 1955:70). This extensive work, which was compiled in the third century B.C. during the reign of Ptolemy Philadelphus, earned its creator the accolade of "Father of Bibliography" (Parsons 1952:217) since "no work of comparable scope" seems to have been attempted (Thompson in ELIS 36, 1983:93). Because of its extensive coverage of the extant corpus of Greek literature, the Pinakes was "considered a basic reference book in antiquity, and is cited frequently by scholars" (Kesting 1986:157).

The Pinakes were compiled from the existing catalogues of the RAL (PRE Vol.3, 1899:414; Wendel in Milkau 1955:70) and the fact that Callimachus' work has been referred to as "Pinakes" indicates that the work "was based on a shelf list written on tablets" (Irwin in ELIS 1, 1968:403).

Not much is known of the subject classifications Callimachus had adopted (Parsons 1952:209). Canfora (1987:39) argues that since Callimachus had attempted an overall classification, he subdivided his Pinakes "into generic categories corresponding to the various sections of the library". Modern scholarship is therefore generally agreed that the Pinakes were divided into six classes of poetry, five of prose and one class of miscellanea (De Vleeschauwer 1967:49; Vorstius 1954:7; Weimann 1975:30; Wendel in Milkau 1955:70-71). Thompson however suggests that more subject classes may have been listed under the prose section (in ELIS 36, 1983:93). Conversely, it has been suggested that only ten classes in all were listed (Kesting 1986:157; Parsons 1952:210-211).

In an extensive study Witty has attempted to identify the various subject classes through references in the ancient sources (1958:133-136). In all, Witty lists only twenty-five of 825 extant fragments which appear in various texts "merely [as] oblique references by ancient authors to the bibliographical work of Callimachus ..." (Witty 1958:132). Witty's findings are in part reproduced below:

Oratory

"And Democritus said: In order that I, also, may mention the verses of the poet and orator Dionysius Chalcus - he was called Chalcus because he advised the Athenians to adopt a bronze [chalcos] currency, and this statement is recorded by Callimachus in his Register of Oratory (Athenaeus XV,669 D/E)

This is one of the direct references by name to three subject classes of the Pinakes (Parsons 1952:211; Witty 1958:136). Parsons (1952:215-216) notes that in this particular subject class "every speech was noted and every speech was given a title". These were then arranged "according to their purpose" into the following sub-divisions: official (state-political), professional (such as law) and civic/ornate (speeches for various occasions).

History

"Hecataeus of Miletus, in the Description of Asia - granting that this book is a genuine work of the historian, since Callimachus ascribes it to Nesiotes ...". (Athenaeus II,70B)

Here the arrangement was alphabetical with Parsons going on to point out that "it is curious to note that many of the early and greatest historians did not have regular titles to their works ..." (1952:215). Noteworthy examples in this case are Herodotus and Thucydides.

Laws

"For Gnathaena was very adept and humorous in making reply; she had, in fact, compiled a Rule for Dining in Company (which lovers who came to her and to her daughter must follow) in imitation of the philosophers who have drawn up similar rules. Callimachus has recorded it in the third "tablet" of his Rules, citing the beginning of it as follows: "The rule here written down is equal and fair for all" - three hundred and twenty-three lines". (Athenaeus XIII.585)

The subject class of Laws or Rules was placed third in the general sequence of the Pinakes. The entry mentioned above followed the standard bibliographic description procedure adopted by the Pinakes viz. author - incipit/title - number of lines.

Philosophy

"Our philosopher [Parmenides] too commits his doctrines to verse just as did Hesiod, Xenophanes and Empedocles ... He is believed to have been the first to detect the identity of Hesperus, the evening star, and Phosphorus, the morning star; so Favorinus in the fifth work of his Memorabilia; but others attribute this to Pythagoras, whereas Callimachus holds that the poem in question was not the work of Pythagoras". (Diogenes Laertius IX,22-23)

Witty maintains that "it is obvious that the list containing the philosophers is meant here" (1958:134). Again an alphabetical arrangement was followed with the philosophical works, although Parsons points out that there may have been exceptions since "difficulty arises as to the arrangement of Aristotle". The works of Theophrastus that Diogenes Laertius listed (see 4.1.5.1b) are said to have been derived from the Philosophy Pinax "by way of Hermippus" (Parsons 1952:214).

Miscellany

"I know, too, that Callimachus in his Tablet of Miscellaneous Literature has recorded books on the making of cakes by Aegimius, Hegesippus, Metrobius and Phaestus". (Athenaeus XIV.643e)

"There is even a book by Chaerephon recorded by Callimachus in his Table of Miscellany; he writes as follows: 'Writers on dinners: Chaerephon; dedicated to Dod'. And then he subjoins the beginning of it, 'Since you have often bidden me' (and adds the size) 'in three hundred and seventy-five lines'". (Athenaeus VI,244A)

Another two direct references to the Pinakes. Witty notes that the first account is used as evidence by modern scholars to prove that Callimachus arranged the authors of works in alphabetical order (1958:135). The mass of texts that were allocated to the miscellanea class were divided into subject groups with each being arranged alphabetically (Parsons 1952:216). The second extract again illustrates the method of entry adopted for individual works.

Medicine (?)

"Eudoxus of Cnidos, the son of Aeschines, was an astronomer, a geometer, a physician and a legislator. He learned geometry from Archytas and medicine from Philistion the Sicilian, as Callimachus tells us in his Tables (Diogenes Laertius VIII,86)

Witty concedes that in this case Callimachus "might have classed Eudoxus under one of several *Pinakes*. Nevertheless, this is still the only ancient source which refers to the possible existence of a medical pinax (Witty 1958:135). Authors classified under this class would have been arranged "according to their genre" (Parsons 1952:216).

Lyric Poetry

"It was written in honour of Hieron, winner in the chariot races, but we are not certain about the kind of contest. The number of variants before us is by no means small. Some indeed say that it was not a triumphal ode at all, eg. Timaeus calls it a sacrificial ode; Callimachus, a Nemean; Ammonius and Callistratus, an Olympic; others a Pythian (eg. Apollonius the classifier); while others call it a Panathenean". (Scholia on Pindar)

Although this is a "rather indirect" reference to the Pinax of Lyric Poetry (Witty:1958:135) it is certain that such a class did form part of the greater Pinakes. The method of bibliographic description employed in this particular Pinax will have been adapted to the various authors listed, since many diverse forms of literature constituted this class (Parsons 1952:211-212).

Comedy

"Diphilus in The Rampart-taker (Callimachus gives this play the title of Eunuch); Diphilus says ...". (Athenaeus XI,496 E/F)

Witty maintains that "these titles are obviously of comedies" (1958:135).

Tragedy

"The time in drama is not to be taken absolutely. For this was not taught at Athens. Callimachus says that Democrates (Timocrates?) was listed as the author of the tragedy". (Scholia in MSS MNO on the Andromache of Euripides 445)

Dramatic works and their writers, whether of tragedy or comedy, may have been arranged chronologically according to date of production, as Callimachus had produced a previous work listing dramatic authors in this way (see 4.3.6.1). However it is also possible that these Pinakes had an alphabetical arrangement.

To these classes identified by Witty, Parsons adds "mathematical science" and "natural science" (1952:216).

Besides providing a bibliographic description of the works listed, the Pinakes also supplied biographical information about the author (De Vleeschauwer 1967:49; Hessel 1955:5; Irwin in ELIS 1, 1968:403; Wendel in Milkau 1955:71). This information included: place of birth - father's name - teachers and education - nickname and pseudonym and finally career details (Parsons 1952:211). This biographical sketch would be followed by the detailed listing of the particular writer's works. In cases where controversy existed or dispute arose over the authorship of a work, this was carefully noted together with all the pertinent facts (Thompson in ELIS 36, 1983:93; Wendel in Milkau 1955:71).

