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THE STATE OF THE ART OF SELECTED WRITING MATERIALS: A COMPARATIVE STUDY BASED ON 19TH- CENTURY SOURCES AND CONTEMPORARY KNOWLEDGE

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ABSTRACT

The paper aims to present and compare the state of knowledge in selected writing materials based on 19th-century sources and contemporary news examples. The paper cites an excerpt from the written examination for director of the Jagiellonian Library, relating to writing materials, of Józef Muczkowski in 1836. The course of the entire examination and the committee's work on its preparation are also outlined. The article also elaborates on selected discoveries of ancient papyri, parchments and clay tablets between the 19th and 21st centuries. These included documents found during excavations carried out in: Herculaneum (at the Villa of the Papyri), Tebtunis on the outskirts of the Fajum oasis, Sheikh Abd el-Gurna, Nineveh, Dura Europos, Qumran and Ein-Gedi. Aspects of their preservation and dissemination, as well as digitisation, are addressed. The tasks carried out in opening and reading the contents of the various manuscripts without risking their destruction are also described.

KEYWORDS: history of librarianship, history of writing materials, discoveries of ancient writing materials, digitisation, Jagiellonian Library, Józef Muczkowski

Knowledge is constantly being transformed. It would seem that objects that were created hundreds of years ago are forever stored. However, the galloping development of technology has always dictated its rules to all sectors of science, bringing newer and newer solutions into circulation, improving not only the quality of life but also of research. In this way, history was – and still is – often reinvented. Things that used to be used daily became a thing of the past, replaced by new and improved inventions. The hundreds of years that have passed have encouraged the disappearance of certain practices that were previously an indispensable part of the life of certain civilisations. The widely understood ‘library world’, once hermetic, has also been obliged to adapt its offerings to the needs of society while striking a balance between technology and science. However, there are still areas that reflect past practices. Library science, on the one hand, is a discipline closely tied to its tradition and, therefore, conservative, while on the other hand, it is evolving in line with emerging improvements. It combines tradition with modernity. The history of the book and, at the same time, of librarianship is changing; nevertheless, the knowledge of the book from earlier years was not always as we know it now.

The greatest influence on the development of libraries and the knowledge of librarianship in the Polish lands was exerted by the directors of libraries. In the first half of the 19th century, the director of the Jagiellonian Library was Józef Muczkowski. He held this position from 1837 to 1858. During his 21 years at the helm, he introduced numerous changes to the library. First and foremost, he generally rebuilt the Library, then located in the building of the Collegium Maius. He also carried out a comprehensive reorganisation of the library’s collection. He re-organised the catalogues to improve the search for works. He created an alphabetical master

catalogue by combining all bibliographical descriptions previously arranged by language. As a result, he searched for a large number of duplicates, which, among other things, made it possible to clarify the full numerical status of the collection held in the Library. Noting all sorts of problems that the 19th-century institution had to face, he repeatedly implemented innovative solutions to raise the standard of the library. With regard to cataloguing, he developed and introduced his own systematic scheme. It was a material scheme based on the relationship of superiority and inferiority of individual divisions and subdivisions of science. Józef Muczkowski was the first to deal with what are now known as special collections. He listed and arranged documents of social life and graphic and cartographic materials, including all brochures, dissertations, calendars, maps, and engravings. He separated incunabula from the collection into a separate resource, which he took special care of, rearranged manuscripts, and arranged and compiled a catalogue of numismatic items.

All his activities were based on his knowledge of librarianship, which he continuously developed as director of the Jagiellonian Library.¹ Nevertheless, the science of Libraries or books in the early nineteenth century differed in many respects from that which we study today. One can learn about what knowledge was available to scholar-librarians in the nineteenth century, in the broad field of the history of the book, among other things, from the documents preserved in the Jagiellonian Library and the Jagiellonian University Archives for the examination for the post of director of the Jagiellonian Library, which Józef Muczkowski took.

The competition for the director of the university library was announced nearly six months after the death of Jerzy Samuel Bandtkie, on 10 December 1835 to be precise.² All those interested in the

1 B. Krawczyk, *Józef Muczkowski: dyrektor Biblioteki Jagiellońskiej, historyk*, Kraków 2021, pp. 121-240.

2 Archive of the Jagiellonian University in Cracow (hereinafter: AUJ), ref. S I 584, k. nlb., [Announcement of the Competition for the Chair of Librarian at the University of Cracow dated 10 December 1835].

position had to send an official application by post to the university rector at their own expense by the deadline of 20 February 1836. They were obliged to attach numerous documents to the letter, such as a curriculum vitae, a birth certificate, and a doctoral degree from the University of Kraków or another university located in the state of one of the Three Greatest Guardian Crowns. In addition, an employment certificate from a well-known and respected library was required, indicating the years worked at the institution. Priority over fellow applicants for the post of director was also ensured by enclosed documents proving, among other things, knowledge of foreign languages, bibliography and Slavonic literature, printing machines and numismatics.³ Furthermore, those entering the competition for the post of university librarian were required to provide evidence of competence in literary diplomatics, i.e. the ability to read old manuscripts and indicate their dating.⁴

Candidates for the post, vacated after J. S. Bandtkie, would have had as part of their duties, in addition to the overall care of the library, to hold classes with students in the form of lectures on bibliography. The classes were to be held in Polish at a rate of three hours per week. The remuneration proposed at the time for both duties was 7,000 Polish zlotys per year.⁵

Before a particular candidate was accepted by the University Senate and entrusted with the duties of librarian of the Krakow Library, the whole process took the form of a competition. All persons interested in the post, after fulfilling the formal requirements, which focused solely on providing or uploading the indicated doc-

3 AUJ, ref. S I 584, k. nlb., [Announcement of the Competition for the Chair of Librarian at the University of Cracow dated 10 December 1835].

4 M. M. Biernacka, *Wykłady Karola Estreichera w Szkole Głównej w Warszawie 1865-1868. Studium bibliologiczne*, Warsaw 1989, pp. 45-56.

