

1-20-2021

## Science Librarianship in Colonial Philippines: Mary Polk and the Philippine Bureau of Science Library, 1903-1924

Bradley Brazzeal  
*Mississippi State University, bdb128@msstate.edu*

Follow this and additional works at: <https://scholarsjunction.msstate.edu/ul-publications>



Part of the [Library and Information Science Commons](#)

---

### Recommended Citation

Brazzeal, Bradley, "Science Librarianship in Colonial Philippines: Mary Polk and the Philippine Bureau of Science Library, 1903-1924" (2021). *University Libraries Publications and Scholarship*. 27.  
<https://scholarsjunction.msstate.edu/ul-publications/27>

This Article is brought to you for free and open access by the University Libraries at Scholars Junction. It has been accepted for inclusion in University Libraries Publications and Scholarship by an authorized administrator of Scholars Junction. For more information, please contact [scholcomm@msstate.libanswers.com](mailto:scholcomm@msstate.libanswers.com).

This is an Accepted Manuscript version of the following article, accepted for publication in Science & Technology Libraries

Brazzeal, Bradley. "Science Librarianship in Colonial Philippines: Mary Polk and the Philippine Bureau of Science Library, 1903-1924." *Science & Technology Libraries* 40, no. 2 (2021): 154-171. <https://doi.org/10.1080/0194262X.2020.1864568>.

It is deposited under the terms of the Creative Commons Attribution-NonCommercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

## **Science Librarianship in Colonial Philippines: Mary Polk and the Philippine Bureau of Science Library, 1903-1924**

Bradley Brazzeal  
Mississippi State University Libraries  
P.O. Box 5408  
Mississippi State, MS 39762  
USA  
bbrazzeal@library.msstate.edu

The Spanish-American War of 1898 ushered in decades of American rule in the Philippines. American colonial administrators established a bureaucracy that included the Bureau of Government Laboratories, later known as the Bureau of Science, which would serve as a central laboratory and also conduct research in the biological sciences, chemical sciences, ethnology, and more. A crucial component of the work of the Bureau was its library, which was headed from 1903 to 1924 by Mary Polk. This article is a study of Polk, the environment in which she worked, and her lasting impact on Philippine librarianship.

Keywords: library history, Mary Polk, Philippine Bureau of Science

### **Introduction**

On December 10, 1898, the United States and Spain signed the Treaty of Paris, formally ending the Spanish-American War that began in April of that year. For twenty million dollars, the United States took possession of the Philippine Islands and joined the ranks of Western colonial powers in Asia. After a period of military rule, President William McKinley appointed a civilian Philippine Commission, led by future U.S. President William H. Taft, to govern the colony. The Commission, which reported to the Secretary of War, exercised legislative authority beginning in September 1900 and executive authority beginning in July 1901 (Kramer 2006).<sup>1</sup>

The Philippine Commission “sought to introduce modern ideas and scientific practices that would harness the full potential of the colony’s natural resources” (Pagunsan 2017, 34). On September 1, 1901, the Commission divided the various government bureaus among themselves, with Dean C. Worcester becoming Secretary of the Interior. Bureaus reporting to Worcester included the following: Agriculture, Forestry, Government Laboratories, Health, Mining, Non-Christian Tribes, Public Lands, and Weather (Worcester 1921). Several of these had antecedents under the Spanish regime, and the Manila Observatory, which became the Weather Bureau, was a well-established Jesuit-run institution long before the arrival of the Americans (Anderson 2007). The Commission added three Filipinos to their ranks, though they were not given any government bureaus to oversee (Worcester 1921). Among these was T. H. Pardo de Tavera, a renowned Sorbonne-trained physician and scholar who had written *Plantas Medicinales de Filipinas* a decade earlier (Kramer 2006; Merrill 1903).

Over the next three decades, thousands of Americans would answer the call for participation in the colonial project as members of the Philippine Civil Service. Among these were many scientists and those who would provide supportive roles for them. The latter included Mary Polk, who went to the Philippines as a personal secretary but became one of the individuals by whom “the foundation of Philippine librarianship was forged” (Hernandez 2001, 336). As the librarian of the Bureau of Science, she would be the face of science librarianship in the Philippines for two decades. This article makes use of archival and other resources not readily available to others who have written biographical articles on Polk (Lopez 1970; Manuel 1955; Perez 1931), and it provides a broader context for understanding Polk’s foundational work and her legacy.

## **Overview of the Bureau of Science**

Dean Worcester had taught zoology at the University of Michigan, and he was one of the few Americans to have traveled widely in the Philippines before the Spanish-American War (Kramer 2006). While at Michigan, he was amazed at what he saw as the territorial nature of the different laboratories on campus. This led to “much duplication of instruction and of books, apparatus and laboratory equipment. Great economies might have been effected by the establishment of a central purchasing agency ...” (Worcester 1921, 489). Now in the Philippines, Worcester had the opportunity to avoid this problem by the creation of the Bureau of Government Laboratories to “perform all of the biological and chemical work of the government under the directions of one chief” (Worcester 1921, 491). The work of the Bureau was not confined to the laboratory and soon expanded to include all aspects of botany, entomology, zoology, and more. In November of 1905, the Bureau of Government Laboratories and the Bureau of Mines were combined to form the Bureau of Science, and in the following year, the Bureau began ethnological research (Cox 1918b).

The Bureau was led by four directors during Polk’s time. Paul C. Freer, a renowned chemistry professor at the University of Michigan (and Worcester’s brother-in-law), served as the first director from 1901 until his death from illness in 1912 (“Paul Caspar Freer” 1912). He was succeeded by Alvin Cox, a Bureau chemist since 1906. Cox resigned in 1919 and later led the

California Bureau of Chemistry (“Personal Profile” 1958; Velasco and Baens-Arcega 1984). He was succeeded by long-time Bureau botanist Elmer D. Merrill, who resigned in early 1924 to join the University of California as Dean of the College of Agriculture. He would ultimately serve as director of Harvard’s Arnold Arboretum (Schultes 1957). William H. Brown, a botanist who joined the bureau in 1911, then took the helm a month before Polk’s death and served as director until 1933. In 1938, Brown went to Johns Hopkins University, where he was a lecturer and head of the botanical garden until his death the following year (“Brown, William Henry” 1955; DAC 1940). With Brown’s retirement, the leadership of the Bureau was assumed by a Filipino, soil chemist Angel S. Arguelles, who would be at the helm until 1952. Arguelles would have known Polk well, since he had been with the Bureau for two decades before becoming director (Velasco and Baens-Arcega 1984).

