
VOLUME 7

1986

NUMBER 1

Missouriensis



JOURNAL OF THE
MISSOURI NATIVE PLANT SOCIETY

CONTENTS

Missouriensis is the official publication of the Missouri Native Plant Society. Founded in 1979 as a non-profit corporation, the Society is devoted to the conservation and study of the plants growing wild in Missouri, to the education of the public about the significance of the native flora and its habitat, and to the publication of related information.

Minutes of the Winter Meeting	by Sherry Morgan	p. 2
Minutes of the Spring Meeting	by Joanna Turner	p. 5
An Orchid Transplant	by Pat Grace	p. 8
Conversations with Julian Steyermark:		
The <u>Flora of Missouri Years</u>	by Gary A. Reese	p. 11
The Continued Expansion of <u>Galium pedemontanum</u> in Missouri	by David Castaner	p. 17
<u>Lonicera maackii</u> , Escaped from Cultivation in Missouri	by Paul L. Redfearn, Jr.	p. 20
Comments on Family Synopsis for the Missouri Flora, I	by Julian A. Steyermark	p. 21
Request for Material		p. 22
Missouri Botanical Record	by Wallace E. Weber and Jay Raveill . .	p. 23

MINUTES OF THE MISSOURI NATIVE PLANT SOCIETY
BOARD OF DIRECTORS MEETING DECEMBER 7, 1985

Call to Order: The meeting was called to order by President David Castaner at the Burr Oak Woods Nature Center, Blue Springs, Missouri at 9:30 A.M. Other board members present were: John Doggett, Karen Haller, Doug Ladd, Nancy Morin, Sherry Morgan, Ginny Wallace, Mervin Wallace, and Wallace Weber. Other members and guests present for the meeting were: Bill Clark, Bill Dierker, Pat DeLozier, Linda Ellis, Al Haller, Marguerite and Bud Solomon, and Joanne Watkins.

Minutes: Minutes for the preceding meeting were read. Mervin Wallace noted a \$5.00 error that needed to be corrected in the Treasurer's report. Minutes were approved with the correction.

Treasurer's Report: Treasurer Merv Wallace gave the following operating statement: balance on hand 9/2/85, \$4,332.99; income from membership dues and contributions, \$457.25; for a total of \$4,790.24. Disbursements: \$25.25 to Conservation Employees Credit Union for opening a new account (\$25.00 to savings account, \$.25 charge for new account); \$3.05 to Missouri Botanical Garden Library for photocopying; \$12.00 to Jim H. Wilson for coffee and donuts (June meeting); \$66.00 to Ginny Wallace for postage for dues notice; \$4.74 to Bryan's Office Supplies for rubber stamp; for total disbursements of \$111.004. Balance on hand 12/2/85, \$4,679.20. Dues notices were mailed November 5. Total number of members as of 12/2/84 is 295.

Committee Reports: Environmental Action and Education: Dave Castaner mentioned that this committee had been revised at the last meeting, and John Doggett is the new chairman. Castaner will be reviewing other standing committees and considering changes. Field Trips: Ginny Wallace mentioned that a member had called her and asked for more field trips. These trips have to be done on a local level, and Ginny asked that anyone interested in leading field trips should contact her. Awards: Ginny Wallace noted that information on awards will be published in the next issue of Missouriensis. Ginny requested authorization to order four more plaques. After discussion, Sherry Morgan made the motion, Wally Weber seconded and it was passed unanimously.

Brochures: Ginny Wallace and Dottie Epstein had discussed new brochures. Board members agreed that new brochures are needed, but that full color is too expensive. Ginny agreed to have a mock-up to present by the next meeting.

Future Meetings: Meeting dates and field trips were discussed. The next meeting will be in Warrensburg, April 25-26, in conjunction with the Missouri Academy of Science. The next annual meeting will be held June 13-14 at Big Lake State park with field trips to the loess hill prairies. Pat DeLozier agreed to lead a field trip to look at aquatic

plants in early July. This trip will be along the floodplain of the Missouri River in Lafayette County. The fall meeting will be held September 20th in Ste. Genevieve County. Wally Weber suggested a fern field trip and agreed to contact Jim Kelly and Paul Redfearn regarding field trips. Other suggestions made for future field trip meetings included woody plants in southeast Missouri, Indian Creek in Howell County, Holly Ridge State Forest on Stoddard County, and sites in Oregon County.