Questions have been raised in modern scholarly circles as to whether the Pinakes of Callimachus constituted a catalogue or bibliography (Johnson 1965:54). Holmes argues that it was "not a catalogue" - this being borne out by the fact that there exists "no source claiming that the work was compiled for library use". Instead, Holmes suggests that the Pinakes was "a literary compilation aimed at setting out names, short biographical sketches and lists of the works of people prominent in every form of literature" (1980:291). Johnson (1965:54) proposes that the Pinakes was "more than a mere bibliography" while Vorstius argues that it took the form of a literary history with

emphasis on writers (1954:7). However the fact that the title of Callimachus' work is derived from the term Πινάκες (tablets) may indicate that it was intended simply to be a library "book list" after all (PRE Vol.3, 1899:413). The Pinakes may therefore have reflected the actual RAL catalogues (De Vleeschauwer and Wright in Rawski 1973:105). Canfora assumes that because the full title of the Pinakes sets out that only the writings of those "eminent in any kind of literature" were listed, the work described only a selection, although still extensive, of the complete RAL catalogue (1987:39). Irwin suggests that only one-fifth of the holdings were listed (in ELIS 1, 1968:403). Conversely Holmes (1980:291) argues that the authors included in the Pinakes did not necessarily bear "any relation to those existing in the Alexandrian library collection ..." and instead concludes that the works listed may have constituted those the RAL ultimately wished to own.

Various figures have been suggested for the number of works entered in the Pinakes. The Pinakes were compiled at a time when the RAL allegedly possessed 200 000 to 490 000 scrolls (see 4.3.5.2). De Vleeschauwer and Wright propose that the minimum total of 200 000 works were recorded (in Rawski 1973:105). That Callimachus had processed at least 400 000 texts of the total seems too incredible. Wendel (in Milkau 1955:72, note 2) makes mention of a theory that only the 90 000 amigeis scrolls of the total of 490 000 texts were processed and entered into the Pinakes. This would mean that 750 individual entries were made per one of the 120 volumes. This certainly appears to be a more realistic total.

4.3.6.3 The public library

Initially the RAL holdings were accumulated for the sole purpose of complementing the scholarly activities pursued by members of the Mouseion. It follows that as the number of scholars attracted to Alexandria increased, so did correspondingly the number of users of the RAL (Hessel 1955:5). Parsons (1952:138) maintains that "free public access" to the collection was permitted during the reign of Ptolemy II Philadelphus with the appointment of Zenodotus of Ephesus to the post of head librarian (see 4.3.4.8). This is

in part confirmed by the presence of duplicate copies in the RAL collection (Weimann 1975:30).

Furthermore, the fact that the RAL possessed efficient repair facilities presupposes that the holdings suffered from the continual use of a large user public. White points out that scrolls "were brittle stuff and rapidly deteriorated with handling, which necessitated constant unrolling" (see 2.2.2). The edges and surfaces of the papyrus scrolls were therefore "prepared and protected by artificial means with special care". White concludes that materials "in use might last a century, rarely two" (1914:lxiv).

The RAL scriptorium also produced copies of edited and corrected works. These were made available "to any one" (Richardson 1963:170) and especially to libraries outside Alexandria, who loaned these texts to reproduce copies to add to their own holdings (Weimann 1975:30).

4.3.7 THE ALEXANDRINE WAR: CAUSE OF DESTRUCTION?

After his defeat at the hands of Caesar at Pharsalus in 48 B.C., Pompey fled with the remnants of his forces to Cyprus (see 4.2.1). Caesar, probably in an attempt to counter any future threat the Pompeians may have posed, departed Asia-Minor for Egypt (Parsons 1952:275). Caesar arrived in Alexandria that same year as guest of Cleopatra, the reigning Ptolemaic monarch.

Coinciding with Caesar's sojourn in Alexandria was the outbreak of a local revolt. Probably incited by Caesar's presence in the city, 200 000 men of the Egyptian army led by the general Achillas proceeded to occupy parts of the city and went on to besiege the palace in which Cleopatra was entertaining her visitor. Heavily outnumbered, Caesar ordered the burning of the large Egyptian fleet lying at anchor in the harbour which posed "a definite menace against the arrival of reinforcements sent for by Caesar, and an immediate danger to the few ships of the Roman" (Parsons 1952:286).

Unfortunately, the fire soon spread from the moored burning ships to the surrounding piers and dockland. This supposedly was to have dire consequences for the RAL according to various ancient sources:

"In this war, to begin with, Caesar encountered the peril of being shut off from water, since the canals were dammed up by the enemy; in the second place, when the enemy tried to cut off his fleet, he was forced to repel the danger by using fire, and this spread from the dockyards and destroyed the great library". (Plutarch Caesar XLIX,3)

"After this many battles occurred between the two forces by day and by night, and many places were set on fire, with the result that the docks and the storehouses of grain among other buildings were burned, and also the library, whose volumes, it said, were of the greatest number and excellence". (Cassius Dio XLII,38.2)

The following sources provide figures for the number of works allegedly destroyed:

"... seven hundred thousand volumes ... were all burned during the sack of the city in our first war with Alexandria, not intentionally or by anyone's order, but accidentally by the auxiliary soldiers". (Aulus Gellius VII,17.3).

"There are besides in the city temples pompous with lofty roofs, conspicuous among them the Serapeum ... In this were invaluable libraries, and the unanimous testimony of ancient records declares that 700 000 books ... were burned in the Alexandrine war, when the city was sacked under the dictator Caesar". (Ammianus Marcellinus XXII,16.12-13)

Seneca provides a remarkably lower figure:

"... Titus Livius who says ... Forty thousand books were burned at Alexandria ...". (Seneca De Tranquillitate Animi IX,4)

The same figure is given by the fifth century historian Orosius (Parsons 1952:307).

It should be noted in this regard that archaeological excavations have placed the RAL in the western part of the city (Parsons 1952:313) roughly "a quarter of a mile from the Great Harbor" (White 1914:xxxv, note 2).

Judging by the above accounts, a number of scholars believe that the RAL was totally destroyed by fire during the confrontation (Thompson 1962:23; Von Graberg 1974:293). The Serapeum (see 4.1.5.2) now became the leading library in Alexandria (De Vleeschauwer 1967:50) complementing the restored Mouseion (Weimann 1975:30). This is confirmed in part by Holmes (1980:291) who points out that "most references to the Alexandrian library from the Imperial period are to the Serapeum ...". Holmes goes on to conclude that "even if the building itself was not demolished (for there is no comment

that the Mouseion was damaged) the main library's bookstock may be said to have been severely diminished in the fire".

That the RAL and its collection were only partly damaged is a view adopted by various scholars (Kesting 1986:157; Wendel in Milkau 1955:76). Irwin for one notes that damage to the RAL "cannot have been serious" since the Mouseion (and by implication the RAL) was "indeed near Caesar's headquarters" which itself was not damaged as "Caesar continued to occupy the position afterward" (in ELIS 1, 1968:403). White concedes that the RAL "was in the track of the fire, but presumably at its limit", and, because the RAL spanned such a large complex of buildings "it is improbable that both building and books were totally destroyed" (1914:xxxvi).

However, closer examination of the sources indicates that the RAL itself may not have been destroyed or damaged at all. Both the accounts of Aulus Gellius and Ammianus Marcellinus can be discounted on the basis of elementary errors (White 1914:xxxiii-xxxiv). Gellius (c.A.D.130-c.180) states that all the 700 000 volumes accumulated in Alexandria by the Ptolemies were burnt - yet it is known that the Serapeum was unaffected by the fire. Ammianus Marcellinus (c.A.D.330-395) on the other hand, records both libraries as having burnt, but wrongly locates both in the Serapeum.

As for Plutarch (c.A.D.50-120) and Dio Cassius (third century A.D.), both historians base their accounts on the assumption that a book collection was known to have been burnt in Alexandria, and automatically assumed that it was the RAL which had been destroyed (Canfora 1987:97; PRE Vol.3, 1899:411).