### **Polk Before the Philippines**

Mary K. Polk was born to John M. and Eliza Polk on February 10, 1864, in Knox County, Indiana (Perez 1931; Polk 1912). She graduated with an A.B. in Philosophy from Indiana University in 1891 (Indiana University 1911), and after a year as an instructor of English at Vincennes University in Indiana, she headed to California, where she enrolled in the recently opened Leland Stanford Junior University as an Education major.<sup>2</sup> From Stanford, Polk received an A. B. in Education in January 1895 and an A. M. in English in May 1896. Among those whose time at Stanford overlapped with Polk’s were Edwin B. Copeland, Richard C. McGregor, and Alvin Seale, who would become renowned scientists with whom Polk would work half a world away (“Alumni Notes” 1924; Stanford University 1910; Vincennes University 1893).

In a letter to Indiana University president Joseph Swain, Polk stated her postgraduation plans as follows: “When I’ve taught in a High School for a few years and studied abroad for some time, I hope I.U. or some other college may consider my services valuable enough to wish them” (Polk 1896). After two years at Santa Barbara High School, Polk decided to take a break from teaching and moved to Washington, DC (“Quads” 1901). On March 25, 1901, she wrote to Swain of her newfound career interest. “... I have become a stenographer and typewriter, having now two weapons instead of one with which to fight the battle of life. I am enjoying the year very much” (Polk, 1901a).

A few weeks later, Polk wrote to Swain that she would be going on a three-month trip to Europe. Before leaving, she would take a U.S. Civil Service examination, but she confessed that “I do not much expect anything from it, but thought it well to try my luck on the first thing that offered.” She also expressed that her dream was to become a private secretary, such as the one who worked for Swain (Polk 1901b).

On November 25, 1901, Polk sent a letter to Swain from Honolulu, Hawaii. Her dreams of both living abroad and also becoming a private secretary were being realized through a position in the Philippine Civil Service as private secretary to Richard P. Strong, a specialist in tropical diseases who had served with the U.S. Army in the Philippines. Strong was now returning to Manila as

the head of the Biological Laboratory, which was part of the newly created Bureau of Government Laboratories, and the two arrived in Manila on January 1, 1902 (Anderson 1999; Freer 1903; Polk 1901c).

According to a census that took place the following year, the Philippine capital had a population of over 200,000, including 4,300 American-born residents. One version of the census report included excerpts from a speech by Governor Taft in which he suggested that most American residents were “holding the Filipino up to contempt, exposing all his supposed vices, and giving him no credit whatever for any virtues” (USBC 1904, p. 9; USBC 1905). Taft’s observations were echoed by Wayne C. Welborn, deputy chief of the Bureau of Agriculture, who noted in a letter home in 1903 that “[t]he average American here has a very poor opinion of [Filipinos]. Most Americans here are from North of Mason and Dixon’s Line. They are particularly rabid in their opinion of the Filipino ...” (Welborn 1903). Figure 1 shows Mary Polk and many of her Bureau of Science colleagues in a photograph taken around 1915.



Figure 1. Mary Polk and colleagues. Part of larger photo entitled “Scientific Staff of the Bureau of Science.” Photo is in the public domain. (Source: Cox 1915).

### **Beginning of the Bureau of Science Library**

In his first annual report for the Bureau, Freer stated that “[a] necessary feature of scientific investigation is an adequate reference library, and it goes without saying that the bureau of government laboratories must be equipped with such an adjunct to work” (Freer 1903, 548). There was certainly a dearth of scientific literature in the Philippines when Freer wrote. Elmer D. Merrill, who transferred from the Bureau of Agriculture to the Bureau of Government Laboratories in 1903, noted that some valuable scientific collections in Manila were destroyed by fire in 1897 and later during American military operations (Cox 1918b; Merrill 1903). Merrill stated in his annual report for 1902 that “six or eight thousand dollars are imperatively needed for books which are not obtainable in Manila” (Lamson-Scribner 1903, 601), and Bureau entomologist Charles S. Bank complained about the lack of literature for his field, noting that he

“has depended almost entirely upon his private library for data and the classification of material brought in” (Freer 1904, 595).

Freer’s plan for the library included hiring “[a] competent librarian ... and modern methods of cataloguing will be adopted as soon as sufficient number of books are on hand to warrant the expense” (Freer 1903, 548). Being a civil service position, a prospective librarian would need to pass an examination that evaluated the following areas: “library economy; bibliography, including cataloguing and indexing; French and German, translations into English; and training and experience in library work” (USCSC 1902, pp. 301-302). After a little more than a year at the Bureau, Polk took the exam on February 28, 1903, and was appointed as the Bureau librarian on April 1 (Bernardo, 1974). At 39 years old, Polk began a career that would leave its mark on Philippine library history, though her successor, Cirilo B. Perez noted that she always felt a sense of inadequacy because “[s]he had no formal training aside from that given in a summer course in the University of Wisconsin” (Perez 1931, 25). It seems that Mary Polk would have taken this summer course during her first extended leave (see below), though the author did not find a record of this.

Polk set about “the work of accessioning, classifying, cataloguing, and caring for the rapidly growing stock of books, periodicals, and pamphlets ...” (Freer and Polk 1905, 40). Freer gave Polk “great credit for the complete and accurate manner in which she has undertaken the organization of this division of the bureau,” and he noted the special challenge of preserving books in a tropical climate (Freer 1905, 415). Early on, Polk also assisted W. E. Musgrave and Moses T. Clegg with an extensive bibliography for their publication *Trypanosoma and Trypanosomiasis, with Special Reference to Surra in the Philippine Islands*, for which Polk received a mention by name in *The British Medical Journal* (“Reviews” 1904).