Missouriensis: Nancy Morin lead a discussion of the problems with Missouriensis. The main problem has been lack of material and this has resulted in less contact with members. Some members feel Missouriensis is too technical while some professionals feel it is not technical enough. Nancy suggested that Missouriensis could become more structured with articles assigned ahead of time on a particular topic. Nancy also indicated that if anyone else was interested in editing Missouriensis she would gladly step down. The discussion following resulted in comments from most everyone present. After a lengthy discussion, Dave Castaner made the following motion: Moved that a final issue of Missouriensis be published for 1985 and that in 1986 the society publish two issues of Missouriensis per year and four newsletters. After discussion, the motion was changed to six newsletters per year. The motion was seconded by Sherry Morgan and passed unanimously. Then the production of the newsletter was discussed. Finally, three volunteers stepped forward! The newsletter editors are Linda Ellis, Sue Hollis and Joanne Watkins from the Kansas City areas. Nancy Morin asked for suggestions for Missouriensis. Topics mentioned were history of Missouri botany, plant families, origin of scientific names, and new species for the state accompanied by new keys and illustrations. Newsletter topics mentioned were lists of new members, meetings and field trips, items from other plant society newsletters, a question and answer column, an a contest to name the newsletter. An editorial committee was established to determine what information should go in Missouriensis or the newsletter. Committee members are the current editors, Dave Castaner, Paul Redfearn, Doug Ladd and Ginny Wallace.

Inventory and Missouri Checklist: Since Jay Raviell has moved to Illinois, Dave Castaner called for a discussion of the inventory project and checklist of Missouri plants. Wally Weber explained that he is in the process of digitizing county maps from Steyermark's Flora of Missouri. Then new records can be added and a new dot atlas produced. Weber expects to have the digitizing completed by the end of the spring semester. Board members discussed the publication of a Missouri checklist, and noted unresolved issues such as level of taxonomy, new synonyms and standardization of common names. Nancy Morin mentioned that Sue Taylor is working on revised nomenclature. Dave Castaner suggested that since we have come to a decision point, the inventory committee might present a written report to the Board indicating the present status of its work. Then perhaps the goals and missions of the committee need to be redefined or restated (as needed), then a new committee constituted to implement these goals.

MONPS Projects: Previous suggestions have been made regarding spending some of the Society's money on worthwhile projects. Ginny Wallace moved that MONPS provide \$250.00 to students of Society members for expense money for a project that adds to the knowledge of the flora of Missouri. After a lengthy discussion, Wally Weber seconded the motion, which then passed unanimously. Dave Castaner asked that the Awards Committee work out the specific details and guidelines for this project and report back to the Board.

Other Business: Dave Castaner announced that he would check into Society members getting a discount price on the Flora of Missouri from Iowa State University Press. Ginny Wallace proposed the idea that the Society set up a speaker's bureau, making programs available to groups in their area. John Doggett made this motion, Wally Weber seconded it and it was passed unanimously. An announcement will be put in the newsletter. The Board commended the St. Louis chapter for its work at the flower show in St. Louis and all other activities on behalf of the Society. It was agreed to have the St. Louis chapter newsletter sent to Linda Ellis so that items of interest could be included in the MONPS newsletter.

Adjournment: The meeting was adjourned at 4:00 P.M.

Respectfully submitted,
Sherry Morgan, Vice President

MINUTES OF THE MISSOURI NATIVE PLANT SOCIETY
ANNUAL BOARD OF DIRECTORS' MEETING APRIL 26, 1986

Call to Order: The meeting was called to order by President David Castaner at 9:00 A.M. in the Science Library at Central Missouri State University, Warrensburg. Other board members present were: Melvin Conrad, Karen Haller, James Key, John Molyneaux, Sharon Morgan, Paul Nelson, Joanna Turner, Ginny Wallace, and Wally Weber. Other members and guests were: David Bogler, Patrick DeLozier, Bob Eastman, Linda Ellis, Catherine Filla, Bill Gant, Al Haller, Sue Hollis, David LaPlante, Ken McCarty, Susan and Dick Russell, Bill Summers, and Sue Taylor. Of the total number present, one was from the Columbia Chapter, three from Jefferson City, three from Kansas City, and nine from St. Louis.

Minutes: Minutes from the preceding meeting were approved as read.

Treasurer's Report: The operating statement was presented by Ginny Wallace in the absence of Treasurer Merv Wallace. Balance on hand 12-2-85: \$4,679.20. Income from operations: membership dues, \$1,367.50; interest from checking account, \$184.69; and \$578.58 from the Arkansas Natural Heritage Commission (a payment due Gary Reese, but rolled over by MONPS as the Committee could make payments only through a non-profit organization), for a total of income and cash of \$6,809.97. Disbursements were: \$66.00 and \$71.00 for stamps for the newsletter, \$18.00 to St. Louis Chapter for dues, \$28.77 for other newsletter expenses, and \$578.58 to Gary Reese, for a total of \$762.45. Balance on hand 4-24-86, \$6,047.52. There were 288 paid members as of 4-24-86 and 72 members who had not yet renewed.