Confirmation that the RAL had in fact escaped the Alexandrine War unscathed may come from the silence on the subject in a number of notable sources. Strabo for one had visited Alexandria twenty-three years after the war and had studied in the RAL. He went on to give a description of the Mouseion buildings that housed it (see 4.3.3) and discussed the organization of the library (Canfora 1987:82; Irwin in ELIS 1, 1968:403; Rolfe 1963:303, note 1; Wendel in Milkau 1955:88). White concludes that in Strabo describing the Mouseion "if the Library in its immediate vicinity and all its books had

been totally destroyed, he could hardly have failed to record so lamentable a catastrophe" (1914:xxxvi). Caesar in his own account of the civil wars never refers to the destruction of the RAL (Irwin in ELIS 1, 1968:403; White 1914:xxxvi) nor does the unknown contemporary author of the Alexandrine War, although Canfora points out that one understands "their reluctance to record an unpleasant incident" if the burning of the RAL had indeed taken place (1987:140). Cicero, the bibliophile, scholar and contemporary of Caesar (see 4.2.5.5), who certainly "would have felt this loss deeply", is silent on the subject (White 1914:xxxvi) and did not even mention it after Caesar's death (Canfora 1987:140). Also silent on the incident is Appian (second century A.D.), a born and bred Alexandrian who wrote an account of the Alexandrine War in his Civil Wars as well as the historian Athenaeus who was born in Egypt and drew "on thousands of sources" (Canfora 1987:95).

Seneca simply states that 40 000 books were burnt. Parsons maintains that "he probably meant just this and was referring to the number of books (volumes, burned, and not to the number in the library)" (1952:172). White (1914:xxxiv, note 1) however believes that Seneca made an error when recording such a low figure. Earlier in the same passage De Tranquillitate Animi IX.4-7) Seneca was criticizing the accumulation of large collections (quoted at the end of 4.3.5.2) and therefore "the number of books burnt in Alexandria was not, for the matter he had in hand, of any particular importance ...". Seneca, probably like Plutarch and Dio Cassius, knew that books had been burnt during the Alexandrine War and simply proposed the figure of 40 000 which to a Roman at that time seemed "a generous provision for a library", since libraries in Rome were generally small and private (see 4.2.4).

Conversely, Canfora argues that Seneca's proposed figures are the most credible and accurate of them all. Seneca quotes Livy (Titus Livius - 59 B.C.- A.D.17) as his source who Canfora sees as "a contemporary of Caesar and of Augustus" (1987:93). The news of the fire would therefore have still been fresh in people's minds when Livy compiled his history, unfortunately the relevant book of which covering the Alexandrine War has been lost. The fact that Orosius almost three centuries later used the same terms as Seneca had in describing the scrolls viz. "Singulare profecto monumentum studii curaeque

maiorum", proves "that Orosius, like Seneca, must have found the figure of 40 000 scrolls in his copy of Livy" (Canfora 1987:94).

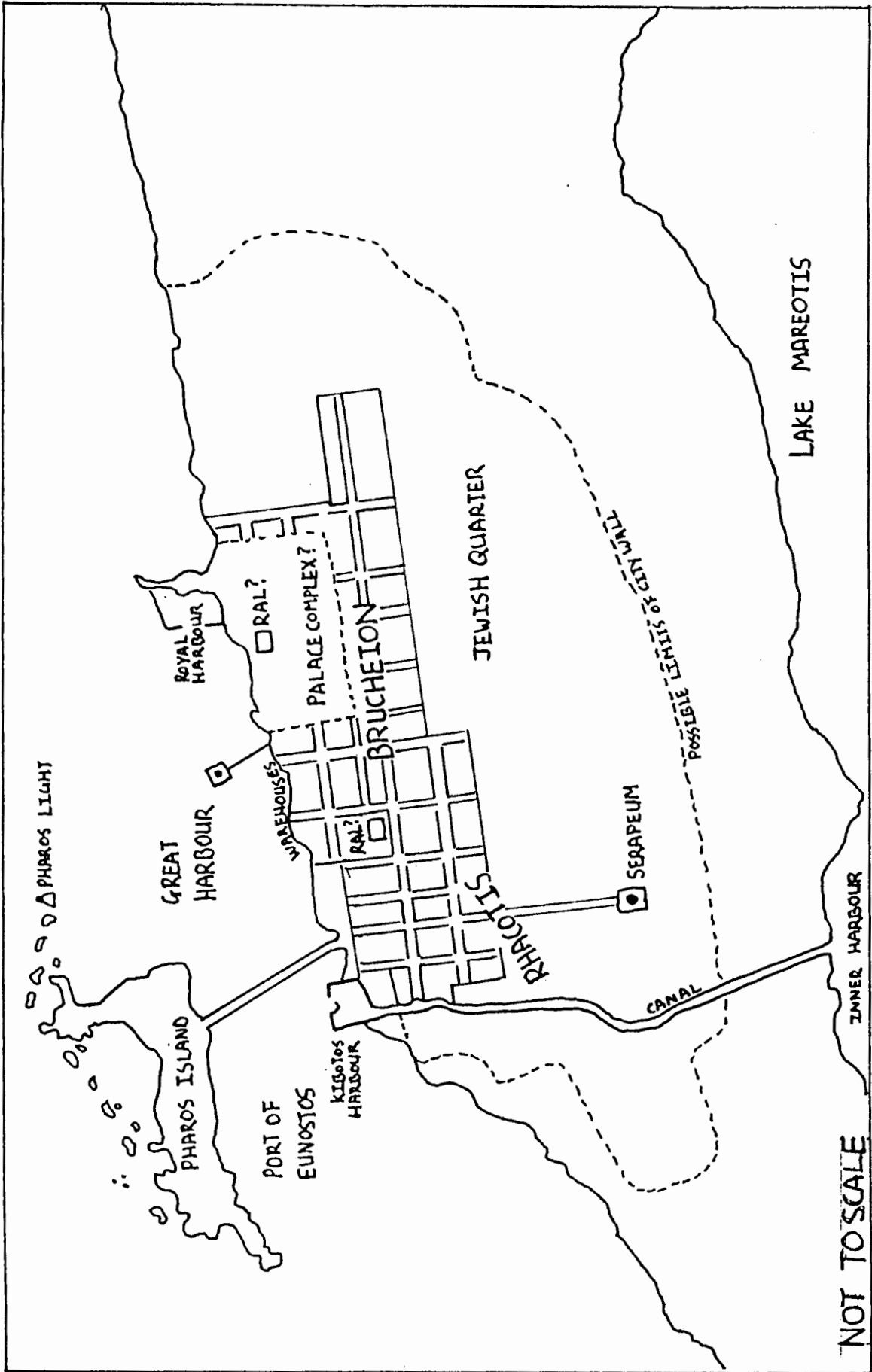
It has therefore been suggested that the books destroyed during the Alexandrine War were never in the RAL in the first place, but were being stored in a warehouse situated in the harbour area. It is alleged that Caesar, on visiting the RAL and the Mouseion, was so impressed that he wished to establish a library on a similar scale in Rome (see 4.2.5.8). Cleopatra therefore presented Caesar with scrolls from the RAL collection and these were awaiting shipment to Rome at the time when the local uprising began (De Vleeschauwer 1967:50; Parsons 1952:284-286; PRE Vol.3, 1899:413). These books will have been the 40 000 mentioned by Seneca that were destroyed by the fire.

Although De Vleeschauwer argues that this figure of 40 000 is exaggerated for the number of books Caesar had received from the RAL (1967:50), Parsons believes that it "is reasonable". Caesar certainly could have had the 40 000 books removed from the RAL in the time available and such a total would "form the foundation for a great, new library at Rome" (1952:314, note 1). However Canfora maintains that "the sequence of events between Caesar's arrival in Alexandria and his firing of the ships moored in the port ... hardly left him the leisure, trapped as he was in a situation of grave danger ...". Canfora concludes that this whole hypothesis is therefore "in truth very fragile" (1987:135) while Irwin (in ELIS 1, 1968:403) sees it as "merely an ingenious guess".