One of the inducements held out to American members of the Philippine Civil Service was the offer of extended periods of leave after working for certain periods of time, though this leave was often combined with work. Polk first went on such leave from September 1, 1904, to August 31, 1905, and Charles J. Arnell served as acting librarian (Freer 1906). During this year-long leave, Polk continued to work for the development of the library. Arnell noted that:

“what has been lost in the immediate supervision of the library has perhaps been more than compensated by the interest which she has aroused both in America and Europe in our laboratory by the arrangement of exchanges and acquisition of gifts which she has effected, and by other benefits which have accrued through her efforts” (Freer 1906, 348).

When Polk was in Europe just a few years earlier, she was a tourist whose future career was up in the air. Now she was conducting official business for the government of the Philippine Islands.

While Polk was on leave, Secretary Worcester noted that “[t]he scientific books and periodicals of the government were scattered among half a dozen different bureaus and were not being well cared for,” and he saw that the best way forward was to make the Bureau of Government Laboratories the home of a “central scientific library” (Polk 1910; Worcester 1921, 494). Accordingly, the volumes from the various bureaus that reported to Worcester were sent to the Bureau of Government Laboratories, though special provisions allowed the other bureaus to sign a memorandum to check out the volumes that they consulted frequently (Polk 1910).

In February 1905, the Bureau published Bulletin No. 22, which was simply entitled *I. Description of New Buildings II. A Catalogue of the Library*. Polk was the named author for the second part, since she oversaw much of the work before she went on leave, but Arnell added updated material. At the time of publication, the library had 17,350 volumes, which were classified using a “very slightly modified” version of the Dewey system, but by 1910 the library had switched to the Library of Congress classification system because it was more suitable for the subject matter of the library (Freer and Polk 1905, 44; Polk 1910, p. 53). By 1921, the library had just under 80,000 “bound and unbound volumes and parts” (Merrill 1922, 46). Figure 2 shows a photograph of the library of the Bureau of Science taken around 1918.



Figure 2. The library of the Philippine Bureau of Science. Photo is in the public domain. (Source: Cox 1918b).

Bulletin No. 22 gained more international attention for the Bureau library. The October 1905 *Indian Medical Gazette* ran an article entitled “The Need of a Scientific Library in India,” which noted that:

“[a] catalogue has just been published by Miss Mary Polk, the Librarian, and the library is now in a position of great usefulness, and the worker in Manila no longer feels the isolation and want of books of references which so greatly hinders the worker in the tropics” (“The Need” 1905, p. 387).

The December 30, 1905 issue of *The British Medical Journal* lauded the facilities and equipment of the Bureau and noted that:

“... the catalogue of the library, compiled by the librarian, Miss Mary Polk, shows that it contains every periodical or book of reference bearing on the subjects dealt with in the laboratories ... In tropical English colonies few such properly equipped institutions exist ...” (“The Government Laboratories” 1905, p. 1715)

While the above articles based their appraisal of the library on Polk’s catalogue, a first-hand testimonial of the value of the library was provided by S. T. Dunn, Superintendent of the Botanical and Forestry Department in Hong Kong. In his annual report for 1906, Dunn stated:

“One of the drawbacks to botanical work in Hongkong [sic] has always been the delay entailed when any information from a fuller botanical library was required. This is now to some extent removed by the establishment by the United States Government of a fine scientific library in connection with the Bureau of Science, Manila; and, by the courtesy of the Government Botanist Mr. E. Merrill, extracts from works not possessed by this department have been written out on more than one occasion for our information” (Dunn 1907, 15).

An important event in the further enhancement of the Bureau’s international reputation was the establishment in 1906 of the *Philippine Journal of Science*. Not only did the journal provide a means of more systematic dissemination of research by scientists in the Philippines, but exchanges with other institutions and societies, which numbered 470 in 1915, provided the “the larger part of the current serial literature in the Bureau of Science library” (Cox 1917a, 6). In the beginning, Polk oversaw much of the needed clerical work for the journal, but in 1909 a business manager for the journal was appointed (Freer 1909; Strong 1910). A year or two afterwards, Bureau ornithologist Richard C. McGregor, whose time at Stanford overlapped with Polk’s, began assisting with the journal (Freer 1912; Stanford University 1910), a role through which he would later contribute to the formal training of Filipino librarians. He would continue with the Bureau until his death in 1936 (Grinnel 1938).

Worcester’s consolidation of the libraries in the Department of the Interior was taken a step further by the Philippine Commission with the establishment in 1909 of the Philippine Library



(Polk 1910), which was governed in the early years by a Library Board. The first director of the Philippine Library was James A. Robertson, a scholar of Philippine history, who continued in that position until 1916 (Morallos 1998). A major component of the general collection was the holdings of the American Circulating Collection, which had been established in 1900 by Mrs. C. R. Greenleaf and was under the charge of Nellie Young Egbert. While many functions were consolidated, the library of the Bureau of Science and certain other libraries continued to function within their respective bureaus (Robertson 1910). With a reorganization of government bureaus in 1916, the Library Board was disbanded, and the name of the institution was changed to the Philippine Library and Museum. The library would henceforth be led by Filipinos (Morallos 1998).

Polk went on extended leave again from July 12, 1910, until October 24, 1911 (Cox 1913; Freer 1912). On the day of her departure, a local newspaper ran a story entitled “Miss Polk Off for Europe Today: Lady Official Will Represent P.I. at Archivists’ Congress in Brussels.” The article noted that “[i]t is peculiarly fitting that the Philippines Library should be represented by Miss Polk, for she has been identified with library work in Manila almost since its inception” (“Miss Polk” 1910). In London, Polk wrote to William L. Bryan, president of Indiana University, expressing her hope to visit the university during her time in the States, and she noted that, during her time in Europe, “I have been busy with work for my library and for the Bureau of Science a good deal of the time but have done a good deal of sight-seeing as well. It has been a very delightful experience” (Polk to Bryan, [1911]).

In a few years, the tranquility that Polk enjoyed in Europe would be shattered as the continent became engulfed in World War I. In addition to lending its scientific expertise to the war effort, the Bureau of Science, through Mary Polk and others, played an active role in the American Library Association’s Library War Service (Clemons 1919; Cox 1919).