5 AUJ, ref. S I 584, k. nlb., [Announcement of the Competition for the Chair of Librarian at the University of Kraków dated 10 December 1835]. Comparing the salary of different positions, it is worth noting that in 1825 a labourer working in the Kraków region received 10-15 Polish zlotys per month, while, for example, in 1857 the scribe of the Library of the National Ossoliński Institute in Lviv received an annual salary of 700 Rhine zlotys. See J. A. Szwagrzyk, *Pieniądz na ziemiach polskich X-XX w.*, Zakład Narodowy im. Ossolińskich, Wrocław 1973, p. 262.

umentation, had to obtain a positive result in the examinations (written and oral) conducted in Polish. The written examination was scheduled for 14 April 1836, and the oral examination for the following day, i.e. 15 April 1836.⁶

The requirements for the candidates of the competition and the rules of the competition were agreed on several occasions in a wide circle. On 25 June 1835,⁷ the first mention was made of the fact that a competition for a university librarian should be held. It was mentioned in a letter from Karol Hube - the rector of the university - to Karol Hübner, who was then a government commissioner. In it, the rector pointed to §39 of the Internal Regulations, which stated that a competition for a vacant chair should be held for four months and start within 14 days of the vacancy. This paragraph caused the Rector, K. Hube, to demand that the University Senate meet without delay and hold a competition for the vacant chair, postponing its time to a maximum of seven days.⁸

Despite the indication of the rector K. Hube, on 7 July 1835 the President of the Governing Senate of the Free, Independent and Strictly Neutral City of Cracow and its District, Kacper Wielogłowski sent a letter to the Government Commissioner K. Hübner regarding the filling of the chair of professor of bibliography and librarian at the Jagiellonian University. Kacper Wielogłowski wanted the relevant information about the competition and the vacancy to be withheld, of course, after the matter had been agreed with the Academic Senate. In the letter in question, he suggested that there was an unexplained proposal to entrust a post to one of the Jagiellonian University professors outside the competition procedures.⁹ The person in question was Paweł Czajkowski - a professor of lit-

6 Ibid.

7 J. S. Bandtkie died on 11 June 1835. The letter was written 14 days after the librarian's death. See A. Birkenmajer, *Bandtkie (Bandtke) Jerzy Samuel (1768-1835)*, in: *Polski słownik biograficzny*, Kraków 1935, vol. 1, pp. 260-263.

8 AUJ, ref. S I 584, k. nlb., [Letter from K. Hube to K. Hübner dated 25 June 1835], record number 32.

9 Ibid, k. nlb., [Letter from K. Wielogłowski to K. Hübner dated 7 July 1835], reference number 4071.

erature at the Kraków University, serving as dean of the Faculty of Philosophy in the years 1823-1828 and, from 1831, as a member of the Governing Senate,¹⁰ who wanted to take over the post without having to participate in the competition.

The matter was not clarified until 18 November 1835. On that date, the President of the Ruling Senate, K. Wielogłowski, drafted a letter justifying the impossibility of accepting P. Czajkowski's proposal. On November 17, 1835, during a conference of residents of the Three Greatest Courts, it was decided that the post vacated by J. S. Bandtkie could not be 'offered'. Hence, there was no question of handing over the post to P. Czajkowski outside the competition procedures, and the Senate itself decreed that the Government Commissioner to the Scientific Institutes should inform the relevant persons as soon as possible of the need to announce a competition and to supervise its results.¹¹

Only 10 days later, i.e. on 28 November 1835, K. Hübner responded to the recommendations of the President of the Governing Senate and sent a letter to Jan Kajetan Trojański¹², who was a Dean of the Faculty of Philosophy about the need to announce a competition for a University Librarian. Trojański, as a Dean, was first and foremost tasked with convening a meeting of the Faculty members and defining the duties to be performed by the newly hired Librarian at the Jagiellonian University. Having defined the duties,

10 A. Bar, *Czajkowski (Czaykowski) Paweł (zm. 1839)*, in: *Polski słownik biograficzny*, Kraków 1938, vol. 4, pp. 159-160.

11 AUJ, ref. S I 584, k. nlb., [Letter from K. Wielogłowski to K. Hübner dated 18 November 1835], record number 7055.

12 Jan Kajetan Trojański lived between 1797 and 1850 and was a lexicographer and classical philologist. He served as a school teacher at the Royal Gymnasium in Poznań, and was subsequently a lecturer at the University in Kraków. He lectured on Polish and Latin literature. He also held the position of rector of the university in 1841-1843, and was dean of the Faculty of Philosophy in 1835-1837 and 1845-1848. He was also president of the Cracow Scientific Society. See Z. Pietrzyk, *Poczet rektorów Uniwersytetu Jagiellońskiego 1400-2000*, Jagiellonian University, Wydawnictwo Jagiellonia SA, Kraków 2000, p. 253; *Jan Kajetan Trojański*, <http://tnk.krakow.pl/czlonkowie/trojanski-jan-kajetan/> [accessed 02.12.2023]; W. Steffen, "Sylwetki filologów wielkopolskich XIX wieku", *Meander*, 1969, R. 24, vol. 3, pp. 140-142.

he was also obliged to present them to the Academic Senate for its opinion and approval.¹³

There was no long wait for the reply from J. K. Trojański, which was sent to K. Hübner already on 4 December 1835. According to the information contained in the letter, Trojański convened a faculty meeting on 30 November 1835, and at that meeting, a resolution was passed to hold a competition for the post of university librarian. All professors of the Faculty of Philosophy agreed that the competition should be based on four flagship requirements that a candidate should meet in order to obtain the post left behind by J. S. Bandtkie. Firstly, the Faculty Committee determined that the future librarian, despite his theoretical knowledge of librarianship, should have a strong practical background. Thus, a work certificate from another recognised library indicating experience in library management and knowledge of the rules of such institutions was required. The second aspect articulated in Trojański's letter was that the candidate for the librarian should demonstrate a considerable background of knowledge in literature, Slavic and Polish bibliography, as well as knowledge of ancient languages, in order to take due care of a good arrangement of the collection and to select new acquisitions appropriately at every possible opportunity. This requirement was conditioned by the fact that, at that time, the Jagiellonian Library already had an extensive collection of manuscripts, as well as Slavic and Polish works of literature and bibliography. Thirdly, the future librarian had to be proficient in the broad field of numismatics and the workings of the printing house. According to §75 of the University Statute, the librarian also looked after the numismatic collection and the printing house.¹⁴ Hence, the professors of the Faculty considered that to manage the printing house well and to supervise the orderliness of the collection, broad knowledge in this area was neces-

13 AUJ, ref. S I 584, k. nłb., [Letter from K. Hübner to J. K. Trojański dated 28 November 1835], registration number 980.

14 *Statut organiczny Uniwersytetu Krakowskiego z dnia 24 sierpnia 1833 r.*, Kraków 1833, p. 187.

sary.¹⁵ The final, fourth requirement stated that all candidates for library director should be informed that during the examination, an additional test on knowledge of literary diplomatics, i.e. the ability to read manuscripts and determine their dating, should be conducted.¹⁶

Acquainted with the requirements, two candidates entered the competition. One of them was Józef Muczkowski, who on 20 March 1836 received a letter inviting him to the examination.¹⁷ The second candidate, Förstmann,¹⁸ was informed of the negative decision to entrust him with the post decided by the competition.¹⁹

Documents relating to the conduct of the Józef Muczkowski competition are held in the Archives of the Jagiellonian University in Kraków. Among them is a report on the competition written down by J. K. Trojański. In it, he noted that following the provisions of the university's Statute, a faculty meeting was held three days before the examination, during which 50 questions were worked out,²⁰ from which the candidate was to draw three. The competition, or rather the competitive examination, lasted two days. It was held on 14 and 15 April 1836. The questions were divided into four thematic blocks, dealing successively with manuscripts and the history of writing, bibliography, librarianship, and numismatics.

