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## THE BOTANICAL PURSUITS OF JOHN SAMPLES, PIONEER OHIO PLANT COLLECTOR (1836-1840)<sup>1, 2</sup>

RONALD L. STUCKEY<sup>3</sup>

*Department of Botany, The University of Michigan, Ann Arbor, Michigan*

### ABSTRACT

From 1836 to 1840, John Samples, an Urbana, Ohio, school teacher and self-taught botanist, assembled one of the earliest collections of vascular plants from southwestern Ohio. Today his collection is preserved in the University of Michigan Herbarium.

Of Samples' personal life, little is known except of his teaching. He conducted a private school in Urbana from 1833-1838 and taught briefly in Cincinnati in 1839. More is known of his botanical studies since he corresponded with John Torrey and Charles W. Short, two well-known botanists of the day. From these letters we learn that without the aid of "an instructor or anything indeed" he began his herbarium in the spring of 1836. The record of his botanical work ends abruptly in June of 1840.

Cedar Swamp, the Mad River and its tributaries, Wisham's Pond, Dougan Prairie, and the "barrens" were among his favorite collecting sites in Champaign County. Here he not only secured most of the common plants of the region, but also some plants which have either never or rarely been collected in the area since. He also gathered plants in Hamilton, Logan, Madison, Miami, and Scioto counties. Plants from his friends' gardens indicate that he had an interest in gardening. In this study, 490 of his specimens have been located. A list of these plants with his original notes serves to document the natural flora of the Mad River valley as it was known in his day.

### EARLY OHIO BOTANICAL HISTORY

By the close of the eighteenth century, the territory west of the Allegheny mountains was part of the vast frontier that was open to colonization by the early pioneers. Among these pioneers, many of whom settled in the Ohio River valley, were learned people who took an active interest in the nearly virgin vegetation. In this group was Dr. Daniel Drake, one of the first to study plants in this river valley. His first major publication, "Notices Concerning Cincinnati", (Drake, 1810) was the first book to be printed west of the Allegheny mountains which listed some of the indigenous plants (Horine, 1961: 98). The botanical

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<sup>3</sup>Present address: Department of Botany and Plant Pathology, The Ohio State University, Columbus, Ohio 43210.

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portion was in the form of a *calendarium florum*, which included observations on the phenological progress of the vegetation throughout the growing season. In a later publication (Drake, 1815), an entire section containing a list of native trees growing in the Miami country, a list of plants useful in medicine and the arts, and a floral calendar was included. Furthermore, according to Horine (1961: 153), Drake was the first to present lectures on botany in the Western country, the introductory lecture being given "Friday evening, 8 May 1818." During this same period, Dr. Samuel P. Hildreth of Marietta College, in some of his earliest publications (1826, 1827, and 1829) contributed early notes on Ohio's vegetation. His papers, like Drake's, dealt with medicinal and practical uses of plants and with observations on their growth and development throughout the season.

The methods of studying plants began to shift from phenological observations to the collection and preservation of specimens. These collections then served as documentation for systematic lists and catalogues of plants for a given area. According to Kellerman (1899), Manassah Cutler at Marietta is considered to have collected the earliest specimens in Ohio, but later they were accidentally destroyed by fire. The first published list of plants for a given area was prepared by Dr. John L. Riddell (1834), and was entitled "Catalogue of the plants, growing spontaneously in Franklin County, central Ohio . . ." After taking up his residence in Cincinnati, Riddell published a "Synopsis of the Flora of the Western States" (1835). This was the first catalogue of plants covering a large area of several states written by a resident Ohio botanist. He followed this publication with a "Supplementary Catalogue of Ohio Plants" (1836). His records were apparently based on preserved specimens. However, Riddell sold or exchanged many of his early collections, and today many of them are lost, although there are some remaining specimens in various herbaria both in America and Europe. Thomas G. Lea, also of Cincinnati, was actively preparing a herbarium, and his list of plants was published in 1849 (Lea, 1849).

In the Columbus area, William S. Sullivant took to the field to secure plant specimens, as likewise did his physician friend, Dr. John M. Bigelow, both of whom published lists of plants of the central Ohio area (Sullivant, 1840; Bigelow, 1841).

A contemporary of these publishing naturalists was John Samples, an Urbana, Ohio, school teacher and enthusiastic, self-taught botanist and plant collector. Samples prepared one of the earliest collections of plants made in the relatively unexplored, nearly virgin countryside of the Mad River drainage system in Champaign County, Ohio (Stuckey, 1964). Today his plants are preserved in the University of Michigan Herbarium. They were included as part of some 2500 specimens that belonged to Dr. Adams Jewett of Dayton, Ohio, which, after his death in 1875, were presented to the University of Michigan by his son, Dr. Henry S. Jewett, a graduate of the Literature School (1868) and the Medical School (1870) of the University of Michigan. This paper attempts to reconstruct from scattered fragments the life of John Samples as it pertains to his occupation and botanical work, to describe some of the habitats and localities where he collected plants, and to include a list of his specimens with his notes to document the Mad River valley flora as it was in his day.

#### JOHN SAMPLES AS A SCHOOL TEACHER

Of Samples' personal life we know little, except of his teaching. Ogden (1881: 341) has left for us a concise yet brief statement pertaining to his residence in Urbana. In the 1830's, a private school was conducted in Urbana, and classes were held in a two-story, four-room brick structure known as the Academy building. At this time,

John Sample[s], during the years 1833, -34, -35, occupied the west room of the building. Sample[s] was a fair scholar, and considered a successful teacher. He was quiet and reserved in his manners, and fond of lonely walks. The latter may be explained by the

fact of his fondness for botany, and of his purpose to write a history of the flora of Champaign County, a purpose he was compelled to abandon on account of ill health. He died of consumption, shortly after giving up his school. He was understood to be the writer of a series of papers which appeared in the town journal, criticising a rival teacher, which provoked retaliation, and gave the public much interest at the time.

The first notice concerning his school that I have been able to locate in Urbana newspapers appeared in the "Country Collustrator, and Mad River Courant," Saturday, November 23, 1833. It is as follows:

The undersigned respectfully informs the citizens of Urbana and those within its immediate vicinity, that he will again open a school in a room of the Academy, on Monday the 25th inst. in which all the ordinary branches of an English education will be carefully taught.—Terms made known on application. The undersigned having spent about three years in qualifying himself for the profession, and designing to pursue it for some time, from this, united with considerable practical experience in Teaching, he hopes to merit a continuation of the patronage of the public.  
Nov. 14th 1833. J. Samples

This advertisement leaves two problems about his life unsolved. First, we do not know exactly when he began his teaching occupation, since the word "again" implies that he may have conducted school in Urbana before 1833. Second, it is not known where he spent the "three years in qualifying himself." Another item concerning his school appeared September 26th, 1834:

#### JUVENILE & CLASSICAL SCHOOL

The fall Term of the above mentioned School will include a period of twelve weeks, extending from the 29th of September to the 22nd of December, at the close of which there will be an examination of the pupils in all the branches pursued during the Term.

The subscriber flatters himself that the School will be conducted upon an improved and a more regular system than heretofore; and from the liberal patronage which formerly sustained him in his efforts, and for which he now presents his grateful acknowledgments, he hopes that his subsequent services will still merit its continuance.

#### Terms of Tuition

In Spelling, Reading and Writing,	\$2.25
Arithmetic,	2.75
English Grammar, Composition and Geography	3.00
Algebra, Natural Philosophy and Geometry	4.00
Elementary and Classical French	5.00

The preceding prices include the expense of rent, fuel, &c. and will be payable at the expiration of each term.

N.B. No allowance will be made for absence, unless in case of indisposition.

Urbana, Sept. 26th, 1834

John Samples

A last notice that I found appeared in the "Urbana Record," April 21, 1837. It is quoted in part:

#### SAMPLES' SCHOOL

This school which is now in operation, will after a short recess be opened for the summer term, on Monday the 15th of May next, at which time youths of both sexes will be received and *correctly* instructed in those branches of the English education *only*, which will be of actual utility to them in the practical affairs of life.

N.B. —None but class-books of the most approved kinds will be used in the school; and no pupil will be admitted for a less time than one quarter; neither will there be any abatement of payment on account of absence from school, unless in case of indisposition of the pupil, or other extraordinary incidents.

Urbana, April 21, 1837.

John Samples

I did not find any articles in the Urbana newspapers written by John Samples criticizing a rival teacher, as Ogden stated; however, since the newspaper files for 1836-39 in the Champaign County Library are not complete, these items, if they appeared in the town newspaper, may be lost. Samples left Urbana some time after September 21, 1838, and moved to Cincinnati, where, in a letter to John Torrey dated "Cincinnati July 1st 1839," we know that he was teaching "in

one of the common Schools." By checking the labels on his 1839 specimens, we can learn of his travels during that summer. These are discussed later. By the spring of 1840, he had returned to Urbana, where he again collected plants until June 13, 1840, the last date for which I have located any specimens. He may have died soon thereafter or he may have moved away. In either event, the "Western Citizen & Urbana Gazette," which published lists four times a year of unclaimed letters that accumulated in the post office, included John Samples' name during October, 1840. This is the last of the available data concerning his personal life. Although I have attempted to locate information concerning his family history, my efforts have so far failed in this respect. As a result, when or where John Samples was born and when or where he died is still unknown.

#### JOHN SAMPLES AS A SELF-TAUGHT BOTANIST

Concerning the botanical aspects of his life, we are able to get a more complete story, for Samples corresponded and exchanged specimens with several important botanists of the day. Some of his letters have been saved and are therefore helpful in piecing together his botanical career. Two of them were received by Dr. Charles W. Short of Lexington, Kentucky. Short, a western frontier plant collector and exchange correspondent, was widely known among both American and European botanists. On September 6, 1837, Samples introduced himself to Dr. Short in a letter, the first part of which is quoted below:

I received your kind offering of the 26th. May, on the 3rd. of June, all of which I have perused with great pleasure. Accept of my sincere thanks, Sir, and be pleased to pardon what you may consider neglect, in my not answering it immediately; but in the meantime please to hear the apology which I shall offer. When Dr. Joseph S. Carter [an Urbana physician] was in Kentucky in the Spring, he traveled in your company as he informed me after his return to Urbana, and said, that he gave you my name as one engaged in your favorite Science in this vicinity, and requested me at the same time to 'send you some word.' I would cheerfully have communicated with you more than once in the interval since, had circumstances permitted it. This is the first leisure time I have had since the 13th of May last. [At that time his school was in recess, as noted above.]

You, Sir, may be able to judge of the severity and closeness of my labors when I inform you, that since the middle of April I have discharged the duties as teacher in a 'Common School' consisting of 30-35 pupils, cultivated a small garden containing about 200 species of plants, in the intervals of time which occurred of mornings and evenings, and on Saturdays have taken up my 'vasculum' and sallied forth to the woods and meadows in quest of new species,—that is, new to me,—and after performing a tour on foot of from 5 to 30 miles, have returned wearied, wet, and hungry, but to begin another task requiring great patience and labor, of examining, analyzing, and disposing of in the Press, the specimens, thus brought in: besides being generally of evenings engaged in changing the plants in the Press or else attending to the business of the School. Thus have passed the Spring and summer. My labors during the last summer (1836,) were less severe; I began collecting plants for an *herbarium* with the springing of vegetation, and pursued that to the exclusion of every employment, till the 1st of July, at which time I engaged with a School in which employment I have since continued.

So I before informed you, I discontinued the regular and exclusive business of botanizing, on the 1st of July; for my collection had by this time become so bulky and confused that I feared that I should not be able to dispose of or arrange it. I went out occasionally afterwards and added considerably to that number; and after arranging the specimens and making out a list of them, I found I had preserved 581 species of which 128 were exotic and naturalized species. During the present season, up to this time (Sept 6th 1837.) I have collected and preserved at least 190 species of which 30 species are exotics; so that the whole number in the Herbarium amounts to about 770 species, and about 613 indigenous plants, though there are several undetermined species in the collection, and also 2 or 3 undescribed, among which are a *Collinsia*, an *Impatiens*, a *Corollorhiza*, one called *Boehmeria* with what seems to me to be a very imperfect generic description,—please to notice it.—& *Rhamnus*,—these seem to be distinct species. There are many varieties, some of the most conspicuous are in the following genera, viz: *Aster*, *Baptisia*, *Batschia*, *Chelone*, *Crataegus*, *Cypripedium*, *Dipsacus*, *Erigeron*, *Gerardia*, *Hedysarum*, *Impatiens*, *Jeffersonia*, *Liatris*, *Lonicera*, *Pedicularis*, *Physalis*, *Potamogeton*, *Potentilla*, *Quercus*, *Ranunculus*, *Rhamnus*, *Rhus*, *Ribes*, *Rumex*, *Sagittaria*, *Scutellaria*, *Silene*, very variable, *Solidago*, *Trillium*, *Veronica*, *Viola*, varieties numerous, *Vitis*, &c. &c....

Short answered the letter on October 20, 1837, and Samples replied on December 27, 1837. He began his letter by thanking Dr. Short for some copies of scientific publications. In the second paragraph, he mentioned sending a small package of such plants that he "did not find mentioned in the different Catalogues of Kentucky plants." Apparently forgetting what he had written Dr. Short in the previous letter, he repeated himself in regard to his beginning botanical work, for in the third paragraph he said:

In the spring of '36 I commenced preserving plants for a Herbarium without the aid of an instructor or any thing indeed, but the *Flora*, (Eaton's 6th. Edition,) and endeavored to determine every plant which I could find in flower, excepting beyond the Ferns, which was no small undertaking you would perhaps say for a novice in Botany as I was; but notwithstanding my inexperience and my being alone in the labor, I collected, read, and preserved, near 500 species during the summer, or rather during the season. The general rush of vegetation during the months of May, June and July afforded me more objects for examination than I could well dispose of, which accounts for the bad appearance and preservation of some of my specimens.

In determining the species of those which I send you, my dear Friend,—should you discover any errors in my decision, please excuse me, as I do not pretend to be an adept in reading the characters of Plants. I am yet too young a hand in the Science, and must in candor confess that I have in some instances mistaken the species, and two or three times even the genus, of some Cruciferae, Umbelliferae and Gramineae, and in another instance I mistook plants of two very different Orders [now called families].

Even the student of today may easily misidentify a plant. Yet after one has studied Samples' collection, it can be seen that he was amazingly accurate in the determination of his plants. Many of them have proved to be correctly identified at the generic level, as the names were applied in his day. More amazing is the fact that at least for the first two years of his labors, he used only Amos Eaton's "Manual" (1833) to find what name to apply to each specimen. In the "Manual," the descriptions of the genera are arranged according to the Linnaean artificial method. The second part of the book has these genera listed alphabetically, with brief descriptions of the known native North American and commonly cultivated species belonging to each genus. There were thus no analytical keys or line drawings for John Samples to use. In order to use Eaton's "Manual," familiarity almost to the point of memorizing its contents must have been essential. Yet Samples, without the aid of a teacher and with only this book, was able to identify correctly most of the plants which he encountered in his forays in the Urbana neighborhood. How many students of today, who have access to books with complete keys, illustrations, and more elaborate descriptions, as well as authorities and fellow students to consult, can begin to do as well as John Samples?

In his letters, he made apologies for the "bad appearance and preservation" of his specimens. An examination of his plants shows them, however, to be remarkably well pressed and in an excellent state of preservation today. Many of the early American botanists, as well as many of today's amateurs and beginning students of the flora, do not do as well. Many untrained collectors often take a regrettably small portion of the plant. However, such was usually not the case with Samples—as most of his specimens include the entire plant, even the most usually overlooked part—the roots.

His botanical library must also have been a beginning endeavor. At the time he wrote his first letter to Dr. Short, he owned "Eaton's Man[ua]l 6th Ed[ition]" as noted above, and the "Kentucky Catalogue" (Short, Peter, and Griswold, 1833). Later, he received from Short the "3rd Supplementary Catalogue of the plants of Kentucky" (Short, 1837), plus "some very interesting articles of a scientific nature." On one plant label, he makes reference to the "N[orth] A[merican] Genera" of Thomas Nuttall (1818). In a letter to Torrey, July 1, 1839, he spoke of purchasing "the two published numbers of the 'Flora'" (Torrey and Gray, 1838). Since he apparently owned only two botanical books in early 1837, which is three years before my record of him ends, and he mentioned only a few addi-

tions in the 3-year interval, we can conclude that he had not accumulated a very extensive botanical library.

To my knowledge, Samples' name appears only twice in published botanical literature. The first and more important is the mention of his name in the preface of John Torrey and Asa Gray's (1838-1843) botanical masterpiece, "A Flora of North America . . ." At the time, Torrey was probably the most authoritative botanist in North America and Gray, just beginning his career, was destined to become America's leading botanist. It was considered a great honor to send plant specimens to important botanists, especially if the plants proved to be new to science. Often the contributor was commemorated by having the plant bear his name. In this publication, Torrey and Gray acknowledged the receipt of plants from various collectors in Ohio by saying that "Mr. T. G. Lea, Mr. Wm. S. Sullivant, Mr. John Samples, and Dr. Paddock are the chief contributors."

In a communication to Torrey, July 1, 1839, Samples wrote, "[The bearer of this letter] brings you a very few plants among which are a few fine specimens of the *Valeriana* which I mentioned before, and from which you will probably have a good opportunity of learning the characters, at least those which belong to the plant itself." Letters to Torrey earlier than this one have not been located. However, this letter must have been at least the second, as the words "which I mentioned before" indicate. When and how did Samples learn of John Torrey and his desire to have plants from the frontier country? Perhaps this desire was communicated by Thomas G. Lea. In Lea's letter to Torrey, July 22, 1839, he wrote "I send a spec[i]m[en] of *Valeriana* handed to me by Mr. Samples; I had informed him of your wish to have specimens & when he brought me this, he told me that he had sent you specimens. Mr. Samples has removed from Urbana to this city [Cincinnati]."