During Polk’s leave in 1910-1911, Sarah Osgood Brooks served as acting librarian until her resignation in March of 1911 (Freer 1912). Her husband, Bureau chemist Benjamin T. Brooks, resigned to pursue a PhD in Germany, and she would later serve as the first librarian of the Mellon Institute of Industrial Research at the University of Pittsburgh, where her husband would also work (“Brooks, Benjamin Talbott” 1938; Hamor 1923). Brooks’ replacement as acting director was Emma E. Kinne, who held a degree in library science from Syracuse University. She was assisted by Huldah E. Kupfer, also a Syracuse graduate, who was assigned to help with the *Philippine Journal of Science* after Polk’s return (Cox 1913; Freer 1912; Smalley 1911). Kinne resigned in 1914 and would later have a long career at the library of the University of Pittsburgh (“Kinne, Emma” 1943).

Other Americans associated with the work of the library included Mary L. Crozier, Lucia May Brooks, and Margaret Upleger. Crozier, a former army nurse and widow of Manila-based publisher William Crozier, joined the Bureau in 1915 and remained for 6 years (Cox 1917a; Kinney 1907; Merrill 1922; “Pioneer Manila Editor” 1913). Lucia May Brooks was a visiting librarian from Stanford who returned to that institution after a year and died in early 1919 (“Miss

Lucia M. Brooks” 1919). Margaret Upleger, a graduate of the Pratt Institute Library School, first appears in the annual report for 1918, where it mentions that her time was split between the Bureau and the University of the Philippines while Polk was again on leave, but her work with the Bureau ended in 1920. She married soon afterwards and moved to the southern Philippines (Cox 1919; Graduates’ Association, 1921; McGregor 1921).<sup>3</sup>

For Polk, it was clear that the future of the Bureau of Science library (and other libraries in the Philippines) depended not on American library personnel but on trained Filipinos who could assist with and eventually lead the library. She saw all types of libraries as essential to the advancement of the Philippines, noting in an article in the *Philippine Journal of Education* that “[b]y using the numberless opportunities that are continually presenting themselves in any library, a librarian so trained becomes a powerful factor in the progress and welfare of the people among whom he lives and works” (Polk 1918, 124). Polk expended much time and energy to make this happen, and it is for this aspect of her work that she is most remembered.

### **Preparing Filipinos for Library Work**

A stated justification of American rule in the Philippines was the lack of fully trained Filipinos, especially in the areas of the sciences. When President Woodrow Wilson’s pick for Governor General, Francis Burton Harrison, arrived in Manila in 1913, he immediately made it known that he and the President were not pleased with the rate of “Filipinization” of the Philippine Civil Service and declared a “New Era” in which the situation would be rectified. Secretary Worcester and the other current members of the Philippine Commission resigned (Kramer 2006, 352-353). Elected Filipinos had assumed some legislative powers in 1907 and, with the disbanding of the Philippine Commission, complete legislative authority in 1916 (Kramer 2006). In a major government reorganization, the Bureau of Science became part of the newly-formed Department of Agriculture and Natural Resources (DAC 1940). Compared to other bureaus, the Bureau of Science continued to have a relatively higher percentage of American employees, and Harrison himself acknowledged the difficulty of finding suitably trained Filipinos for both scientific and leadership positions in the Bureau (Harrison 1922).

In a letter to the Indiana Alumni Association, Polk noted that Filipino civil servants were often treated unfairly in terms of salaries and promotion, though her mention of the phrase “New Error” perhaps shows some concern for the way Harrison’s policies were implemented.

“Measured by financial advancement also, our graduates had fared very well, even before the days of the ‘New Era’ (sometimes referred to locally as the ‘New Error’) when the stony-souled Americans were more tightly grasping the purse-strings when a question of promotion for a Filipino came up” (“Alumni Notes” 1917, 95)

In 1903, the Philippine government began a program of sending Filipinos to American colleges under the provision that these students, known as *pensionados*, would serve in the Philippine

Civil Service upon completion of their studies (Kramer 2006). A major step for the local training of Filipinos was the establishment of the publicly funded Philippine Medical School in 1905. Five years later, this would become the College of Medicine in the University of the Philippines, which was established in 1908. From the beginning, the Bureau's library was the primary collection of scientific literature available to the faculty and students (Board of Educational Survey 1925; Cox 1918b). In time, both the *pensionado* program and the establishment of the University of the Philippines would allow for the "Filipinization" of the Bureau of Science library, but for a decade Polk would have to rely on in-house training.

The first mention of a Filipino library employee in an annual report of the Bureau of Science occurred in the 1905 report, in which Arnell stated that library assistant Rufino del Rosario provided "almost indispensable assistance" while Polk was on leave (Freer 1906, 348). Three years later, it was noted that "[t]emporary employees selected from lists of students submitted by teachers in the various schools of the city have been of great assistance and have proved very satisfactory" (Freer 1909, 67). A more formal apprentice program was implemented, and by 1914 the program was deemed:

"very successful, not only in that the amount of money spent for carefully selected apprentices results in more intelligent service, but also a group of young people with an elementary knowledge of library science will become available for library work in other libraries in Manila and throughout the provinces and will interest themselves in the library extension and other public welfare work if we retain sufficient trained librarians to teach them" (Cox 1915, 34).

During the 1913-1914 academic year of the University of the Philippines, Polk began teaching library research methods to students of the College of Medicine, and in 1914, she assisted James A. Robertson, director of the Philippine Library, who began teaching three library science courses in the University (Bernardo 1974; Cox 1915). When Robertson returned to America in 1916, Polk took over responsibility for the library science program and received approval for a four-year curriculum in library science built around seven library science courses (Faderon et al., 2016; University of the Philippines 1917).<sup>4</sup>

An article in the 1917 volume of the student work *The Philippinensian* listed nine students in the library science program. Among these were four employees of the Bureau of Science: Luis Montilla, Nicetas Del Mundo<sup>5</sup>, Cirilo B. Perez, and Catalina Sugang. In addition to Polk, program instructors included Syrena McKee and Emma O. Elmer<sup>6</sup>, who were respectively chief cataloguer and chief of the documents section of the Philippine Library and Museum. Richard C. McGregor of the Bureau of Science and others provided special lectures on publishing. The article attributed the small numbers studying library science to the fact that "[m]any students are pessimistic about the pecuniary prospects of library work and say that though the work is as hard as other technical courses yet the present remuneration of library workers does not give sufficient inducement for taking the course" (Bureau of Civil Service 1917; "Library Science Class" 1917, 217-21).

