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The manuscript works of S. Fred Prince (1857-1949)

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ABSTRACT: S. Fred Prince, a botanical illustrator and amateur scientist, is a largely unknown artist whose work on the American landscape demonstrates his eligibility to be considered in the lineage of self-taught illustrator-naturalists such as Mark Catesby and Genevieve Jones. In this article, we present a survey of extant Prince materials identified at time of writing, describing their contents and physical characteristics. Beyond this survey and description, we also provide a biographical sketch and timeline of Prince's life.

KEY WORDS: Botany—ferns – amateur science – Marvel Cave – Missouri – United States

AN UNUSUAL TALENT IN CHARACTERIZING PLANTS

Some years ago I saw some of the wild flower drawings which Mr. Prince made. They exhibit unusual talent in characterizing the plants in question and would be most suitable for use in illustrating any publication concerned with those plants ... Mr. Prince's work was scientifically accurate, in addition to making a painting bring out all a painting could. – Frank C. Gates, Professor of Taxonomy & Ecology, Kansas State College of Agriculture and Applied Science, 10 October 1946.¹

This letter, written to Alice Prince Shafer, refers to the work of her father, the illustrator S. Fred Prince. Professor Gates knew Prince from their time together working at the Kansas State College, now Kansas State University in Manhattan, Kansas. The letter is one in a series (copies of which are held by the Dumbarton Oaks Research Library and Collection) that Mrs. Shafer

solicited in an attempt to bring her father, S. Fred Prince, acclaim and financial security in the last years of his life. Prince's work was published in an array of scientific journals, textbooks, and regional surveys, often unsigned illustrations to the writings of others. It is the largely unsigned nature of his published work that moved the authors of this article to examine his manuscript works more closely. The quality of Prince's work and its potential significance for not only bibliography, but also art history and environmental studies make the work *prima facie* worthy of further scholarship. Through a biographical essay on Prince and a bibliography of his extant manuscript works, this article seeks to provide foundations for further scholarship and research on Prince and his work.

Samuel George Prince and Alice Cordelia Little gave birth to their first child, Samuel Webb (later calling himself S. Fred), on 26 May 1857 in Philadelphia, Pennsylvania. S. Fred's interest in science and illustration was evident from an early age, as he drew sketches of wildflowers for his mother to embroider. After living for a time in Philadelphia and Washington, DC, the Prince family moved to Chicago. S. Fred stopped attending school in Chicago in 1869, though no evidence of his graduation exists. Prince suggested the paperwork may have been destroyed by the Chicago Fire of 1871, but he may also have been too young to be eligible for a diploma.²

In 1871 the family moved to Wisconsin, first Manitowoc and then Madison. Prince's father worked in printing houses, and S. Fred himself worked as a bookbinder, stereotyper, and electrotyper before forging a career for himself as a scientific illustrator. His experience with engraving techniques, bookbinding, and printing is borne out in the evidence found in his later work. He also started his fern collection around this time (a collection apparently donated to the University of Illinois, though it has not been located as of this writing).³ Ferns were a major theme of his later work, presaged in his youthful collecting activities.

From 1881 to 1892, Prince worked as a medical illustrator in Chicago. But his life as a naturalist began in earnest when he moved to Missouri in 1893 following the death of a woman he had hoped to marry. Reflecting back on his years at Marvel Cave, S. Fred Prince wrote, "I broke down in 1893 and was brought into the Ozark forest, where I spent ten years. Here my main work was the survey and study of the great cavern called Marvel Cave."⁴ Indeed, he moved to

the Ozarks not only to find solace from his breakdown but also with the promise of a job from the Lynch family. William Lynch purchased the cave in 1889, seeking bat guano and later tourist dollars. His daughters were also active in the family business, and became close friends to Prince (Payton 2007:23).

Prince settled near Marvel Cave. In the following decades, he came and went, taking jobs from universities, working for irregular periods and then returning to his homestead in the woods. Once he had married and had two children, there was further need to earn an income with contract work as an illustrator. (His wife Maud worked as a schoolteacher.) In his manuscripts, Prince names professional scientists in his acquaintance, such as Henry B. Ward and Frank C. Gates. He was appointed to positions at several schools in part because of scientific acquaintances, and despite his lack of professional scientific or artistic accreditation. Ward, for example, found illustrator positions for him at Nebraska University and later at the University of Illinois.