Committee Reports: Editorial Committee: A meeting of this committee was held in Jefferson City and their decisions are to be published in the newsletter. Dave Castaner discussed the difficulties in deciding whether articles should be published in Missouriensis or the newsletter. This decision is mostly up to the editor of Missouriensis, but the objectives of both publications need to be clarified. Paul Redfearn has agreed to determine the format that should be followed by articles submitted to the journal. Field Trips: Chairman Ginny Wallace announced that her March 29th field trip to the Burr Oak Woods Natural Area drew 50 people and led to the formation of a Kansas City chapter. Several upcoming field trips have been announced in the newsletter. Membership Committee: Ginny Wallace indicated that 72 members have failed to renew after receiving a second notice, and she is considering writing some of them a personal note. Awards Committee: Ginny Wallace had received nominations from only one member for the awards to be given at the annual meeting in June. Also, only one grant application had been received. A replacement is needed on this committee for Gary Reese, who has moved to Michigan, and the board authorized Ginny and Paul Nelson to expand the committee as they see fit. Inventory Committee: There was a lengthy discussion of the need to redefine the objectives of this committee. Paul Nelson pointed out the problem of deciding when to stop and publish a Missouri flora update, and Wally Weber agreed that it is an ongoing project that can't be achieved in the next year or so, but it has to be cut off at

some point in time. Nelson raised the possibility of using MONPS funds to hire a student to assist in the project, and Sue Taylor suggested exploring financing from other groups as well, since the work will be valuable to the entire state. John Wylie announced receipt of a letter from Peter Raven proposing that the Department of Conservation put someone at the Missouri Botanical Garden to revise Steyermark's Flora of Missouri, and President Castaner asked that MONPS be kept posted on this. Wally Weber mentioned that there are many phases to updating, including county records, distribution maps, revised nomenclature, etc., and possibly Steyermark's work could be updated, but kept essentially as it is and a simplified field guide, which gives more of a concept of family characteristics, could be separately prepared. A mid-summer meeting of the Inventory Committee was decided upon, probably to be held at Meramec State Park, where chairman Jay Raveill will be working. Other members of the committee are Paul Nelson, Doug Ladd, and Wally Weber. Anyone interested in joining the committee should contact Dave Castaner.

New Chapters: Dave Castaner announced that we now have four chapters, which are located in Columbia, Jefferson City, Kansas City, and St. Louis. He asked that each chapter appoint two members (one of whom should be the treasurer) to be on a committee to review the role of chapters regarding the dues problem and representation on the state board. Sue Hollis agreed to contact the other chapters, set up a meeting, and have solid proposals by the winter meeting. Minutes, treasurer's reports, and newsletters from the chapters should be in archives and records have to be kept for the Internal Revenue Service. Ginny Wallace moved that seed money of \$100.00 for each of the three new chapters be provided. The motion was seconded by Mel Conrad and passed unanimously. Wally Weber mentioned the possibility of a chapter forming in Springfield.

Resignations and Appointments: Gary Reese has also had to resign from the Steyermark Archives Committee, and David Bogler, who had already helped on the project, will contact Betty Nellums to see if they can work out a way to continue with it. Ginny Wallace announced that she would like to resign as field trip chairman and volunteered to become membership chairman, since all the financial records and mailing lists are already in her office. Much gratitude was expressed to Ginny for all the work she has done in planning truly outstanding trips for the society. Ken McCarty, new Natural Areas Coordinator for the Department of Natural Resources, was appointed new field trip committee chairman.

Future Meetings: The annual meeting will be held at Big Lake State Park in northwest Missouri, with the board meeting and/or annual meeting possibly to be held Friday night, June 13th, and field trips on Saturday, June 14th. Paul Nelson will check on the availability of a meeting room for Friday night, and details will be given in the newsletter. The fall meeting is still planned for September 20, in Ste. Genevieve County.

Election: It was announced that Wally Weber and Patrick DeLozier have been nominated to fill the two board positions that expire in June. A notice will

be sent out asking for other nominations, which should be sent to nominating committee members Doug Ladd or Bill Summers. A ballot will be placed in the next newsletter.

Display Board: Ginny Wallace proposed securing a permanent display board for the society similar to the one she arranged for the MONPS booth at the Endangered Species Day at the Missouri Botanical Garden. She was authorized to see about having one made up.

Adjournment: The meeting was adjourned at 11:00 A.M.

Respectfully submitted,
Joanna Turner, Secretary

AN ORCHID TRANSPLANT

Pat Grace¹

Introduction

The purple fringeless orchid, Habenaria peramoena Gray, was first discovered by the late botanist J. H. Kellogg at Iron Mountain Lake in St. Francois County in 1928. The orchid is currently listed as status undetermined on the state list of rare and endangered species.

In July 1985, Mervin Wallace, Assistant Heritage Biologist with the Missouri Department of Conservation, went to this site and found forty-two blooming specimens and two sterile plants. He thinks more plants may be there. He also observed in the area Wild Sweet William (Phlox maculata L. var. pyramidalis (Smith) Wherry), a sedge (Carex triangularis Boeckl.), and Rushfoil (Crotonopsis linearis Michx). Wallace is exploring the state for rare and endangered species, researching historic botanical records and visiting sites where such plants have been found.