Although a library science program was now available in the Philippines, Polk realized that the training that she was able to give her students was not enough to train the first generation of Filipino library leaders and that a library science *pensionado* program was needed (Osborn 1927; Perez 1931). In this she had the full support of Bureau of Science Director Cox. In the recommendation section of his 1916 annual report, he noted that:

“I desire to renew my recommendation of last year that the Government aid in sending the more advanced Bureau of Science library assistants to the United States for further professional training, in order that we may have available a group of trained employees for carrying on library work of a high order and for teaching in the library training courses” (Cox 1917b, 62-63).

The necessary legislation was passed in 1918, thanks to the efforts of Polk, Lois S. Osborn (pioneer of school libraries in the Philippines), and other members of the Women’s Club of Manila (Bernardo 1974; Osborn 1927). The first Filipinos to benefit from this program had all studied library science under Polk and had practical library experience. Gabriel A. Bernardo, Jose Munda, and Eulogio B. Rodriguez worked in the Philippine Library and Museum, and Cirilo B. Perez worked in the library of the Bureau of Science. (Bureau of Civil Service 1917; “Library Science Class” 1917). Polk arranged for these four to study at the University of Wisconsin for two years, as authorized by the Philippine government (Bernardo 1974).

These *pensionados* returned in 1920, having completed the Legislative Reference Course from Wisconsin, rather than a degree program (“Class of 1920” 1920). However, the University of the Philippines awarded the Bachelor of Science in Library Science to Bernardo and Perez (University of the Philippines 1921). There would be just three more library science *pensionados*. Ismael V. Mallari would go to the University of Wisconsin in 1919, and the following year, two Bureau of Science library employees were sent to the States. Isidoro Saniel went to the New York State Library School, and Isaac V. Lucero was sent to the Pratt Institute Library School before going to the University of Illinois (Bernardo 1974; Faderon et al. 2016; McGregor 1921).

### **Filipino Librarians in the Bureau of Science**

Writing to Mary Hazeltine of the Wisconsin Library School in early 1921, Perez noted that he was originally supposed to work for the Philippine Library and Museum upon his return to Manila, but Polk managed to have him transferred to the Bureau of Science. He continued that “she is very busy, and she leaves me in charge of the Bur. of Science Library most of the time. This gives me [the] chance to do administrative as well as technical work” (Perez 1921).

The University of the Philippines continued to rely primarily on the resources of the libraries of the Bureau of Science and other government agencies in Manila. Various units on campus had small collections, but they were not well-maintained. This began to change in 1922 with the

official establishment of a university library, with Polk serving as both University Librarian and Professor of Library Science (Bernardo 1974). She was assisted in both roles by Bernardo. Perez also became an adjunct instructor of library science, and, by this time, McGregor's official title at the university was "lecturer on library science and zoology" (University of the Philippines. 1921, 25, 96).

In 1923, Saniel joined Polk and Perez as a dedicated reference librarian. Polk now saw things coming together in the library like she had long envisioned. In a letter to Vicente de Jesus, director of the Philippine Health Service, Polk stated:

"The library of the Bureau of Science ...has for many years felt the need of a trained reference librarian, whose first duty shall be to assist our patrons in their search for information ... This need has now been met in a very encouraging way [sic] by the return from the United States of Mr. Isidoro Saniel with the degree of Bachelor of Library Science from the New York State Library School" (de Jesus, 1924, 673).

The importance of this was clear to Director de Jesus, who noted in his annual report that he "hoped that this opportunity and privilege be availed of in order that the standard of efficiency of the Service, thru constant study on the part of its Officers and personnel, may be raised" (de Jesus, 1924, 673).

An important step in the professionalization of librarianship was the founding of the Philippine Library Association in 1923, with the first president being T. H. Pardo de Tavera, the former member of the Philippine Commission who was now director of the Philippine Library and Museum. Polk was also a founding member of the association, which still exists today (Lopez 1970; Saniel 1972).

### **The Legacy of Mary Polk**

Mary Polk died of heart disease in the Philippines on April 12, 1924, and was buried two days later in the Cemeterio del Norte. Before that time, "she intimated to her associates that she would soon retire, as she felt that the work she started was already safe in the hands of the young librarians whom she had trained and developed" ("Alumni Notes" 1924; Perez 1931, 25). Indeed, those young librarians would become library leaders for decades to come.

Cirilo Perez was appointed to take her place in the Bureau of Science, and he would continue in the position until the Japanese invasion. Refusing to work for the occupiers, Perez joined the resistance movement and was executed by the Japanese (Nivera 1968). During the battle to retake Manila, "[t]he Bureau of Science was razed to the ground and its library, herbarium, and museum were reduced to ashes" (Rotor and Dy 1945, 61).

Gabriel Bernardo took over Polk's positions in the University of the Philippines as University Librarian and department head for Library Science. He would serve in these capacities until retiring in 1957 (Verzosa 1963). Fellow *pensionado* Eulogio B. Rodriguez served as director of the National Library during and after the war, and he was succeeded by Luis Montilla, who had worked under Polk in the Bureau of Science library for nine years (Cox 1918a; Morillos 1998).

Polk's legacy can also be found in the work of the scientists whom she assisted. In addition to providing service to a generation of Filipino scientific leaders, such as future director Arguelles, Polk worked with a number of American scientists in the Bureau who stayed for some time in the Philippines before returning to America or who died in the Philippines. Mention has already been made of directors Freer, Cox, Merrill, and Brown. Botanist Edwin B. Copeland was with the Bureau from 1903 to 1908 and held other positions in the Philippines before eventually becoming associate curator of the University of California Herbarium (Wagner 1965). Alvin Seale took a position at the Harvard Museum of Comparative Zoology after serving as Bureau ichthyologist from 1907 to 1917 (Herre 1959). Both Copeland and Seale had attended Stanford at the same time as Polk (Stanford University 1910).