Prince worked on the American frontier of his time. The Ozarks may not seem quite so distant now, but in the late nineteenth century there was very little development in that area. Prince's daughter, Alice Prince Shafer, wrote that he considered himself a conservationist, working to document the flora "being depleted by the advancing westward migration."⁵ The White River, which bordered the area of his work around Marvel Cave, Missouri, was first dammed in the early twentieth century, and has been modified with multiple dams and man-made lakes since. Prince's maps of the waterways and caves of the region therefore document a lost American landscape. With the exception of several maps and drawings, very few of these documents have been published. Prince's detailed illustrations—of insects and ferns, for example—were frequently published in other people's books or articles. But Prince's unpublished manuscript material demonstrates a holistic approach to the landscape that included geology, flora, and fauna. He considered himself a scientist.

How does Price's self-identification as a conservationist affect his utilization of conventions of scientific practice? Where does Prince—who seems not to have had even a high school degree—fit in? For some context, it is worth noting that over the course of the nineteenth

century, the practice of science became more professionalized, requiring of its practitioners the sort of advanced degrees we might expect from anyone calling herself a scientist today. The establishment of American institutions such as the Smithsonian (in 1846) and the National Academy of Sciences (in 1863) is indicative of the move towards standardized and centralized practices (Bruce 1988). And despite contemporary concerns that researchers in a university were overburdened by teaching and by the pressure to devote themselves to the practical applications of scientific discovery (telegraphs, electric lights), the fact remains that by the end of the nineteenth century in America most science was being done in an academic setting (Rowland 1883; Lucier 2009; Lucier 2012).

It has been suggested that there were distinct periods of science in America, one being the nineteenth-century movement to transform science into an independent and self-governing entity, with practices codified and sanctioned by the academy, and another period of specialization within the academy in the decades leading to WWII.⁶ (The period following WWII is out of the scope of this paper.) S. Fred Prince's long life bridged these nineteenth and early-twentieth-century changes, including technological developments that made the laboratory a primary setting for plant science, and yet his career is reminiscent of careers formed in an earlier, even colonial, era of American history. We are reminded, for example, of Mark Catesby (1682-1749), an Englishman who collected specimens in the American Southeast; Catesby taught himself how to etch in order to illustrate his specimens for publication and became (like John James Audubon after him) a scientist-illustrator. Or consider William Bartram (1739-1823), who despite being the son of a naturalist had not planned on such a career himself, until entering the field at age 34. Constantine Rafinesque (1783-1840), a polymath who made contributions to botany and zoology, was self-educated and deeply fascinated by the natural history of America. All of these individuals became naturalists by declaring themselves such, going to the field, and doing the work.

By way contrast, consider a contemporary of Prince. Charles W. Woodworth (1865-1940) obtained a bachelor's and a master's degree from the University of Illinois at Urbana-Champaign, an institution with which Prince was occasionally employed. Woodworth worked as an assistant to Stephen Alfred Forbes (director of the Illinois State Laboratory of Natural

History) while obtaining these degrees; Prince worked for Forbes as an illustrator from 1912 to 1914. Woodworth spent time in the same area of the country as Prince; he worked in Arkansas for the state's Agricultural Experiment Station. Woodworth specialized in entomology and founded the Entomology Division at the University of California, Berkeley (Anonymous 1940; University of California 2005). Prince, it must be said, preferred his homestead in the rural Ozarks to the life of cities and universities, but it is also evident that an advanced degree could significantly impact one's professional trajectory, meaning the difference between scraping together an income and an academic appointment at a prestigious university.

Prince's long-term collaboration with professional scientists as an illustrator of their work meant that he knew and often adhered to scientific convention in his own work. His manuscripts refer to plants by their binomial names and give rough indication of their place of collection, though it must be said that his notes are often inflected by a characteristic poetry, as in his location description for a specimen of *Adiantum pedatum*, or northern maidenhair fern: "There were four groups of this beautiful fern in 'Camptosorus,' the largest of which was in a broad shady ravine, where hundreds of plants were growing among mossy stones on a rocky bottom over which flowed the cold clear waters of a never dying spring."⁷ This description, like others in the same manuscript, refers to a map devised by Prince, *Camptosorus* being both the name for Prince's favorite genus of fern and the name he bestowed on his homestead in the Missouri Ozarks [figure 1].