Of the pioneer Ohio botanists mentioned in the introduction of this paper, only Lea seems to figure directly in Samples' botanical pursuits. As to how early and under what circumstances they met, I do not know. They may have become acquainted as early as October 6, 1838, for this date is written on the label which accompanies the specimen of *Elodea canadensis* that Samples noted as coming from Lea. We do know that Samples visited Lea, as implied above when Lea said that Samples had handed him a specimen of the *Valeriana*. This encounter was most probably during the early summer of 1839, for Samples obtained *Yucca filamentosa* from Lea's garden on Rue Street on June 15, 1839. It is also very possible that Samples learned some of his early ideas of botany from Lea, especially concerning the kinds of data to record on labels. Both botanists were quite alike in their manner of recording data. In addition to the name of the plant, date of collection, and their own name, they both recorded habitat and locality data. Lea apparently was more careful in this respect, however, than was Samples. In the dawn of botanical collecting in America, the latter two items were often not considered, and even Torrey, Sullivant, and Short often failed in this respect. Torrey was interested in who donated the plants to him, and so among many of his oldest specimens at the herbarium of the New York Botanical Garden, the name of the collector is often the only fact written on the sheet. Torrey also spent a great amount of time determining what species or variety he had and putting his ideas into print, and so he did not take time to concern himself with recording habitat and locality data. Sullivant and Short were primarily interested in building up large collections to exchange with their friends, and so they often wrote or printed only the name of their home address on the label. Because of this procedure, botanists, who expect labels to include locality data, often attribute the Sullivant and Short specimens as having been collected near their home town, even though both of them are known to have collected in many different habitats in various parts of their respective states. It was Lea and Samples who began the task of recording geographical information for the Ohio plants. We might say they had some foresight regarding ecology and phytogeography, and their importance.

Sullivant, in his catalogue (1840), gives the second mention of Samples in a passing reference. Concerning the *Valeriana*, he noted, "a new and undescribed species of *Valeriana* found, as I am informed, by Mr. Samples, lately of Urbana, in the Cedar Swamp, 6 miles south of that place." This information was supplied to Sullivant by Lea as will be brought out later. In a letter to Torrey, December 12, 1839, Sullivant made another reference to Samples. "Mr. Whiting [a Columbus book dealer] handed me some days since a small parcel from you containing two letters one to Dr. Paddock, the other to Mr. Samples directed to Cincinnati—I put them with the P[ost] Off[ice] at this place—It shortly afterwards occurred to me that I was informed last summer by Mr. Lea that Mr. Samples had removed from Cincinnati (Perhaps to Portsmouth in this state).—I wrote to Mr. Lea requesting him to attend to the determination of the letter so that I have no doubt it has reached Mr. Samples—." As has been mentioned, Samples returned to Urbana after leaving Cincinnati, so Sullivant was probably wrong in this statement. These two references, as well as two references to be mentioned later, indicate that Sullivant had only a vague knowledge of what Samples was doing, and therefore he probably did not know Samples personally. What knowledge Sullivant did have of Samples seems to have come to him from Mr. Lea. I have not found any evidence that Samples was aware of Sullivant and his work.

The above-mentioned Dr. Jonathan R. Paddock at this period was teaching chemistry, pharmacy, botany, and *materia medica* in the Worthington Medical College, located at Worthington, north of Columbus (Forman, 1941). In a letter of August 12, 1839, he wrote to John Torrey saying, "I have recently received a *Valeriana* from Mr. John Samples which was found by him a year or two since near Urbana, O[hio].—I think it an undescribed species.—I have noticed it in the list, but without a specific name. I will endeavor to procure a specimen for you, or induce Mr. Samples to send you one." As to what the relationship between Paddock and Samples was, I can not presently say. Perhaps more can be learned after a study is made of the records of Dr. Paddock, if these still exist.

I have not found any evidence that Samples knew or corresponded with Drake, Hildreth, Riddell, or Bigelow, but he did have associations with two other, lesser known botanists.

Living in nearby Springfield in 1835–40 was Milo G. Williams, a teacher in the Springfield high school, who collected plants from about 1833 to 1878 in the neighborhoods of Cincinnati, Dayton, Springfield, and Urbana. In 1850, Williams moved to Urbana where he was one of the leaders in the organization of Urbana University (now Urbana Junior College), serving as its first Dean of the Faculty, Professor of Science, and President and later Secretary of the Board of Trustees until his retirement in 1860. He continued as an active trustee until his death in 1880 (Weisenburger, 1950). His herbarium of "several thousand specimens" was left at the college where much of it remains today (Johnson, 1930). He, like Samples, never published any papers on his work and so he also has become one of the forgotten Ohio botanical pioneers. Samples and Williams exchanged specimens. I have found seven of Williams' specimens in Samples' collection, and three especially interesting Samples specimens in Williams' herbarium.

Another acquaintance was with Dr. John A. Warder, who in later life became well known in the region as a physician, horticulturalist, and forester (Moore et al., 1883). In his late twenties, he moved to Cincinnati in 1837 to begin his professional career. Here Samples met the young Dr. Warder, and the latter gave Samples a few specimens. However, there are no data with these, and so it has been impossible to determine where Dr. Warder obtained them. Among the seven specimens I have found, the rare *Trillium nivale* is of the most interest.

At the time I searched for Samples' plants in the University of Michigan Herbarium, I did not at first realize the significance of certain specimens, many

of which contain the label on which is printed "Charles W. Short, Lexington, Kentucky. 1836." These specimens also bear the stamp "Estate of Adams Jewett," or the note "donor H. S. Jewett." Two of these specimens are annotated as "C. W. Short M.D. from herbarium of John Samples." Since we now know that Short and Samples exchanged plants, it is most likely that the specimens bearing these identifications were at one time part of the Samples herbarium, and that they did not come directly to Jewett from Short as I had previously supposed. Among the Short manuscripts at the Academy of Natural Sciences of Philadelphia, I found no information concerning the plants that Short sent to Samples. Miss Phyllis Covatta (*in litt.*, 1964) was unable to trace any evidence in this regard at the Filson Club Library in Louisville, Kentucky. During a search at the herbarium of the New York Botanical Garden and the herbarium of the Academy of Natural Sciences of Philadelphia for some of the more interesting plants that Samples collected, I found very few duplicates that Samples had sent to Torrey or Short. Either Samples failed to send more than a few specimens, or Torrey or Short may not have saved the specimens, or they may have sent them out on exchange, or the specimens may have been lost or thrown away through the years. All duplicates that I have seen in other herbaria are cited in the systematic list at the end of this paper.

Three plants collected by Samples are especially interesting, and therefore are worthy of additional discussion. The *Valeriana* has been mentioned previously. Even though several botanists attempted to send specimens of this species to Torrey as discussed below, it is only fair that the *Valeriana* should have been named from his specimen, since he was actually the first to find it. Indeed, that has been the case. Torrey and Gray (1841(2): 49) described this species as new to science from Samples' specimens under the name *Valeriana ciliata*. It must have been Torrey's original intention to name the species *Valeriana Samplesii*, as some of the original labels carry this specific epithet. However, this herbarium name was never published.

Two notes, a description of the new plant by Samples, dated "Cin[cinnati] June 22nd 1839," and an undated note by Sullivant to Torrey, are attached to the sheet of the holotype of *Valeriana ciliata* in the herbarium of the New York Botanical Garden. Samples wrote "the Root of this plant is perennial and fleshy; and may possibly possess important medicinal properties. The Stem rises generally from 3 to 4 feet. The Flowers are regularly triandrous, of a greenish-white color, and appear generally in the interval from the first to the middle of June. The whole plant is dark green; and the leaves some-what fleshy, and smooth on the surface, but uni-formly ciliate on the margin. The rest of the characters are apparent from the specimens. Hab[itat] Rich alluvial prairies, where the surface is quite wet and swampy; and covered with grass and rushes. It is met with in some places on the prairies where the alluvial deposit is from 3 to 8 feet in depth; composed of decayed vegetable substances intermixed with fresh water shells." Sullivant's note, which should have been filed with his specimen of *Valeriana ciliata* in the general collection at the herbarium of the New York Botanical Garden rather than with the specimen collected by Samples which is in the type collection, reads,

I gathered this plant this spring—could find no description of it in any of my books—thought it must be new & was in hopes I should be the first to send it to you, but I find I have been anticipated.—My friend Mr. T. G. Lea Esq. of Cin[cin]n[at]i wrote me a few days since, that he had sent you a Valeriana from the same neighborhood collected by Mr. Samples wh[h]ich was new to you.—I have since ascertained that it was collected a year or two since by Mr. Williams of Springfield & sent by him to Dr. Short—from whom nothing had been heard on the subject.—

A description of the plant by Sullivant is also contained in his note.

In addition to the specimens of Samples and Sullivant at New York, there is



also a specimen bearing a Samples label, but with the words "T. G. Lea" written on it. This is the specimen that Samples handed to Lea as mentioned earlier in this paper. In regard to Williams' specimens, probably enough materials for eight full sheets were found at Urbana Junior College. Two notes with Williams' specimens are interesting: On one is written "Urbana. Boggy grounds in prairies. June. I first found and described this plant in 1839 [unpublished]; and sent specimens to several botanists. At that time it was not known in works on Botany." On the second note, apparently intended for John Torrey, but never sent, he wrote "Mr. T. G. Lea informs me that you have had specimens of this species from Mr. Samples, of Urbana—Mr. S and myself met with it the same year in the same locality. I made out an imperfect description at this time. Mr. Lea further informs me that you have given a full description and named it." Now we have completed the historical chain of events that led to the formal recognition of this rare Ohio species.

Since *Valeriana ciliata* is an uncommon species in Ohio, its distribution bears some discussion. In his North American monograph of the genus *Valeriana*, Meyer (1951) treated *Valeriana ciliata* Torrey & Gray as a subspecies under *Valeriana edulis* (*Valeriana edulis* Nuttall ex. Torrey & Gray ssp. *ciliata* (Torrey & Gray) F. G. Meyer), and he cited the Samples specimen at New York as the type. He mapped this collection as Urbana. The Sullivant specimens, however, he cited as Columbus, but it appears to me that Sullivant never collected the plant at Columbus. My reasons follow: (1) Sullivant did not confine his collecting to the immediate area within Franklin County around Columbus. Rodgers (1940: 121) said that "during the spring and summer [1840], he [Sullivant] had visited many promising localities for plants within Ohio, among them being 'the high table lands dividing the waters of Lake Erie from those of the Ohio River, back of Cleaveland & eastwardly toward the Pennsylvania line.'" Further, Rodgers (1940: 122) stated that Sullivant (in a letter to Gray) said, "In these dull times instead of turning my attention to politics as every body does, I attend almost entirely to making short botanical trips around the country of 2, 3, or 4 days . . ." (2) Seldom did Sullivant write on the labels an exact location for the source of his specimens. On most of his labels is written "Columbus, Ohio." This was his home and it was important that this information be on the label so that other botanists would know where to address him. It was a common practice to cite home addresses at this period. (3) The locality data on his specimens of *V. ciliata* at the Gray Herbarium and the herbarium of the Missouri Botanical Garden are either "Urbana" or "Columbus." Specimens in Short's herbarium at the Academy of Natural Sciences of Philadelphia are more explicitly labeled as "Cedar Swamp near Urbana, O." and "Cedar Swamp 6 miles south of Urbana, O." In his note to Torrey, the one which is filed with the holotype specimen of *Valeriana ciliata* at New York, he wrote, "Cedar Swamp near Springfield Ohio—1839." In his 1840 catalogue, Sullivant mentioned the *Valeriana* only as coming from Cedar Swamp, 6 miles south of Urbana, and gave Samples credit for finding it. Thus nowhere have I been able to find any statement to indicate that Sullivant actually collected the plant at Columbus. According to this evidence, therefore, *V. ciliata* has been collected in Ohio only from the several places in Cedar Swamp located between Urbana and Springfield. Hauser (1963), who did not see any of Sullivant's specimens, mapped its known Ohio distribution correctly, based on three collections in The Ohio State University Herbarium, the most recent in 1940. Outside of Ohio, where appropriate habitats are more common, *V. ciliata* occurs locally from Michigan westward to Minnesota and Illinois (Meyer, 1951).

The false garlic, *Nothoscordum bivalve* (L.) Britton, like *V. ciliata*, is a rare species in Ohio. Its present distribution in the United States as given by Fernald (1950) is from Florida to Texas north to Virginia, southern Ohio, Indiana, southern

Illinois, and Nebraska. Deam (1940) mapped it as being limited to southwestern Indiana. Braun (1943) listed records from six southern and central Kentucky counties. In Ohio, the species has previously been reported from the southern part of the state "below Buzzard Roost Rock, Adams County" (15 July 1932, *E. Lucy Braun s.n.* GH! NY!). A more recent collection has come from "a sandy field at Sandy Springs, Adams County" (6 May 1956, *Lawrence H. Hicks & Floyd Bartley 2285 US!*). Two collections are in the Samples herbarium, and therefore *N. bivalve* is one of the most interesting plants in the collection, since it represents a range extension of this rare plant some 90 miles to the north. One specimen came from "rich, warm, sandy soil near a pond in Mr. John H. James' pasture, one mile east of Urbana." The second collection, on three sheets, is from "warm sandy soil 1½ miles E[ast] S[outh] E[ast] of Urbana." At the time Samples collected these plants, he recognized them as being unusual. He had not previously encountered them, and so he considered the possibility of naming a new species as the labels bear the name "*Allium pumilum* Samples." The name, however, was never published.

The interest generated by these specimens and Dr. E. Lucy Braun's inquiry about this species in the course of her work on the monocots of Ohio led me to search further for notes and herbarium specimens of this rare species in Ohio. In Schaffner's 1932 catalog, *N. bivalve* is listed from Clark County, based on specimens in the Urbana University Herbarium and the Gray Herbarium. In giving an account of certain interesting plants in Williams' collection at Urbana University, Schaffner (1931) listed *N. bivalve* from "Urbana, Clark Co." In searching through specimens in the folder of the family Liliaceae in Williams' herbarium, I found a piece of a plant labeled "*Allium striatum*? P[urs]h Urb[ana]. Rich, dry sandy soil, May—(Specimen from J[ohn] Samples)." This is a specimen of *N. bivalve* and is probably a duplicate of material in the Samples collection. In this period in history, *Allium striatum* Jacq. was the commonly used name for this species. The nomenclature and synonymy were not clarified until about 75 years later by Britton (Britton and Brown, 1913: 501).

Schaffner's 1931 listing of Urbana as being in Clark County was an error which was magnified by omitting the name of Urbana and giving only Clark County in the 1932 Catalog. In regard to Schaffner's report of a specimen in the Gray Herbarium, I have seen the specimen and it carries the following data on the original label. "*Allium striatum*, Ell?—I found this 1st. of last May near Springfield Oh[io]—I have since ascertained that (more than probable) the same was found last season by Mr. Samples near the same place it has none of the taste or smell of the onion—generally larger than these specimens, 8 to 10 inches.—Sept 1840 Columbus Ohio Wm. S. S[ullivant].” As I have mentioned previously, Sullivant's knowledge of Samples' botanical activity was rather obscure, and so he likely did not know where Samples got his specimens. Thus, I think it is safe to say that Sullivant obtained this specimen in Clark County, since he said "near Springfield." If he would have found it in the same locality as Samples (1 to 1½ miles east of Urbana), Sullivant would more than likely have written "near Urbana." Thus the documented distribution of *N. bivalve* is limited to Adams, Champaign, and Clark counties in Ohio. Since the records from the latter two counties are based on only these collections of 125 years ago, *N. bivalve* should again be looked for in Champaign and Clark counties.

A third plant has proved also to have special interest, because it shows that Samples had a keen eye for seeing variation in plants. Writing to Torrey on July 1, 1839, Samples said,

An *Impatiens* is found in the neighborhood of Urbana where I formerly resided which seems to differ very essentially from the other two species, (the *Fulva* & *Pallida*.) that I have been nearly ready to conclude that it constitutes a distinct species; but it may yet prove to be a variety of *Fulva*. The leaves are distinctly cordate-ovate, and the stem

reaching the height of 4 to 5½ feet. The flowers appear later in the season (6th August.) are of a darker color and larger in size than the two mentioned above, both of which I observed in flower a week ago on the banks of the Licking near Cincinnati. I have given away all of my specimens of this plant, but as I expect to be in its locality in a few days I shall try to secure some specimens and send them...as soon as possible

The plant that he observed and collected on "June 22nd 1839" from the banks of the Licking River near Cincinnati is in the Samples herbarium. However, no specimen answering to the description of the *Impatiens* he thought might be new was found in the Samples herbarium. This absence was to be expected, since he said he had given away all of them. Apparently he did not collect any more when he returned to Urbana later in the summer of 1839, and therefore he probably did not send any to Torrey, since none was found in the herbarium of the New York Botanical Garden. Upon searching through the Williams herbarium, I found one of the specimens of the unusual *Impatiens* that Samples described in his letter to Torrey. Williams wrote on the label that the plant was sent to him by Mr. Samples. Williams also thought it was new to science and wrote on the label the name, "*Impatiens pallida*, Nut. var. *cordata*." The varietal name was never published. In considering the identification of this plant, it appears to differ from the normal *I. pallida* in having smaller, elliptic-ovate, distinctly cordate-based leaves on very short petioles. Comparison with specimens at Philadelphia and New York shows that plants of *I. pallida* may have large cuneate-based leaves on long petioles on the lower portions of the plant, but the leaves on the upper portions may become much reduced in size and take on the appearance of those on Samples' specimen. Thus, Samples' material does not differ significantly from the usual *I. pallida* at either the specific or infraspecific levels, and therefore formal nomenclatural recognition is not warranted. At the time of his study, however, the variations of jewelweeds were not so well understood, and his opinion that he had a new taxon was perhaps justified.

Considering Samples' collection in its entirety, there is no doubt that it is a valuable, heretofore uncorrelated contribution to the knowledge of the flora of southwestern Ohio. Not only is it one of the oldest existing collections made in this region of the state, but it is valuable in that the plants were obtained in a very interesting area of that region. The Mad River valley of Champaign County is unique in that here was and still is located the best developed, southernmost white cedar bog in western Ohio. Numerous stock ponds, providing a habitat for various aquatics, were in existence. Low, flat, poorly drained areas harbored plants characteristic of the swamps, wet meadows, and wet prairies. Scattered throughout the county on the more mesic, well-drained sites grew beeches, maples, oaks, and hickories. Drier areas, devoid of trees, provided niches for species of the dry meadows and dry prairies. These diverse habitats of 125 years ago were the botanical haunts for John Samples. Today, with the growth and expansion of Urbana and the draining and farming of the rich alluvial soil of the Mad River valley, many of these diverse habitats have vanished from the landscape, either in part or completely, and with their destruction, the collecting sites and much of their natural vegetation have also disappeared. Some of the plants in the collection represent species which are rare in the state and doubtlessly many of them are now extirpated in the areas whence they were once obtained. Today we are fortunate that a few people, like John Samples, took the time long ago to preserve specimens, so that we might have some, although often times very scanty, knowledge of the natural flora.