In chemistry, Raymond F. Bacon served as a Bureau chemist from 1905 to 1910 and would become the director of the Mellon Institute of Industrial Research at the University of Pittsburgh ("Bacon, Raymond Foss" 1963). Robert R. Williams, who was with the Bureau from 1909 to 1915, would later work for Bell Laboratories, where he became the first to isolate Vitamin B1, or thiamine (Costa 1999). In medicine, Richard P. Strong was with the Bureau for a decade before eventually becoming the chair of Tropical Medicine at Harvard (Anderson 1999). The abovementioned scientists are just a sampling of those who worked for the Bureau of Science, and Polk's library served scientists in other bureaus as well.

It is unclear how long Polk originally intended to stay in the Philippines, and her letters to Joseph Swain seem to indicate that librarianship was not in her plans. But it was in the Bureau of Science that she found her true calling in life. In discussing Polk's lack of extensive library training, Perez (1931, 25) stated that "[s]he was ever conscious of the handicaps that beset her, and for this reason she planned and worked, more than any other individual, that the young librarians under her guidance would not suffer the same difficulties that she had to undergo."

Complete independence came to the Philippines in 1946, but Polk's legacy has continued to be recognized. Loida Lim Lopez (1970, 61) wrote in the *Journal of Philippine Librarianship* in 1970 that Polk could "rightly be called the mother of Philippine Library Science," and the Philippine Association of Academic and Research Librarians continues to provide a scholarship in her name that "honors the life and accomplishments of Mary Polk, the first librarian of the University of the Philippines, who started the first formal library science training program in the same university" (PAARL 2019).

## Notes

1. This was the Second Philippine Commission. The First Philippine Commission only had “advisory and investigative responsibilities” and was led by Jacob Gould Schurman, president of Cornell University (Kramer 2006, p. 112). When the Taft Commission assumed power, the U.S. Army was still engaged in operations against Filipino nationalists, who wanted the Philippines to be independent rather than a part of another foreign power. This Philippine-American War lasted officially until July 4, 1902 (Kramer 2006).
2. During this time, Polk also taught at a high school in the city of Haywards, but she apparently had to leave that position because the state of California did not recognize her Indiana University degree as a suitable qualification for teaching (Polk 1894).
3. Upleger came to the Philippines from the University of Oregon, where she “strongly championed the German cause before America’s entrance into the war and continued ... in some cases, it was alleged by the students, discouraging enlistment in the American army” (Sheldon 1940, 198).
4. According to the university catalog for 1916-1917, “[t]he first two years of the course will lead to the degree of Bachelor of Arts; four years to the degree of Bachelor of Science in Library Science.” This reflects the European model, which the university soon dropped for the American model. By the 1921-1922 academic year, the first two years would lead to an Associate in Arts (Board of Educational Survey 1925; University of the Philippines 1917, 82; University of the Philippines 1921).
5. Nicetas Del Mundo apparently was married that year and appears in rosters from 1917 on as Nicetas M. Santiago.
6. Emma O. Elmer was married to Adolph D. E. Elmer who worked at the Bureau of Science from 1903 to 1905. Afterwards, A. D. E. Elmer became a private botanical collector. The couple would be interned by the Japanese during World War II, and A. D. E. Elmer would die in 1942 in the Santo Tomas Internment Camp (Copeland 1949; Stevens 1946).

### **References**

Alumni Notes by Classes. 1917. *Indiana University Alumni Quarterly* 4:95-96.

Alumni Notes by Classes. 1924. *Indiana University Alumni Quarterly* 11:463.

Anderson, W. 1999. Strong, Richard Pearson. In *American national biography*, ed. J. A. Garraty and M. C. Carnes, Vol. 21, 46-48. New York: Oxford University Press.

Anderson, W. 2007. Science in the Philippines. *Philippine Studies* 55:287-318.

Bacon, Raymond Foss. In *National cyclopaedia of American biography*, vol. 46, 574. 1963. New York: John T. White & Company.

Bernardo, Gabriel. 1974. The status of the popular library movement in the Philippines. In *Gabriel A. Bernardo: Librarian, bibliographer and scholar*, ed. M. Garcia, 12-39. Manila: Bibliographical Society of the Philippines.

Board of Educational Survey. 1925. *A survey of the educational system of the Philippine Islands*. Manila: Bureau of Printing.

Brooks, Benjamin Talbott. In *National cyclopaedia of American biography*, vol. Current Volume E, 391. 1938. New York: John T. White & Company.

Brown, William Henry. In *National cyclopaedia of American biography*, vol. 40, 391. 1955. New York: John T. White & Company.

Bureau of Civil Service. 1917. *Official roster of officers and employees in the Civil Service of the Philippine Islands*. Manila: Bureau of Printing.

Class of 1920. 1920. *Wisconsin Library Bulletin* 16:135-136.

Clemons, H. 1919. *The A. L. A. in Siberia: Letters written by Harry Clemons, representative of the American Library Association War Service, with the A. E. F. in Siberia*. Washington: American Library Association Library War Service.

Copeland, E. B. 1949. A. D. E. Elmer: Leaflets in Philippine botany. *Philippine Journal of Science* 78:1-4.

Costa, Albert B. 1999. Williams, Robert Ramapatnam. In *American National Biography*, ed. J. A. Garraty and M. C. Carnes, vol. 23, 496-97. New York: Oxford University Press, 1999.

Cox, A. J. 1913. *Eleventh annual report of the director of the Bureau of Science to the Honorable Secretary of the Interior for the year ending August 1, 1912*. Manila: Bureau of Printing.

Cox, A. J. 1915. *Thirteenth annual report of the director of the Bureau of Science Philippine Islands to the honorable the Secretary of the Interior for the year ending December 31, 1914*. Manila: Bureau of Printing.

Cox, A. J. 1917a. *Fourteenth annual report of the director of the Bureau of Science Philippine Islands to the honorable the Secretary of the Interior for the year ending December 31, 1915*. Manila: Bureau of Printing.



Cox, A. J. 1917b. *Fifteenth annual report of the director of the Bureau of Science Philippine Islands to the honorable the Secretary of the Interior for the year ending December 31, 1916*. Manila: Bureau of Printing.

Cox, A. J. 1918a. *Sixteenth annual report of the director of the Bureau of Science Philippine Islands to the honorable the Secretary of Secretary of Agriculture and Natural Resources for the year ending December 31, 1917*. Manila: Bureau of Printing.