When dates are given for the collection of individual specimens they are often general; for example "1934, June" for his watercolor of *Ipomea pandurata* [figure 2]. Truly, Prince's illustrations are where his scientific talents are most apparent, as in his illustrations for the same *Adiantum pedatum* described above, which show the fern's fronds, spores, and rhizomes, including multiple angles and magnifications [figure 3]. With regards to organization of individual manuscripts, Prince's practices varied. In some cases, in particular in his works on ferns, he listed specimens alphabetically by genus and species. When he did not, he often included an index, as in the case of *Violets of the Ozarks* and *The Rainbow in the Grass: Wildflowers of the Marvel Cave Ozarks* (both at Oak Spring).

S. Fred Prince did not fit into the standard scientific model of his time. He had no degrees. He did not specialize. He was both author and illustrator. This is what makes him so fascinating. We could call him merely an amateur scientist, a hobbyist, a science enthusiast, but that does not encompass the contributions he made as an illustrator of published scientific works, or the way he devoted his entire life to scientific observation. His unpublished manuscript works, combining botany, geology, and entomological observations, hark back to the work of eccentric, self-made, self-taught individuals of an earlier period. Let us be clear: his contributions do not rise to those of men like Catesby or William Bartram. Neither are they as reliably beautiful as the work of another artist and naturalist, Genevieve Jones (1847-1879), and her family, whose collaborative work on birds' nests and eggs is also meticulous and scientifically accurate (Kiser 2012). In the writings we have examined, Prince never compares himself to these figures. The comparison is most valuable for the perspective it provides on the history of science, including the options available for talented individuals at a given time.

Prince is worth considering as an example of how science was consumed and created, an example that complicates the accepted history of science in America by giving it a more independent and democratic face. The whole field of biology was overhauled by means of the synthesis, in the early twentieth century, of gene theory and evolutionary theory. And there on the periphery, literally and figuratively, was S. Fred Prince, observing and annotating his surroundings like an eighteenth-century explorer.

Inasmuch as Prince's manuscript work is known at all, it is through the occasional reproduction of his drawings of Marvel Cave in tourist publications and books about spelunking, as well as in a valuable but brief publication by Suzanne Wilson in the *Missouri Conservationist* (Wilson 1998). One version of his *Cave Book* is held at Silver Dollar City, a theme park in Branson, Missouri. But the books on Marvel Cave are only a part of Prince's extant work. One work, on butterflies, has taken a circuitous route back to the Ozarks region and is now held at Crystal Bridges Museum of American Art in Bentonville, Arkansas. Several further items exist outside this region, at institutions including Dumbarton Oaks, The Oak Spring Garden Library, the Hunt Institute for Botanical Documentation, and a private collection near Washington, D.C. These books were projects to which Prince returned year after year, decade after decade; indeed, many

of the titles described below were conceived of as part of a larger work to be titled the *Woodland Booke*. Unlike the work he published as (often unattributed) illustrations to the scientific papers of others, these books were his personal project to document a territory he held dear. In 1930, he retired from his position at Kansas State College (now Kansas State University) in Manhattan, Kansas, to return to Marvel Cave. In the following years, he put the final touches on works that had in many cases been started decades earlier. Prince died on 12 January 1949 and was buried in Carl Junction, Missouri.

MANUSCRIPT WORKS DETAILED

The Cave Book (at Silver Dollar City), 1935

There are in fact two *Cave Books*, one at Silver Dollar City, and the other in a private collection. The book residing at Silver Dollar City is that which Prince gave as a final illustrated report to the Lynch family about his discoveries and observations in and about Marvel Cave; it is inscribed "1935," though as with all of Prince's works it represents work over a significant period of years. The map produced by Prince at this time is still the map of the caverns used by the Silver Dollar City theme park. The authors have not examined this volume in person, though Silver Dollar City supplied digital images for reference. The privately held *Cave Book* is bound by Prince in cloth and paper boards, with the title in his hand.