Canfora instead argues that 40 000 scrolls in the harbour warehouses were "articles of merchandise, export goods intended for the valuable and fastidious foreign market" (1987:70) since "nothing in the words of Seneca ... lead one to think that the books mentioned were books belonging to the royal library" (1987:96). If they had indeed formed part of the RAL holdings, the 40 000 scrolls would have been "no more than a tiny part of the vast collection at Alexandria" (1987:144).

Despite the Alexandrine War and its possible consequences, the Mouseion continued to flourish for roughly another, albeit "undistinguished", four centuries (Irwin in ELIS 1, 1968:403). The losses suffered by the RAL, whatever the total, were in part made up by the 200 000 scrolls donated by Mark Antony in 41 B.C. from the Pergamum collection (see 4.1.5.7 and 4.3.5.1).

Map 8: Library Sites of the City of Alexandria



5. A CASE FOR CONTINUITY

5.1 THE ESTABLISHMENT OF LIBRARIES: A CONSEQUENCE OF CULTURAL INTERACTION

5.1.1 THE MIDDLE EAST

Widespread economic and political interaction between the various ancient Middle Eastern civilizations allowed for an exchange of ideas and concepts. Invariably this cultural exchange influenced the methods of book preservation employed in the various centres throughout the Middle East (see 5.2).

An example of the intense ancient Middle Eastern socio-economic and political interaction is the northern Syria city-state of Ebla (see 2.1.6.4) which had achieved its high-point in the period 2400-2250 B.C. The city-state boasted a large library which was open for use to visiting scholars. These foreign academics, together with their Eblaite counterparts, compiled language dictionaries co-operatively under the guidance of a general editor. This procedure is considered by Wellisch (1981:495) to be the ancient equivalent of the modern scientific conference attended by delegates from all over the world. In return, Ebla probably sent scribes to attend conferences in other city-states including Mari (see 2.1.6.2), Ebla's traditional rival (Bradscher 1985:241).

Modern scholars believe that Eblaite scribes taught in Mesopotamian cities. This may certainly have been the case of the Syrian city of Erech where numerous tablets have been uncovered bearing the names of Eblaite scribes (La Fay 1978:755).

At its peak Ebla was considered an economic giant (La Fay 1978:735) and tablets contained in the Eblaite collection list thousands of place names (Wellisch 1981:494), some of which are situated in modern Syria, Jordan and Israel. The influence of Ebla has also been discernible in the culture of the Palestinian Canaanites, a people from whose culture the Hebrews borrowed following Abraham's settlement in Canaan in c.2000 B.C. (La Fay 1978:754).

An Egyptian jar on whose lid was inscribed the cartouche of Pepi I (who reigned as pharaoh between 2332 and 2283 B.C.) was found at Ebla and is evidence of the city's exchanges with Egypt (La Fay 1978:759). The city of Nippur on the Euphrates, once the religious centre of Sumer, was dedicated to the supreme deity Enlil who also featured in Ebla's syncretistic pantheon (La Fay 1978:755).

Ebla's rival Mari, situated along the upper reaches of the Euphrates in modern Syria, was described in old Babylonian chronological lists from Nippur and Kish as the seat of "the tenth dynasty after the flood" and ruled over Babylon in 2560-2425 B.C. (Milkau 1955:35). The city had extensive contact with Syria, Assyria, Babylon as well as Cyprus and centres along the coasts of the Aegean Sea. The Mari royal library also contained correspondence from Elam (a kingdom in what is today Iran), the Hittites as well as Mediterranean coastal towns (Milkau 1955:36, note 1).

The Phoenician harbour city of Ugarit (see 2.1.6.7) flourished in the thirteenth century B.C. and succeeded Ebla and Mari as the commercial centre in northern Syria. Ugarit maintained close links with Minoan Crete (see 3.1) and the Hittites to the north (Johnson 1965:39). The city was mentioned in the Egyptian Amarna letters (dated to between c.1433-1255 B.C.) and appeared in the Hittite texts of Hattusa (see 2.1.6.7).

The royal archives of Ugarit adopted the organizational procedures which were followed in Mari's archival collections (EJ Vol.3, 1971:370). Tablets uncovered in the remnants of these Ugarit library chambers contained a wide variety of languages. The bilingual and foreign language wordlists recovered were similar to those found in Mesopotamia. Akkadian was well represented as well as bilingual wordlists in combinations such as Ugaritic-Akkadian and Sumerian-Akkadian. A short text in Cypriot writing has been discovered as well as a cylinder seal inscribed with Hittite picture writing. A funerary stele with an Egyptian hieroglyphic dedication inscribed upon it was also uncovered (Milkau 1955:43).

Further evidence indicates that Pharaonic Egypt was heavily involved in interaction with contemporary civilizations to the north. The library of Amarna (see 2.2.6.2) for example,

yielded tablets illustrating the relationships between the kings of Asia-Minor, Syria, Mesopotamia and the Egyptian pharaohs. Furthermore the tablets were inscribed upon in the Babylonian-Assyrian language - the lingua franca of diplomatic exchange at the time. Tablets were also uncovered at Amarna containing extracts of Babylonian mythology (Johnson 1965:34, Milkau 1955:9, Richardson 1963:69). Egyptian contact with the Hittites of Asia-Minor is indicated by letters of exchange which have also been found at Amarna. De Vleeschauwer (1967:30) maintains that this is proof of an extensive cultural interaction between the two lands.

On the site of the Assyrian city of Kanesh a clay box was uncovered in which Assyrian merchants had stored their tablets. Inscribed upon this box was the relief of a monkey peering inquisitively into the box. This illustration may have had symbolic function as the Egyptian writing god Thoth was identified with the figure of a monkey (Milkau 1955:37).

The existence of document collections in Palestine by 1400 B.C. is confirmed by the Egyptian Amarna letters and tablets found in the Hittite capital of Hattusa. These include letters from elders, princes and governors from centres all over Palestine notably Jerusalem, Tyre, Acco, Ashkelon, Gaza, Lachish (see 2.3.4.2) and Ayalon. The letters in both cases refer to further correspondence undertaken between the respective parties. For example, the annals of Thutmose III (c.1490-1436 B.C.) list annual contracts for supplies with the harbour towns of Syria and Palestine (Richardson 1963:83-85).

Egyptian influence on book preservation in Palestine dates back to the period of Abraham's settlement in Canaan and Jacob's emigration to Egypt in c.2000 B.C. when the patriarchs were in "close personal contact with the library lands of Babylonia and Egypt" (Richardson 1963:54). Furthermore Moses, who led the Hebrew people out of Egypt in roughly 1400 B.C., would have had the "training and professional experience of a scribe in Egypt" (FGB 1984:10) as both he and his brother Aaron were brought up in Egyptian schools and were therefore "familiar with the Egyptian ways of keeping their books" (Richardson 1963:74). Under King Solomon (c.961-922 B.C.) scribes and officials kept records in their respective departments "as in Egypt and everywhere else at that time" (Richardson 1963:123-124). Furthermore Richardson notes that Egyptian influences

continued into the Ptolemaic rule of Palestine in the Septuagint and New Testament times (1963:72).

Krzys (in ELIS 15, 1975:296-297) points out that Biblical references and archaeological discoveries suggest that the Hebrews had already established libraries in Mesopotamia before their migration into Palestine. The Hebrew concept of book preservation therefore originated from the old and established book preservation traditions of the various Mesopotamian civilizations. With the Babylonian and Persian occupations after 607 B.C., record preservation in Palestine once again strictly follows the traditional Mesopotamian pattern (Richardson 1963:127). It was through foreign conquests such as these that the Babylonians, Hittites and Assyrians "transmitted" their book preservation traditions and procedures throughout the Middle East (De Vleeschauwer and Wright in Rawski 1973:94).