Cox, A. J. 1918b. *The Philippine Bureau of Science*. Manila: Bureau of Printing.

Cox, A. J. 1919. *Sixteenth annual report of the director of the Bureau of Science Philippine Islands to the honorable the Secretary of Agriculture and Natural Resources for the year ending December 31, 1918*. Manila: Bureau of Printing.

DAC (Department of Agriculture and Commerce). 1940. *The Department of Agriculture and its service to the people*. Manila: Bureau of Printing.

de Jesus, V. 1924. *Report of the Philippine Health Service for the fiscal year from January 1 to December 31, 1923*. Manila: Bureau of Printing.

Dunn, S. T. 1907. *Report of the Botanical and Forestry Department, for the Year 1906*. Hong Kong: Noronha & Co.

Faderon, R. B., V. V. M. Aguirre, I. S. Buenrostro, and J. F. A. Cabbab. 2016. The University of the Philippines (UP) School of Library and Information Studies. In *Educating the Profession: 40 Years of the IFLA Section on Education and Training*, ed. M. Seadel, C. M. Chu, U. Stöckel, and B., 278–301. Berlin: de Gruyter.

Freer, P. C. 1903. Report of the Superintendent of Government Laboratories for the year ending August 31, 1902. In *Third annual report of the Philippine Commission. 1902*, part 1, ed. W. H. Taft, 545-82. Washington: Government Printing Office.

Freer, P. C. 1904. Second annual report of the Superintendent of Government Laboratories. In *Fourth annual report of the Philippine Commission. 1903*, part 2, ed. W. H. Taft, 343-621. Washington: Government Printing Office.

Freer, P. C. 1905. Report of the Superintendent of Government Laboratories. In *Fifth annual report of the Philippine Commission. 1904*, part 2, ed. L. E. Wright, 411-67. Washington: Government Printing Office.

Freer, P. C. 1906. Report of the Superintendent of Government Laboratories. In *Sixth annual report of the Philippine Commission. 1905*, part 2, 329-77. Washington: Government Printing Office.

Freer, P. C. 1909. *Seventh annual report of the director of the Bureau of Science to the Honorable the Secretary of the Interior for the year ending August 1, 1908*. Manila: Bureau of Printing.

Freer, P. C. 1912. *Tenth annual report of the director of the Bureau of Science to the Honorable the Secretary of the Interior for the year ending August 1, 1911*. Manila: Bureau of Printing.

Freer, P. C., and M. Polk. 1905. *I. Description of new building II. A catalogue of the library*. Manila: Bureau of Public Printing.

The Government Laboratories in Manila. 1905. *The British Medical Journal* 2:1715.

Graduates' Association. 1921. *Pratt Institute School of Library Science Twentieth Handbook 1920-1921*. [Graduates' Association]: New York.

Grinnell, J. 1938. In memoriam: Richard C. McGregor: Ornithologist of the Philippines. *The Auk* 55:163-75.

Hamor, W. A. 1923. Bibliography, the foundation of scientific research. *Special Libraries* 14(3):17-22.

Harrison, F. B. 1922. *The corner-stone of Philippine independence: A narrative of seven years*. New York: The Century Co.

Hernandez, V. S. 2001. Trends in Philippine library history. *Libraries & Culture* 36:329-344. doi:10.1353/lac.2001.0034.

Herre, A. W. C. T. 1959. Alvin Seale, naturalist and ichthyologist. *Science* 129:313-14. doi:10.1126/science.129.3345.313.

Indiana University. 1911. *Register of graduates: 1830-1910*. Bloomington: Indiana University.

Kinne, Emma E(lizabeth). In *Who's who in library service*, 2<sup>nd</sup> ed, ed. C. C. Williamson and A. L. Jewett, 299. New York: H. W. Wilson, 1943.

Kinney, D. H. 1907. Department of army nursing. *The Trained Nurse and Hospital Review* 39:27-28.

- Kramer, P. A. 2006. *The blood of government: Race, empire, the United States, & the Philippines*. Chapel Hill: The University of North Carolina Press.
- Lamson-Scribner, F. 1903. Report of the chief of the Bureau of Agriculture for the year ending August 31, 1902. In *Third Annual Report of the Philippine Commission: 1902*, part 1. Washington: Government Printing Office.
- The Library Science Class. 1917. *The Philippinensian* 3:217-18.
- Lopez, L. L. 1970. Mary Polk – Library pioneer. *Journal of Philippine Librarianship*. 3:61-72.
- Manuel, E. A. 1955. Polk, Mary. In *Dictionary of Philippine biography*, vol. 2., ed. E. A. Manuel, 299-302. Quezon City: Filipiniana Publications.
- McGregor, R. C. 1921. *Nineteenth annual report of the director of the Bureau of Science Philippine Islands to the honorable the Secretary of Agriculture and Natural Resources for the year ending December 31, 1922*. Manila: Bureau of Printing.
- Merrill, E. D. 1903. *Botanical work in the Philippines*. Manila: Bureau of Public Printing.
- Merrill, E. D. 1922. *Twentieth annual report of the director of the Bureau of Science Philippine Islands to the honorable the Secretary of Agriculture and Natural Resources for the year ending December 31, 1921*. Manila: Bureau of Printing.
- “Miss Lucia M. Brooks.” 1919. *Stanford Illustrated Review* 20:193.
- Miss Polk Off for Europe Today. 1910. *CableNews American*, July 13.
- Morallos, C. P. 1998. *Treasures of the National Library: A brief history of the premier library of the Philippines*. Manila: The National Library.
- The Need for a Scientific Library for India. 1905. *India Medical Gazette* 40:387.
- Nivera, P. I. 1968. Cirilo B. Perez. *Journal of Philippine Librarianship*. 1: 62-74.
- Osborn, L. S. 1927. An adventure in dreams. *The Library Journal* 52:1068-72.
- PAARL (Philippine Association of Academic and Research Librarians). 2019. Scholarship Grants. Last modified November 2019. Accessed November 30, 2020. <https://www.paarl.org.ph/?q=content/scholarship-grants>
- Pagunsan, R. V. 2017. Colonizing the Philippine environment: Natural history, science and the nation. PhD diss., National University of Singapore, 2017.

Paul Caspar Freer. 1912. *The Physician and Surgeon* 34: 371-75.