Fifty years study of some of our most common ferns and their habitats: mostly at "Camptosorus" 1883-1903-1930 (at Dumbarton Oaks), 1883-1930

Inconsistent in both numeration and collation, this manuscript consists of approximately 200 leaves (page numbers up to 224, with one page number used twice and 15 page numbers omitted) of illustrations and text, including an illustrated title page, an introduction to the *Woodland Booke* as a whole, numerous drawings of ferns and manuscript text on ferns, a map of the area around Marvel Cave, and a pasted-in watercolor of mountains. The work is unbound. In some cases, a full sheet of paper has been folded twice to create four leaves. In a majority of cases, the same full sheet has been cut in half, with each half folded once to create two leaves. In some cases the full sheet has been cut into four parts so that a loose leaf can be inserted. Housed

with the work are two sets of pressed specimens, one consisting of twelve leaves of pressed ferns and the other consisting of ten leaves of pressed flowers. Among the pressed specimens are several examples of stationery from Prince's time working an assistant to S. A. Hoover in the Agriculture and Geography department of the State Normal School in Warrensburg, Missouri. The manuscript is written on at least four types of paper, the heaviest of which has a 1903 watermark and its leaves measure $14 \frac{13}{16} \times 10 \frac{3}{4}$ inches [37.6 x 27.3 cm]. The three lighter-weight papers are only slightly smaller, measuring $14 \frac{13}{16} \times 10 \frac{11}{16}$ inches [37.6 x 27.2 cm].

An Index and Synonymy [sic]⁸ of the Ferns of the United States up to 1925 (at Oak Spring)

In addition to the title page and one blank leaf, 87 leaves of manuscript text, pen and ink on lined paper. The paper is personal stationery, and each leaf is labeled "S. Fred Prince" on both recto and verso. The leaves are unbound but are kept between two boards, onto which have been affixed sheets of decorated paper painted with watercolor and gold ink. This work has no illustrations. As the title suggests, it is an index of alternative names for ferns, listed alphabetically by their Latin names. This item was likely bound by Prince, as it nearly matches the signed bindings done by him.

Leaves measure $11 \frac{1}{8} \times 9 \frac{1}{8}$ inches [28.3 x 23.3 cm]

The Pteridophyta. A Companion to the Study of the Ferns (at Oak Spring), 1930-1935

In addition to the title page, 60 leaves of manuscript text, pen and ink on lined paper. The paper is personal stationery, and each leaf is labeled "S. Fred Prince" on both recto and verso. The leaves are unbound but are kept between two boards, onto which have been affixed sheets of decorated paper painted with watercolor and gold ink, matching other similar boards and bindings done by Prince. The papers and decoration on the boards are different from those on the *Index and Synonymy*, but the illustrations appear to use similar inks. This work includes numerous illustrations of variations among ferns (for example the shape of the sporangia and the arrangement of sporangia clusters, or sori). Many of these diagrams would have had to be made with the use of a microscope, which S. Fred Prince surely had in his possession for his work on insects. Kept with this volume are ten photocopied manuscript leaves "written 1926," describing the landscape—and the ferns in particular—around Marvel Cave. The *Index and Synonymy* (described above) and *The Pteridophyta* are companion pieces. They are made with the same

materials, cover the same subject, and make reference to one another. In *The Pteridophyta*, for example, he writes that he developed the *Index and Synonymy* in order to simplify his ongoing study of ferns, complicated initially by the many names given to some species.

Leaves measure 11 1/8 x 9 1/8 inches [28.3 x 23.3 cm]

The Rainbow in the Grass: Wildflowers of the Marvel Cave Ozarks, 1890-1936

This is Prince's title for a series of watercolors of wildflowers (207 at Oak Spring, 20 at Dumbarton Oaks, three at Hunt Institute). These are unbound works produced in watercolor and pencil. The majority of the works, held at Oak Spring, include two drawings on each folded sheet. Those at Dumbarton Oaks have been cut out and removed from the series, and those at Hunt would seem to have been removed in a similar fashion. The authors have not examined the Hunt materials in person. These images are on pages with false plate impressions.

Oak Spring leaves measure 15 3/8 x 11 1/4 inches [39 x 28.6 cm], measurements taken from folded sheet

Hunt leaves measure: 15 1/4 x 11 inches [39 x 28 cm]

DO leaves measure: 15 1/4 x 11 inches [39 x 28 cm]

Some Butterflies and Other Insects of Marvel Cave Ozarks (at Crystal Bridges), 1939-1941

On the front pastedown of the manuscript is the bookplate of Mildred Bliss, the founder of Dumbarton Oaks. Bound in three quarters brown morocco with marbled boards, the title consists of 27 leaves of watercolor paper, with 18 watercolor illustrations, and manuscript text in Prince's hand throughout. As with many of Prince's manuscript works, the pages are stamped with blind engraving plates to give the sense of printed illustrations along the lines of a luxurious presentation volume. The title was likely bound later and professionally, as the binding far more luxurious than those Prince created himself.