During the Hellenistic period Richardson (1963:172-173) argues that libraries in Palestine "not on the building only, but ... the book collections and perhaps the material of which they were made" followed after the Pergamum (see 4.1.5.7) model (see 4.1.5.9).

5.1.2 GREECE

Western library history began with the early Egyptian and Babylonian civilizations and achieved its "golden age" in classical Greece (Johnson 1965:61). Wendel (in Milkau 1955:51-52) argues that the Greeks were able to adopt many ideas concerning librarianship from the old Middle Eastern civilizations owing to extensive trade links and cultural exchange. However, the Greeks only assimilated these ideas into their own system instead of adopting them in their original form. With this in mind Wendel concludes that it was the Greeks and not the Middle Eastern cultures who were responsible for the development of ancient librarianship.

Alternatively Weimann suggests that the influences of the Middle East on Greek librarianship are much more apparent (1975:25-26). For example, Greek collections containing purely scientific and literary works as opposed to state archives and temple

collections are only identifiable after King Ashurbanipal of Assyria had created his royal library at Nineveh. This would indicate that the origins of ancient librarianship were not exclusively Greek and that Middle Eastern influences run deeper than Wendel proposes. Even document preservation procedures adopted by the Greek Bronze Age cultures (see 3.1.6) resemble those of the Middle Eastern civilizations (see 5.2).

Peisistratus, tyrant of Athens from 561-527 B.C. (see 3.3.6.1) collected the first organized library of manuscripts and Wendel believes that the organizational methods and procedures used in this library were introduced through the Ionian Greeks (in Milkau 1955:56). Ionia, situated along the Western coast of Asia-Minor, will have had continuous interaction with the various Middle Eastern civilizations as the region on a number of occasions was occupied by Assyrian and Persian kings.

As in the Middle East palace libraries also existed in Greece - not only during the Bronze Age but also after the fall of the Bronze Age civilizations. A palace library was established once a ruler or tyrant was "well-disposed" towards the arts and sciences and would invite poets, artists and scholars to his court (Irwin 1964:57) acting as their patron. Therefore the libraries of Polycrates of Samos (c.546-522 B.C. and see 3.3.6.2) and Peisistratus could be classified as royal libraries. Royal libraries were later established in the same way at the Hellenistic royal capitals of Antioch (see 4.1.5.3), Pella (see 4.1.5.4), Pergamum (4.1.5.7) and Alexandria (see 4.3.2).

However, general scholarly opinion is that the Greek contribution to ancient librarianship is the concept of a library as an independent institution (Weimann 1975:26), free from state control.

5.1.3 THE HELLENISTIC PERIOD

Hellenism (see 4.1.1) embodied "an administration that took account of the individual characteristics of each region" with the book becoming "an instrument of government" (De Vleeschauwer and Wright in Rawski 1973:92). In this way Hellenism assimilated the beliefs, traditions and administrative systems of the conquered Middle Eastern territories.

On their campaigns the future Successors of Alexander became familiar with the bibliophilic cultures of the Middle East and their document preservation traditions whether it be "in the palace, the temple, the administration, in commerce and in farming ..." (De Vleeschauwer and Wright in Rawski 1973:93). The Middle Eastern concept of state initiated mass preservation of recorded thought was therefore adopted by the new Successor kingdoms (De Vleeschauwer 1967:42) as an integral part of the Hellenistic ruler cult (see 4.1.4.8).

Hessel however, argues that between the library cultures of the Middle East and the Hellenistic period lie the four centuries reign of the Medo-Persian kings "who, so far as is known, paid no attention to library matters" (1955:2). It must be remembered that the general library procedures, such as the bibliographic control required by the large state and royal libraries, had no precedent in the Greek world (see 3.3.5.2) where the collections were too small to warrant the need for such elaborate organization. Although De Vleeschauwer (1967:41-42) concedes that both the great libraries of Hattusa and Nineveh no longer existed, these institutions still served as examples and models for libraries in cities throughout the Middle East, with "the later Persian occupation" not effecting "substantial changes in these institutions ..." (De Vleeschauwer and Wright in Rawski 1973:102). It was through these libraries that the future Successors were exposed to the original library procedures of Nineveh and Hattusa.

Conversely Richardson maintains that from the time of Alexander the Great's conquests in the late fourth century B.C. "the libraries of Asia Minor, Egypt, Syria, Palestine even ... are largely Greek as to their books, Greek in architecture and Greek as to organization and keeper" (1963:148). However De Vleeschauwer and Wright advise caution when attempting to assess the Greek contribution to Hellenistic library institutions (in Rawski 1973:99). For one, the Greek, and especially the Athenians, showed great contempt for anything "barbarian". Aristotle's library (see 3.3.6.7) may have been "universal" as regards its content, but it would exclusively have contained Greek works. The fact that later Hellenistic institutions contained texts from Phoenician, Hebrew, Egyptian and Babylonian origin must indicate that Greek influence on these later libraries is not as powerful or all-embodying as generally thought (see 5.2.2).

Nevertheless, the universal concept of collection development as espoused by Aristotle's Lyceum (see 3.3.6.7a) did feature in the later Hellenistic royal libraries (De Vleeschauwer 1967:43).

Many modern scholars agree that Aristotle's collection was the first university library created exclusively for literature preservation, editing and textual criticism. This practice continued for the next two and a half centuries (Weimann 1975:29). Hessel concludes that the "seed sown by Aristotle now bore rich fruit" during the Hellenistic period (1955:3) and goes on to maintain that the legacy Aristotle left to the newly emerged Hellenistic world had now evolved into "a change in the direction of scholarly endeavour". This included the independence of individual subject-fields from one another, academic study and investigation being "confined to limited subject matter" and the accumulation and study of works produced by preceding generations of scholars instead of the creation of new original works.

Probably the most important contribution of Greece (and by inference Aristotle) to Hellenistic librarianship, was the small academic library (see 4.1.4.5). De Vleeschauwer (1967:43) points out that the Lyceum (see 3.3.6.7 and 4.1.5.1) and Plato's Academy (see 3.3.6.5) were not the examples in this regard, but instead lent impetus to the establishment of specialized institutions such as medicine and law academies.

A common factor throughout Mesopotamia and Syria, Palestine, Egypt and Greece is that the earliest forms of book collections were attached to temples (Johnson 1965:9). This tradition continued into Hellenistic times. The Serapeum (see 4.1.5.2) in the Temple of Serapis in Alexandria is said to be a subsidiary library of the RAL in the same way as the temple library Ashurbanipal had established in Nineveh to complement his royal library (Johnson 1965:27).

Thompson notes that in Egypt "from century to century, even from millennium to millennium, things have hardly changed" and goes on to conclude that "the temple libraries of Ptolemaic Egypt ... were much the same as they had been ages before"

(1962:2). The Hellenistic Serapeum library will therefore have inherited many features dating from the earlier pharaonic times.

5.1.4 THE ROMAN REPUBLIC

Although already possessing a vibrant archival tradition, the establishment of literature collections in the Roman Republic coincided with Rome's successful military campaigns in the Hellenistic Eastern Mediterranean during the second century B.C. (see 4.2.4). Roman librarianship therefore directly "inherited Greek and Hellenistic conceptions regarding libraries ..." (Bruce 1985:89).

Caesar had attempted to establish a public scholarly library based on the Alexandrian model in Rome (De Vleeschauer 1967:50, Hessel 1955:6, Johnson 1965:66, Kesting in ELIS 39, 1985:377, Weimann 1975:32 and see 4.2.5.8) yet it is generally believed that Roman librarianship was based more on the Macedonian and Pergamum book preservation traditions than that of the RAL (Irwin in ELIS 1, 1968:404). This is highly likely since the libraries that were brought back to Rome as war booty were from the Antigonid, Attalid and Seleucid kingdoms and not Ptolemaic Egypt.