#### JOHN SAMPLES AS A PLANT COLLECTOR AND TRAVELER

Two early maps (Hess and Mathews, 1858; Starr and Hedington, 1874) and portions from local histories (Cowgill, 1881; Ogden, 1881; and Middleton, 1917) have been useful in locating many of Samples' collecting sites within Champaign County. A list of 27 of these is given in table 1. Figure 1 is a map of the Mad

River drainage system through the center of Champaign County, on which are indicated the localities that have been found. It has been impossible to locate a few of the original localities, such as in "barrens near grand point," "Mr. Wm. Neil's pasture," and near "Buchanan's old farm," "Mr. H. Muzzy's on the Dougan Canal," "the Sulphur Spring," and "near Wm. Wards."

Though Samples visited various habitats in the Mad River valley, many of the labels do not carry a specific locality. Most of these plants are the common species of the region and so the exact locality was in his opinion apparently not

TABLE 1  
*John Samples' collecting localities in Champaign County, Ohio*

Locality	Number of specimens
I. Natural Habitats	
A. "Barrens"	6
B. "Cranberry Prairy...4 miles W[est] of West Liberty"	1
C. "Dougan Prairy"	8
D. "Falling Springs in Mad River township near Mr. [Conoway] Rector's [S½ Sec. 7, Mad River Twp.]"	1
"G[lady] C[reek]"	8
"Hannah's Branch"	3
E. "Lower Cedars, Cedar Swamp 6 miles south of Urbana"	6
"Mad River"	15
F. "Mad River Prairy 2 m[iles] W[est] of Urbana"	3
G. "Maple Swamp, 1½ miles N[orth] E[ast] of Urbana"	4
H. "Mitchell's Lake [Sayre's Lake, NE¼ Sec. 11, Concord Twp.]"	2
"Nettle Creek"	5
"Muddy Creek"	1
I. "Small Cedar Swamp 2 [or 2½] miles S[outh] W[est] of Urbana"	2
J. "Upper Cedars"	17
K. "Wisham's Pond, 1½ miles north of Urbana [NE¼ Sec. 19, Salem Twp.]"	20
II. Property Owners	
L. "Mr. [Parker] Bryan's Meadow on the town branch [SE¼ Sec. 35, Urbana Twp.]"	1
M. "Mr. James Dallas five miles south of Urbana [S½ Sec. 26, Urbana Twp.]"	1
N. "Mr. [E. P.] Fyffe's meadow [C. Sec. 29, Urbana Twp.]"	1
O. "Mr. John H. James' farm, 1½ miles S[outh] E[ast] of Urbana [nearly all of Sec. 10, Urbana Twp.]"	3
P. "Mr. Conoway Rector's in woods [C. Sec. 12, Mad River Twp.]"	1
Q. "Mr. I[saac] Reynolds' field N[orth] E[ast] of Urbana [E½ Sec. 24 & C. Sec. 18, Urbana Twp.]"	1
R. "Mr. [John] Stemble's Garden in Harrison Township [NW¼ Sec. 7, Harrison Twp.]"	1
S. "Mr. J[ohn A.] Ward's meadow, near the West edge of Urbana [SW¼ Sec. 23, Urbana Twp.]"	5
T. "Thomas' Old Mill on Hanna's branch [S½ Sec. 33, Salem Twp.]"	1
U. "Near Mt. Tabor Meeting House"	1
V. "White's Hill [?] Near Snow Hill Cemetery, S½ Sec. 32, Salem Twp.]"	2

necessary. Many of them are listed as "near Urbana" or "Urbana." The Mad River and its tributaries provided excellent habitats for various kinds of plants. In the woods along the river he obtained such spring flowers as *Erythronium albidum*, *Trillium flexipes*, *Hepatica americana*, *Hydrastis canadensis*, *Chaerophyllum procumbens*, *Thaspium barbinode*, *Phlox divaricata*, and the orchids, *Goodyera pubescens*, *Corallorhiza maculata*, and *Aplectrum hyemale*. The banks of Nettle Creek were the source of *Erythronium americanum*, *Cimicifuga racemosa*, *Jefersonia diphylla*, *Aesculus glabra*, and *Viola sororia*; and *Hepatica acutiloba* came from the woods on Hannah's Branch of Kings Creek.

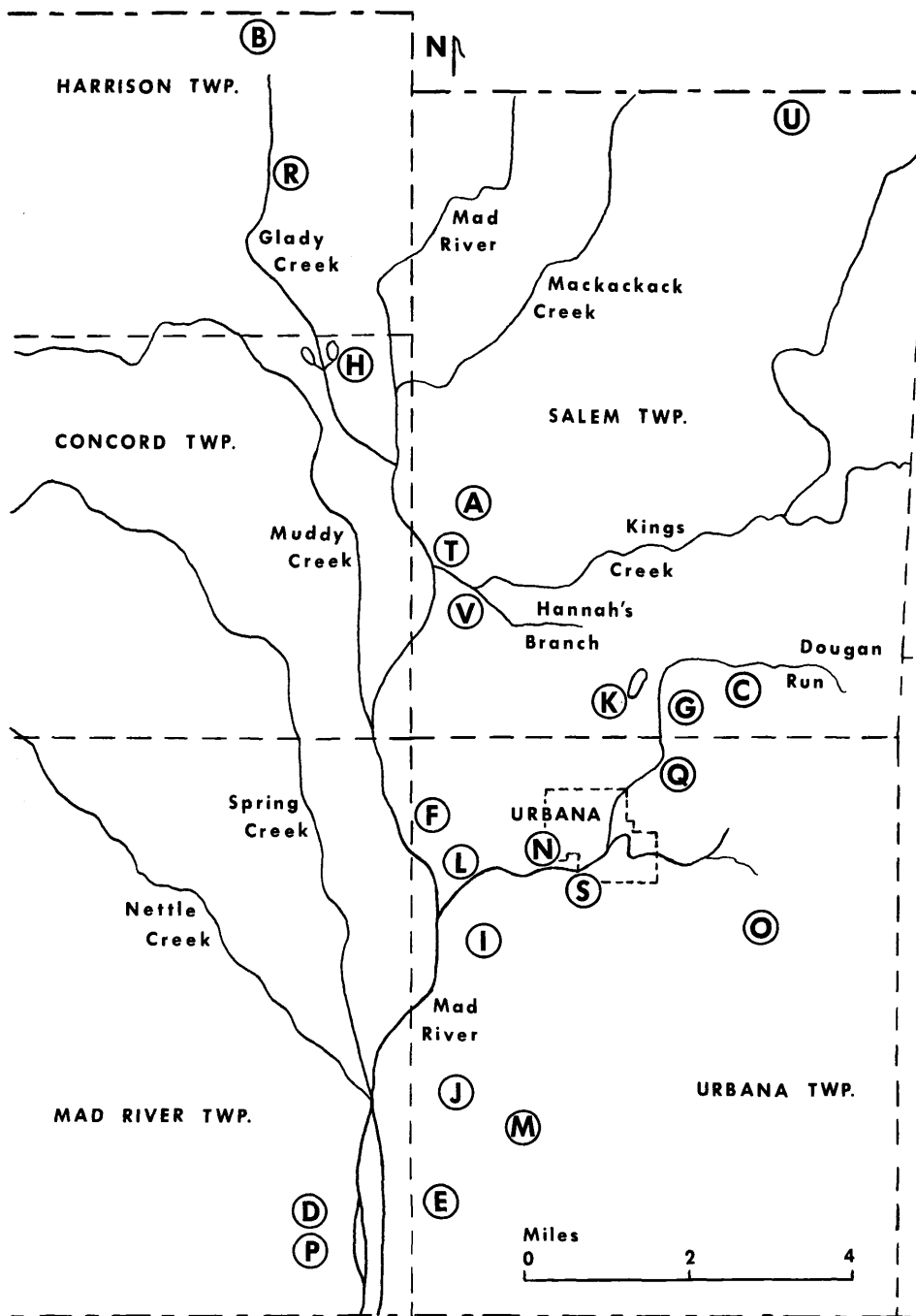


FIGURE 1. Map of the Mad River valley in central Champaign County, Ohio. Encircled alphabetical letters indicate John Samples' collecting localities. The names of these localities with the corresponding alphabetical letters are listed in Table 1.

Cedar Bog is the most distinctive habitat in the area. Kellerman and Wilcox (1895) published the first list of plants growing in the bog. Dachnowski (1910, 1912: 40) described the bog in more detail with relation to the composition of the soil and vegetation. According to him, "this type of bog is distinctly northern in its distribution . . . and harbors a unique dependent flora which long thrived unmolested and was once a favorable resort for botanists." Formerly covering an area of approximately 7,000 acres, it contained at the time of Dachnowski's writing about 600 acres, and today it is still further reduced in size. Within its bounds were found plants known elsewhere in Ohio only from the northeastern and extreme northwestern corners of the state. John Samples and Milo G. Williams were probably the first botanists to set foot among the groves of white cedar, *Thuja occidentalis*, the dominant plant of the association. Referring his collections to the "Upper Cedars," "Lower Cedars," a "Cedar Swamp 6 miles south of Urbana," or a "Small Cedar Swamp 2-2½ miles S[outh] W[est] of Urbana," Samples obtained many, although not all that have been reported, of the rare plants known from the bog. The most noteworthy plants that came from the "Cedars" are *Pogonia ophioglossoides*, *Triphora trianthophora*, *Liparis loeselii*, *Parnassia glauca*, *Drosera rotundifolia*, *Rhamnus alnifolia*, *Trientalis borealis*, *Utricularia cornuta*, *Mitchella repens*, and *Valeriana edulis* ssp. *ciliata*.

Wisham's Pond, "1½ miles north of Urbana," was also one of the collecting sites he most often frequented. The only large body of water existing today in that location is an unnamed stock pond located in Section 19 of Salem Township. It is without a doubt the body of water Samples visited. Here partly submerged in shallow water, he found *Brasenia schreberi*, *Nuphar luteum* ssp. *macrophyllum* (*N. advena*), *Nymphaea odorata*, and *Pontederia cordata*. *Scirpus fluviatilis*, the only sedge in the collection besides many specimens of *Carex*, was probably the most conspicuous plant along the margin in his day. In wet, damp places along the shore must have grown *Dryopteris thelypteris* (*Thelypteris palustris*), *Ranunculus septentrionalis*, *Sium suave*, *Lysimachia terrestris*, *Sabatia angularis*, and *Scutellaria epilobiifolia*. On the high banks in the dry meadows, thickets, and woodlands in the immediate vicinity, he found *Carex hirtifolia*, *Clematis viorna*, *Menispermum canadense*, *Rhus aromatica*, *Viola pedatifida*, *Zizia aptera*, *Gentianella quinquefolia* ssp. *occidentalis*, *Polemonium reptans*, and *Lithospermum canescens*.

East of Wisham's Pond in Salem Township and extending miles to the south, lay Dougan Prairie, now no longer present. According to Cowgill (1881: 498), "when the country was first settled by the whites, this prairie was mostly covered with water the greater part of the year, having the appearance of a lake, with here and there a small island thickly covered with timber, mostly oak and hickory." Samples visited the area several times, picking up such plants as *Sagittaria graminea*, *Glyceria septentrionalis*, *Calamagrostis canadensis*, *Carex vulpinoidea*, *Habenaria psycodes*, *Saxifraga pensylvanica*, *Baptisia leucantha*, and *Proserpinaca palustris*. On the west edge of Dougan Prairie lay the Maple Swamp, "1½ miles N[orth] E[ast] of Urbana." Here Samples secured *Carex crus-corvi*, *Hypericum mutilum*, *Lysimachia thyrsoiflora*, and *Asclepias quadrifolia*.

As stated by Middleton (1917: 67), the legislature in 1827 authorized Judge John Reynolds, a prominent citizen of Urbana, to construct an artificial waterway, known variously as Reynold's ditch, Dougan run, Dougan canal, or Town Branch, which drained Dougan Prairie. The ditch began in the southeastern corner of Salem Township, made a curve to the north, entered Urbana Township north of the city, passed through the city along the railroad track, and progressed on to the southwest where it emptied into Mad River. Along this waterway, Samples gathered *Carex cristatella*, *Allium canadense*, *Ranunculus fascicularis*, *Viola sagittata*, *Asclepias incarnata*, *Silphium perfoliatum*, and *Heliopsis helianthoides* ssp. *helianthoides*.

Although much of the county was a dense forest, areas other than the low,

flat wet prairies were clear of trees. These were called "barrens." One of these tracts of land was in the western portion of Salem Township north of Kings Creek. In the barrens, Samples collected *Spiranthes gracilis*, *Delphinium exaltatum*, *Lespedeza capitata*, *Eryngium yuccifolium*, and *Hedeoma pulegioides*. A few other noteworthy plants that came from barrens, dry prairies, or skirts of woods and thickets were *Ranunculus fascicularis*, *Anemone virginiana*, *Frasera caroliniensis*, *Galium circaezans*, *Echinacea purpurea*, and *Cirsium discolor*.

By arranging the specimens chronologically, we can retrace some of Samples' field trips. Within Champaign County, only one trip is well defined. This trip was made on the weekend of July 6 and 7, 1838. After taking *Saururus cernuus* and *Ludwigia palustris* from wet places near Urbana, on July 6, he moved to the Mad River Prairie, "2 m[iles] W[est] of Urbana," and obtained *Lilium michiganense* and *Cacalia tuberosa*. Progressing northward up the Mad River he found, "near Thomas' old mill on Hanna's branch," *Achillea millefolium*. Moving further northward into Concord Township along Glady Creek he came to Mitchell's Lake, probably the one known today as Sayre's Lake. There growing in the water were found two plants, *Potamogeton pulcher* and *Myriophyllum verticillatum* var *pectinatum*; both species today are rare in the state and are known from probably no more than five counties. He may have remained with Mr. [John] Stemble overnight, for on Sunday, July 7, his collections commence with the picking of *Verbascum blattaria* "from Mr. Stemble's garden in Harrison Township." *Habenaria leucophaea*, a rare orchid for the state, was obtained from the "meadows on Glady creek." His ultimate destination later in the day resulted in taking *Potentilla palustris*, "from a cranberry prairy, at the extreme northern limits of Champaign county, 4 miles W[est] of West Liberty." Returning home via Muddy Creek, he gathered *Asclepias exaltata*, which was growing in the woods. His weekend botanical journey was finished.

While a resident of Urbana, he made at least two trips outside of Champaign County, one to Miami County in May 1838 and one to Logan County in June 1838. Judging by the kinds of plants obtained on these two trips, he apparently botanized in much drier habitats than those in the vicinity of Urbana, and the plants collected most likely did not grow where Samples often walked closer to his home. Unaware of his trips outside the county, curators at the University of Michigan Herbarium in the past have unselectively annotated some of these specimens as having been obtained in Champaign County, and therefore I feel it is necessary to clarify the locality for each of these specimens.

*Trip to Miami County in 1838*

- May 11 Near Fletcher  
*Dicentra canadensis*
- May 12 Near Piqua, Banks of the Miami River  
*Corydalis aurea*  
*Euphorbia commutata*
- May 13  
*Cercis canadensis*  
*Sedum ternatum*  
*Juniperus virginiana*
- May 13 Near Elizabethtown [now called Lena]  
*Viola striata*
- May 13 Spring Creek [could be in either Miami or Champaign County]  
*Mertensia virginica*  
[Plants collected in Champaign County as he returned from Miami County]
- May 13 Near St. Paris  
*Dicentra cucullaria*  
*Ranunculus flabellaris*

May 13 Mad River, West of Urbana

*Erythronium albidum*  
*Hydrastis canadensis*  
*Orchis spectabilis*  
*Trillium sessile*

*Trip to Logan County in 1838*

June 16 Near Lewistown, Sphagnous Swamp

*Sarracenia purpurea*

June 16 Near Col[onel James] McPherson's [about 4 miles northwest of Bellefontaine]

*Osmunda regalis*  
*Quercus muehlenbergii*

June 16 Near Zanesfield, Hills and Slaty Ravines

*Adiantum pedatum*  
*Botrychium virginianum*  
*Hydrophyllum macrophyllum*  
*Hydrophyllum virginianum*

June 17 *Glyceria septentrionalis*

*Lycopodium lucidulum*  
*Synandra hispidula*

June 18

*Aralia nudicaulis*  
*Dryopteris marginalis*  
*Hydrophyllum canadense*  
*Panax quinquefolius*  
*Polystichum acrostichoides*  
*Synandra hispidula*  
*Viburnum acerifolium*

As pointed out earlier in this paper, sometime after September 21, 1838, Samples moved to Cincinnati, Ohio. On October 6, 1838, he indicated having secured *Elodea canadensis* "from Mr. Lea of Cincinnati, Ohio." In the spring of 1839, he collected *Isopyrum biternatum* and *Saxifraga virginensis* near Cincinnati. Several other plants were obtained in the Cincinnati area during the early summer. At least three excursions were made into Kentucky, and Lea and Samples may have been together on some of these trips. The following plants were collected there in 1839:

April 20 *Stylophorum diphyllum*, "Hills below the mouth of Licking [River]."

June 2 *Solanum carolinense*, "On the North Bend road 3 miles below Cin[cinnati]."

June 22 *Houstonia purpurea*, "From the Banks of Bank-lick [Creek]."

*Asclepias syriaca*, "On the Bank-lick road 3 miles S[outh] E[ast] of Cincinnati."

*Impatiens pallida*, "From the bank of Licking [River], 5 miles S[outh] E[ast] of Cincinnati."

In his communication to John Torrey on July 1, 1839, Samples wrote, "I shall pass through Columbus in a day or two on my way to Urbana. . ." Probably traveling by boat up the Ohio River, he reached Portsmouth on July 2. Here he got *Pinus virginiana*, *Lespedeza virginica*, and *Tephrosia virginiana* from "hills near Portsmouth." He then continued his travel up the Scioto River to Columbus. Taking the "National road" westward from Columbus, he picked *Lappula myosotis* from "near West Jefferson" on his way to Urbana. Stopping at the "Cedar Swamp 6 miles South of Urbana," he took *Drosera rotundifolia* and *Utricularia cornuta*, both collected in July 1839, but undated. By July 25, 1839, he had returned to Cincinnati and revisited Nicholas Longworth's garden. Samples'



visits to the Longworth garden are discussed later. August 3rd to the 10th found him again at Portsmouth collecting *Conohea multifida*, *Cacalia suaveolens*, *Ampelamus albidus*, and *Solanum carolinense* and, by August 25, he apparently had removed to Urbana, for he got *Lemna minor* from the "Upper Cedars." During May and June of 1840, he again collected vigorously in the Urbana neighborhood. Apparently he was concentrating on the study of *Carex*, for all his *Carex* collections, except one, were made at this time. Then abruptly, after June 13, 1840, no more specimens were collected. As stated previously, what happened to John Samples after this date is unknown, and the sequence of events that occurred in bringing Samples' herbarium into the hands of Dr. Adams Jewett is also not known.