The habitat at Iron Mountain Lake is part of a wooded flood plain not frequently flooded. The location is in a small resort town in the leadbelt region of eastern Missouri. Town official Mayor John Rogers was quite interested when he learned there were orchids almost in his front yard. "Didn't know there was such a thing," he said.

A problem exists, however. Plans for a city park are complete and development will soon begin in the same area where the orchids grow. Wallace included this information in his field report to the Missouri Natural Heritage Inventory, and correspondence began between the state agencies involved with the park planning and rare plant protection. Sherry Morgan, Botanist with the Missouri Department of Conservation, recommended the orchids be moved to a safer site.

During the fall 1985 meeting of the Missouri Native Plant Society (MONPS), the members decided to take on the project of transplanting the orchids. Several members from the St. Louis area agreed to help. On September 19, Karen Haller, John Molyneaux, and I met Wallace near Iron Mountain Lake to begin the transplanting project.

Finding the Orchids

We drove to the upper shore, parked and walked with shovels, buckets and burlap bags into thick underbrush and woods. We soon realized we were searching for a needle in a haystack because of the changes the purple fringeless orchids must have made in just two short months. After Wallace

found a fallen log he had seen in July to use as a landmark for the plants, he and Karen Haller found the first orchid, which I'm sorry to say (with that expression to infuriate all plant lovers), "looked just like another weed," and a broken, bedraggled one at that. What must have been lovely rose-purple blossoms in July were now well-camouflaged green-brown seed capsules on stalks only eighteen inches to three feet tall. Of the twenty plants originally seen in that spot, we found only six more. We carefully dug them up and wrapped each with a burlap bag, being sure to include a generous ball of soil around the roots. Most orchids are associated with fungi in the soil surrounding their roots and should not be moved bare rooted, a fact mentioned by Sherry Morgan in her recommendation.

Only seven plants were taken because we had to meet Conservation Agent Mike Christensen at nearby Bismark Lake at 12 o'clock, and the time was close to that. We went out of the woods with our gear, and with sharp eyes we observed plants and shrubs as we left. Karen Haller took field notes of our observations of Beggar Ticks (Bidens vulgata Greene), Grape Fern (Botrychium dissectum Spreng.), Virginia Knotweed (Polygonum virginiaum L.), Spotted Touch-me-not (Impatiens capensis Meerb.), Clearweed (Pilea pumila (L.) Gray), Tall White Aster (Aster simplex Willd.), Blue Lobelia (Lobelia siphilitica L.), and Moneywort (Lysimachia nummularia L.).

Transplanting

We drove to Bismark Lake in adjacent Iron County. Bismark Lake is an impoundment administered by the Missouri Department of Conservation. MDC Agent Mike Christensen was waiting for us and we boarded a sturdy boat for the trip across the lake. We were headed to a site that was well protected and similar to the original spot at Iron Mountain Lake. Wallace had visited Bismark Lake the day before to locate the site.

We navigated carefully around tree stumps at the upper end of the lake. This took us up the creek source to the secluded site by the narrowed water passage. We pulled up to shore, unloaded, and walked a short distance into the underbrush. Once we found a good spot, we dropped everything - except the orchids, which we put down gently!

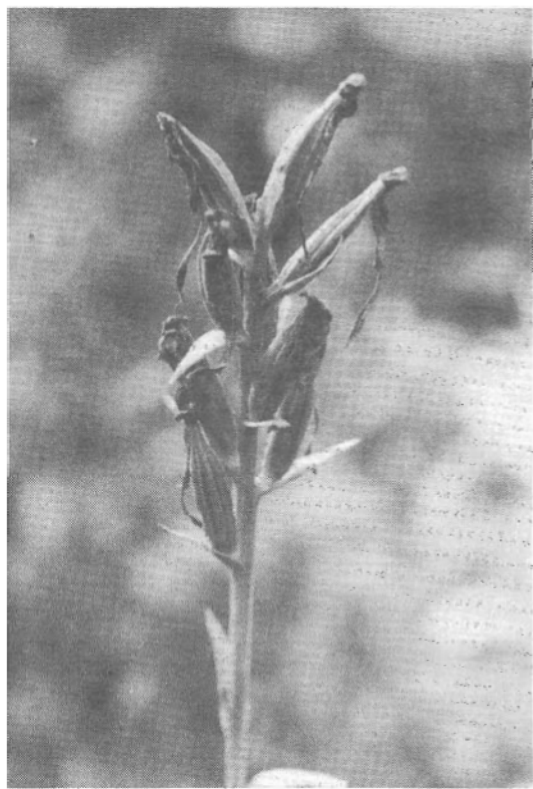
Wallace took a tape measure out full length along the ground and asked us to place the plants at even intervals along this line. We dug holes and planted the orchids, then we carried buckets of water from the creek to soak them thoroughly.