In this article, only the first set of 'Manuscript Studies' questions of 9 questions will be discussed. According to the plan, there should have been 10 questions, but the number 8 was omitted, hence the error in the overall numbering. The ques-

15 AUJ, ref. WF I 53, [Letter from the government commissioner J. Schindler to the dean of the Faculty of Philosophy, J. K. Trojański dated 28 February 1837], record number 159.

16 AUJ, ref. S I 584, k. nlb., [Letter from J. K. Trojański to K. Hübner dated 4 December 1835].

17 BJ, Rkps ref. Przyb. 27/59, k. nlb., [Letter from the Rector of the University to J. Muczkowski, dated 20 March 1836], reference 84.

18 Unidentified person.

19 AUJ, ref. S I 584, k. nlb., [Letter from A. Czapski to the Rector of the Jagiellonian University dated 26 March 1836].

20 Indeed, due to a numbering error in the report, there were 49 questions.

tions were as follows: 1) *About the invention of writing, its perfection and on what medium was writing done at different times?* 2) *Describe the history of Egyptian paper, parchment, cotton and linen paper.* 3) *In what respect should a manuscript librarian be careful?* 4) *On what does theoretical manuscript science depend?* 5) *Identify the principles of practical manuscript science.* 6) *What are the principles for assessing the value of manuscripts and how should they be organised in a library?* 7) *How are manuscripts described?* 9) *Identify sources relevant to manuscript studies?* 10) *Provide information on Polish diplomatics.*²¹

From this set of questions, Muczkowski drew number two. His task was to describe the history of Egyptian paper (papyrus), cotton, linen and parchment.²² The candidate's answer was elaborate and precise, indicating the state of knowledge in the field at the time. It was contained in nine pages written by Muczkowski's hand. Above all, it contained many details indicating his excellent knowledge of the literature on the history of writing. At the beginning of his reply, he pointed out that *"when manuscripts form an important part of public libraries, and the knowledge of the matter on which they were written in different centuries, in addition to other closer means of estimating their age which facilitate the evaluation of their age, by means of which external signs by diplomats [...] described, their character and importance for indicating the time when a given manuscript was written, therefore from the earliest times, when more scrupulous study began, some scholars were concerned with tracing the beginning of manuscript matter"*. He cited works by, among others: Melchior Guilandi,²³ Charles-François Toustain, René-Prosper Tassin, Jean--Baptiste Baussonnet²⁴

21 AUJ, ref. S I 584, k. nlb., [Documents relating to Józef Muczkowski's competition for the post of Professor of Bibliography and Librarian of the Jagiellonian University].

22 Ibid, k. nlb., [Documents relating to Józef Muczkowski's competition for the post of Professor of Bibliography and Librarian of the Jagiellonian University].

23 M. Guilandi, *Melchioris Guilandini Papyrus. Hoc est, commentarius in tria C. Plinii Maioris de papyro capita; multiplici rerum variorum cognitione refertus, recensente, et summariis, atque indice rerum verborumque augente. Henrico Salmuth, Typis Schönfeldianis, Ambergae 1613.*

24 C. F. Toustain, R. P. Tassin, J. B. Baussonnet, *Nouveau traité de diplomatique, où l'on examine les fondemens de cet art, on établit des règles sur le discernement des titres, et l'on*

and Georg Friedrich Wehrs.²⁵ He also demonstrated his knowledge of scholars researching the history of paper, repeatedly citing their names, such as the historian Jean Mabillon, the typographer Johann Gottlob Immanuel Breitkopf and the librarian of the Vatican Library Leo Allatius. Muczkowski outlined the subsequent history of papyrus. He began by stating that “*when the method of making Egyptian paper was invented, it is difficult to determine with certainty because apart from Pliny, who reported on the method of making it, there is a profound silence in ancient authors about this subject*”. He characterised the ways of writing content on papyrus and its durability. He then described parchment noting its occurrence in three colours, i.e. white, yellow and purple. He also discussed the colours of the inks used depending on the nature of the work and the colour of the parchment. Gold and silver ink on purple parchment was only attributed to religious books. He cited as an example of such work the manuscript of the Roman clergyman and also the translator of the Bible, Wulfil (Ulfilas), noting that he had personally seen it in 1824 in the university library in Uppsala, Sweden, during his scholarly journey.²⁶ He also did not fail to add information about its state of preservation, emphasising that “*time and frequent viewing had significantly damaged this ancient scribal monument*”. He then referred to the work kept in the Jagiellonian Library in the field of astronomy drawn up “*on white paper with gold ink*”.²⁷ He also men-

expose historiquement les caractères des bulles pontificales et des diplômes, Chez Guillaume Desprez, Paris 1750, vols. 1-6.

- 25 G. F. Wehrs, *Vom Papier, und den vor der Erfindung desselben üblich gewesenenen Schreibmassen*, Th. 1, Helwingschen Hofbuchhandlung, Hannover 1788.
- 26 Wulfila, *Codex argenteus (Silverbibeln)*; see Carolina Rediviva, Uppsala University Library, Rkps ref. DG 1.
- 27 He probably had in mind the following manuscript: G. Peuerbach, *Theoricæ novæ planetarum cum figuris Absque fine*; M. Bylica de Olkusz, *Figuræ additiæ ad Georgii Peurbachii Theoricæ novæ planetarum*, c. 1470; see BJ, Rkps ref. 599. In the *catalogue of manuscripts of the Jagiellonian Library* by Władysław Wisłocki, there is a note next to this item that it is a parchment codex from the end of the 15th century. It is “*decorated with beautifully painted and gilded initials and astronomical figures*” and probably came to the Jagiellonian Library thanks to Marcin of Olkusz. See W. Wisłocki, *Katalog rękopisów Biblijoteki Uniwersytetu Jagiellońskiego*, Jagiellonian University, Kraków 1877-1891, part 1, p. 189.

tioned the changes in the thickness of parchment over the years, as well as palimpsests, which, in his opinion, bore “*the hallmark of the barbarism of those centuries. Indeed, sometimes a classical author or an important historian had to give way to a shabby tripe*”. In doing so, he referred again to the publication *Nouveau traité de diplomatique...* by C. F. Toustain, R. P. Tassin and J. B. Baussonnet, from which more information can be gleaned about how “*this barbaric operation was handled*”.

Subsequently, Muczkowski drew attention to the discovery of linen paper originally stitched together with parchment in codices and discussed the history of cotton paper. He pointed out that the origins of cotton paper should be sought in Asia. “*The Saracens, on their expedition to Bukharai, learnt how to make it in Samarkand, which, being rich in cotton, was particularly famous for this product.*” He briefly presented the history of cotton paper and the use of cotton rags for its production in Europe thanks to workshops in Italy and Spain, and the mixing of cotton and linen rags for the production of another writing material. He then added a few remarks about Polish paper mills, referring to the publication of Joachim Lelewel’s *Bibliograficznych ksiąg dwoje*.²⁸ Muczkowski concluded his answer to the drawn question with an argument aimed at drawing attention to the importance of the ability to work with historical works.