Dr. Adams Jewett took up residence in Mobile, Alabama, in February 1839, after spending from the winter of 1833 to the summer of 1838 in Europe preparing himself for the medical profession. In the spring of 1842, he left Mobile and moved to Dayton, Ohio, arriving in late May, 1842. Although he visited relatives in Dayton in the fall of 1838 and the summer of 1841, there appears to be no evidence of his coming into contact with John Samples (Henry S. Jewett, unpublished, and Mrs. Horace F. Lunt, grand-daughter of Adams Jewett, *in litt.*, 1963).

#### JOHN SAMPLES' INTEREST IN CULTIVATED PLANTS

In his September 6, 1837, letter to Charles W. Short, Samples wrote that he had "cultivated a small garden containing about 200 species of plants." In the collection are some 48 specimens which came from various gardens that he visited. It has been impossible for me to identify many of these plants to species. The origins of the plants are not known, and I found that some of them would not key out satisfactorily in Bailey (1949). Furthermore, lack of adequate material for comparative purposes has not been at my disposal.

The majority of cultivated plants, a total of 16, came "from Mr. B[ethuel] Samples' garden." Eleven were labeled "from the garden in Urbana," and two came from his "father's garden." It is not known whether these plants all came from three different gardens or the same garden. The relationship to Bethuel Samples is not understood. According to Ogden (1881: 214), "among the first settlers of the village [was] . . . Bethuel Sample[s]." The deed records in the Champaign County Court House verify that Bethuel Samples, at this time, owned lot 167 in Urbana, where he apparently lived (Deed Book Vol G: 294). He is the only person with the name Samples that owned property in Urbana. Bethuel Samples, listed as the head of the family, is the only person bearing the name Samples that is recorded for Urbana and Urbana Township in the 1820, 1830, and 1840 census records at the Champaign County library. A number of "males" and "females," in various age groups, but with no names, are listed in the report. Bethuel Samples' Will (written March 24, 1857), which is at the Champaign County Court House, gives no reference to John Samples. It is very probable that Bethuel was John's father, but I have found no direct statement to verify that relationship.

Many of the garden plants were doubtless useful in cooking and for the making of medicine, as many of them belong to the Umbelliferae, Boraginaceae, Labiatae, and Solanaceae—families that include many plants with these properties. Some of these plants were apparently restricted to cultivation and had not spread into the wild. One interesting example is *Solanum dulcamara*. On the label Samples wrote "has not yet been found growing wild in this country. From my Father's garden in Urbana . . ." Samples was essentially predicting that the plant would escape from cultivation and become the weedy vine that today commonly inhabits fence rows and wet ditches.

Another interesting plant, *Sedum pulchellum*, was collected June 29, 1838, from "Urbana." Originally I thought that this was a state record of a native

plant. However, in its natural range, south of Ohio, *Sedum pulchellum* grows on limestone rock outcrops. Although there is a limestone outcrop and quarry northeast of Urbana, Samples never wrote on his labels of having obtained plants from this kind of habitat. Deam (1940), excluding this species from Indiana, said that the plant, when grown in gardens, "reseeds itself each year and will persist in flower beds" and will escape. By checking other specimens Samples collected on this date, I find that he obtained three other cultivated plants; thus the most logical explanation is that *Sedum pulchellum* was either a cultivated plant or a garden escape, and not a native Ohio plant.

Another garden in Urbana belonged to John H. James, who while leading a busy life as a lawyer, banker, legislator, stockbreeder, editor, lecturer, and writer, also maintained an interest in horticulture. In writing about James, Smith (1949) said ". . . his natural love for growing things led him to experiment with fruits and vegetables on a rather large scale. His handsome residence [a twenty-two room house in Urbana, since torn down] was one of the showplaces of Champaign County." Samples visited him at least once and obtained *Clematis viticella* on July 10, 1838.

The gardens of T[homas] M. Gwynne and William Kellar in Urbana were also visited by Samples.

While residing in Cincinnati during the spring and early part of the summer of 1839, Samples made the acquaintance of two leading citizens, N[icholas] Longworth and Judge [Jacob] Burnet [Sr.], both of whom had attractive gardens. Longworth, a lawyer and owner of vast amounts of real estate, was at this time, according to Goss (1912: 126), Cincinnati's most wealthy resident. With his interest in horticulture, particularly as a grower of grapes used in the making of fine wine, Longworth's gardens and grounds became a showplace of the city. Samples, apparently fascinated with the numerous kinds of plants available, obtained specimens in Longworth's garden on May 18, June 4, 6, 14, 15, and July 25, during his frequent visits in 1839. As to whether he actually knew Longworth personally, I cannot tell. Some of the labels bear the name Mr. Gabriel Sleath, who may have been Longworth's gardener, and it may have been from him that the specimens were received.

#### SYSTEMATIC LIST OF THE PLANTS IN THE JOHN SAMPLES COLLECTION

A total of 490 Samples' specimens, of which 478 belong to the University of Michigan Herbarium, have been located in this study. Following is an annotated list of these plants. The nomenclature follows that of Fernald (1950), except for identifications of those specimens which have been annotated by recent specialists in specific groups. Recent taxonomic revisions have also been consulted in a number of cases. However, in most instances, if a name different from that appearing in Fernald is used, the latter is included as a synonym. Varieties or subspecies, which were either already determined correctly or were easily determined by the writer, have been included. However, if a species is not determined in the systematic list at an infraspecific level, it does not necessarily mean that the typical variety or subspecies occurs in his collection. All information written

#### EXPLANATION OF FIGURE 2

FIGURE 2. John Samples' handwriting as represented by three specimen labels and the concluding paragraph of his July 1, 1839, letter to John Torrey. These labels represent the three most common styles Samples used in organizing botanical data. The annotations, "Estate of Adams Jewett" and "A. striatum" on its accompanying label, were written by Miss E. C. Allmendinger, an herbarium assistant at the time the collection was presented to the University of Michigan. Miss Allmendinger's annotations appear with many of Samples' specimens. (The labels are actual size; the letter is  $\frac{5}{8}$  normal size.)

*Potamogeton natans?*  
 From Mitchell's Lake, on Gladys  
 creek, July 6th 1838.

No. 38.

(61. Ranunculaceae)

*Polyandria Toxigena.*

*Delphinium exaltatum*  
 Salem, in the barrens, Aug 11.  
 1838.

*Allium pumilum*, *A. striatum*  
Samples.

Found near a pond in Mr. John H. James' Pasture  
 one mile east of Urbana, May 20. 1838.

Hab. Rich, warm, sandy soil.

JOHN SAMPLES.  
 URBANA OHIO.

Exlate of Adams Jewett, M. D.

I have given away all my specimens of this plant,  
 but as I expect to be in its locality in a few  
 days I shall try to secure some specimens and  
 send them with specimens of the other two plants mention-  
 ed, as soon as possible. I have not received  
 the two published numbers of the "Flora"; but  
 I shall pass through Columbus in a day or  
 two on my way to Urbana, I will call on  
 Mr. Whiting & get them

Very respectfully Yours, &c.

John Torrey

John Samples.

by Samples on his labels, including his original identification, habitat data, and dates, are unedited and indicated by quotation marks. Common or colloquial names used by Samples are placed inside quotation marks and are listed after the scientific name. An asterisk before the name of a plant indicates that he noted it as being cultivated or naturalized. A plus sign indicates that Samples' original label is missing, and the note not in quotation marks, which follows the plus sign, is the information contained on a label that has been added to the specimen. In most cases these labels have been added since the collection became the property of the University of Michigan. All specimens are considered to have come from within the boundary of Champaign County, except where otherwise noted. All information supplied by me as a result of this research is included in brackets. Specimens that I found in other herbaria are included with the institution to which they belong noted by the standard herbarium abbreviations (Lanjouw and Stafleu, 1964).

## PTERIDOPHYTA

## EQUISETACEAE

*Equisetum arvense* L. Horsetail.

+Wet prairies.

*Equisetum fluviatile* L. Water-horsetail.

"19-1 *Equisetum uliginosum* Madriver Prairy July 1, 1837."

*Equisetum laevigatum* A. Br. Scouring-rush, "Pipes."

*Equisetum hyemale* L. var. *intermedium* A. A. Eat.

"No. 311 *Equisetum uliginosum* Meadows. N[orth] E[ast] of Urbana, June 24th 1838"

## LYCOPODIACEAE

*Lycopodium lucidulum* Michx. "Shining Club-moss."

"*Lycopodium lucidulum* In a slaty ravine near Zanesfield, June 17th 1838" [Logan Co.]

*Lycopodium clavatum* L. Common or Running Club-moss.

+Champaign Co., Ohio. 18—

## ISOËTACEAE

*Isoëtes engelmanni* A. Br. Quillwort.

"*Isoëtes lacustris* Urbana. O[hio] Aug[ust] 30th 1838" [2 sheets] [The following note appears in Milo G. Williams' Botanical Notes.] "*Isoëtes lacustris*. Willd. (Quillwort). Near Urbana, 1½ miles S[outh] E[ast] on the road to J[ohn] H. James farm; in a pond. Aug[ust] 30, 1838" 3 to 12 in[ches]. My specimens are from Mr. J[ohn] Samples." [In Williams' herbarium at Urbana Junior College!]

## OPHIOGLOSSACEAE

*Botrychium dissectum* Spreng. Moonwort. Grape-Fern.

+Cincinnati, Ohio. [? Hamilton Co.]

*Botrychium virginianum* (L.) Sw. "Rattlesnake Fern."

"No. 2 *Botrychium Virgin[i]cum* Woods near Zanesfield June 18th 1838." [Logan Co.]

"Mr. M[ilo] G. Williams" [? Clark Co.]

## OSMUNDACEAE

*Osmunda regalis* L. "Royal Fern."

"No. 2 *Osmunda regalis* Near Col[onel] James] McPherson's June 16th 1838." [Logan Co.] [2 sheets]

*Osmunda claytoniana* L. Interrupted Fern.

+Champaign Co., Ohio. [2 sheets]

*Osmunda cinnamomea* L. Cinnamon-Fern.

"*Osmunda cinnamomea* Lower Cedar Swamp, May 1838"

## POLYPODIACEAE

*Cystopteris protrusa* (Weath.) Blasdell Bladder-Fern.

*Cystopteris fragilis* (L.) Bernh. var. *protrusa* Weath.

"*Asplenium fragile?* Dr. John A. Warder." [? Hamilton Co.]

*Cystopteris bulbifera* (L.) Bernh. Buble-Fern.

"*Aspidium marginale*. (M[ilo] G. Williams.) [A.] felix-mas? J[ohn] S[amples] Mr. M[ilo]

G. Williams Springfield." [? Clark Co.]

*Onoclea sensibilis* L. Sensitive Fern.

+Damp Woods, Urbana, Ohio, July 22, 1837.

*Dryopteris thelypteris* (L.) Gray. Marsh-Fern.

*Thelypteris palustris* Schott.

"Asplenium Thelypteroides, Michx. Damp grounds near Wisham's Pond July 1, 1837."

"No. 567. *Aspidium thelypteris*? Wisham's pond, Aug[ust] 11, 1838."

*Dryopteris hexagonoptera* (Michx.) Christens. Broad Beech-Fern.

"*Polypodium hexagonopterum* Hannah's Branch Dry hill sides in woods June 1838"

*Dryopteris spinulosa* (O. F. Muell.) Watt. Spinulose Wood-Fern.

"*Aspidium dilatatum*, Willd? Damp woods June 3, 1837"

*Dryopteris marginalis* (L.) Gray. Marginal Shield-Fern.

"*Aspidium marginale*. Willd. In a slaty ravine near Zanesfield. June 18, 1838" [Logan Co.]

*Polystichum acrostichoides* (Michx.) Schott. Christmas Fern, "Sword fern."

"*Aspidium acrostichoides*. In woods near Zanesfield June 18th 1838." [Logan Co.]

*Athyrium pycnocarpon* (Spreng.) Tidestr. Narrow-leaved Spleenwort.

"*Asplenium angustifolium*. Willd. Rich woodlands. Aug[ust] 20, 1837"

"*Asplenium angustifolium* Mr. [Thomas G. Lea] Cin[cinnati], Ohio" [? Hamilton Co.]

*Athyrium thelypteroides* (Michx.) Desv. Silvery Spleenwort.

"*Asplenium thelypteroides* Mr. [Thomas G.] Lea Cin[cinnati] O[hio]" [? Hamilton Co.]

*Campptosorus rhizophyllus* (L.) Link. Walking Fern.

"Lower Cedars, Ohio. On old logs, May 27, 1837.

*Asplenium platyneuron* (L.) Oakes. Ebony Spleenwort.

"*Asplenium ebeneum* Mr. [Thomas G.] Lea Cin[cinnati], Ohio [Lea obtained his own specimen from "Taylor's ravine," Campbell Co., Ky., PH!]

*Adiantum pedatum* L. Maidenhair.

"Near Zanesfield, Ohio, June 16, 1838. [Logan Co.]

## SPERMATOPHYTA

### GYMNOSPERMAE

#### PINACEAE

*Pinus virginiana* Mill. Spruce-Pine, "Scrub Pine."

"*Pinus inops* From hills near Portsmouth Ohio July 2nd 1839." [Scioto Co.]

*Thuja occidentalis* L. Arbor Vitae, "True White Cedar."

"*Cupressus thyoides* Grows in wet mossy swamps. From a swamp 2½ m[iles] S[outh] W[est] of Urbana, March 24, 1838."

*Juniperus virginiana* L. "Red Cedar."

"No. 81 *Juniperus Virginianus*. Rocky grounds & Clayey bluffs. On the Miami [River], at Piqua May 12th 1838." [Miami Co.]

## ANGIOSPERMAE

### MONOCOTYLEDONEAE

#### TYPHACEAE

*Typha latifolia* L. "Cattail."

"19-3. *Typha latifolia*. Swamps & wet places. Upper Cedars, July 22nd 1837."

#### SPARGANIACEAE

*Sparganium eurycarpum* Engelm. "Bur Reed."

"19-12. *Sparganium ramosum*. In Brooks and ponds. Hannah's branch, July 29th 1837" [2 sheets]

#### ZOSTERACEAE

*Potamogeton pulcher* Tuckerm. Pondweed.

"*Potamogeton natans*? From Mitchell's Lake, on Glady creek, July 6th 1838."

#### JUNCAGINACEAE

*Triglochin maritimum* L. Arrow-grass.

"*Triglochin elatum* Urbana June 9th 1838 Note. This is probably the *T. elatum* described by Mr. [Thomas] Nuttall, page 237. N[orth] A[merican] Genera." [Nuttall, 1818.]

"*Triglochin elatum*, Linn.—Nutt. (*T. maritimum*.) Swampy grounds. May 5, 1840"

#### ALISMACEAE

*Sagittaria graminea* Michx. Arrowhead.

"351. *Sagittaria simplex*? From a pond at Dougan prairie, June 30th 1838."

*Sagittaria ?latifolia* Willd. Arrowhead, Wapato, Duck-potato.

"No. 598. *Sagittaria sagittifolia*. From a pond 1½ m[iles] S[outh] E[ast] of Urbana, on the land of Mr. J[ohn] H. James. Aug[ust] 25, 1838."

## HYDROCHARITACEAE

*Elodea canadensis* Michx. Waterweed, Water-thyme.

"*Udora serpicula*. [U.] *canadensis* Nutt. From Mr. [Thomas G.] Lea of Cincinnati Oct[ober] 6th 1838" [? Hamilton Co.]

## GRAMINEAE

*Glyceria septentrionalis* Hitchc. Floating Manna-Grass, Sweet Grass.

+Near Zanesfield, Ohio, June 17, 1838. [Logan Co.]

"417. *Glyceria fluitans*, Brown! ? Found growing in a pond 2 feet in depth, at Dougan prairy, June 30th 1838."

*Calamagrostis canadensis* (Michx.) Nutt. Blue-joint.

"*Calamagrostis Canadensis?* Beauv. Dougan Praairy, wet. June 30, 1838"

## CYPERACEAE

*Scirpus fluviatilis* (Torr.) Gray. River Bulrush.

"*Scirpus maritimus*, Linn. Found at Wisham's Pond, 1½ miles north of Urbana June 13, 1840"

*Carex convoluta* Mackenz.

"*Carex rosea*, Linn.—Schkuhr! Thickets and open woods. May 25, 1840."

"*Carex rosea*, Linn.—Schk. In woods 1½ miles N[orth] E[ast] of Urbana. June 5, 1840."

*Carex cephalophora* Muhl.

"*Carex cephalophora*, Linn.—Muhl. Open grassy woods. May 25, 1840."

*Carex vulpinoidea* Michx.

"366. *Carex multiflora* From Meadows at Dougan prairy, June 30th 1838."

*Carex prairea* Dew.

"*Carex paniculata*, Muhl. Wet places, May 12, 1840."

*Carex stipitata* Muhl.

"*Carex stipitata*, Linn.—Muhl! Wet prairies & swampy grounds May 5, 1840."

*Carex laevivaginata* (Kükenth.) Mackenz.

"*Carex stipitata*, Linn.—Muhl! Wet swampy places, May 18, 1840."

*Carex crus-corvi* Kunze

"*Carex muricata?* Linn. Maple swamp 1½ miles N[orth] E[ast] of Urbana. June 5, 1840."

*Carex sterilis* Willd.

"*Carex scoparia?* Muhl. stamens not seen. Wet prairies, May 12, 1840."

"*Carex scoparia?* Linn! Schkuhr! Meadows, common; Urbana May 27, 1840."

*Carex cristatella* Britt.

"*Carex lagopodoides*, Linn! Schkuhr. Dougan Canal 1 mile north of Urbana. June 13, 1840"

*Carex leptalea* Wahlenb.

"*Carex polytrichoides?* Muhl. Dry, open woodlands 2 [miles] E[ast] of Urbana. May 12, 1840."

*Carex pennsylvanica* Lam.

"*Carex Pennsylvanica*, Linn. Lamb. Dry woods of a thin soil, May 12, 1840."

*Carex hirtifolia* Mackenz.