Once the orchids were in the ground, Wallace attached round metal discs to yellow plastic tent stakes. On the discs were code numbers for each plant to be later recorded in the Missouri Natural Heritage Inventory. He drove a tagged stake into the ground on the same side of each plant in line with the tape. At each end of the long line he placed a small red triangular plastic flag on a short wire to mark the site. At the shore he marked the location with blue tape tied to a branch. These markers will help to relocate the site and the plants, and the documentation is needed to monitor the population data on the survival rate of orchids.

Our job completed, we boarded the boat for the ride across the lake to our cars, where we took a few pictures and said our goodbyes.

The trip was special and unique for me; and I have great respect for Merv Wallace, who shares his experiences and knowledge willingly. He is a good teacher and a patient man. This task was important and I'm glad to have shared it with him and my fellow MONPS members Karen Haller and John Molyneaux. By these field trips we learn new things and recognize plant associations. We share the interest in Missouri native plants and the concern for what happens to more fragile species.

1 30 N. Iola Drive, St. Louis, Missouri 63119



Seed capsule of Habenaria peramoena.



Mervin Wallace, Assistant
Heritage Biologist

CONVERSATIONS WITH JULIAN STEYERMARK:
The Flora of Missouri Years

interviewed by Gary A. Reese
Missouri Department of Conservation

August 9, 1985
Missouri Botanical Garden
St. Louis, Missouri

While many people are aware of Dr. Julian Steyermark's contributions to our knowledge of Missouri's flora, they know little of the history behind his efforts at publishing the Flora of Missouri. Fewer still are aware that professionally he is a specialist on tropical American flora and did most of his Missouri research in his spare time. Therefore, it seems fitting to publish this brief transcript describing some of the interesting history behind the Flora of Missouri.

This transcript was made from a tape-recorded interview with Dr. Steyermark (denoted JAS). The interviewer was Gary Reese (denoted GAR), formerly a biologist with the Missouri Department of Conservation. The interview occurred on Friday, August 9, 1985, in Dr. Steyermark's office at the Missouri Botanical Garden. During the taping, Dr. Steyermark was viewing old (1930s) photographs that he had taken during plant collecting trips in Missouri and trying to recall times and places for some of the uncaptioned prints. This was part of an ongoing Missouri Department of Conservation/Missouri Native Plant Society project to catalog the approximately 1400 photos of Dr. Steyermark's in the Archives of the Missouri Botanical Garden.

GAR: What prompted you to do South American research while you were doing your Missouri work?

JAS: The reason I got tied up with Venezuela is because during World War II, I was sent down to South America. First Ecuador for nearly a year, and then to Venezuela, to make an inventory of the quinine resources of those countries, for the cinchona bark which has been used for treating malaria. We were needing quinine at that time because the Japanese had taken over critical places like Java, where all the quinine was grown, and the soldiers in the South Pacific were dying from malaria. So the United States government sent botanists to look for sources of new quinine where it is native in the Andes of South America. From Bolivia through Ecuador, to Colombia and Venezuela, it grows at the higher altitudes. We had to go out and find the trees and make samples of the bark, dry the bark - a couple of kilos - and send them back for examination, to see how much quinine there was in the sample. If there was enough, they planned to go down and exploit those areas and strip

the bark from the trees. But the war ended before it got very far, so nothing happened. They made a survey and they published on it.

GAR: Except that you were able to do some research on the side?

JAS: I was sent down to Ecuador and I was there for ten months and then they transferred me to Venezuela. I had read about the Lost World, of course, and the expeditions there to Roraima, Angel Falls, and Duida, and I had always wanted to go down to that part of Venezuela. A couple of the places where I had to look for quinine were in that part of the Lost World. I was there in 1943, all of 1944, and up to the middle of 1945, and I carried on much exploration during that period. I had the Field Museum (of Natural History, Chicago) extend my stay. . .let me stay longer so that I could do more exploring. So when I came back in 1945 I had to identify all these plants. There were about eight thousand numbers. I found so many wonderful new things - new species - that I said, "That's the country for me to go to!" So, I was sent on my first expedition, in 1953, to Chimanta Tepui (Tepui is the Indian word for the mountains). That is one of the big sandstone table-topped mountains isolated in the Lost World. I was there five months trying to get around and doing lots of climbing. Then in 1955, I went back again to the same mountain to explore more of it with another botanist, Dr. Wurdack, of the New York Botanical Garden. For three months [we] had Indians carry all the stuff up the Mountain. It took us one month to get up and a long time to get down.

GAR: Pre-helicopter days!

JAS: Yes. So I walked many miles.

GAR: You didn't do any sheer-sided climbing in those days, because you couldn't get up there?

JAS: We had to find a way to get up - in cracks around the bluffs. This kindled my desire to continue to explore that country. And so when an opportunity came up in 1958, I said, "Yes, I'd sure like to go," and I left the museum in 1959. I had [a] two year grant from the National Science Foundation to finish the Flora of Missouri. I wrote it up in two years, after getting all the data together, visiting all the state universities and junior colleges . . .

GAR: For your distribution maps?