The following day, on 15 April 1836, Muczkowski took the second part of the exam, held in the form of an interview. His task was to draw two questions from a pool of issues and answer them. After the oral examination and the evaluation of Muczkowski’s answers in the written examination, the professors of the Faculty of Philosophy examining him gave a positive opinion on the transfer of the Jagiellonian Library and the chair of bibliography to his care after the late J. S. Bandtkie. In addition, the Academic Senate also

28 J. Lelewel, *Bibliograficznych ksiąg dwoje w których rozebrane i pomnożone zostały dwa dzieła Jerzego Samuela Bandtke : Historia drukarni krakowskich – tudzież historia Biblioteki Uniw[ersytetu] Jagiell[oińskiego] w Krakowie a przydany katalog inkunabułów polskich, Nakładem i drukiem Józefa Zawadzkiego, Wilno 1823-1826, vol. 1-2.*

consulted the professors of Vilnius University on this issue. They agreed.²⁹ As a result, Józef Muczkowski officially became director of the Jagiellonian Library and professor of the Department of Bibliography at Jagiellonian University on 15 December 1836.³⁰

In 1836 and 30 years later (as evidenced by the lectures delivered in 1866 by Karol Estreicher at the Main School in Warsaw), the state of knowledge about ancient writing materials differed significantly from the knowledge we have today. When lecturing on bibliography, Karol Estreicher pointed to its many connections with the history of writing and printing. He believed that the study of bibliography should precede the study of the history of literature, while “*the lecture on bibliography [...] treated historically should pay attention both to what printing has accumulated for us today and from what the relationship of the writing culture of each nation began*”.³¹ When discussing papyrus, one should, first of all, mention the dramatic events that took place in Herculaneum in 79, when Vesuvius erupted. At that time, the Villa of the Papyri (Villa dei Papiri) was buried under the ruins of the volcanic materials. It was rediscovered in 1750, and by 1764 one of its levels had been explored using a network of tunnels.³² The Villa of the Papyri hid many treasures from antiquity, including numerous sculptures, such as the herma (bust) of the Macedonian king Demetrius Poliorcetes³³ and a bronze statue

29 AUJ, ref. S I 584, k. nlb., [Letter of the Academic Senate to the Governing Senate of 9 December 1836].

30 Ibid, k. nlb., [Letter from the President of the Ruling Senate to the Government Commissioner dated 15 December 1836 regarding the transfer to Muczkowski of the Chair of Bibliography and the Jagiellonian Library as a director], record number 7267; BJ, Rkps ref. Przyb. 27/59, k. nlb., [Patent for J. Muczkowski dated 15 December 1836], record number 7267.

31 K. Estreicher, M. M. Biernacka [ed.], *O bibliografii: Trzy lekcje wygłoszone 6, 13 i 16 listopada 1866 roku w Szkole Głównej w Warszawie*. National Library, Warsaw 1978, pp. 15-25.

32 G. W. Houston, ‘The Villa of the Papyri at Herculaneum’, in G. W. Houston, *Inside Roman Libraries: Book Collections and Their Management in Antiquity*, The University of North Carolina Press, Chapel Hill 2014, pp. 87-88.

33 T. Zieliński, ‘Nowy Dionizos czy syn Posejdona? De(kon)strukcja obrazu Demetriusza Poliorcetesesa w świetle nowożytniej historiografii’, *Studia Antiquitatis et Medii Aevi Incohantis*, 2021, vol. 6, no. 21, pp. 27-57. For the catalogue of the bronze and marble sculptures in the Villa of the Papyri as of 1908, see E. R. Barker, *Buried Herculaneum*, Adam and Charles Black, London 1908, pp. 219-227.

of a dancing Faun-satyr.³⁴ The first discovery of papyri at the Villa was made in 1752 with excavations commissioned by King Charles III of Bourbon of Spain.³⁵ At that time, 21 works and various fragments were found stored in two wooden boxes. Exploring further rooms of the Villa, 11 papyri were found in the spring of 1753, while 250 more scrolls were discovered in the summer. By 1754, 337 Greek papyri and 18 Latin papyri had already been found. As the years passed, the number of excavated papyri increased. After 1855, the number of manuscripts rescued from the ruins of the Villa was 1806, of which 500 were fragmentary and charred, 341 were almost whole, and 965 were in an intermediate state of degradation. Unfortunately, due to the lack of knowledge and tools needed to secure and read the destroyed documents, the vast majority of them were destroyed in subsequent attempts to discover their contents by, for example, splitting them lengthwise.³⁶

The first attempt to unwrap the papyri more securely was made by Antonio Piaggio, an Italian monk and Vatican scholar who lived between 1713 and 1796. Commissioned by the Vatican, he was sent to Naples in 1753 to unwrap, decipher and transcribe the contents of the manuscripts from the Villa Papyri.³⁷ Piaggio found an authorial solution for the unfolding of the manuscripts. He attached silk threads to the edges of the papyri. One by one, each part of the papyrus was unrolled and glued to a piece of membrane and then canvas. It took four to five hours to unroll one inch of the manuscript. However, this action allowed works to be copied and preserved. In subsequent years, attempts were made to open manuscripts with the help of chemicals. Nevertheless, Antonio Piaggio's

34 L. Sternklar, *Artystyczno-informacyjny przewodnik po Pompei, Herkulanum i Capri: z planem wykopalisk Pompei*, By the Polish Bookstore B. Połoniecki, Bookstore under the firm of E. Wende and Company, Lviv, Warsaw 1906, p. 110.

35 'IV. Papyri Herculaneum', *Bulletin of the Institute of Classical Studies*, 1986, vol. 33, no. S54, p. 36.

36 E. R. Barker, *Buried...*, pp. 108-110.

37 *Padre Antonio Piaggio*, <https://www.britishmuseum.org/collection/term/BIOG41904> [accessed 18.11.2023].

method was reinstated due to the experiments' failure.³⁸ The works found in the Villa of the Papyri that were successfully unfolded were mainly Greek manuscripts in philosophy, but also 21 Latin items located in the previously mentioned wooden boxes.³⁹ Among them were some 30 works by the Greek philosopher and poet Philodemus of Gadara, which were published and translated,⁴⁰ four of the books of Epicurus' treatise *On Nature*, i.e. books XIV, XV, XXV and XXVIII,⁴¹ and a Latin poem (hexameter) treating the exploits of Mark Antony in Egypt.⁴² The popularity of the works found in Herculaneum is also evidenced by early 19th-century publications available in Polish libraries, such as a novel which is probably a mystification of the original manuscript of *Podróże Antenora po Grecyi i Azji z wiadomościami o Egipcie: rękopism grecki znaleziony w Herkulanum* by Étienne François de Lantier.⁴³

It was not until the 21st century that major discoveries related to the manuscripts secured at Herculaneum were made. First of all, it should be mentioned that in 2001, the Packard Humanities Institute, which is a non-profit foundation with a focus on archaeology, music, films and archives of a historical nature, set up the Herculaneum Conservation Project in collaboration with the Italian organisation Soprintendenza. The project's main aim is to protect the sites excavated during archaeological work by at least regularly conserving them. Moreover, since most of the collections found at Herculaneum in the 20th century were taken to the Archaeological Museum in Naples and Herculaneum does not have its own museum, the Packard Humanities Institute Foundation is considering and investigating the possibility of building such an

38 E. R. Barker, *Buried...*, pp. 110-112.

39 *Ibid.*, pp. 118-119.