"*Carex pubescens*, Linn.—Muhl, Dry woodlands, Wisham's pond, May 14, 1840"

"*Carex pubescens*, Linn.—Muhl, In woods 1½ miles N[orth] E[ast] of Urbana. June 5, 1840."

*Carex stricta* Lam. var. *strictior* (Dew.) Carey

"*Carex acuta*, Linn. Swampy grounds forming large tufts. This is the most conspicuous grass in our Wet swampy prairies of western Ohio, May 27, 1840."

*Carex buxbaumii* Wahlenb.

+Wet places near Sulphur Spring, Urbana, May 27, 1840.

*Carex lanuginosa* Michx.

+Urbana, Ohio, May 18, 1840.

"*Carex pellita*, Linn!—Muhl! Grows in swampy wet ground May 18, 1840."

"*Carex pellita?* Linn!—Muhl! Grows in wet places,—near the Sulphur-spring. May 27, 1840."

*Carex hirsutella* Mackenz.

"*Carex hirsuta*, Linn.—Willd. In woods 1½ miles N[orth] E[ast] of Urbana. June 5, 1840."

*Carex granularis* Willd.

"*Carex granularis* Linn!—Muhl! Wet meadows G[lady] c[reek], May 25, 1840"

"*Carex granularis* Linn!—Muhl! Moist meadows: Mr. [E. P.] Fyffe's meadow, abundant. May 25, 1840"

*Carex crawei* Dew.

"*Carex connoidea?* Linn!—Schkuhr! Wet prairies grows solitary, May 27, 1840" [On the reverse side of this label is written] "This *Carex* grow[s] solitary; i.e. a single plant, instead of forming tufts as most of the species do. leaves somewhat succulent."

*Carex blanda* Dew.

"*Carex laxiflora*, Linn & Lamb! Moist rich woods, Urbana May 25, 1840"

*Carex flava* L.

"*Carex tentacula*? Linn.—Muhl? Wet swampy places, May 18, 1840." [2 sheets]

*Carex hystericina* Willd.

"*Carex tentacula*, Muhl? Lower Cedar Swamp, May 18, 1840."

"*Carex hystericina* Linn!—Willd! Wet prairies May 25, 1840"

+Urbana, Ohio, May 27, 1840.

*Carex tuckermanii* Boott "Bladder Sedge."

"19-3. *Carex vesicaria*. Edges of shallow ponds—Urbana, May 23rd 1836."

*Carex* sp. [immature]

"*Carex Muhlenbergii*? Linn.—Schk. (too young.) Low grounds, May 5, 1840"

*Carex* sp. [immature]

"*Carex oligocarpa*, Schk. Margins of ponds, May 12, 1840."

## ARACEAE

*Arisaema atrorubens* (Ait.) Blume Jack-in-the-Pulpit.

"159. *Arum triphyllum* Col[lected] in Mr. Wm. Neil's pasture, May 26th 1838."

*Arisaema dracontium* (L.) Schott. "Green Dragon."

"19-12 *Arum dracontium* Damp rich woods. Urbana, June 3rd 1837"

*Symplocarpus foetidus* (L.) Nutt. Skunk-cabbage.

"*Symplocarpus foetidus*, Salisb! Nutt. Swamps, & along muddy banks of streams, Flo[wer]s. April 7, 1837. Fol[iage] May 1, 1838."

## LEMNACEAE

*Lemna minor* L. Duckweed.

"*Lemna minor*, Upper Cedars, Aug[ust] 25th 1839."

## COMMELINACEAE

*Tradescantia ohioensis* Raf. "Rose Spiderwort."

"*Tradescantia rosea*, Linn! Pursh! Meadows, woods & borders of thickets, Urbana June 4, 1838."

## PONTEDERIACEAE

*Pontederia cordata* L. Pickerelweed.

+Urbana, Ohio, July 1, 1838. [This specimen probably came from Wisham's Pond, as Samples collected only four other plants on this date—all from this pond.]

## LILIACEAE

*Tofieldia glutinosa* (Michx.) Pers. False Asphodel.

"*Tofieldia glutinosa*, Huds!—Willd! Swampy grounds, Urbana, June 23, 1838"

*Stenanthium gramineum* (Ker.) Morong var. *gramineum* Featherbells.

"*Veratrum angustifolium* Linn! Pursh! Meadows, Urbana June 30, 1838"

*Zigadenus glaucus* (Nutt.) Nutt.

"*Zigadenus glaucus*, Michx!—Nutt! Grassy prairies, Urbana, July 27, 1838."

*Veratrum virginicum* (L.) Ait. Bunchflower.*Melanthium virginicum* L.

"*Limanthium Virginicum*, Willd! Meadows, Urbana, June 30, 1838."

*Uvularia grandiflora* J. E. Smith. Bellwort.

"*Uvularia grandiflora*, Smith. Woods, May 14, 1840"

*Allium canadense* L. "Canadian Garlic."

"No. 301 *Allium Canadense*. Meadows along the town-branch, June 23rd 1838"

\**Allium sativum* L. "Garlic."

"No. 482. *Allium sativum*. From Mr. B[ethuel] Samples' garden in Urbana, July 21st, 1838."

*Allium cernuum* Roth "Nodding Leek."

"No. 448. *Allium cernuum*. In meadows in rich soil, Urbana. July 14th. 1838."

\**Allium schoenoprasum* L. "C[h]ives."

"No. 201 *Allium schoenoprasum*. From the garden in Urbana. June 4th 1838"

*Allium tricoccum* Ait. Wild Leek, "Three-seed Leek, Ramp."

"No. 22 *Allium tricoccum*. Leaves only. Rich alluvial soils. Upper cedars, April 7th. 1838."

"No. 22 *Allium tricoccum* Woods near Urbana, June 25 1838 (Leaves col[lected] Apr[il] 7th.)"

*Nothoscordum bivalve* (L.) Britt. False Garlic.

"*Allium pumilum*, Samples. Found near a pond in Mr. John H. James' Pasture one mile east of Urbana, May 20, 1838. Hab[itat] Rich, warm, sandy soil." [See text for additional information.]

"*Allium* (sp. nov.) proposed—*pumilum*! Hab[itat] Warm sandy soil 1½ miles E[ast] S[outh] E[ast] of Urbana, May 12, 1840" [3 sheets]

- "*Allium striatum*? Ph Urb[ana] Rich, dry sandy soil May—(Specimen from J[ohn] Samples)" [In Williams' herbarium at Urbana Junior College!]  
*Lilium michiganense* Farw. Michigan Lily.  
 "Lilium Canadense. From a meadow on the Mad river prairie, July 6th. 1838." [2 sheets]  
*Erythronium americanum* Ker. Yellow Adder's-tongue, Trout-Lily.  
 "Erythronium Americanum, Smith! Moist low woods, on Nettle creek April 26, 1838."  
*Erythronium albidum* Nutt. White Dog's-tooth-Violet.  
 "Erythronium albidum, Linn! Nutt. Rich woods, on Mad river, May 13, 1838."  
 \**Ornithogalum umbellatum* L. "Star-of-Bethlehem."  
 "No. 187. *Ornithogalum umbellatum* Gardens & meadows. From the garden in Urbana. June 2nd 1838."  
 \* *Yucca filamentosa* L. Silkgrass, Spanish-bayonet.  
 "Yucca filamentosa. From Mr. Thomas G. Lea's garden on Rue Street, Cin[cinnati] June 15th, 1839."  
 \* *Asparagus officinalis* L. "Asparagus."  
 "Asparagus officinalis. From the garden in Urbana, June 12th 1838."  
*Smilacina racemosa* (L.) Desf. False Solomon's-seal.  
 +Champaign Co., Ohio, June 9, 1838.  
*Smilacina stellata* (L.) Desf. False Solomon's-seal.  
 +Champaign Co., Ohio.  
*Maianthemum canadense* Desf. var. *interius* Fern. Wild Lily-of-the-valley.  
 +Champaign Co., Ohio, June 9, 1838.  
*Polygonatum pubescens* (Willd.) Pursh. Solomon's-seal.  
 +Champaign Co., Ohio.  
*Polygonatum canaliculatum* (Muhl.) Pursh. "Giant Solomon's Seal."  
 "No. 287 *Convallaria multiflora* Collected in Mr. J[ohn A.] Ward's meadow, near the West edge of Urbana, June 23rd 1838."  
*Medeola virginiana* L. Indian Cucumber-root.  
 "Gyromia Virginica, Nutt! In very moist woods or sphagnous shaded swamps, Urbana, June 9, 1838."  
*Trillium sessile* L. Sessile Trillium. Toadshade.  
 "Trillium sessile, Linn. Rich alluvial river bottoms, May 13, 1838."  
*Trillium flexipes* Raf. "False Wake-robbin."  
 "Trillium erectum, var atropurpureum Linn! Rich alluvial, river bottoms, May 8, 1837.  
 Is this not a variety of *T. pendulum*? J[ohn] S[amples]"  
 "Trillium erectum, Linn. Rich woods, Mad river west of Urbana May 13, 1838."  
*Trillium grandiflorum* (Michx.) Salisb. Showy Trillium, "Three leaved Lily."  
 "No. 140. *Trillium grandiflorum*. Moist rich ground, and borders of thickets From the Upper cedars. May 26th 1838."  
*Trillium nivale* Riddell. Dwarf White or Snow-Trillium.  
 "Trillium nivale, Linn.—Riddell! From rocky banks near Springfield O[hio] Mr. M[ilo] G. Williams," [Clark Co.] [The following note appears in Milo G. Williams' Manuscript, page 155.] "I met it [*T. nivale*] first early in the spring of 1836, on the rocks along Buck Creek..." [On the the label with his specimens at Urbana Junior College is written] "Spr[ingfield]. Rocky Banks of Buck Creek. March 3-4."  
 "Trillium nivale. Ridd. From Dr. J[ohn] A. Warder of Cincinnati. 1839. [County Unknown]  
*Smilax lasioneura* Hook. Greenbrier. "Jacob's ladder."  
 "No. 286 *Smilax peduncularis* Collected in Mr. J[ohn A.] Ward's meadow near the west side of Urbana, June 23, 1838"  
*Smilax hispida* Muhl. "Greenbrier."  
*Smilax tamnoides* L. var. *hispida* (Muhl.) Fern.  
 "20-6. *Smilax rotundifolia*. Moist thickets and skirts of woods. Urbana, June 13th 1836."

## DIOSCOREACEAE

- Dioscorea villosa* L. "Yam-root."  
 "20-6. *Dioscorea villosa* Borders of thickets and woods. Urbana July 3rd 1837"

## AMARYLLIDACEAE

- \* *Narcissus poeticus* L. "Poet's Narcissus."  
 "No. 134. *Narcissus poeticus*. monstrosus. From Mr. B[ethuel] Samples' garden Urb[ana] May, 23rd 7 o'clock, morning."  
 \* *Narcissus incomparabilis* Mill. Narcissus.  
 "Narcissus pseudo-narcissus, Linn. Gardens Urbana, April 14th 1840"  
*Hypoxis hirsuta* (L.) Corville "Star-grass."  
 +Urbana, Ohio, May 26, 1838.  
 "Hypoxis erecta. Meadows. June 16th 1838"



## IRIDACEAE

*Sisyrinchium albidum* Raf. Blue-eyed Grass.  
+Urbana, Ohio, June 7, 1838.

## ORCHIDACEAE

- Cypripedium calceolus* L. var. *pubescens* (Willd.) Carrell  
"Cypripedium pubescens, Linn. Swartz! Rich moist woods, & wet swamps, Urbana. June 16, 1838."  
*Cypripedium candidum* Muhl. Small White Lady's-slipper.  
"Cypripedium candidum. Willd. Found in a grassy prairy 6 miles south of Urbana, May 26th 1836"  
*Cypripedium reginae* Walt. Showy Lady's-slipper, "Moccasin flower."  
"Cypripedium spectabile, Linn.—Swartz! Wet grassy prairies, frequent, June 23, 1838."  
*Orchis spectabilis* L. Showy Orchis, "Priest in the Pulpit."  
"Orchis spectabilis, Linn. Rich moist woods, Urbana, May 13, 1838."  
*Habenaria leucophaea* (Nutt.) Gray. Prairie Orchis.  
"410 *Habenaria fimbriata* Meadows on Gladly creek July 7th 1838"  
*Habenaria psycodes* (L.) Spreng. Small Purple Fringed Orchis.  
"356. *Habenaria psycodes*. From Dougan prairy, June 30, 1838."  
*Pogonia ophioglossoides* (L.) Ker. Pogonia or Beard-flower.  
"Pogonia ophioglossoides, Juss!—Br! From the Upper Cedar Swamp, June 23, 1838."  
*Triphora trianthophora* (Sw.) Rydb. Nodding Pogonia.  
"Triphora pendula, Nutt! Rich woods near the Upper Cedar Swamp, Aug[ust] 1837"  
*Spiranthes gracilis* (Bigel.) Beck. Southern Slender Ladies'-tresses.  
"Spiranthes tortilis, Richard. var. *b. gracilis*, Torr. (*Neottia tortilis*.) Thickets in barrens near grand point, Sept[ember] 9, 1837."  
*Spiranthes cernua* (L.) Richard. Common or Nodding Ladies'-tresses.  
"Spiranthes cernua, Richard! *Neottia cernua*. Prairies, & wet grounds, Urbana, Aug[ust] —1837"  
*Goodyera pubescens* (Willd.) R. Br. "Rattlesnake Plantain."  
"Goodyera pubescens, Brown! From woods on Mad river, Aug[ust] 12, 1837."  
*Corallorhiza maculata* Raf. Spotted Coral-root.  
"Corallorhiza multiflora, Haller!—Nutt! Damp shady woods on Mad river. Aug[ust] 26, 1837."  
*Liparis lilifolia* (L.) Richard. Lilia-leaved Twayblade.  
"Liparis lilifolia, Willd. Woods east of Urbana June 9, 1840"  
*Liparis loeselii* (L.) Richard. Loesel's Bog Twayblade.  
"Liparis Correana? Richard!—Spreng! From a wet prairy near the upper Cedar-swamp, June 23, 1838."  
*Aplectrum hyemale* (Muhl.) Torr.  
"Aplectrum hyemale, Nutt! Rich woods, Mad river, May 18, 1840

## DICOTYLEDONEAE

## SAURURACEAE

*Saururus cernuus* L. Lizard's tail.  
+Urbana Ohio, July 6, 1838.

## FAGACEAE

- Quercus macrocarpa* Michx. Mossey-cup Oak.  
"Quercus macrocarpa Rich alluvial soils near Urbana—May 20, 1837"  
*Quercus muehlenbergii* Engelm. "Rock chestnut Oak."  
"Quercus montana? Coll[ected] near Col[onel] James] McPherson's, June 16, 1838"  
[Logan Co.]  
*Quercus imbricaria* Michx. Shingle-Oak.  
+Champaign Co., Ohio.

## ULMACEAE

*Ulmus americana* L. American Elm.  
+Urbana, Ohio, 1838.

## MORACEAE

- \**Ficus elastica* Roxb. Fig.  
"A Leaf of the *Ficus Elastica* From Mr. N[icholas] Longworth's garden Cinc[innati] 1839"

## URTICACEAE

- Urtica procera* Muhl. Nettle.  
"No 616 *Urtica dioica* Road sides & pastures, Urbana, Aug[ust] 25th 1838."  
*Boehmeria cylindrica* (L.) Sw. Bog-Hemp.  
"Boehmeria cylindrica Damp woods, June 1837"

## SANTALACEAE

*Comandra umbellata* (L.) Nutt. ssp. *umbellata* Bastard-Toadflax.  
 +Urbana, Ohio, May 26, 1838.

## ARISTOLOCHIACEAE

*Asarum canadense* L. Wild Ginger.  
 "Asarum Canadense, Linn. Rich woods. June 9, 1838."

## POLYGONACEAE

\**Rumex acetosella* L. Sheep-Sorrel.  
 "Rumex acetosella. Lane Seminary near Cin[cinnati] May 14th, 1839" [Hamilton Co.]  
*Tovara virginiana* (L.) Raf. Jumpseed.  
 +Urbana, Ohio, August 25, 1838.  
*Polygonum amphibium* L. var. *stipulaceum* Coleman. Water-Smartweed.  
 +Champagin Co., Ohio.  
*Polygonum lapathifolium* L. Dock-leaved Smartweed, "Resinous Knotweed."  
 "6-2. *Polygonum lapathifolium*? Damp grounds or dried ponds. Urbana, July 29th 1837."  
 \**Polygonum orientale* L. Kiss-me-over-the-garden-gate.  
 +Naturalized, Urbana, July 22, 1837.  
*Polygonum arifolium* L. Halberd-leaved Tearthumb.  
 +Mad River, Ohio, August 28, 1838.

## PHYTOLACCACEAE

*Phytolacca americana* L. Pokeweed.  
 +Urbana, Ohio, July 5, 1838.

## PORTULACACEAE

*Claytonia virginica* L. Spring-beauty.  
 +Mad River, Ohio, April 14, 1838.

## CARYOPHYLLACEAE

\**Arenaria serpyllifolia* L. Thyme-leaved Sandwort.  
 "Arenaria serpyllifolia, Linn. Dry, sandy banks, G[lady] c[reek] May 12, 1840" [2 sheets]  
 \**Stellaria media* (L.) Cyrillo. "Chickweed."  
 "Stellaria media, From a yard in Urbana July 14th 1838."  
*Cerastium nutans* Raf. Mouse-ear Chickweed.  
 "Cerastium nutans, Rafin. Rich damp places, Urbana May 5th 1840"  
*Silene virginica* L. Fire-Pink.  
 "349. *Silene Virginica*? Woods near Urbana, June 30, 1838"  
 \**Silene* sp. "Bladder Champion."  
 "Cucubalus behen. From the garden in Urbana, June 9th 1838"  
 \**Dianthus caryophyllus* L. Carnation, "Common Pink."  
 "No. 223. *Dianthus caryophyllus*? From Mr. B[ethuel] Samples' garden in Urbana, June 29th 1838."

## NYMPHAEACEAE

*Nuphar luteum* (L.) ssp. *macrophyllum* (Small) Beal. Yellow Pond-lily.  
*Nuphar advena* Ait.  
 +Wisham's Pond, May 26, 1838.  
*Nymphaea odorata* Ait. Fragrant Water-lily.  
 "Nymph[a]ea odorata Wisham's pond, July 1, 1838"  
 "Young plants of Nymph[h]aea odorata June 13, 1840."  
*Brasenia schreberi* Gmel. Water-shield.  
 +Wisham's Pond, June 11, 1836.