Temple libraries, just as in the older Mesopotamian and Egyptian civilizations, also featured in the Roman Republic. Just as with their Middle Eastern counterparts, Roman temple collections contained works to complement the training of priests and also preserved formal religious literature (Johnson 1965:64-65, Wendel in Milkau 1955:107).

Once established in the various private estates in the Roman Republic, the remnants of the once proud Hellenistic libraries took on a new character (see 4.2.4) which Bruce describes as "significant changes, not modifications ..." (1985:90). This was a direct consequence of the fusion of the Roman and Hellenistic civilizations.

5.2 COMMON ELEMENTS AND PROCEDURES

The analyses undertaken in the following pages take the form of tabulated comparisons based on the findings made in the preceding three chapters with the analyses of individual library institutions. An attempt has been made to list the libraries within the tables chronologically.

5.2.1 LIBRARY BUILDINGS AND ARCHITECTURAL LAYOUT

In the following table four categories of library locations have been identified viz. - within a palace complex, a temple, administrative complex and a miscellaneous section classed as "other". A fifth column contains information of the architectural layout of a specific library where details are available. It will be noted that in a number of cases one archaeological site has revealed two separate collections.

Table 1: Library buildings and architectural layout

Library		Palace	Temple	Admin	Other	Details
Mesopotamia	UR (2.1.6.1)				x	
			x			
Syria	Mari (2.1.6.2)	x				
Mesopotamia	Kish (2.1.6.3)			x		
Syria	Ebla (2.1.6.4)	x				4 chambers
Mesopotamia	Lagash (2.1.6.5)				x	door - and windowless chambers with entry from roof.
Egypt	Edfu (2.2.6.1)		x			chamber or recess in wall.
Egypt	Amarna (2.2.6.2)	x				
Hittite	Hattusa (2.1.6.6)				x	2 chambers
			x			3 chambers
Phoenicia	Ugarit (2.1.6.7)	x				
			x			
Bronze Age	Knossos (3.1.6.1)	x				

	Library	Palace	Temple	Admin	Other	Details
Egypt	Thebes (2.2.6.3)				x	recesses in colonnaded hall.
Bronze Age	Mycenae (3.1.6.2)	x				
Bronze Age	Pylos (3.1.6.3)	x				
Palestine	Samaria (2.3.4.1)				x	chambers near palace complex.
Assyria	Nineveh (2.1.6.9)	x				
Palestine	Lachish (2.3.4.2)			x		
Greece	Metroon (3.3.6.3)		x			
Greece	Aristotle (3.3.6.7)				x	colonnaded building
	Royal Alexandrian Library (4.3.3)				x	recesses in colonnaded hall.
Hellenistic	Serapeum (4.1.5.2)		x			recesses in colonnaded hall.
Hellenistic	Antioch (4.1.5.3)	x				
Hellenistic	Ptolemaion (4.1.5.5)				x	resembled RAL and Pergamum.
Hellenistic	Pergamum (4.1.5.7)		x			recesses in colonnaded hall.
Palestine	Oumran (4.1.5.8)				x	situated in "community centre"
Hellenistic	Jerusalem Archive (4.1.5.9)				x	resembled Pergamum.
Rome	Rome Public Library (4.2.5.8)		x			

This preceding table reveals that throughout the ages book collections were housed in similar buildings or institutions. Palace libraries existed in the Middle Eastern civilizations of Mari (c.2480-1697 B.C.), Ebla (c.2400-2250 B.C.), Ugarit (c.1400 B.C.) and Nineveh (668-612 B.C.); in Pharaonic Egypt's Amarna (1411-1355 B.C.); the Greek Bronze age mainland sites of Mycenae and Pylos (both c.1100 B.C.) and in Knossos (c.1400-1100 B.C.) on Bronze Age Crete. This tradition of libraries housed in palace complexes was continued with the RAL which was constructed in the vicinity of the Ptolemaic royal palaces in the Brucheion suburb of Alexandria (see 4.3.3), its size and that of the Mouseion preventing it from being housed in the royal palace itself.

Similarly, temple libraries were found in the Middle Eastern Ur (c.3000 B.C.), Ugarit (c.1400 B.C.) and Hattusa (c.1400 B.C.); in Pharaonic Egypt's Edfu (c.2000 B.C.) and the Greek Metroon (established fifth century B.C.). This practice was also adopted by the Hellenistic institutions of Pergamum (founded 200 B.C.) and the Ptolemaic Serapeum (founded c.296 B.C.) in Alexandria. The Romans continued the temple library tradition with the establishment of the Rome public library in 39 B.C.

The concept of a library occupying the recesses along a covered walk or colonnaded hall (stoa) has first been identified in Pharaonic Egypt. Canfora (1987:81) notes that this structure constituted the "sacred library" of Ramses in his mausoleum at Thebes (c.1237 B.C.). A similar structure has been identified in the Peripatos of Aristotle (334 B.C.) in Athens (Johnson 1965:58). The archaeological excavations at Hellenistic Pergamum reveal a similar structure (see 4.1.5.7), a library which modern scholars agree was based on the design of the RAL (Canfora 1987:81, 141). The colonnaded structure also featured in the Serapeum temple library (Canfora 1987:81). It follows then, as Richardson concludes, that a library in most cases in the ancient world "implied ... a colonnade" (1963:160) - an architectural concept first applied in Pharaonic Egypt and subsequently adopted by the RAL (in all probability influenced by Aristotle's Peripatos in Athens).

Furthermore, it will be noted from the foregoing table that all the large libraries established after the founding of the RAL resembled the architectural layout of the Ptolemaic institution. This confirms the belief that the RAL was the example on which later Hellenistic libraries were modelled. Qumran is not classed as Hellenistic since it was established by a sect opposed to Hellenism (see 4.1.5.8). From Pergamum the architectural concept of the colonnaded library was introduced into Hellenistic Palestine (Richardson 1963:172) and Rome (De Vleeschauwer 1967:54; Gormley 1974:7; Johnson 1965:58).

5.2.2 COLLECTION DEVELOPMENT

A distinctive feature of RAL collection development policies was the acquisition of foreign works which formed part of the institution's attempts to achieve a form of "universality" as regards the constitution of its holdings (De Vleeschauwer and Wright in Rawski 1973:99; Hessel 1955:2; Kesting in ELIS 39, 1985:375). An attempt is made in the following table to trace the origins and subsequent development of this trend of collecting foreign works. "Foreign works", for the purposes of this analysis, may either be texts written in a foreign language or translations thereof.

Only those libraries are listed for which concrete evidence exists that they held foreign literary texts as well as multi- and bilingual dictionaries and wordlists in their holdings. Material recording diplomatic exchanges and treaties are excluded. Roman libraries are not considered, as these libraries were foreign collections simply transplanted to Rome (see 4.2.4).

Table 2: Collection development

Library	Dictionaries/ Wordlists	Literary Texts	Details
Syria Ebla (2.1.6.4a)	x		32 bilingual dictionaries Akkadian, Babylonian, Assyrian.
Egypt Amarna (2.2.6.2a)		x	Babylonian mythology.
Phoenicia Ugarit (2.1.6.7a)	x		multi- and bilingual dictionaries.
		x	Akkadian, Egyptian, Hittite, Sumerian.
Hittite Hattusa (2.1.6.6a)	x		bilingual dictionaries.
		x	<u>Epic of Gilgamesh</u> in 3 languages.
Assyria Nineveh (2.1.6.9a)	x		bilingual dictionaries.
		x	various of Mesopotamian origin.
Royal Alexandrian Library (4.3.5.2)		x	translated Sumerian, Egyptian, Phoenician and Persian works.
Hellenistic Serapeum (4.1.5.2a)		x	same as RAL.

As can be seen, the acquisition of foreign texts is limited to Middle Eastern collections. The absence of Greek institutions is explained by the Greek contempt for anything "barbarian" (see 5.1.3). The Greek contribution to the collection development policies of the RAL was limited to the concept of universality as regards the sciences, but excluded non-Greek texts (De Vleeschauer and Wright in Rawski 1973:99).