40 J. Z. Lichański, 'Historia retoryki; rozdział wciąż otwarty, czyli retoryka - nauka o rozwoju', *Poradnik Językowy*, 2013, vol. 6, p. 13.

41 J. Kutkiewicz, 'Historiografia filozofii w starożytności: part 1: od najwcześniejszych źródeł do Platona', *Studia z Historii Filozofii*, 2022, no. 4, p. 89.

42 E. R. Barker, *Buried...*, pp. 119-120.

43 E. F. Lantier, *Podróże Antenora po Grecyi i Azji z wiadomościami o Egipcie: rękopism grecki znaleziony w Herkulanum*, Gröblowskiy Printing House, Cracow 1808, vols. 1-5.

institution also on site, in the vicinity of the excavations. It bases its plans, above all, on the assumptions of the archaeological excavations carried out and the discovery of many objects of everyday life of past centuries. It also seeks to integrate the ancient and modern city with an emphasis on preserving and enabling access to the excavations for visitors who are on site.⁴⁴ The project is currently led by Andrew Wallace-Hadrill, Honorary Professor of Romance Studies and Director of Research at the Faculty of Classics, University of Cambridge.⁴⁵

In addition to the preservation of the excavations at Herculaneum, there is ongoing work on the reading of the manuscripts excavated from the Villa Papyri. Major work aimed not only at reading but also at safeguarding the collection includes, in particular, the project for the digitisation of papyri by the FARMS Centre for the Preservation of Ancient Religious Texts (CPART), which began in 1999,⁴⁶ and was completed in 2002. More than 30,000 scrolls were then imaged in high quality.⁴⁷ Then, in 2016, Dr W. Brenta Seales of the University of Kentucky in Lexington, using X-ray tomography and computer visualisation, discovered the possibility of reading an Ein-Gedi scroll found in the Dead Sea region of Israel.⁴⁸ Using the knowledge gained and the ability to virtually open papyri without physically unrolling them, a further study of the Herculaneum col-

44 [The Packard Humanities Institute programs in archaeology], <https://packhum.org/archaeology.html> [accessed 19.11.2023].

45 Professor Andrew Wallace-Hadrill, <https://www.classics.cam.ac.uk/directory/andrew-wallace-hadrill> [accessed 19.11.2023]; A. Wallace-Hadrill, *Herculaneum: Past and Future*, Frances Lincoln, London 2011; *From pumice to LEGO*, <https://www.classics.cam.ac.uk/research/projects/hcp> [accessed 19.11.2023].

46 'Herculaneum Project Exceeds Expectations', *Insights*, 2000, vol. 20, no. 7, <https://web.archive.org/web/20130701184752/http://maxwellinstitute.byu.edu/publications/insights/?vol=20&num=7&id=143> [accessed 19.11.2023]; S. W. Booras, D. M. Chabries, 'The Herculaneum scrolls', *IS&T Reporter: The Window on Imaging*, 2001, no. 16.2, pp. 215-218.

47 'Digitization of Herculaneum Papyri Completed', *Insights*, 2002, vol. 22, no. 6, <https://web.archive.org/web/20130701184553/http://maxwellinstitute.byu.edu/publications/insights/?vol=22&num=6&id=246> [accessed 19.11.2023].

48 'AI reads text from ancient Herculaneum scroll for the first time', *Nature*, 2023, <https://www.nature.com/articles/d41586-023-03212-1> [accessed 19.11.2023].

lection was carried out in 2019. Taking X-rays, the team led by Dr Seales uses a particle accelerator. With this type of activity, they are capturing delicate surface patterns on the manuscripts that indicate ink, or rather its presence on the charred scrolls. Thus, in 2023, the lab made a breakthrough discovery – identifying ink on X-ray scans and separating it from a layer of charred material.⁴⁹ As a result, work is now underway to decipher the contents of the digitised materials obtained in this way. A Vesuvius Challenge has been announced in collaboration with the team of Dr B. Seales.⁵⁰ While the organisers encouraged participation through several financial prizes, the grand prize was \$700,000, and the deadline for submissions was 31 December 2023. Those wishing to receive it had to read four passages of text of at least 140 continuous characters, each from two scrolls from which scans were generated without unrolling them. As of 5 January 2024, this prize has not yet been awarded to anyone, while the process of checking the submissions is ongoing.⁵¹ Nevertheless, individual awards for contributions to the work of reading the scrolls have already been distributed. Most notably, on 12 October 2023, the organisers announced that a prize had been awarded for the first discovered word in an unopened Herculaneum scroll, consisting of more than 10 characters in an area of 4 cm². This was won by Luke Farritor, a 21-year-old computer science student from the University of Nebraska-Lincoln, who thus received a prize of \$40,000. Another entrant, Free University of Berlin graduate Youssef Nader, also read the same word, which confirmed its veracity and was awarded second place with the equivalent of \$10,000.⁵²

49 *Vesuvius Challenge*, <https://scrollprize.org/> [accessed 19.11.2023].

50 ‘Contest launched to decipher Herculaneum scrolls using 3D X-ray software’, *The Guardian*, 2023, <https://www.theguardian.com/technology/2023/mar/15/contest-decipher-herculaneum-scrolls-3d-x-ray-software> [accessed 19.11.2023]; *Vesuvius Challenge*, <https://scrollprize.org/> [accessed 19.11.2023].

51 *Vesuvius Challenge - Grand Prize*, https://scrollprize.org/grand_prize [accessed 05.01.2023]; *Vesuvius Challenge - Prize Winners*, <https://scrollprize.org/winners> [accessed 05.01.2023].

52 *Vesuvius Challenge - First Letters*, <https://scrollprize.org/firstletters> [accessed 19.11.2023]; ‘AI reads text...’.