## RANUNCULACEAE

*Ranunculus longirostris* Godr. White Water-Crowfoot.  
 "Ranunculus aquatilis, Linn. From a pond on White's Hill. May 20th 1838"  
*Ranunculus flabellaris* Raf. Yellow Water-Crowfoot.  
 "Ranunculus Prushii, Linn.—Richard. From a pond near St. Paris, May 13, 1838."  
*Ranunculus ambigens* S. Wats. Water-plantain-Spearwort.  
 "Ranunculus flammula From a pond 2½ miles S[outh] S[outh] E[ast] of Urbana, July 28th 1838"  
*Ranunculus micranthus* Nutt. Tiny-flowered Crowfoot.  
 "Ranunculus auricomus, Linn.—Pursh. (Perhaps a var[iet]y of [R.] abortivus.) From open lots near the west end of 6th street Cincinnati. April 11, 1839." [Hamilton Co.]

*Ranunculus recurvatus* Poir. Buttercup.

"156. *Ranunculus recurvatus*. Linn.—Poir. Collected in Mr. Wm. Neil's pasture, May 26, 1838."

*Ranunculus pensylvanicus* L. Bristly Crowfoot.

"31. *Ranunculus pensylvanicus*, Linn. *R. hispidus*, Pursh.—on former label. Wet grounds, Urbana, July, 1837."

+*Ranunculus hispidus*, Samples, Ohio. [Sent to Short, PH!]

*Ranunculus fascicularis* Muhl. "Early Crowfoot."

"*Ranunculus fascicularis*. Borders of thickets, in barrens. Dougan canal, May 5th 1838."

*Ranunculus septentrionalis* Poir. Swamp-Buttercup.

"*Ranunculus repens*, Linn. Collected at Wisham's Pond, May 26th 1838."

*Thalictrum dioicum* L. Early Meadow-Rue.

"*Thalictrum dioicum*, (pistillate.) From the Town Branch, May 26th 1838"

*Thalictrum dasycarpum* Fisch. & Lall. Purple Meadow-Rue.

"*Thalictrum Cornuti?* Linn. Borders of open grassy woodlands, June, 1836."

*Anemonella thalictroides* (L.) Spach. Rue-Anemone.

"*Thalictrum anemonoides*, Michx. *Anemone thalictroides*. Open Woodlands, fence-rows, G[lady] c[reek] May 5, 1838."

*Hepatica americana* (DC.) Ker. Hepatica.

"*Hepatica Americana*, Woods, on Mad river, May 1837"

*Hepatica acutiloba* DC. Hepatica.

"*Hepatica acutiloba*, Woods on Hanna's Branch May 1837"

*Anemone virginiana* L. Thimbleweed.

"*Anemone Virginiana*, Linn. Borders of woods,—thickets G[lady] c[reek] July 28, 1838."

*Anemone canadensis* L. Canadian Anemone.

"*Anemone Pennsylvanica*, Linn. [A.] *aconitifolia*. Fence-rows and meadows, Urbana, June 23, 1838."

"*Anemone aconitifolia* Meadows, Urbana, June 30, 1838"

*Anemone quinquefolia* L. var. *interior* Fern. Wood-Anemone.

"*Anemone nemorosa*, Urbana April 30th 1838"

*Clematis virginiana* L. Virgin's-bower, Clematis.

"*Clematis Virginiana*, Linn. Banks of streams,—Town Branch, July 22, 1837."

*Clematis viorna* L. Clematis.

"379. *Clematis viorna*. Wisham's pond, July 1, 1838."

\**Clematis viticella* L. Clematis.

"*Clematis viticella*. From Mr. J[ohn] H. James' garden in Urbana, July 10th 1838."

\**Clematis* sp.

"*Clematis odoratus*, African From Mr. N[icholas] Longworth's garden, Cin[cinnati] July 25th 1839. Mr. Gabril Sleath."

*Isopyrum biternatum* (Raf.) T. & G. False Rue-anemone.

"*Enemion biternatum*. Raf. Dry upland woods near Cincinnati. O[hio, Spring 1839]" [Hamilton Co.]

*Caltha palustris* L. Marsh-Marigold, "Meadow Cowslip."

"19. *Caltha palustris*. L. Swamps & wet places.—Upper Cedars, April 7, 1838."

\**Nigella damascena* L. "Fennel-flower."

"420 *Nigella damascena* From Mr. B[ethuel] Samples' garden in Urbana, July 9th 1838"

\**Nigella* sp. "Nutmeg Flower."

421. *Nigella sativa*. From Mr. B[ethuel] Samples' garden in Urbana. July 9th 1838."

\**Aquilegia canadensis* L. "Scarlet Columbine."

"No. 203. *Aquilegia Canadensis*. From my Fathers garden in Urb[ana] June 4th 1838"

\**Aquilegia vulgaris* L. "Columbine."

"No. 202. *Aquilegia vulgaris* From the garden in Urbana June 4th 1838"

\**Delphinium ajacis* L. "Larkspur."

"No. 2 *Delphinium consolidum* From Mr. B[ethuel] Samples' garden in Urbana, June 19, 1838"

*Delphinium tricorne* Michx. Dwarf Larkspur.

+Champaign Co., Ohio.

*Delphinium exaltatum* Ait. Tall Larkspur.

"No. 538. *Delphinium exaltatum* Salem [Twp.], in the barrens, Aug[ust] 11, 1838."

*Cimicifuga racemosa* (L.) Nutt. Black Snakeroot.

"*Cimicifuga racemosa*, Linn.Ell. Hills on Nettle creek, July 6th 1837."

*Actaea pachypoda* Ell. "White Baneberry."

"No. 196. *Actaea alba*. Shady woods. From [John] Ward's bottom June 3rd 1838."

*Hydrastis canadensis* L. Golden-seal. Yellow Puccoon.

"*Hydrastic Canadensis*, Linn. (Young plant in flower.) Woods, on Mad river, May 13, 1838."

"No. 90. *Hydrastic Canadensis*. Full grown leaves, and mature fruit Near Urbana July 14th, 1838."

## BERBERIDACEAE

*Jeffersonia diphylla* (L.) Pers. Twinleaf.

"*Jeffersonia diphylla*. Nettle creek April 1838."

\**Berberis vulgaris* L. Common Barberry.

"*Berberis vulgaris*. From Judge [Jacob] Burnet's garden in Cin[cinnati] April 24th 1839"

## MENISPERMACEAE

*Menispermum canadense* L. "Canada Moonseed."

"*Menispermum Canadense*. Borders of moist woods & thickets Wisham's Pond, June 17, 1837"

## CALYCANTHACEAE

\**Calycanthus floridus* L. var. *floridus*

"92. *Calycanthus Floridus*. From Mr. William Kellars' garden in Urbana, July 4th 1838."

"*Calycanthus floridus*. From Mr. N[icholas] Longworth's garden. Cin[cinnati] June 15th. 1839."

## ANNONACEAE

*Asimina triloba* (L.) Dunal. Pawpaw, "Custard Apple."

"*Porcelia triloba* Banks of streams May 13th 1837."

## LAURACEAE

*Sassafras albidum* (Nutt.) Nees var. *molle* (Raf.) Fern. Sassafras.

"Urbana, Ohio, May 20, 1838.

*Lindera benzoin* (L.) Blume var. *pubescens* (Palmer & Steyerem.) Rehd. Spicebush.

"Urbana, Ohio, April 7, 1838.

## PAPAVERACEAE

*Sanguinaria canadensis* L. "Blood-root."

"*Sanguinaria Canadensis*, Linn. (In fruit.) Common in rich woods, May 4, 1840"

"Champaign Co., Ohio.

*Stylophorum diphyllum* (Michx.) Nutt. Wood-Poppy.

"*Meconopsis diphylla*. Hills below the mouth of Licking [River] K[entucky]. April 20th 1839" [Kenton Co.]

\**Chelidonium majus* L. "Celandine."

"No. 132. *Chelidonium majus*. Gardens and waste places. about old fences and walls."

\**Papaver somniferum* L. Common Poppy.

"No. 390 *Papaver somniferum*. From Mr. B[ethuel] Samples' garden in Urbana, Aug[ust] 21st 1838"

\**Papaver orientale* L. "Field Poppy."

"432. *Papaver dubium*. From Mr. B[ethuel] Samples' garden in Urbana, July 12th 1838."

\**Papaver* sp. "Dubious poppy."

"432. *Papaver dubium*. From Mr. B[ethuel] Samples' garden in Urbana, July 12th 1838."

\**Adlumia fungosa* (Ait.) Greene. Climbing Fumitory.

"*Adlumia cirrhosa*, De. Cand!—Raf! Cultivated, Aug[ust] 1838."

*Dicentra cucullaria* (L.) Bernh. Dutchman's-breeches.

"1. *Dielytra cucullaria*, Bork! De.C. In rich woods near St. Paris, C[hampaign] C[ounty] O[hio] May 13, 1838."

*Dicentra canadensis* (Goldie) Walp. Squirrel-corn.

"2. *Dielytra Canadensis*, Bork!—D.C.! In woods near Fletcher in Mi[ami] County May 11, 1838."

*Corydalis aurea* Willd. Golden Corydalis.

"1. *Corydalis aurea*, De Cand! Willd! Near Piqua O[hio] in rich woods, May 12, 1838." [Miami Co.]

## CAPPARIDACEAE

*Polanisia dodecandra* (L.) DC. ssp. *dodecandra* var. *dodecandra*

*Polanisia graveolens* Raf.

"*Cleome dodecandra*. From the Canal bank at the end of 8th Street Cincinn[ati] Ohio. June 15th 1839." [Hamilton Co.]

## CRUCIFERAE

\**Armoracia rusticana* Gaertn. Horseradish.

*Armoracia lappathifolia* Gilib.

"*Cochlearia armoracia* Tournef.-Linn. From a muddy branch of Mad river, Naturalized May 20, 1838"

## SARRACENIACEAE

*Sarracenia purpurea* L. Pitcher-plant.

"*Sarracenia purpurea*. From a sphagnous swamp near Lewistown. Logan County. June 16th 1838."

## DROSERACEAE

- Drosera rotundifolia* L. Round-leaved Sundew.  
 "Drosera rotundifolia, Linn. Cedar Swam[p] 6 miles south of Urbana, July 1839"

## CRASSULACEAE

- \**Sedum pulchellum* Michx. Rock-moss, "Orleans Moss."  
 "215 *Sedum pulchellum* Urbana June 29th 1838" [A cultivated plant. See text.]  
*Sedum ternatum* Michx. Stonecrop.  
 "Sedum ternatum. Piqua, May 13th 1838" [Miami Co.]

## SAXIFRAGACEAE

- Penthorum sedoides* L. Ditch-Stonecrop.  
 "No. 622. *Penthorum sedoides*. From a pond 1¼ m[iles] S[outh] E[ast] of Urbana, Aug[ust] 25th 1838."  
*Saxifraga virginiana* Michx. Early Saxifrage.  
 "Hills near Cincinnati, Ohio, April 7, 1839. [Hamilton Co.]  
*Saxifraga pennsylvanica* L. Swamp-Saxifrage.  
 "162 *Saxifraga Pennsylvanica* Col[lected] in the Mad river prairy 2 m[iles] W[est] of Urbana May 26th 1838"  
 "162 *Saxifraga Pennsylvanica* Urbana, June 2nd 1838"  
*Heuchera americana* L. var. *americana* Rock-geranium.  
 "Heuchera Americana Mr. M[ilo] G. Williams" [? Clark Co.]  
*Mitella diphylla* L. Bishop's-cap, "Currant-leaf."  
 "No. 142. *Mitella diphylla*. Woods & Swamps. From the Upper cedars. May 26th 1838."  
 "Mitella diphylla, Linn. Rich low grounds or rocky woodlands May 5, 1840"  
*Parnassia glauca* Raf. "Grass of Parnass [us.]"  
 "No. 511. *Parnassia Americana*. Prairies, and swampy grounds, Up[per] Cedars, July 27th 1838."

## HAMAMELIDACEAE

- Hamamelis virginiana* L. var. *virginiana* Witch-hazel.  
 "Hamamalis Virginica From the falling springs in Mad river township near Mr. [Conoway] Rector's June 9th 1838"

## PLATANACEAE

- Platanus occidentalis* L. Sycamore, "Button Wood."  
 "19-12 *Platanus occidentalis*. Grows along Mad river. May 31, 1836"

## ROSACEAE

- Potentilla fruticosa* L. "Shrubby Cinquefoil."  
 "Potentilla fruticosa, Linn! Wet boggy prairies, Urbana, July 14, 1838"  
*Potentilla palustris* (L.) Scop. Marsh Five-finger.  
 "Comarum palustre, Linn! From a Cranberry prairy, at the extreme northern limits of Champaign county, 4 miles W[est] of West Liberty, July 7, 1838."  
 \**Potentilla* sp.  
 "Potentilla lutea. Mr. [Gabril] Sleath. Cin[cinnati] From Mr. N[icholas] Longworth's garden Cin[cinnati] June 4th 1839."

## LUGUMINOSAE

- Gymnocladus dioica* (L.) Koch. Kentucky Coffee-tree, "Coffee bean."  
 "20-10. *Gymnocladus Canadensis*. Alluvial soil—River bottoms Mad river June 3rd 1837"  
*Gleditsia triacanthos* L. "Honey Locust."  
 "20-6. *Gleditchia triacanthos*. Banks of streams—Urbana, June 10th 1837"  
 "Gleditschia triacanthos, Linn! Woods, Urbana, May 18, 1840." [2 sheets]  
 \**Cassia marilandica* L. Wild Senna.  
 "No. 492. *Cassia Marilandica*. A Specimen raised in the garden from seeds brought from Worthington [Ohio] by Dr. A. D. Sweet.—July 26th 1838"  
*Cercis canadensis* L. Redbud.  
 "Cercis Canadensis. Piqua May 13th 1838." [Miami Co.]  
*Baptisia leucantha* T. & G. White or Prairie-False Indigo.  
 "357. *Baptisia tinctoria* var. *a. albiflora*. From Dougan prairy, June 30, 1838"  
 \**Lupinus* sp.  
 "Lupinus hirsutus. July 9th 1838." [A cultivated plant. Dr. David B. Dunn of the University of Missouri tells me that this is not a native North American plant. This specimen represents a species that grows in either South America or Europe.]  
 \**Trifolium pratense* L. "Red Clover."  
 "Trifolium pratense From the garden in Urbana June 10th 1838."

\**Trifolium repens* L. "White Clover."

"Trifolium repens. Fields Urbana, June 12 1838"

*Trifolium reflexum* L. "Buffalo Clover."

"Trifolium recurvatum. From Dr. J[ohn] A. Warder, of Cincinnati. 1839." [? Hamilton Co.]

\**Melilotus alba* Desr. White Sweet Clover.

"2. Melilotus leucantha, Tournef!—Koch! Cultivated, June 29, 1838."

\**Medicago orbicularis* (L.) All. Medick, "Snail shell."

"Medicago scutellata. From Mr. B[ethuel] Samples' garden in Urbana, June 22nd 1838"

*Tephrosia virginiana* (L.) Pers. var. *virginiana* Goat's-rue.

"Tephrosia Virginiana, Persoon. From a dry sterile hill near Portsmouth Ohio, July 2, 1839." [Scioto Co.]

*Desmodium nudiflorum* (L.) DC. "Tick-trefoil."

"Hedysarum pauciflorum Nutt. Spring[fiel]d M[ilo] G. Williams" [? Clark Co.]

*Desmodium glutinosum* (Muhl.) Wood. Tick-trefoil.

"No. 473. Hedysarum acuminatum Groves, and borders of thickets. Urbana July 21st 1838."

*Desmodium rotundifolium* DC. Tick-trefoil, "Round-leaved Hedysarum."

"16-10 Heydsarum rotundifolium. Dry sandy-oak woods. Urbana, Aug[ust] 19th 1837."

*Desmodium canescens* (L.) DC. Tick-trefoil.

"No. 474. Hedysarum viridiflorum? Borders of woods & thickets, July 21, 1838." [2 sheets]

*Desmodium paniculatum* (L.) DC. Tick-trefoil.

"No. 627. Hedysarum paniculatum? Bottoms of Mad River, Aug[ust] 25th 1838"

*Lespedeza virginica* (L.) Britt. Bush-Clover.

"Lespedeza reticulata, Michx! Pers! From dry sterile hills near Portsmouth O[hio] July 2, 1839." [Scioto Co.]

*Lespedeza capitata* Michx. Bush-Clover.

"No. 579. Lespedeza capitata. Barrens and borders of woods, Urbana, Aug[ust] 11th 1838."

*Vicia caroliniana* Walt. Wood-Vetch.

"7. Vicia Caroliniana? Tournef! Walt! Woods—near Mount Tabor meeting house, May 13, 1837."

*Vicia americana* Muhl. var. *americana* Vetch.

"1. Vicia Americana, Tournef!—Muhl! Prairies & meadows, Lower Cedar swamp, June 10, 1837"

*Lathyrus palustris* L. Vetchling, "Marsh Pea."

"16-10 Lathyrus palustris. Prairies & meadows. Urb[ana] June 17th 1837"

*Apios americana* Medic. Groundnut. Potato-bean.

"No. 628. Apios tuberosa. Grows on the margins of the town branch. Aug[ust] 2th 1838."

*Amphicarpa bracteata* (L.) Fern. Hog-Peanut.

"16-10 Amphicarpa monoica"

#### OXALIDACEAE

*Oxalis violaceae* L. "Violet Wood sorrel."

"10-5 Oxalis violaceae Damp woods—Urbana, June 3rd 1837"

"No. 197. Oxalis violaceae. Moist woodlands. From [John A.] Ward's bottom June 3rd 1838"

*Oxalis stricta* L. Wood-Sorrel.

*Oxalis europaea* Jord.

"Oxalis stricta? From Dr. J[ohn] A. Warder of Cincinnati 1839." [?Hamilton Co.]

*Oxalis grandis* Small. Wood-Sorrel.

[Mounted on the same sheet as the previous specimen]

#### GERANIACEAE

*Geranium maculatum* L. Wild Geranium.

"Geranium maculatum, Linn. Rich woodlands, June 7, 1838."

#### RUTACEAE

*Xanthoxylum americanum* Mill. "Prickly Ash."

"20-5. Xanthoxylum fraxineum Rich soils on skirts of woods and Prairies, Urbana, May 8th 1837."

#### POLYGALACEAE

*Polygala senega* L. Seneca-Snakeroot.

†Urbana, Ohio, June 2, 1838.

*Polygala verticillata* L. Polygala. Milkwort.