It has been suggested that the RAL adopted the collection development policies and procedures of Ashurbanipal's Nineveh (De Vleeschauer 1967:32; Hessel 1955:2). Both Nineveh (see 2.1.6.9a) and the RAL (see 4.3.5.2) resorted to the mass copying and purchasing of texts existing within and beyond the boundaries of their respective kingdoms. Both institutions were equipped with efficient scriptoria to facilitate the large-scale copying of texts that was required. Since the Greeks "never aimed at the procurement of massive collections" (De Vleeschauer and Wright in Rawski 1973:104 and see 3.3.5) it was through Hellenism that the RAL adopted exclusively Middle Eastern collection development policies.

5.2.3 COLLECTION ACCESSIBILITY

5.2.3.1 Seals and labels

The identification of written material usually occurred in two ways: either by means of seal impressions or statements of responsibility inscribed onto the clay tablet and manuscript - or by the attachment of labels and title slips. In the table below the various methods employed by a number of libraries have been identified.

Johnson observes that the stamp and cylinder seal utilized in Ugarit were similar to those found in use in Babylonia and Egypt (1965:39). While the use of seal impressions and inscriptions as indicated in the table above is limited to the three Middle Eastern libraries, Nineveh appears to represent the transitional phase in document identification methods as both the seal impression and the label were used. This can be seen as representing a continuity in the development of document identification to the time of the establishment of the RAL. Nineveh again served as the example in this case for the

RAL to follow. Roman collections adopted the Hellenistic (and those of the RAL) labelling methods.

Table 3: Seals and labels

Library		Inscriptions	Labels	Details
Syria	Ebla (2.1.6.4b)	x		inscriptions on tablet edges.
Phoenicia	Ugarit (2.1.6.7b)	x		cylinder and stamp seal.
Assyria	Nineveh (2.1.6.9b)	x		royal seal of ownership.
			x	labels identifying individual tablet's location and groups of a multi-tablet work.
Royal Alexandrian Library (4.3.6.1)			x	indicates authorship, date, origin.
Rome	Cicero (4.2.5.5b)		x	title slips.
Rome	Atticus (4.2.5.6b)		x	title slips.

Depending on the method of subject differentiation (see 5.2.3.4), shelves and containers were also identified as to their contents. As the table below indicates, the identification methods employed in this case are similar to those applied in the identification of individual tablets and papyri viz. seals, labels and inscribed headings placed on or above containers and shelves.

Table 4: Seals and labels

Library		Seals	Labels	Headings	Details
Mesopotamia	Ur (2.1.6.1b)	x	x		identify contents of clay boxes.
Syria	Mari (2.1.6.2b)		x		identify contents of various containers.
Mesopotamia	Kish (2.1.6.3b)	x			identify contents of clay jars.
Egypt	Amarna (2.2.6.2b)		x		identify contents of wooden chests.
Royal Alexandrian Library (4.3.6.1)				x	identify manuscripts on shelves.
Hellenistic	Serapeum (4.1.5.2b)			x	identify sections and subdivisions.
Hellenistic	Pergamum (4.1.5.7b)			x	identify manuscripts in containers, recesses and on shelves

The identification of the various sections that made up a collection, whether contained in boxes, jars, chests or on shelves, became standard practice in libraries throughout the ages. Middle Eastern libraries generally adopted the same methods, while the evolution of the large papyrus collections such as the Hellenistic libraries and the RAL required an adaptation of the older Middle Eastern methods.

5.2.3.2 Colophons

Ancient librarians were often faced with multi-tablet or multi-scroll works. The many tablets or scrolls that made one work had to be kept together in some way to prevent loss or misplacement. The colophon solved this problem to a certain extent and was introduced in libraries throughout the ancient world.

Table 5: Colophons

Library	Details
Hittite Hattusa (2.1.6.6b)	last line of preceding tablet inscribed in first line of next tablet.
Phoenicia Ugarit (2.1.6.7b)	same as in Hattusa.
Assyria Nineveh (2.1.6.9b)	same as in Hattusa. single tablet lists opening lines of tablets forming part of multi-tablet work.
Royal Alexandrian Library (4.3.6.1 and 4.3.5.2)	possibly identified as "summageis" scrolls. text divided into equal sized scrolls and numbered in sequence as "books".

Originating in the Middle Eastern libraries, the colophon remained a standard procedure but was adapted and modified in the later RAL to suit papyri collections.

5.2.3.3 Catalogues and shelf-lists

The accumulation of large book collections implies the application of some form of bibliographic control to facilitate easy access to the library holdings. The following table has identified shelf-lists, inventory lists and catalogues arranged either by subject or

author/title combinations as the most common forms of bibliographic control employed in ancient libraries.

Table 6: Catalogues and shelf-lists

Library	Subject	Author Title	Inventory Shelf-list	Location	Details
Egypt	Edfu (2.2.6.1b)		x	inscribed on wall.	list order of papyrus containers.
Hittite	Hattusa (2.1.6.6b)	x		inscribed on tablets.	
Assyria	Nineveh (2.1.6.9b)	x		inscribed on walls and tablets.	records title, lines, contents, incipit, subdivisions of text.
Greece	Aristotle (3.3.6.7b)		x		records length of work.
Royal Alexandrian Library (4.3.6.1)		x		inscribed on papyri. separate bibliography.	supplies number of lines, origin author, title/ incipit, lines and biographical details.
			x		
Hellenistic	Lyceum (4.1.5.1b)	x			
Hellenistic	Rhodes Gym. (4.1.5.6b)	x			records length of work.
Hellenistic	Pergamum (4.1.5.7b)		x		two types: with and without duplicates.
		x		separate bibliography.	same as RAL.
Palestine	Qumran (4.1.5.8b)		x		
Rome	Lucullus (4.2.5.2b)	x			

Cataloguing procedures first used at Hattusa in c.1400 B.C. were applied in Ashurbanipal's royal library in Nineveh (De Vleeschauer and Wright in Rawski 1973:104; Milkau 1955:47). It was through the later Middle Eastern collections which Alexander and his generals (the future Successors) had come across during their

campaigns and for which Nineveh had served as the model and example, that the RAL went on to adopt these methods of bibliographic control. This is confirmed by the table above, as the only significant Greek library existing before the establishment of the RAL, namely Aristotle's, is far too small to have influenced the large scale and detailed cataloguing procedures of the RAL.

Thompson maintains that even the Pinakes of Callimachus had its antecedent in Nineveh (in ELIS 36, 1983:94), while the alphabetical arrangements employed in the Pinakes were first used in Pharaonic Egypt (Richardson 1963:164).

The RAL went on to serve as the model for later institutions such as Pergamum, and variations of its cataloguing procedures went on to be adopted throughout the Hellenistic world (Wendel in Milkau 1955:81-82).

5.2.3.4 Subject differentiation

Large library collections were arranged in some way to make the book materials accessible and to ensure efficient retrieval of required documents. Collections were in most cases arranged by the content of the book materials the libraries held. The following table has identified five methods of subject differentiation generally applied in ancient libraries through the ages, with more unique methods classed under "other".