There were many more discoveries and opportunities to read ancient manuscripts of which Józef Muczkowski could not have been aware at the time of passing the exam for director of the Jagiellonian Library. It is worth mentioning here another great, though completely accidental, discovery of papyri testifying to the life of the ancient Egyptians. In 1900, during excavations at Tebtunis on the outskirts of the Fajum oasis in northern Egypt, further manuscripts were encountered. The work was carried out for the University of California at Berkeley and the Hearst Foundation. On 16 January 1900, to be exact, one of the labourers working on the excavation came across a mummified crocodile.⁵³ Being disappointed by the discovery, as he was expecting a sarcophagus, he struck the crocodile, which revealed ancient manuscripts. The animal was stuffed with scrolls of papyrus. In the following weeks, a full cemetery of mummified crocodiles was uncovered, but only about two per cent contained papyri.⁵⁴ Among the papyri found at the time, texts by Homer, Sophocles and Euripides, among others, were encountered. Between 1902 and 1933, a catalogue of the collection from Tebtunis was published,⁵⁵ although the collection was never fully inventoried nor counted. However, it is estimated to contain more than 26,000 fragments of ancient texts.⁵⁶ Today, some of these are housed in the Bancroft Library at the University of California, Berkeley, where the Center for the Tebtunis Papyri was established in 2000. Its aim is primarily to research the papyri collection, to decipher its contents, but also to digitise it and to train students who

53 Crocodiles were worshipped in ancient times in that area as sacred animals through the god Sobek - in Egyptian mythology the ruler and protector of water and the army. The god Sobek was depicted as a man with a crocodile head, a crocodile or a mummified crocodile. See: *Ancient Egypt Online: Ancient Egyptian history and art: Sobek*, <https://ancientegyptonline.co.uk/sobek/> [accessed 26.11.2023].

54 S. M. Burstein, *Kleopatra i jej rządy: Kleopatra VII Wielka 69-30 p.n.e.*, Bellona, Warsaw 2008, pp. 87-88; *The Periodical*, 1903, no. 21, pp. 7-8.

55 P. W. Campbell, 'In the Mouth of the Crocodile', *Humanities*, 2001, vol. 22, no. 3, pp. 30-33.

56 *The Tebtunis Papyri Collection*, <https://www.lib.berkeley.edu/visit/bancroft/tebtunis-papyri/collection> [accessed 26.11.2023].

can take on the task of conducting further research in the future.⁵⁷ A publicly accessible database of sources from Tebtunis has also been created at the Center. It is not complete but contains details of several thousand documents. Work to update and complete the database is still ongoing. It can be accessed from the Center for the Tebtunis Papyri website.⁵⁸

When discussing papyrus discoveries, it is impossible not to mention the discovery made by the Centre for Mediterranean Archaeology at the University of Warsaw, led by Tomasz Górecki. In 2004, during research at Sheikh Abd el-Gurna in Egypt, the team came across a collection of Coptic and Greek texts written on papyrus, vessel shells and limestone shards.⁵⁹ Subsequently, two leather-bound papyrus books inscribed with the Coptic alphabet and a dozen texts on parchment wrapped between two leather-bound boards were found in 2005.⁶⁰ The first codex was possible to be deciphered as a set of rules and regulations for the church community, the so-called Pseudo-Basil Canon in Coptic. It dates to the seventh/eighth century. The second is a collection of eulogies by the Theban saint Pistentios – one of the Coptic bishops.⁶¹ The third collection consists of parchments written in Coptic and one in Greek.⁶²

Recalling the discoveries of T. Górecki, it is also worth noting the previously indicated texts written on vessel shells and limestone shards. Józef Muczkowski did not mention this type of writing ma-

57 *Center for the Tebtunis Papyri*, <https://www.lib.berkeley.edu/visit/bancroft/tebtunis-papyri> [accessed 26.11.2023].

58 *Center for the Tebtunis Papyri – About us – About the database*, <https://www.lib.berkeley.edu/visit/bancroft/tebtunis-papyri/about-us> [accessed 26.11.2023]; *Berkeley Library digital collections*, <https://digicoll.lib.berkeley.edu/search?p1=&ln=en&as=1&m=a&p2=852%3ATebtunis+Papyri> [accessed 26.11.2023].

59 T. Górecki, *Odkrycie cennych ksiąg papirusowych w Gurana w Górnym Egipcie*, <https://pcma.uw.edu.pl/badania/sezon-po-sezonie/odkrycie-cennych-ksiag-papirusowych-w-gurana-w-gornym-egipcie/> [accessed 26.11.2023].

60 T. Górecki, 'Sheikh Abd El-Gurna (Hermitage in Tomb 1152): Preliminary Report, 2005', *Polish Archaeology in the Mediterranean*, 2007, no. 17, pp. 263–274.

61 *Ibid*, pp. 266–274; E. Kokoszycka, *Koptyjskie księgi odkrywają coraz więcej tajemnic*, <https://naukawpolsce.pl/aktualnosci/news%2C20534%2Ckoptyjskie-ksiegi-odkrywaja-coraz-wiecej-tajemnic.html> [accessed 26.11.2023].

62 T. Górecki, *Sheikh Abd El-Gurna...*, p. 274.

terial when giving his answer about writing materials during his examination for the director of the Jagiellonian Library. However, as a professor at the Jagiellonian University, he taught the history of writing (within his lectures on bibliography) also pointing out Old Egyptian writing.⁶³ Of course, Muczkowski was already familiar with one of the greatest discoveries in the history of archaeology related to writing - the so-called Rosetta stone, as it was found in 1799. It was read in 1822 by the French hieroglyphic writing researcher John F. Champollion.⁶⁴ Nevertheless, it should be remembered that historically, almost simultaneously with Egyptian culture and civilisation, Sumerian culture and civilisation, and therefore cuneiform writing recorded in clay, developed. Knowledge of cuneiform writing in the early 19th century was severely limited. Research into its reading took many years. The first person to read cuneiform writing was the German teacher George Friedrich Grotefend.⁶⁵ In subsequent years, the English scholar Henry Rawlinson, the Irish-born Edward Hincks, the French orientalist Idzi Oppert and the German-born Frederick Delitzsch also deciphered the writing.⁶⁶ One of the greatest discoveries of cultural evidence written in cuneiform script in history is undoubtedly the discovery of King Assurbanipal's library in Nineveh, the capital of the Assyrian state (now in Iraq), in 1850. The discovery of the library was made by Austen Henry Layard, an Englishman, in King Assurbanipal's palace.⁶⁷

63 BJ, Rkps ref. 5790, vols. 1-3, ['Wykład bibliografii i nauk pomocnych', vol. 1: 'Bibliografia'; vol. 2: 'Drukarstwo'; vol. 3: 'Biblioteki i bibliotekarstwo']; BJ, Rkps ref. 6309, ['Wykłady bibliografii ś.p. Józefa Muczkowskiego profesora i bibliotekarza Uniwersytetu Jagiellońskiego miewane w latach [1837 i następnych]'], pp. 1-106.

64 B. Bieńkowska, H. Chamerska, *Zarys dziejów książki*, Wydawnictwo Spółdzielcze, Warsaw 1987, p. 24.

65 Ibid, pp. 27-28; K. Głombiowski, H. Szwejkowska, *Książka rękopiśmienna i biblioteka w starożytności i średniowieczu*, Państwowe Wydawnictwo Naukowe, Warsaw 1979, p. 14; K. Maleczyńska, *Historia książki i jej funkcji społecznej*, Wydawnictwo UW, Wrocław 1987, p. 14.