Perez, C. B. 1921. Letter to Miss [Mary] Hazeltine, 17 January. Library School Student Files. Series 7/20/8, box 48, folder: Bernardo, Gabriel, subfolder: Philippines Correspondence. University of Wisconsin-Madison Archives, University of Wisconsin-Madison.

Perez, C. B. 1931. Mary Polk: Library pioneer. *The Library Mirror* 2(1):24-26.

Personal Profile. 1958. *Journal of Agricultural and Food Chemistry* 6:320. doi:10.1021/jf60086a608.

Pioneer Manila Editor. 1913. *The Fourth Estate*, November 15.

Polk, M. 1894. Letter to J. Swaine, 11 February. Indiana University President's Office Records, 1893-1902. Correspondence, 1893-1902, box 35, folder "Polk, Mary". Indiana University Archives, Indiana University. <http://purl.dlib.indiana.edu/iudl/findingaids/archives/InU-Ar-VAA2656>

Polk, M. 1896. Letter to J. Swaine, 29 May. Indiana University President's Office Records, 1893-1902. Correspondence, 1893-1902, box 35, folder "Polk, Mary". Indiana University Archives, Indiana University. <http://purl.dlib.indiana.edu/iudl/findingaids/archives/InU-Ar-VAA2656>

Polk, M. 1901a. Letter to J. Swaine, 25 March. Indiana University President's Office Records, 1893-1902. Correspondence, 1893-1902, box 35, folder "Polk, Mary". Indiana University Archives, Indiana University. <http://purl.dlib.indiana.edu/iudl/findingaids/archives/InU-Ar-VAA2656>

Polk, M. 1901b. Letter to J. Swaine, 1 June. Indiana University President's Office Records, 1893-1902. Correspondence, 1893-1902, box 35, folder "Polk, Mary". Indiana University Archives, Indiana University. <http://purl.dlib.indiana.edu/iudl/findingaids/archives/InU-Ar-VAA2656>

Polk, M. 1901c. Letter to J. Swaine, 25 November. Indiana University President's Office Records, 1893-1902. Correspondence, 1893-1902, box 35, folder "Polk, Mary". Indiana University Archives, Indiana University. <http://purl.dlib.indiana.edu/iudl/findingaids/archives/InU-Ar-VAA2656>

Polk, M. 1910. The library of the Bureau of Science. *The Philippine Journal of Science* 5: 45-53.

Polk, M. [1911]. Letter to W. L. Bryan, undated. Indiana University President's Office Correspondence, 1902-1913, box 98, folder "Polk, Mary". Indiana University Archives, Indiana University. <http://purl.dlib.indiana.edu/iudl/findingaids/archives/InU-Ar-VAA3710>

Polk, M. 1918. The value of library training in secondary schools and in universities. *Philippine Journal of Education* 1: 120-14.

Polk, W. H. 1912. *Polk family and kinsmen*. Louisville, KY: Bradley & Gilber Co.

Quads. 1901. *Daily Palo Alto*, 15 November.

Reviews. 1904. *The British Medical Journal* 1(2261): 1020-23. doi:10.1136/bmj.1.2261.1020.

Robertson, J. A. 1910. Library work in Manila. *Library Journal* 35:366-67.

Rotor, A. B., and F. J. Dy. 1945. Rehabilitation of a medical center. In *Minutes of the Proceedings of the Fifty-Sixth Annual Meeting Held in Pittsburgh, Pennsylvania October 29, 30 and 31, 1945*, 60-61. Chicago: Association of American Medical Colleges.

Saniel, I. 1972. Forty-nine years of the Philippine Library Association. *Journal of Library History* 7: 301-312

Schultes, R. E. 1957. Elmer Drew Miller – An appreciation. *Taxon* 6:89-101. doi:10.1002/j.1996-8175.1957.tb02704.x.

Sheldon, H. D. 1940. *History of University of Oregon*. Portland, OR: Binfords & Mort.

Smalley, F. 1911. *Alumni record and general catalogue of Syracuse University 1872-1910 including Genesee College, 1852-181 and Geneva Medical College, 1835-1872*, vol. 3, pt 2. Syracuse: Alumni Association of Syracuse University.

Stanford University (Leland Stanford Junior University). 1910. *Alumni directory and ten-year book, II, 1891-1910*. Stanford University, CA: The University.

Stevens, F. H. 1946. *Santo Tomas internment camp*. [New York: Stratford House].

Strong, R. P. 1910. *Eighth annual report of the director of the Bureau of Science to the Honorable the Secretary of the Interior for the year ending August 1, 1909*. Manila: Bureau of Printing.

University of the Philippines. 1917. *The University of the Philippines Catalogue 1916-1917, Announcements 1917-1918*. Manila: Bureau of Printing.

University of the Philippines. 1921. *The University of the Philippines General Catalogue 1921-1922 Fourteenth Year*. Manila: Bureau of Printing.

USBC (United States Bureau of the Census). 1904. *Population of the Philippines: By islands, municipalities, and barrios, taken in the year 1903*, bulletin 1. Washington: Government Printing Office.

USBC (United States Bureau of the Census). 1905. *Census of the Philippine Islands: Taken under the direction of the Philippine Commission in the year 1903*, volume 2. Washington: Government Printing Office.

USCSC (United States Civil Service Commission). 1902. *Nineteenth report of the United States Civil Service Commission: July 1, 1901, to June 30, 1902*. Washington: Government Printing Office.

Velasco, J. R., and L. Baens-Arcega. 1984. *National Institute of Technology 1901-1982: A facet of science development in the Philippines*. Manila: Philippine Association for the Advancement of Science.

Verzosa, N. P. 1963. Gabriel A. Bernardo, a memoir. *Philippine Studies* 11:524-535.

Vincennes University. (1893). *Vincennes University: 1893*. Vincennes, IN: Vincennes University.

Wagner, W. H. 1965. Edwin Bingham Copeland 1873-1964. *Taxon* 14:33-41. doi:10.1002/j.1996-8175.1965.tb00144.x.

Welborn, W. C. 1903. Interesting letter from Luzon. *Greenville Times*, October 3.

Worcester, D. C. 1921. *The Philippines past and present*. New York: MacMillan.