Leaves measure 19 7/10 x 12 2/5 inches [50 x 31.4 cm]

Violets of the Ozarks (at Oak Spring), 1893-1902 (with changes made at least until 1933)

In addition to a half-title, title page, two added leaves (pencil drawing to take the place of page five and an added leaf of introductory text dated 1933), and an index, this work consists of 23 pen and ink drawings, some with a watercolor study of the violet in the lower left corner. These

images are on pages with false plate impressions. The binding is brown burlap with decoration in black pen and a white label, written in Prince's hand, for the title.

Leaves measure 15 x 11 inches [38 x 28 cm]

The following materials are in a private collection:

The Ozarkian Uplift and the Marvel Caverns, a volume including a version of *The Cave Book*, dated 1896, 1894-5, 1933, and 1943 at different points. *The Cave Book* section is dated 1933 and a note by Prince indicated that this version is "the original," with a subsequent 1935 copy being a gift to "the Misses Lynch." Title bound by Prince, with the title in his hand in ink.

Two books of poetry, illustrated with flowers: James Russell Lowell's *The Beggar* and John Henry Newman's *Lead, Kindly Light*. The Newman book is bound by Prince, with the title in his hand in ink, in addition to a watercolor depiction of a flower. The Lowell text is bound in brown burlap, with the title in Prince's hand.

Ye Leaflet: Being Extracts from "The Woodland Booke." This title is unbound, but is on folded sheets.

Ozark Wild Flower Sketches Vol. 1

Ozark Wild Flower Sketches Vol. 2 Both of these volumes are bound in boards of undetermined makeup, covered with printed cotton fabric and have their titles in Prince's hand in ink.

Wild Flowers of the Marvel Cave Ozarks: a list of flowers collected around Marvel Cave between 1893 and 1899. This list, along with the wildflower sketches, constitute notes and materials for *The Rainbow in the Grass*. This title is bound similarly to *Ozark Wild Flower Sketches*, with printed cotton cloth over boards and titles in Prince's hand in ink.

CONCLUSION

At the beginning of the *Fifty years study of some of our most common ferns*, Prince explains that he intended a number of his manuscript works to form one grand work, to be titled *The Woodland Booke*, and indeed it is clear that most have been formatted and designed similarly, with matching title pages for example. Based on this preface and on a letter from his daughter at Dumbarton Oaks, we believe that he intended the following works to appear together as *The*

Woodland Booke: The Fern Book, Violets of the Ozarks, The Rainbow in the Grass, Some Butterflies and Other Insects of Marvel Cave Ozarks, and The Cave Book.

Beyond these works, traces and outlines of other works exist. As mentioned above, the authors of this paper know that Prince collected ferns for much of his life. His collection may have been donated to the University of Illinois, but we have not located it at that institution. Some of his pressed specimens accompany the *Fern Book* at Dumbarton Oaks, so we have examples of the method in which he preserved and organized his pressed specimens [figure 4]. In addition, Prince worked for approximately ten years as a medical illustrator at Rush Medical College. We have been unable to locate any illustrations, either manuscript or published, from this period. The primary hindrance is the closure to the public, since 2012, of the Rush University Medical Center Archives.

The only publications that Prince accomplished in his lifetime were the fruits of his interest in ferns (occasional short articles in publications such as *The Fern Bulletin*) and the scientific illustrations he created, primarily of insects, for the professional scientists with whom he worked at Nebraska University and UIUC.⁹ But his lifelong interest in his beloved Marvel Cave region has been woefully under-recognized, a situation we would like to help remedy. As he wrote at the beginning of the *Fern Book*, “I think it was mostly the artist in me that caused me to be so drawn toward this beautiful country and the dainty beauty of its flowers and plants.”

Considering even the identified works described in the present paper, Prince deserves wider recognition in the community of American naturalists and illustrators. He envisioned his many works on the natural landscape of the Marvel Cave region—insects, plants, geology—to be part of one lifelong project. Indeed, it is evident from a study of his manuscripts that he routinely revisited his works to update and enhance them. Such dedication and attention to detail is noteworthy in and of itself, especially with regards to a region that has changed rapidly in the intervening decades. How fortunate for later generations that a man with a lifelong project happened to live such an extraordinarily long life!