66 K. Głombiowski, H. Szwejkowska, *Książka rękopiśmienna...*, p. 14; K. Maleczyńska, *Historia książki i jej funkcji...*, p. 14.

67 K. Głombiowski, H. Szwejkowska, *Książka rękopiśmienna...*, p. 14; J. Grycz, A. Gryczowa, *Historia książki i bibliotek w zarysie*, Stowarzyszenie Bibliotekarzy Polskich, Warsaw 1959, p. 17.

Just two years later, his assistant, Hormuzd Rassam, found the king's second palace. Both were filled with substantial collections of clay tablets written in cuneiform script. Through these materials, the history of the Assyrians became known. In total, more than 30,000 clay tablets and fragments were found during excavations in Nineveh from the 1840s to the 1930s.⁶⁸ These include, among others, works on astronomy, astrology, science, history, law, philology and theology.⁶⁹

All are currently a part of the British Museum's collection. The selection of the tablets is on permanent display at the Museum in the Later Mesopotamia Gallery and in a virtual version in the exhibition 'I am Ashurbanipal: King of the world, king of Assyria'.⁷⁰ From the Museum's online platform, there is also access to a catalogue of Nineveh tablets in the form of a database.⁷¹ In addition, a research project to reconstruct a medical encyclopaedia from Assurbanipal's library was conducted at the British Museum between 1 May 2020 and 30 June 2023 in consultation with University College London. This work is preserved in fragments and is a compendium of centuries of medical research in Assyria. It also combines aspects of ancient Mesopotamian, Egyptian, Greek and Roman medicine with Syriac-Aramaic traditions. It was discovered that each text found in the work consists of three main subjects: prescriptions, healing procedures, including the medicines used, and medical spells.⁷² One of the results of the project is that the entire encyclopaedia (consisting of a total of 12 works) is now available in electronic form with transliteration and translation

68 *A library fit for a king*, <https://www.britishmuseum.org/blog/library-fit-king> [accessed 26.11.2023].

69 K. Glombiowski, H. Szwejlkowska, *Książka rękopiśmienna...*, pp. 15-17.

70 See *I am Ashurbanipal: King of the world, king of Assyria*, <https://www.britishmuseum.org/exhibitions/i-am-ashurbanipal-king-world-king-assyria> [accessed 26.11.2023]; *A library fit for a king*....

71 See *ASBP Corpus*, <http://oracc.iaas.upenn.edu/asbp/pager> [accessed 26.11.2023].

72 *Research project: reconstructing a 2,500 year old medical encyclopaedia*, <https://www.britishmuseum.org/research/projects/reconstructing-2500-year-old-medical-encyclopaedia> [accessed 26.11.2023].

into English. In addition, it has been provided with an index of all ingredients and medical techniques used at the time.⁷³

When answering the question about writing materials, Józef Muczkowski also characterised parchment. Some of the oldest parchment documents known to date are fragments found in 1923 in Dura Europos dating to the first years of the 2nd century BC.⁷⁴ They were encountered during excavations carried out jointly between 1920 and 1936 by Yale University and the Académie des Inscriptions et Belles-Lettres. The course of work and research on the discoveries at Dura Europos was described by the then leader of the campaign, the American archaeologist Clark Hopkins, in his publication *The Discovery of Dura-Europos*.⁷⁵ Most of the parchments (but also papyri) found there were in Latin. Much of it has also been published in print, except a few that were in fragments, now stored at the Beinecke Rare Book & Manuscript Library in New Haven.⁷⁶ They include both literary and liturgical texts. Some are official documents and military records written in Greek or Latin.⁷⁷

Another great and again completely accidental discovery was made in August 1947 in Qumran on the Dead Sea.⁷⁸ According to a parable, a Bedouin named Ed-Dhib, while searching for a goat that had escaped him near Qumran, came across eleven caves filled with manuscripts. Of course, this legend can be questioned, as he probably discovered the caves while looking for secluded places to store illegally transported items. The explanation for questioning this theory is even trivial – the discovery was made in August when

73 *The Nineveh Medical Project*, <http://oracc.museum.upenn.edu/asbp/ninmed/project/index.html> [accessed 26.11.2023].

74 A. Świderkówna, M. Nowicka, *Książka się rozwija*, Wydawnictwo Zakład Narodowy im. Ossolińskich, Wrocław, Warsaw, Kraków 2008, p. 48.

75 C. Hopkins, B. Goldman (ed.), *The Discovery of Dura-Europos*, Yale University Press, New Haven, London 1979.

76 G. Iovine, 'Unpublished latin papyri from Dura-Europos at the Beinecke Library', *The Bulletin of the American Society of Papyrologists*, 2019, vol. 56, pp. 95-96.

77 G. D. Kilpatrick, 'Dura-Europos: The Parchments and the Papyri', *Greek, Roman and Byzantine Studies*, 1964, vol. 5, no. 3, pp. 215-216.

78 A. Świderkówna, M. Nowicka, *Książka się...*, p. 46.

the temperatures at the Dead Sea were too high to lead goats out to pasture. However, this does not change the fact that Ed-Dhib may have been the first to see the treasures hidden in the depths of the caves. Unfortunately, the discovery bears many signs of crime. The Bedouin told his friends about his adventure, about the jugs he had found and the scrolls they contained, and together, they divided up the spoils and began to trade them. In this way, some of the scrolls were sold to Kando, a cobbler and an antique dealer operating in Bethlehem, for a mere five dollars. After a thorough inspection of the purchase, he wished to consult a specialist and attempted to read the manuscripts.⁷⁹ To this end, he contacted the Syrian Metropolitan Athanasius, residing at St Mark's Monastery in Jerusalem. This man, interested in the manuscripts, bought them for \$100 or \$150,⁸⁰ and, in turn, took steps to establish what the acquired works were. These activities were shrouded in great secrecy and lasted two years. Some sought charlatanism in their discovery and unprecedentedly propounded theories that the texts were new.⁸¹ In November 1947, an archaeologist and professor at the Hebrew University of Jerusalem - Eleazar Lipa Sukenik - bought back the manuscripts from a Kando trader and began researching their origins. Upon learning of the existence of further unexplored scrolls in the hands of the Metropolitan of Syria, other academic institutions stepped in to help recover the works and undertake research. The French School of Biblical and Archaeological Studies in Jerusalem and the American School of Oriental Studies were involved.

After years of research, it is known that E. L. Sukenik purchased from Kando a fragment of the book of Isaiah, a work he entitled 'The war of the sons of light against the sons of darkness' and a collection of hymns of thanksgiving. On the other hand, among the works that the Syrian Metropolitan purchased were: *the full text*

79 M. Belis, 'In search of the Qumran Library', *Near Eastern Archaeology*, 2000, vol. 63, no. 3, p. 122.

80 Ibid, p. 122; E. Dąbrowski, "Odkrycia nad Morzem Martwym po dziesięciu latach (1947-1957)", *Ruch Biblijny i Liturgiczny*, 1957, R. 10, no. 6, p. 359.