JAS: Yes. So that's what happened then.

GAR: What years did that cover?

JAS: That was 1958 and 1959. I went down to Venezuela at the end of 1959 and never returned . . . never gotten out until last year [1984].

GAR: So, you wrote the text for this [Flora of Missouri] down there?

JAS: No, I wrote the text at the Field Museum, when I was still connected in Chicago. [That is when] I wrote the text for this [the Flora of Missouri].

GAR: [You did that] while you were on your National Science Foundation grant?

JAS: Yes, I received a grant from the National Science Foundation to complete the book. It was published by Iowa [State University Press] because Missouri [publishers] didn't have any money. Neither did the Missouri Botanical Garden nor the University of Missouri [Press]. I offered it to them at the time, but they couldn't [take it], they were too poor. So the people at Iowa grabbed it. That's why it was published by the Iowa State [University] Press.

(After a pause during which we reviewed more prints)

JAS: I worked for the Forest Service, you know? Back in 1936 and 1937. You remember that?

GAR: I remember.

JAS: I made surveys for them, and started an herbarium. I studied turkey and deer feeds, and made ecological studies of the Ozark forests.

GAR: I didn't know that you were studying turkey and deer feeds.

JAS: I went around following turkeys - wild turkeys- and deer and collected the plants that they eating.

(Again, after a pause in which we viewed more prints)

GAR: What led you to publish the Spring Flora [of Missouri]?

JAS: Well (laughs) . . . you see I had worked in Missouri with Mr. [Ernest J.] Palmer publishing the [Annotated] Catalog of the Flowering Plants of Missouri. That came out in the 1935 Annals of the Missouri Botanical Garden. So I continued and I thought it would be a good idea to have a Spring Flora of Missouri. Fassett brought one out of the Spring Flora of Wisconsin. In order to make it more easily digested - to identify plants - I conceived the idea of illustrating the keys. A picture always goes a long way in describing. So I was one of the first to introduce that idea. And so the Missouri Botanical Garden published the Spring Flora [of Missouri].

GAR: And then it got picked up by some publisher, the Lucas Brothers in Columbia?

JAS: (Not aware of my questioning) Oh, yes.

GAR: I've got a copy published by them, in 1959.¹

JAS: It's 1941 when it came out?²

GAR: And they reprinted it, and it's still available somewhere.

JAS: Really? I didn't know. So then, of course, I wanted to get a flora that would cover all the state, at all the seasons. That is why I continued working on the Flora of Missouri after the Spring Flora [of Missouri]. I was accumulating records on trips all the time. See, I came to the Field Museum in 1937 and I took all my spare time on vacations and days off - holidays and so forth - to go down to Missouri.

GAR: I've heard mixed stories on how the Field Museum viewed your [Missouri] research.

JAS: (Quickly responds) Ah, they didn't like it! They weren't really much in favor because, you see, they had brought me up there to work on tropical plants with Paul Standley, who was in charge. I was working on the Flora of Guatemala with him at the time. And I went on two expeditions to Guatemala in 1938 and 1939, and then again in 1941 to 1942. And so . . . I was mixing up my tropical work with Missouri work and I had to ask the Museum all the time for time off to go down to Missouri. So, you did hear it right, they didn't [like my Missouri work].

GAR: So it was a labor of love?

JAS: Yes. I simply wanted to make trips to Missouri in order to obtain more records from that state. And I had in mind to do this Flora of Missouri. Well, then Palmer died and I dedicated the Flora of Missouri to him.

(After another pause to view prints)

JAS: So what did you hear about this business of the Field Museum not approving [of my Missouri research]?

GAR: I heard that it was one factor in your deciding to leave.

JAS: Well, they weren't much in sympathy with my work in Missouri. That was my own choice, of course.

GAR: Were you curator or assistant curator?

JAS: I went from assistant curator when I first started in 1937 to associate curator and finally to curator. I was curator for eight years. When Mr. Standley left, I took over curatorship - from 1950 to 1958. And then I got the Venezuelan offer. I had offers from other countries, like Ecuador, Colombia, and Brazil. But since I had already been in Venezuela and found it so fascinating, I took that job. I had a chance to go to Brazil - São Paulo - to work. They offered me the opportunity but I turned it down. And Colombia also. Ecuador . . . I was in Ecuador first where I had trained a botanist there during the quinine program. He wanted me to work with him on the Flora of Ecuador. But I was already involved with the Flora of Venezuela.

(Later Dr. Steyermark recalled details of his first jobs)

JAS: I was research assistant here (Washington University, St. Louis) for Dr. Woodson for two months. [Then I] went down to Panama on my first expedition to the tropics in December, 1934 to February, 1935. And when I came back, that was in February, 1935, there were no real professional jobs of my type available. People during the depression then were being let out instead of being taken in. So, I had to teach senior high school here in University City (near St. Louis, Missouri). But, I had to go to night school to take education [courses] (laughs).

GAR: [A] Ph.D., but you had to go to night school!