"Polygala verticillata Borders of thickets Urbana July 28th 1838."

## EUPHORBIACEAE

*Acalypha rhomboidea* Raf. Three-seeded Mercury.

"No. 577. *Acalypha Virginica*? Pastures & roadsides, Urbana. Aug[ust] 11th 1838."

*Euphorbia obtusata* Pursh. Spurge.

"*Euphorbia obtusata*, Linn.—Pursh. In a waste sterile old field 1½ [miles] N[orth] E[ast] of Urbana June 5, 1840."

*Euphorbia commutata* Engelm. Wood-Spurge.

"*Euphorbia peplus*, Linn. Banks of the Miami [River] at Piqua. May 12, 1838." [Miami Co.]

*Euphorbia supina* Raf. Milk-purslane.

+Champaign Co., Ohio.

## LIMNANTHACEAE

*Floerkea proserpinacoides* Willd. "False Mermaid."

"No. 138. *Floerkea uliginosa*. Moist shaded or muddy ground From Mr. [Parker] Bryan's Meadow on the town branch, May 26th 1838"

## ANACARDIACEAE

\**Cotinus coggygia* Scop. Smoke-tree.

"?Rhus cotinus? From Mr. N[icholas] Longworth's garden Cin[cinnati] June 6th 1839. [Hamilton Co.]

*Rhus aromatica* Ait. Fragrant Sumac.

"Leaves *Rhus aromatica* Wishams pond July 1, 1838"

## CELASTRACEAE

*Euonymus atropurpureus* Jacq. Burning-bush.

"*Euonymus atropurpureus*. Urbana, June 10th 1838."

*Euonymus obovatus* Nutt. Running Strawberry-bush, "Spindle vine."

"5-1 *Euonymus obovatus*. Damp, swampy grounds. Upper Cedars,—June 3rd 1837"

## STAPHYLEACEAE

*Staphylea trifolia* L. Bladdernut

+Urbana, Ohio.

## ACERACEAE

*Acer rubrum* L. var. *rubrum* Red Maple.

"*Acer nigrum*. Urbana, Ohio, April 26th 1838"

*Acer negundo* L. var. *negundo* Box-Elder.

"*Acer negundo* From Mr. N[icholas] Longworth's garden Cin[cinnati] O[hio] May 18th 1839." [Hamilton Co.]

## HIPPOCASTANACEAE

*Aesculus glabra* Willd. (x *octandra*) Buckeye. [det. James Hardin]

"*Pavia ohioensis* Nettle creek. May 14th 1838"

## BALSAMINACEAE

*Impatiens pallida* Nutt. Jewelweed, Touch-me-not.

"*Impatiens pallida*, Nut var *cordata*. Mihi. Urbana. Woods. July & Aug[ust] 2-3 ft This plant was discovered and sent me by Mr. [John] Samples of Urbana: The plant is less, and the leaves differ so much from the *I. pallida*; Until further known I would propose it as a variety of *I. pallida*." [See text for additional information.] [In Williams' herbarium at Urbana Junior College!]

"*Impatiens pallida*. From the bank of Licking [River], 5 miles S[outh] E[ast] of Cincinnati. June 22nd 1839."

## RHAMNACEAE

*Rhamnus alnifolia* L'Hér.

"7. *Rhamnus alnifolius*, Linn! L'Herit! Wet places.—Cedar Swamps, May 18, 1840."

*Ceanothus americanus* L. New Jersey Tea.

"331. *Ceanothus Americanus* Skirts of woods near Urbana June 30th 1838."

## TILIACEAE

*Tilia americana* L. Basswood.

"*Tilia Americana*. Linn! Low woods, May 18, 1840."

## GUTTIFERAE

*Hypericum mutilum* L. St. John's-wort.

"*Hypericum parviflorum*. Overflowed grounds, near the maple swamp, Urbana, July 28th 1838."

\**Hypericum* sp.

"*Hypericum* ———? From Mr. N[icholas] Longworth's garden. Cin[cinnati] June 6th 1839." [Hamilton Co.]

## VIOLACEAE

*Viola sororia* Willd. Violet.

"*Viola cucullata*. From Nettle creek April 26th. 1838."

*Viola sagittata* Ait. Arrow-leaved Violet.

"*Viola sagittata*. (Moist meadows.) Dougan canal near the Township line between Urbana & Salem May 19th 1838."

*Viola palmata* L. Violet.

"127 *Viola plamata?* White's hill Ohio May 20, 1838"

*Viola pedatifida* G. Don. "Bird-foot Violet."

"No. 115. *Viola pedata*. Woods & thickets From Wisham's Pond. May 19th 1838."

*Viola macloskeyi* Lloyd ssp. *pallens* (Banks) M. S. Baker. Violet.

"*Viola blanda*. May 1838"

\* *Viola odorata* L. English or Sweet Violet.

"No. 8. *Viola odorata*. From the garden in Urbana April 1st '38"

*Viola pubescens* Ait. var. *eriocarpa* (Schwein.) Russell. Smooth Yellow Violet.

"*Viola pubescens*. Woods, near Urbana, 1838."

*Viola striata* Ait. Cream-Violet.

"*Viola striata* or, [V.] ochroleuca Near Elizabethtown [now called Lena] Miami county May 13th 1838."

*Viola conspersa* Reichenb. American Dog-Violet.

"*Viola Muhlenbergiana* Urbana 1838"

## THYMELAEACEAE

*Dirca palustris* L. Leatherwood.

"Mad River bottoms, Ohio, June 9, 1838.

"*Dirca palustris*, Linn In low rich woodlands, May 18, 1840."

## MYRTACEAE

\* *Myrtus communis* L.

"*Myrtus communis*. From Mr. N[icholas] Longworth's garden—Cin[cinnati] June 6th 1839." [Hamilton Co.]

## MELASTOMATACEAE

*Rhexia virginica* L. var. *virginica* Meadow-beauty.

"*Rhexia Virginica*. Collected 7 miles from Cincinnati, by Mr. T[homas] G. Lea, June 20th 1838" [On Lea's specimen is written "Lower meadow next the woods, about seven miles on the Madison road. June 20, [18]39." [PH!] [Samples and Lea may have been together when this specimen was collected. The former may have made an error in copying the year, as the collection best fits into the year 1839 in the chronological sequence of events.] [Hamilton Co.]

## ONAGRACEAE

*Ludwigia palustris* (L.) Ell. var. *americana* (DC.) Fern. & Grisc. Water purslane.

"*Insnardia palustris*, Linn. Wet places. July 6, 1838" [2 sheets]

*Circaea quadrisculata* (Maxim.) Franch. & Sav. var. *canadensis* (L.) Hara. "Enchanter's Nightshade."

"No. 442. *Circaea lutetiana*, var. *Canad[ensis]* Woods near Urbana, July 14th 1838"

## HALORAGACEAE

*Myriophyllum verticillatum* L. var. *pectinatum* Wallr. Water-Milfoil.

"415. *Myriophyllum spicatum* Found in Mitchell's Lake in Concord [Twp.] July 6th 1838"

*Proserpinaca palustris* L. Mermaid-weed.

"*Proserpinaca palustris*. Dougan Prairy, July 28th 1838."

## ARALIACEAE

*Aralia nudicaulis* L. "False Sarsaparilla."

"No. 2 *Aralia pubescens*, Samp[les] In woods near Zanesfield. June 18th 1838." [Logan Co.]

*Panax quinquefolius* L. "Ginseng."

"*Panax quinquefolia*, Linn. Rich woodlands, Zanesfield, June 18, 1838" [Logan Co.]

## UMBELLIFERAE

*Sanicula marilandica* L. Black Snakeroot.

"*Sanicula Marilandica* (Red Leaves) May 5, 1840"

*Eryngium yuccifolium* Michx. Rattlesnake-master.

"*Eryngium yuccifolium*, Michx. [E.] aquaticum. Linn. Barrens, grassy upland plains skirts of thickets G[lady] c[reek] Aug[ust] 11, 1838."

*Chaerophyllum procumbens* (L.) Crantz

"*Chaerophyllum procumbens*, Linn.—Lamb. Rich, shady, moist woodlands. Mad river, May 5, 1840."



- "*Chaerophyllum procumbens*, Linn.—Lam. (var. *Boseii* DeCand!) Rich, shady moist grounds. Mad river, May 5, 1840." [2 sheets]
- Osmorhiza claytonii* (Michx.) C. B. Clarke. Sweet Cicely, Sweet Jarvil.
- "*Osmorhiza brevistylis*, Rafin.—DeCand. *Uraspermum hirsutum* Big. Borders of thickets rich woodlands. June 3rd 1837"
- Osmorhiza longistylis* (Torr.) DC. Anise-root.
- "*Osmorhiza longistylis*, Rafin.—DeCand. *Uraspermum Claytonii*. Borders of thickets & rich woodlands. June 3, 1837."
- \**Coriandrum sativum* L. Coriander.
- "5-2 *Coriandrum sativum* L. Gardens June 27, 1836"
- Erigenia bulbosa* (Michx.) Nutt. Harbinger-of-spring.
- "*Erigenia bulbosa* Urbana 1838"
- \**Conium maculatum* L. Poison Hemlock.
- "426. *Conium maculatum*. A specimen from seed obtained from Dr. A. D. Sweet of Worthington [Ohio] and raised in Mr. Bjethuel] Samples' garden in Urbana. July 10th 1838"
- "No. 426. *Conium maculatum*. Cultivated in Urbana—Sept[ember] 4th 1838."
- Zizia aptera* (A. Gray) Fern.
- "5-2. *Zizia cordata*. Woods & thickets June 10, 1837"
- "*Zizia cordata*, Wisham's Pond. June 13, 1840"
- Cicuta bulbifera* L. Water-Hemlock.
- "*Cicuta bulbifera*, Linn. Wet meadows, and ditch banks. July 22, 1836"
- Cicuta maculata* L. "Cowbane."
- "No. 475. *Cicuta maculata* Meadows near Urbana, July 21st 1838."
- Cryptotaenia canadensis* (L.) DC.
- "*Cryptotaenia Canadensis*, De.Cand. From the Upper Cedars, June 23, 1838."
- Sium suave* Walt. Water-parsnip.
- "5-2 *Sium latifolium*, Willd. In Muddy ponds and ditches Wisham's Pond July 22nd 1837"
- \**Foeniculum vulgare* Mill. "Fennel, Dill."
- "*Foeniculum vulgare*, Adans.—Goertn. Gardens, Cultivated, Aug[ust] 6, 1837."
- "*Foeniculum graveolens*, Adans.—Linn Gardens.—Naturalized, Urbana. Aug[ust] 6, 1837."
- Thaspium barbinode* (Michx.) Nutt. Meadow-parsnip.
- "*Thaspium barbinode*, Nutt. Woods and fence-rows, Mad river, May 26, 1838."
- "*Thaspium barbinode*, Nutt. Meadows & low grounds. Urbana, May 5, 1840."
- Pastinaca sativa* L. "Wild Parsnip."
- "No. 289. *Pastinaca sativa*. var. of *arvensis* From Mr. J[ohn A.] Ward's meadow. June 23rd 1838"
- \**Daucus carota* L. Carrot, Queen Anne's Lace.
- "*Daucus carota*, Linn Gardens, cultivated. Urbana, July 22, 1836"

## CORNACEAE

- Cornus alternifolia* L. Pagoda-Dogwood.
- +Urbana, Ohio, May, 1838.

## PYROLACEAE

- Monotropa hypopithys* L. Indian-pipe, "False Beech-drops."
- "10-1 *Hypopythys lanuginosa* Found in dry oak woods. Urbana, Sept[ember] 9th 1837."

## PRIMULACEAE

- Lysimachia quadrifolia* L. Whorled Loosestrife.
- +Champaign Co., Ohio.
- Lysimachia terrestris* (L.) BSP. Loosestrife.
- +Wisham's Pond, Urbana, Ohio, July 1, 1838.
- "No. 447. *Lysimachia quadriflora*. Grassy meadows near Urbana, Urb[ana] July, 14th 1838."
- Lysimachia thyrsoiflora* L. "Clustered flowered Loosestrife."
- "No. 208. *Lysimachia thyrsoiflora* From the Maple Swamp. June 1, 1838." [2 sheets]
- Lysimachia ciliata* L. Loosestrife, "Moneywort."
- "5-1. *Lysimachia ciliata*. Fences & roadsides—Urb[ana] July 1st 1837."
- Trientalis borealis* Raf. Star-flower. Chickweed-wintergreen.
- "*Trientalis Americana* Urbana O[hio] June 9th 1838"
- "*Trientalis Americana*, Linn! Pursh! Mossy Cedar Swamps, May 18, 1840."

## OLEACEAE

- \**Ligustrum vulgare* L. "Prim or Privet."
- "2-1. *Ligustrum vulgare*. Waste grounds, & skirts of woods. Urbana, June 17th 1837."

## LOGANIACEAE

- \**Spigelia marilandica* L. Indian Pink.
- "*Spigelia Marilandica*. From Mrs. Jones' garden on 4th Street Cin[cinnati] by Mr. T[homas] G. Lea. June 15th 1839."

## GENTIANACEAE

- Sabatia angularis* (L.) Pursh. Rose-pink.  
 "No. 566. *Sabbatia angularis*. Wisham's pond, Aug[ust] 11th 1838."  
*Gentianella crinita* (Froel.) G. Don ssp. *crinita* "Fringed Gentian."  
*Gentiana crinita* Froel.  
 "4.2. *Gentiana crinita* Prairies & meadows Urbana—Sept[ember] 23rd 1837"  
*Gentianella quinquefolia* (L.) Small ssp. *occidentalis* (A. Gray) J. M. Gillett  
*Gentiana quinquefolia* L. var. *occidentalis* (A. Gray) Hitchc.  
 "5-2. *Gentiana quinqueflora* Edges of thickets and Woodlands. Wisham's Pond,  
 Oct[ober] 23, 1836"  
*Gentiana puberula* Michx. Gentian.  
 "Gentiana rubricaulis, Linn.—Schwein. & Keating. From the Darby plains 28 miles east  
 of Urbana, October 4, 1837." [Madison Co.]  
*Gentiana alba* Muhl. Yellowish Gentian.  
*Gentiana flavida* A. Gray  
 +Urbana, Ohio, August 26, 1837.  
*Frasera carolinensis* Walt. "American Columbo."  
*Swertia carolinensis* (Walt.) Kutz.  
 "Frasera Walteri, Michx. Skirts of woods & thickets, June 27, 1837."  
 "Frasera Walteri, Michx. Open woods near Buchanan's old farm. June 5, 1840."  
*Menyanthes trifoliata* L. var. *minor* Raf. Buckbean. Bogbean.  
 +Urbana, Ohio, May 19, 1838.

## APOCYNACEAE

- Apocynum androsaemifolium* L. Spreading Dogbane.  
 "Apocynum androsaemifolium, Linn. Woods, June 30, 1838."  
*Apocynum cannabinum* L. Indian Hemp.  
 "339 *Apocynum cannabinum* Thickets and fence rows, June 30th 1838"

## ASCLEPIADACEAE

- Asclepias tuberosa* L. ssp. *tuberosa* "Butterfly-weed."  
 "No. 441. *Asclepias tuberosa*. Fields and borders of woods, Urbana, July 14th 1838."  
*Asclepias purpurascens* L. Purple Milkweed.  
 "Asclepias amana, Linn. Moist places, fence-rows G[lady] c[reek] June 30, 1838."  
*Asclepias incarnata* L. Swamp-Milkweed.  
 "No. 510. *Asclepias incarnata*. Damp soils along the town branch. July 27th 1838."  
*Asclepias quadrifolia* Jacq. "Four-leaved *Asclepias*."  
 "18-5. *Asclepias quadrifolia* Woods & thickets. Urbana, June 17th 1837."  
 "Asclepias quadrifolia. Linn. Jacq. Maple Swamp 1½ miles E[ast] of Urbana. June 5,  
 1840."  
 "Asclepias quadrifolia Collected near Cincinnati by Mr. Tho[mas] G. Lea." [Braun,  
 1934, wrote that Lea obtained his specimen from "(Mill creek valley)."] [Hamilton Co.]  
*Asclepias exaltata* L. Poke or Tall Milkweed.  
 "407. *Asclepias phytolaccoides* From the woods on Muddy creek, July 7th 1838"  
*Asclepias syriaca* L. Common Milkweed.  
 "Asclepias Syriaca. (Kentucky.) On the Bank-lick road 3 miles S[outh] E[ast] of Cin-  
 cinnati. June 22nd 1839" [Kenton Co.]  
*Ampelamus albidus* (Nutt.) Britt. Honevine.  
 "Enslenia albidus. On the banks of the Ohio [River] near Portsmouth Aug[ust] 3rd 1839."  
 [Scioto Co.]

## CONVOLVULACEAE

- \**Ipomoea quamoclit* L. Cypress-vine.  
 "No. 651. *Ipomoea quamoclit*. From Mr. T[homas] M. Gwynne's garden in Urbana,  
 Sept[ember] 13th 1838."  
 \**Ipomoea hederacea* (L.) Jacq. Morning-glory.  
 "No. 683. *Ipomoea nil*. From Mr. B[ethuel] Samples' garden in Urbana, Aug[ust] 21st  
 1838"  
*Cuscuta gronovii* Willd. Dodder.  
 "No. 620. *Cuscuta Americana* Upper Cedars, Aug[ust] 25th 1838."

## POLEMONIACEAE

- Polemonium reptans* L. Jacob's-ladder, "Greek valerian."  
 "No. 114 *Polemonium reptans*. skirts of woods & thickets From Wisham's Pond. May  
 19th 1838."  
 "Polemonium reptans, Linn! Woods, Urbana, May 26, 1838."  
 "Polemonium reptans, Woods & thickets, May 12, 1840."  
 \**Gilia rubra* (L.) Heller. Standing-cypress.  
 "Cantua coronopifolia, Linn.—Willd. Cultivated, Urbana, Aug[ust] 19, 1838."