But there is an aesthetic argument to be made for Prince's work as well. His associates praised his illustrations for their accuracy and effectiveness in conveying important details. These strengths extend into his unpublished work, but are enriched by an imaginative approach that allowed ferns to fill whole pages with their flourishes, winding their way through text that seems secondary to his enthusiasm for the vitality of the plant [figure 5]. Similarly, he added false plate marks and then allowed his illustrations to ignore them altogether, to reach right to the edges of their pages. His violets—a flower for which he showed particular fondness—are as delicate as the real thing, and those with white petals are subtly haloed in a way that makes them appear to float off the page [figure 6]. His watercolor of “butterfly hill” in *Some Butterflies and Other Insects of Marvel Cave Ozarks* goes several steps further and includes a dozen fairies cavorting in the borders.

We have compared Prince to well-known names in illustration of the American natural landscape, looking back to eighteenth-century models that informed his self-taught approach to science and to art. But his work stands on its own, a mix of scientific illustration and American folk art that creates a portrait of a time and place now largely lost. We hope this paper will bring him further recognition and perhaps initiate the necessary steps for an illustrated publication that will bring his work to a wider audience.

NOTES

1. Frank C. Gates to Alice Prince Shafer, 10 October 1946. Letter in provenance files of Dumbarton Oaks.
2. Alice Prince Moreland, Undated biographical sketch. Photocopy in provenance files of Dumbarton Oaks. Biographical information in this article has also been determined from United States Census records from 1870, 1910, and 1920.
3. Alice Prince Moreland, Undated biographical sketch. Photocopy in provenance files of Dumbarton Oaks.

4. S. Fred Prince, Unpublished autobiographical sketch, dated 16 May 1937. Photocopy in provenance files of Dumbarton Oaks.
5. Alice Prince Moreland, Undated biographical sketch. Photocopy in provenance files of Dumbarton Oaks.
6. For this specific claim, see Clark A. Elliott, “Characteristics of the History of Science in America, With Some Programmatic Notes on Unity” on the *Forum for the History of Science in America*, <http://americanscience.blogspot.com/2008/07/characteristics-of-history-of-science-14.html>. Accessed December 2015. Ewan (1969) makes a similar point about “epochs” of botany in the United States. For the professionalization of American botany, see Rodgers (1944), Cittadino (1980), and Bruce (1988), as well as Lucier (2009 and 2012). See also Smocovitis (2006) on the history of the Botanical Society of America, founded by botanists in part “to professionalize the study of plants and to distance it—and themselves—from what they felt were the more amateurish efforts of their predecessors as well as many of their contemporaries.”
7. S. Fred Prince, *Fifty years study of some of our most common ferns and their habitats: mostly at "Camptosorus" 1883-1903-1930*. Dumbarton Oaks.
8. Prince uses the spelling “synonymy” consistently throughout this manuscript.
9. Prince illustrations appear in the *Transactions* of the Kansas Academy of Science, Edwin C. Miller’s *Plant Physiology* (1938), and *Common Insects of Kansas* (1943). The authors of this article are also preparing a bibliography of Prince’s illustrations in print.

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ILLUSTRATIONS

Figure 1: Map of Marvel Cave and surroundings, from *Fifty years study of some of our most common ferns and their habitats: mostly at "Camptosorus" 1883-1903-1930* (image courtesy of Dumbarton Oaks Research Library)

Figure 2: *Ipomea pandurata*, from *Rainbow in the Grass* (image courtesy of Oak Spring Garden Library, Upperville, Virginia)

Figure 3: *Adiantum pedatum*, from *Fifty years study of some of our most common ferns and their habitats: mostly at "Camptosorus" 1883-1903-1930* (image courtesy of Dumbarton Oaks Research Library)

Figure 4: Fern specimens mounted by S. Fred Prince, from *Fifty years study of some of our most common ferns and their habitats: mostly at "Camptosorus" 1883-1903-1930* (image courtesy of Dumbarton Oaks Research Library)

Figure 5: *Camptosorus rhizophyllus*, or walking fern, from *Fifty years study of some of our most common ferns and their habitats: mostly at "Camptosorus" 1883-1903-1930* (image courtesy of Dumbarton Oaks Research Library)

Figure 6: *Viola canadensis* (detail), from *Violets of the Ozarks* (image courtesy of Oak Spring Garden Library, Upperville, Virginia)