JAS: Yes, to take education and psychology, required for a teaching certificate. So, I got a job here at University City Senior High School in 1935. And during the summers, I explored Missouri. In the summers of 1936 and 1937, I worked in the Missouri National Forests.

GAR: (Recalling a photo dated 1937) You say that truck [you were using for research at the time] cost you eighty-eight dollars?

JAS: Yes. You see . . . Truck? I like your nerve. It was a second hand Chevrolet sedan.

GAR: Oh, it was? It looked like a truck - rounded sides.

JAS: What were you looking at?

GAR: It looked like today's van [style], but it had rounded sides and it was dark - but then all vehicles were black.

JAS: What picture was that?

GAR: I don't remember where it was taken, but it was in the 1930s.

JAS: Well, um . . .

GAR: It had back doors that opened up.

JAS: (Dropping the debate over truck versus sedan) In my early years I was a nature counselor at a boy's camp for three summers, in 1928, 1929, and 1930. I'd been collecting plants in Maine, New Hampshire, Missouri, and

Illinois. I don't know how many thousands - a few thousand numbers I collected. So I sold them to the Missouri Botanical Garden, when Dr. Greenman was curator, and received eighty-eight dollars. And with that I bought a second hand Chevrolet. That was the first car I owned - 1934. That's quite a story about that car.

GAR: Was that a pretty good price for your specimens?

JAS: (Laughs) I guess so.

(Early in our conversation, Dr. Steyermark made a comment especially fitting as a summary)

JAS: I had a lot of fun [botanizing Missouri], I'll say that. I enjoyed what I was doing. [It was] just like a treasure hunt when I was out looking for plants.

Dr. Steyermark is presently the world's most prolific living plant collector. He has collected over 138,000 numbers (indicating individual specimens without counting duplicates of the same) during his lifetime and is being written up in the Guinness World Record Book. Approximately 50,000 of these were collected during his research for the Flora of Missouri. Dr. Steyermark recently returned to his home town of St. Louis after 25 years in Caracas, Venezuela, where he worked on the native flora. He is presently on the staff of the Missouri Botanical Garden, where he continues his study of the Venezuelan flora. He is preparing a monumental work on the Flora of the Lost World of Venezuela, to be published in a few years.

Dr. Steyermark's late wife, Cora, authored a book on his botanical explorations in Missouri. It is entitled Behind the Scenes and was published posthumously by the Missouri Botanical Garden. It is presently available at their bookshop.

¹ Actual date was 1964. (GAR).

² Copyright date was 1940.



Julian Steyermark on a Missouri collecting trip in the 1930s.

THE CONTINUED EXPANSION OF
GALIUM PEDEMONTANUM (RUBIACEAE) IN MISSOURI

David Castaner¹

Sanders (1976) reported Galium pedemontanum (C. A. L. Bellardi) Allioni (no common name) to be "currently increasing its geographical distribution on this continent." It was first found in Kentucky in 1933. Although no actual path is determinable, Sanders speculated these possible migration routes: Kentucky (1933), to western West Virginia (1941), central Tennessee (1952), eastern Illinois (1955), southeastern Missouri (1954), and southwestern Arkansas (1951). From western West Virginia to southwestern Ohio (1960), and western Virginia (1972).

In Missouri, the species was reported from Iron County in 1954, and from Christian and Taney counties (in 1972). Sanders (1976) predicted that it would soon widen its occurrence to include most of its potential suitable habitats: eastern Missouri north of the Missouri River, and most of southern Missouri except for the Unglaciaded Osage Plains area in west-central Missouri. It seems to be doing just that.

Galium pedemontanum is here reported from the following additional Missouri counties: Johnson (1970), Pettis (1983), Newton (1983), Camden (1983), Howell (1985), and Douglas (1985). It has also been reported from Shannon County (Jay Raveill, personal communication). It has been found in a cemetery, at the State Fairgrounds, in campgrounds, in an open disturbed field, and along the shoulders of several state routes. Since these types of habitats are common, the species has a huge expansion potential. With familiarity, it is relatively easy to identify in the field. Its sprawling matted appearance somewhat resembles the appearance of G. aparine L., but G. aparine usually has six long leaves per node; G. pedemontanum has four short leaves per node. The following description will serve to distinguish this species.

Sanders characterized Galium pedemontanum as being matted, with terminal erect growth, leaves in whorls of four, with axillary inflorescences shorter than the subtending leaves, with in-curved peduncles. Specifically, it is a fairly small annual that has retrorsely hispid or villous stems, short leaves only 3-10 mm long, with small yellowish or whitish flowers in groups of one to four, and smooth fruit. Missouri specimens have varying degrees of villousness and hispidness (some specimens engage themselves in an inseparable tangle of stems that seemingly grab every article of clothing nearby, resulting in a mass adhesion and, by the way, a shower of seeds). Although Fernald (1950), in Gray's Manual, described the flowers as yellow, in our specimens, all dried (!), the flowers are white in appearance (Figure 1).