Table 7: Subject differentiation

Library	By Chamber	By Container	By Arrangement	By Author	By Date	Other
Mesopotamia Ur (2.1.6.1b)	x					
Syria Mari (2.1.6.2b)			x			
Mesopotamia Kish (2.1.6.3b)		x				
Syria Ebla (2.1.6.4b)	x					also by tablet shapes.
Mesopotamia Lagash (2.1.6.5b)			x			
Phoenicia Ugarit (2.1.6.7b)		x				
Bronze Age Knossos (3.1.6.1b)		x			x	
Bronze Age Pylos (3.1.6.3b)					x	
Palestine Samaria (2.3.4.1b)					x	

Library		By Chamber	By Container	By Arrangement	By Author	By Date	Other
Assyria	Nineveh (2.1.6.9b)	x		x			
Palestine	Lachish (2.3.4.2b)			x			also by names of officials
Greece	Metroon (3.3.6.3b)				x		
Greece	Euthydemus (3.3.6.4b)			x			
Greece	Linus (3.3.6.6b)			x			
Royal Alexandrian Library (4.3.6.1)				x	x	x	also by origin and era of script.
Hellenistic	Lyceum (4.1.5.1b)			x			
Hellenistic	Pella (4.1.5.4b)						copies by origin
Hellenistic	Rhodes Gym. (4.1.5.6b)			x			
Hellenistic	Pergamum (4.1.5.7b)			x	x		copies by origin
Hellenistic	Jerusalem Archive (4.1.5.9b)			x		x	
Hellenistic	Apellicon of Teos (4.1.5.10b)			x		x	
Rome	Lucullus (4.2.5.2b)			x			

As can be seen, the RAL adopted a number of the same procedures first employed by its predecessors. Differentiation by author seems to be a wholly Greek contribution while arrangement by date has its origins in the Bronze Age collections. The most noteworthy Middle Eastern influence is differentiation by means of the arrangement of the holdings - for example one subject group being limited to a specific area of shelving or groups of shelves. This method appears to have reached the RAL also by way of Greek libraries which had adopted it. It is quite possible that since Greek library collections were rather small, subject differentiation by arrangement of the collection may have been the only form of bibliographic control they employed in lieu of actual catalogues, with works then being arranged by author within each subject group. The table also clearly indicates that the RAL served as the example for later libraries to follow as the differentiation procedures originally employed by the RAL were adopted by these institutions.

5.3 THE ROYAL ALEXANDRIAN LIBRARY: THE EPITOME OF ANCIENT LIBRARIANSHIP

This study has found that the RAL displayed all the elements and procedures of ancient librarianship which had already been in use long before its founding in many parts of the then known world. From Pharaonic Egypt originated the architectural concept of the colonnaded library building (see 5.2.1), from the Middle East, and particularly Assyrian Nineveh, the acquisition of an universal literature including foreign works (see 5.2.2). Book identification methods also had Middle Eastern origins (see 5.2.3.1) while the colophon was first employed at the Hittite Hattusa (see 5.2.3.2). The oldest known catalogue recording the location of works was found in the Pharaonic Egyptian Edfu temple library (see 5.2.3.3) and the subject differentiation methods employed in the RAL had both Middle Eastern and Greek influences (see 5.2.3.4).

These facets of librarianship were brought together at the RAL to be assimilated, adapted and modified and then passed on to the later Hellenistic institutions, to Rome and subsequently to the modern era. This continuity in the development of ancient librarianship can be summarized diagrammatically as follows through the identification of the key and most influential libraries and institutions involved.

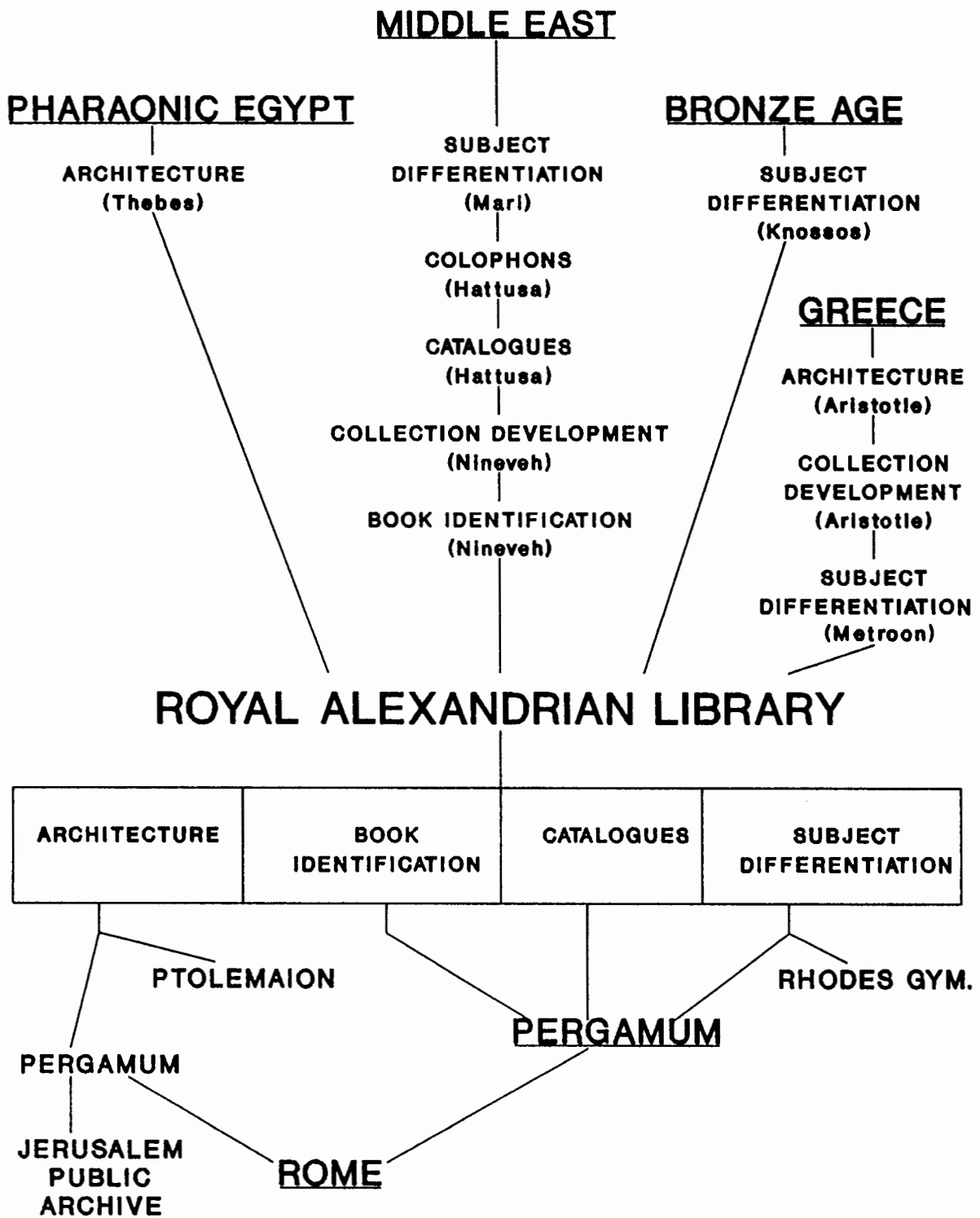


Figure 1: Continuity in the Development of Ancient Libraries

It is the conclusion of the researcher that while it is true that the Mouseion of Ptolemaic Alexandria was exclusively a Greek institution as regards its origins, many modern scholars mistakenly also imply the RAL in this regard (most notably Milkau 1955:17). Instead the RAL should be seen as a distinctive institution from the Mouseion proper, yet complementing its activities. Consequently the historical development of the RAL is an independent process from that of the Greek inspired Mouseion. The findings of this study therefore confirm the hypothesis espoused by a number of scholars that the most prominent influences featured in the RAL are of Middle Eastern origin (De Vleeschauwer 1967; De Vleeschauwer and Wright in Rawski 1973; Hessel 1955; Irwin in ELIS 1, 1968; Weimann 1975; Wendel in Milkau 1955) and that a number of these originated before the foundation of the Assyrian royal library of Nineveh.

Nevertheless Greek influences should not be discounted, however limited they may be. This study has shown that elements employed in small Greek papyri collections (most notably subject differentiation methods) also featured in the RAL. The influence of Aristotle's library which complemented the activities of the original Athenian Peripatetic mouseion, is more pertinent (architectural layout, initial collection development policies). After all, the original concept of a mouseion implied a subsidiary library collection.

The RAL, a Hellenistic institution, was created out of a fusion of Greek and non-Greek concepts of librarianship and in this way mirrored the prevailing Hellenistic social order.

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