- \**Phlox subulata* L. Moss-Phlox.  
 +Urbana, Ohio, 1838, cultivated.  
*Phlox divaricata* L. Blue Phlox.  
 "Phlox divaricata, Linn. Rich woo[d]lands, on Mad river, May 9, 1838."  
*Phlox pilosa* L. Phlox.  
 "Phlox aristata, Linn.—Michx! Borders of woods & thickets, Collected near Wm. Ward's,  
 May 26, 1838."  
*Phlox maculata* L. Wild Sweet William.  
 "Phlox maculata. Meadows, June 30, 1838,"

## HYDROPHYLLACEAE

- Hydrophyllum macrophyllum* Nutt. Waterleaf.  
 "Hydrophyllum macrophyllum, Nutt. Found near Zanesfield, June 16th 1838." [Logan Co.]  
 "Hydrophyllum macrophyllum, Ridd. From Dr. J[ohn] A. Warder of Cincinnati 1839." [? Hamilton Co.]  
*Hydrophyllum virginianum* L. John's-cabbage.  
 "Hydrophyllum Virginicum, Linn. Near Zanesfield, June 16th 1838." [Logan Co.]  
*Hydrophyllum canadense* L. Canadian Waterleaf.  
 "Hydrophyllum Canadense? Willd. From a rich bottom-field near Zanesfield L[ogan] C[ounty] June 18, 1838."  
*Hydrophyllum appendiculatum* Michx. Appendaged Waterleaf.  
 "Hydrophyllum Canadense, Willd. Rich woodlands & alluvial river bottoms, June 9th 1838."  
*Phacelia purshii* Buckl. Miami-mist.  
 "Phacelia fimbriata. Urbana, O[hio] June 23rd 1838"

## BORAGINACEAE

- \**Heliotropium ?peruvianum* L. Turnsole. Heliotrope  
 "Heliotropium Europeum? From Mr. N[icholas] Longworth's garden Cin[cinnati] June 4th 1839."  
 \**Borago officinalis* L. Borage.  
 "Borago officinalis. Garden in Urbana July 27th 1838"  
 \**Symphytum officinale* L. "Comfrey."  
 "Symphitum officinale From the garden in Urbana June 10th 1838."  
*Onosmodium hispidissimum* Mackenz.  
 "Onosmodium hispidum Urbana July 5th 1838"  
*Lithospermum latifolium* Michx. Gromwell.  
 "Lithospermum officinale, Linn. Pastures & borders of thickets. May 26, 1838."  
*Lithospermum canescens* (Michx.) Lehm. Indian-paint.  
 "157. Batschia canescens. Col[lected] at Wisham's Pond May 25th 1838."  
*Cynoglossum officinale* L. "Hound's tongue."  
 "Cynoglossum officinale, Linn. Lane's and roadsides, June 9th 1838."  
*Mertensia virginica* (L.) Pers. Virginian Cowslip, Bluebells.  
 "Pulmonaria Virginica Spring creek May 13th 1838" [Could be either Champaign or Miami County]  
*Lappula myosotis* Moench. Stickseed.  
*Lappula echinata* Gilib.  
 "Echinosperrum Lappula, Lehm. National road near West Jefferson July 5th 1839." [Madison Co.]  
*Hackelia virginiana* (L.) I. M. Johnston Stickseed, "Bugloss."  
 "No. 514. Rochelia Virginiana Fences, and road sides, July 27th 1838."

## VERBENACEAE

- Verbena urticifolia* L. White Vervain.  
 +Urbana, Ohio, July 28, 1838.  
*Verbena hastata* L. "Vervain."  
 "No. 435. Verbena hastata. In Damp or muddy soils near Urbana, July 14th 1838."

## LABIATAE

- Scutellaria incana* Biehler. Skullcap.  
 "Scutellaria cordifolia? Linn!—Muhl! Borders of woods, fence-rows G[lady] c[reek] July 21, 1838"  
*Scutellaria epilobiifolia* A. Hamilton. Common-Skullcap.  
 "352 Scutellaria galericulata From Wisham's pond, June 30th, 1838."  
*Scutellaria parvula* Michx. var. *leonardi* (Epling) Fern. "Little Skull-cap."  
 "13-1 Scutellaria parvula. Dry woodlands & borders of thickets, Urbana June 23, 1837"

- \**Marrubium vulgare* L. "Hoarhound."  
 "No. 346. *Marrubium vulgare*. Road-side in the suburbs of Urbana July 14th 1838."  
*Glechoma hederaceae* L. var. *micrantha* Moricand. Gill-over-the-ground.  
 "Nepeta Glechoma, Linn!—Benth! *Glechoma hederacea*, Willd. From Mr. M[ilo] G. Williams of Springfield." [In Williams' Botanical Notes, he indicates plants of this species from D[ayton, Montgomery Co., Ohio.]  
 +Urbana, Ohio.  
*Prunella vulgaris* L. var. *lanceolata* (Bart.) Fern. "Self Heal."  
 "Prunella vulgaris. From the woods near Urbana, June 20th 1838."  
*Synandra hispidula* (Michx.) Baill.  
 "Synandra grandiflora, Logan County, O[hio] June 17th 1838"  
 "Synandra grandiflora In a field near Zanesfield June 18th 1839" [He means 1838, Logan Co.]  
 \**Leonurus cardiaca* L. "Motherwort."  
 "Leonurus Cardiaca, Linn. Lane 1 mile N[orth] E[ast] of Urbana."  
 \**Salvia officinalis* L. "Sage."  
 "Salvia officinalis, Linn. (Cultivated.) May 30, 1840."  
 \**Monarda didyma* L. Monarda, Horsemint, "Mountain Mint."  
 "Monarda didyma. From Mr. T[homas M.] Gwynne's garden in Urbana, July 14th 1838."  
*Monarda fistulosa* L. var. *fistulosa* Wild Bergamot, "Horse Mint."  
 "No. 501. *Monarda oblongata*. Fence-rows, and borders of thickets July 27th 1838."  
*Blephilia ciliata* (L.) Benth.  
 "Monarda ciliata. *Blephilia ciliata*, Rafin Urbana, June 1838"  
*Blephilia hirsuta* (Pursh) Benth. Wood-Mint, "Beck's Monarda."  
 "No. 502. *Monarda Beckii*. Damp grounds, and moist thickets. July 27th 1838."  
*Hedeoma pulegioides* (L.) Pers. "Pennyroyal."  
 "Hedeoma pulegioides Linn! Dry pastures & woods, Aug[ust] 11, 1838."  
 \**Hyssopus officinalis* L. Hyssop.  
 "No. 455. *Hyssopus officinalis*. From Mr. B[ethuel] Samples' garden in Urbana, July 17th 1838."  
*Pycnanthemum tenuifolium* Schrad.  
 "Pycnanthemum lineare. Collected by Mr. M[ilo] G. Williams of Spr[in]g[fiel]d" [? Clark Co.]  
*Pycnanthemum virginianum* (L.) Durand & Jackson. Mountain-Mint.  
 "Pycnanthemum Virginicum Urbana, O[hio]"  
 +Urbana, Ohio.  
*Lycopus uniflorus* Michx. Water-horehound.  
 "Lycopus Virginicus,"  
*Lycopus americanus* Muhl. Water-horehound.  
 "Lycopus sinuatus"  
 \**Mentha piperita* L. "Peppermint."  
 "13-1 *Mentha piperita* Gardens—& naturalized in various places—Near Mr. H. Muzzy's on the D[ol]ugan canal. Aug[ust] 12, 1837"

## SOLANACEAE

- \**Solanum dulcamara* L. Nightshade, "Bittersweet."  
 "No 185 *Solanum dulcamara*. Has not yet been found growing wild in this country. From my Father's garden in Urbana, June 2nd 1838."  
 \**Solanum pseudo-capsicum* L. Jerusalem-cherry.  
 "Solanum pseudo-capsicum, Linn. Cultivated green-house plant. Urbana, Aug[ust] 20, 1838."  
 \**Solanum tuberosum* L. Potato.  
 +Urbana, Ohio, June 29, 1838."  
*Solanum carolinense* L. Horse-nettle, Ball-nettle.  
 "Solanum carolinense. Collected on the North Bend road 3 miles below Cin[cinnati] June 2nd 1839." [Kenton Co., Ky.] [2 sheets]  
 "Solanum Carolinense, Linn. Mouth of the Scioto [River] at Portsmouth O[hio] Aug[ust] 10, 1839." [Scioto Co.]  
 \**Lycopersicum esculentum* Mill. Tomato.  
 +Urbana, Ohio, August 1838."  
*Physalis virginiana* Miller var. *subglabrata* (Mackenzie and Bush) Waterfall  
*Physalis subglabrata* Mackenz. & Bush  
 "No. 614. *Physalis Pennsylvanicus?* Roadsides & lots, Urbana Aug[ust] 25th 1838."  
*Physalis heterophylla* Nees. Ground-cherry.  
 "No. 613. *Physalis viscosa* Roadsides and lots, Urbana, Aug[ust] 25th 1838."  
 \**Hyoscyamus niger* L. "Henbane."  
 "No. 252. *Hyoscyamus niger*. From Mr. B[ethuel] Samples' garden in Urbana, June 10, 1838"

## SCROPHULARIACEAE

- \**Verbascum blattaria* L. Moth-Mullein.  
 "413. *Verbascum blattaria* var. a. alba. From Mr. [John] Stemble's garden in Harrison township. July 7th 1838."  
 +Cincinnati, Ohio, June 16, 1839. [Hamilton Co.]
- \**Verbascum* sp.  
 "*Verbascum Mexicana?* Mr. [Gabril] Sleath. From Mr. N[icholas] Longworth's garden Cin[cinnati] June 4th 1839."
- Scrophularia marilandica* L.  
 +Urbana, Ohio, July 28, 1838.
- Conobea multifida* (Michx.) Benth.  
 "Excicated, muddy grounds Urbana, July 28th 1838."  
 "On the sandy banks of the Scioto [River] near Portsmouth, O[hio] Aug[ust] 3, 1839."  
 [Scioto Co.]
- Veronica serpyllifolia* L. Thyme-leaved Speedwell  
 "*Veronica serpyllifolia*, Linn. Pastures & Meadows. May 5, 1840."
- Gerardia tenuifolia* Vahl. Gerardia.  
 +Urbana, Ohio.
- Pedicularis canadensis* L. Common Lousewort.  
 "*Pedicularis Canadensis*. Linn. Thickets & borders of woods, May 14, 1840."  
 +Urbana, Ohio, May 19, 1838.

## LENTIBULARIACEAE

- Utricularia cornuta* Michx. Bladderwort.  
 "*Utricularia intermedia* Hayn From a Cedar Swamp 6 miles south of Urbana July 1839"

## ACANTHACEAE

- Justicia americana* (L.) Vahl. Water-willow.  
 "Justicia pedunculosa. Collected near Cincinnati by Mr. T[homas] G. Lea. [On Lea's specimen is written "Lit[tle] Miami [River]," PH!] [Hamilton Co.]
- Ruellia humilis* Nutt. "Ruell[ia]."  
 "No. 381. *Ruellia strepens*. Woods, and borders of thickets, near Urbana, July 14th 1838."

## PHRYMACEAE

- Phryma leptostachya* L. Lopseed.  
 +Urbana, Ohio, July 28, 1838.

## PLANTAGINACEAE

- \**Plantago lanceolata* L. Buckhorn, "Ribwort."  
 "*Plantago lanceolata*, Linn. Naturalized. A specimen brought from Mr. James Dallas' five miles south of Urbana, June 19, 1838."

## RUBIACEAE

- Galium circaezans* Michx. Wild Licorice, "Croofs clivers."  
 "4-1. *Galium circaezans*. Barrens & open woods. Urbana, June 20th 1836."
- Galium lanceolatum* Torr. Wild Licorice.  
 "*Galium lanceolatum?* Linn.—Torr. From near Mr. Conoway Rector's in woods. June 9, 1838."
- Mitchella repens* L. Partridge-berry, "Checker berry."  
 "No. 297. *Mitchella repens*. From the Upper Cedars, June 23rd 1838."  
 "*Mitchella repens*. June 23rd 1838 Urbana, O[hio]."
- Houstonia caerulea* L. Bluets.  
 "*Hedyotis caerulea*, Linn. Hooker. *Houstonia caerulea*, Willd. Grassy woodlands & meadows. Urbana, May 5, 1840."
- Houstonia purpurea* L.  
 "?*Anotis lanceolata?* From the Banks of Bank-lick [Creek] Kentucky, June 22nd 1839."  
 [Kenton Co.]

## CAPRIFOLIACEAE

- Viburnum acerifolium* L. Maple-leaved Viburnum, "Maple guelder-rose."  
 "No. 2 *Viburnum acerifolium* In hilly woods, near Zanesfield, June 18th 1838" [Logan Co.]

## VALERIANACEAE

- Valeriana edulis* Nutt. ex. Torr. & Gray, ssp. *ciliata* (Torr. & Gray) F. G. Meyer  
*Valeriana ciliata* Torr. & Gray. Valerian.  
 "No. 149 *Valeriana* ———? Hab[itat]—Wet grassy pra[iries] Collect[ed] May 26th 1838 near a small Cedar Swamp 2 miles S[outh] W[est] of Urbana. Flowers not fully expanded."  
 [Holotype, sent to Torrey, NY! Photostat of holotype, MO! Isotype, ILL! PH!] [See text for additional information.]

- "Valeriana Prairies—June 6th 1838" [Topotype, sent by Lea to Torrey, NY!]  
 "Valeriana—? . . . Wet grassy prairies, of a damp alluvial soil, June 9th 1838."  
 [Topotype, GH! ILL! PH!]  
 "Valeriana Samplesii, Torr. Wet grassy prairies, May 5, 1840" [Topotype, MICH!]  
 "Valeriana Samplesii, Torr. Alluvial, grassy prairies, May 12, 1840." [2 sheets, Topotype, MICH!]  
 +Valeriana Dioica Mr. Samples Urbana, Ohio. [Topotype, sent to Short, PH!]  
*Valeriana pauciflora* Michx.  
 "Valeriana pauciflora, Found in Mad river bottom." [MICH!]  
 "Valeriana pauciflora. Hab[itat]—Damp woods in alluvial bottoms. Coll[ect]ed, May 26th 1838 in the Mad river bottom 2½ miles west of Urbana." [PH!]  
 +Near Urbana, Ohio, May 26, 1838. [From the J. H. Redfield herbarium, cited by Meyer, 1951, with collector unknown, MO!]  
*Valerianella intermedia* Dyal. Corn-salad.  
 "Fedia radiata. Urbana, O[hio] June 9th 1838"

## CUCURBITACEAE

- \**Lagenaria vulgaris* Ser. Gourd.  
 "Cucurbita lagenaria Sept[ember] 21, 1838"  
*Sicyos angulatus* L. Bur Cucumber.  
 "No 654. Sicyos angulata. From Mr. T[homas] M. Gwynne's garden in Urbana, Sept[ember] 13th 1838."  
 \**Echinocystis lobata* (Michx.) T. & G. Wild Cucumber.  
 "No. 556. Momordica echinata From Mr. B[ethuel] Samples' garden in Urbana, Aug[ust] 27th 1838"

## CAMPANULACEAE

- Specularia perfoliata* (L.) A. DC. Venus's Looking-glass, "Clasping Bellflower."  
 "No. 309. Campanula amplexicaulis From Mr. I[ssac] Reynolds' field N[orth] E[ast] of Urbana, June 24th 1838."  
*Campanula americana* L. "Tall-Bellflower."  
 "No. 498. Campanula Americana. Fence rows and thickets, Urbana. July 27th 1838."  
*Campanula aparinoides* Pursh. Marsh-Bellflower.  
 +Urbana, Ohio.

## COMPOSITAE

- Eupatorium rugosum* Houtt. White Snakeroot.  
 "No. 632 Eupatorium ageratoides. Thickets & fence rows, Urbana, Aug[ust] 25 1838."  
*Liatris spicata* (L.) Willd. Blazing Star.  
 "Liatris spicata Upper cedars, July 27th 1838"  
*Antennaria plantaginifolia* (L.) Hook. Everlasting, Pussy's Toes.  
 "Gnaphalium dioicum, Linn. var. b plantaginifolium, Michx. (Pistillate) Sterile woodlands. Urbana May 5, 1840."  
*Gnaphalium obtusifolium* L. Catfoot.  
 "No. 642. Gnaphalium polycephalum Sterile fields S[outh] E[ast] of Urbana, Aug[ust] 25th 1838"  
*Silphium perfoliatum* L. Cup-plant.  
 "No. 508 Silphium perfoliatum Town branch, July 27th 1838."  
*Heliopsis helianthoides* (L.) Sweet ssp. *helianthoides* Ox-eye.  
 "No. 509 Heliopsis laevis. Town branch, July 27th 1838."  
*Echinacea purpurea* (L.) Moench. Purple Coneflower.  
 "No. 472. Rudbeckia purpurea. In groves, fence-rows & borders of thickets, Urb[ana] July 21st 1838."  
*Bidens cernua* L. Stick-tight, Bur-Marigold, "Daisy Beggar-ticks."  
 "17-3 Bidens chrysanthemoides. Wet meadows, and prairies. Urbana, Sept[ember] 9th 1837"  
*Achillea millefolium* L. Common Yarrow, Milfoil.  
 "405. Achillea millefolium From the woods near Thomas' old mill on Hanna's branch July 6th 1838."  
 \**Anthemis cotula* L. Dog-fennel, "Wild C[h]amomile."  
 "No. 332. Anthemis cotula. Road sides, Urbana, July 14th 1838."  
 \**Artemisia absinthium* L. Wormwood.  
 "No. 653. Artemisia absinthium. From Mr. B[ethuel] Samples' garden in Urbana Sept[ember] 4th 1838."  
*Cacalia suaveolens* L. Indian-plantain.  
 +On the banks of the Ohio [River] near Portsmouth, August 3, 1839. [Scioto Co.]  
*Cacalia tuberosa* Nutt. Indian-plantain.  
 "Cacalia—? This plant comes nearest C. ovata of Walter, but I think it is not that species,—Meadows, and swampy prairies. July 6th 1838"

*Senecio aureus* L. Golden Ragwort, Squaw-weed, "Golden Senecio."

"No. 150. *Senecio aureus*. Moist, rich alluvial soil. From the Upper Cedars, May 26th 1838."

*Cirsium vulgare* (Savi) Tenore. Bull Thistle, "Common Thistle."

"No. 507 *Cnicus lanceolatus*. Fields and pastures, Urbana, July 27th 1838."

*Cirsium discolor* (Muhl.) Spreng. Thistle, "Horrid Thistle."

"17-1. *Cnicus horridulus* Dry Barrens and pastures Urbana, Sept[ember] 9th 1837."

*Krigia biflora* (Walt.) Blake. Dwarf Dandelion.

"*Krigia amplexicaulis* Woods, near Urbana, June 30th 1838"

*Sonchus oleraceus* L. "Prickly Sow-thistle."

"17-1. ?*Sonchus spinulosus*? Dry clayey soils & in pavements. Urbana, Aug[ust] 19th 1837."

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