81 M. Belis, 'In search of the...', p. 122.

of the book of Isaiah, a commentary on the prophecy of Habakkuk, a rule of religious association called 'Manuale disciplinae', a scroll unfolded only in 1956, initially called 'Lamech's Apocalypse', and containing, as it turned out, an Aramaic commentary on the book of Genesis.⁸²

Research at Qumran continued for many years, with scientific expeditions yielding many finds. They were not among the simple ones due to the then ongoing armed conflict following the division of Palestine in 1947 proposed by the UN. Actual excavation of the caves did not begin until 15 February 1949. Unfortunately, due to earlier looting of the caves, some finds could not be saved.⁸³ However, the caves hid a wealth of fragments and complete works. In total, almost 600 different works have been discovered in the eleven caves of Qumran,⁸⁴ of which only about 10 in their entirety and others in larger or smaller fragments containing sometimes only a few sentences. These are mainly biblical texts constituting almost completely the so-called 'Palestinian canon'.⁸⁵ These works were mostly written in Hebrew. Several apocrypha were also found among them.⁸⁶ Among other things, a copper scroll found in the third cave in 1952 is also an interesting find. This is because it contains clues to the hidden valuables. It is, in a way, a treasure map with links to places that are now no longer identifiable, such as 'In the second enclosure, in the underground passage facing east...'.⁸⁷

82 E. Dąbrowski, "Odkrycia nad Morzem...", p. 360.

83 M. Belis, 'In search of the...', p. 123.

84 We now know of a much larger collection. An online inventory of the collections found at Qumran conducted by Mitchell A. Hoselton states that a total of 790 pieces were found in all 11 caves, in terms of works and their fragments identified and unidentified. According to the inventory, the individual pieces found in the caves are as follows, in Grotto 1 - 72 copies, Grotto 2 - 33 copies, Grotto 3 - 14 copies, Grotto 4 - 561 copies, Grotto 5 - 25 copies, Grotto 6 - 31 copies, Grotto 7 - 19 copies, Grotto 8 - 8 copies, Grotto 9 - 1 copy, Grotto 10 - 1 copy, Grotto 11 - 25 copies. See M. A. Hoselton, *Dead Sea Scrolls & Qumran - Inventory of Manuscripts from Qumran*, https://www.bibliotecapleyades.net/scrolls_deadsea/inventory/caves.htm [accessed 28.11.2023].

85 E. Dąbrowski, "Odkrycia nad Morzem...", p. 366.

86 Ibid, pp. 366-370.

87 M. J. Lundberg, *Copper Scroll*, https://web.archive.org/web/20110303234829/http://www.usc.edu/dept/LAS/wsrp/educational_site/dead_sea_scroll/copperscroll.shtml [accessed 28.11.2023]; R. R. Cargill, *On the Insignificance and the Abuse of the*

Just a few tens of kilometres from Qumran, further ancient materials were found in 1970 In Ein-Gedi, an ancient synagogue was discovered with a mosaic-like inscription in Hebrew and Aramaic.⁸⁸ Charred fragments of parchment scrolls were also encountered at the time. These were secured by the Israel Antiquities Authority and waited nearly 40 years to find the opportunity to open them safely and read them. The structure of the fragments found was in very poor condition and any physical touch caused all the archaeological material to disintegrate.⁸⁹ One of the scrolls stood out from the rest because it was located right in the ruins of an ancient temple. It was thus singled out for research. In 2014, the curator and also the director of the Dead Sea Scrolls Project at the Israel Antiquities Authority - Pnina Shor - contacted the aforementioned Dr W. Brent Seales to provide CT scan data of the scrolls. The team, led by Seales, then became the first to ever⁹⁰ 'virtually unwrap' the scroll.⁹¹ By using various methods of digitisation, segmenting the fragments, flattening them, texturing them and then combining them, it was possible to obtain a set of 2D images that allowed the text to be identified and read. The scroll found at Ein-Gedi is the oldest scroll of the Pentateuch in Hebrew known to date, containing the book of Leviticus.⁹²

In the eighteenth and early nineteenth centuries, knowledge of book history was shaped at different levels depending on the subject matter taken up and the related branch of general history. *There was also a place for bibliological problems in eighteenth-century cultural historiography but both in the theoretical and programmatic declarations*

Copper Scroll, <https://web.archive.org/web/20180705134812/http://www.bibleintertp.com/opeds/copper.shtml> [accessed 28.11.2023].

- 88 I. Kalimi, *The retelling of chronicles in Jewish tradition and literature a historical journey*, Penn State University Press, Winona Lake 2009, pp. 133-137.
- 89 W. B. Seales, et al, 'From damage to discovery via virtual unwrapping: Reading the scroll from En-Gedi', *Science Advances*, 2016, vol. 2, z. 9, p. [1], <https://www-1science-1org-1h9xsv2kw2d98.hps.bj.uj.edu.pl/doi/epdf/10.1126/sciadv.1601247> [accessed 01.12.2023].
- 90 The second 'Virtual unpacking' concerned the papyri found at Herculaneum.
- 91 *The Scroll from En-Gedi*, <https://www2.cs.uky.edu/dri/the-scroll-from-en-gedi/> [accessed 01.12.2023].
- 92 W. B. Seales, et al, 'From damage to discovery...', pp. [1-9].

and in the attempts to implement them, book issues were rarely discussed directly and presented more broadly. In the synthetic outlines of the cultural history of the time, the history of the book was only one strand, modestly included in addition [...].⁹³ Nowadays, knowledge of the history of the book, and the materials used in the creation of various kinds of documents, is widely available. Over the years, many studies relating to the history of library science in the broadest sense have been published. In the twentieth century, international conventions, e.g. papyrologists, also began to be organised.⁹⁴ The study of library and book science also allows for many interdisciplinary considerations in harmony with historians, archaeologists, and computer scientists. The technology available also makes it possible to carry out complex research. The lengthy archaeological work, the meticulous preservation of found materials and their restoration are just a few of the activities that make it possible to rediscover past history. The use of computer, X-ray and artificial intelligence techniques makes it possible to discover the content of manuscript documents without risking their destruction. The prospect of further development of forms of verification of archaeological material found is promising. Indeed, there are still many unidentified fragments found during excavations in various corners of the world that are waiting to be made public.

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93 A. Żbikowska-Migoń, *Historia książki w XVIII wieku*, Państwowe Wydawnictwo Naukowe, Warsaw 1989, p. 32.

94 The first such convention was held in Brussels in 1930. See J. Manteuffel, *Rozwój i potrzeby papyrologji*, in: *Nauka Polska: jej potrzeby, organizacja i rozwój: w pięćdziesięciolecie Kasy imienia Mianowskiego MDCCCLXXXI-MCMXXXI*, Kasa im. Józefa Mianowskiego, Warsaw 1932, vol. 15, p. 289.

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