In Flora of Missouri (Steyermark, 1963), G. pedemontanum will key to G. obtusum Bigel. The following insertion will allow G. pedemontanum to be keyed out in the Flora of Missouri. See Page 1388.

- f. Leaves in whorls (circles) of four (g)
 - g. Corolla dull purple; leaves acutely pointed;
 - 2-5 cm long G. arkansanum
 - g. Corolla whitish or yellowish; leaves obtuse (blunt)
 - at the tip, 0.8-3 cm long gg
 - gg. Leaves glabrous or slightly scabrous on the margins;
 - stems smooth G. obtusum
 - gg. Leaves villous; stems villous and retrorsely
 - hispid; leaves 3-10 mm long G. pedemontanum

Voucher specimens for the new reports are deposited in WARM (herbarium of Central Missouri State University). These are Johnson County, Francis 141, 8 May 1970; Pettis County, Castaner 7527, 24 May 1983; Newton County, Castaner 7453, 25 May 1983; Camden County, Castaner 7763, 23 June 1983; Howell County, Castaner 8383, 21 May 1985; and Douglas County, Castaner 8449, 22 May 1985.

Duplicates of Francis 141 (Johnson County) and Castaner 7763 (Camden County) have been examined by Cheryl A. Lawson (a current researcher in the genus) and have been verified.

LITERATURE CITED

- Fernald, M. L. 1959. Gray's Manual of Botany 8th ed. American Book Co., New York. lxiv + 1632 pp.
- Sanders, R. W. 1976. Distribution history and probable ultimate range of Galium pedemontanum (Rubiaceae) in North America. Castanea 41: 73-80.
- Steyermark, J. A. 1963. Flora of Missouri. Iowa State Univ. Press, Ames, Iowa. lxxxii + 1728 pp.

¹ Biology Department, Central Missouri State University, Warrensburg, Missouri 64093-5053

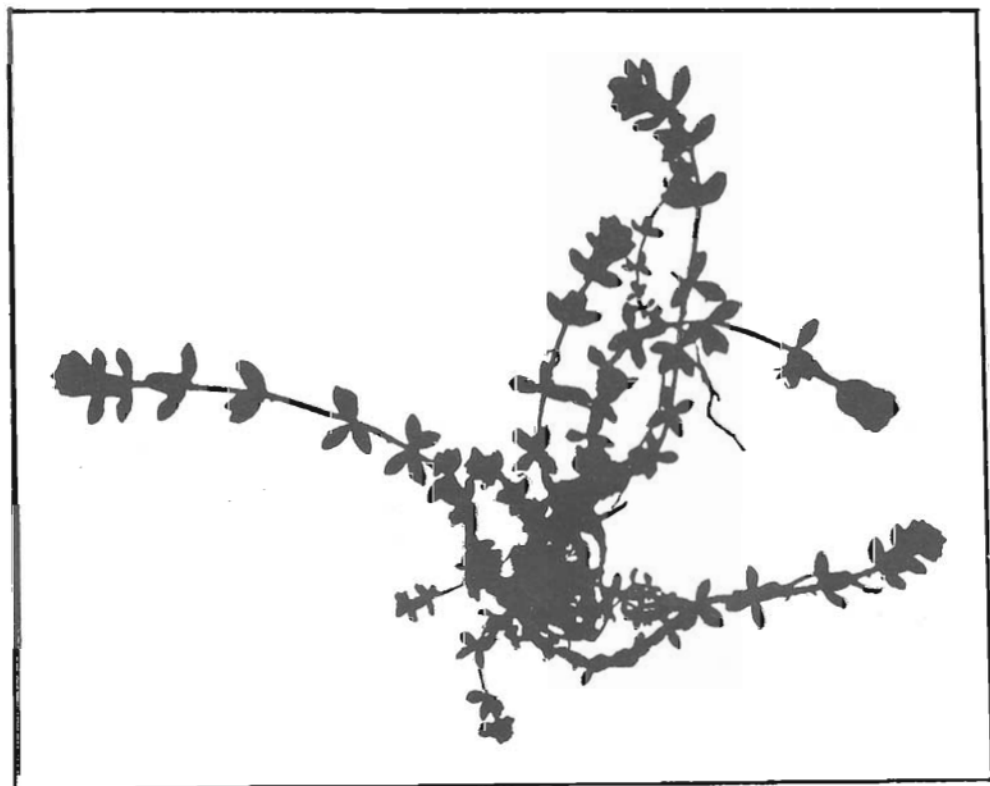


Figure 1. Xerograph of Galium pedemontanum. Castaner 7352 (WARM).

LONICERA MAACKII, ESCAPED FROM CULTIVATION IN MISSOURIPaul L. Redfearn, Jr.¹

Members of the genus Lonicera are difficult to keep penned. In addition to Japanese Honeysuckle (Lonicera japonica Thunb. var. japonica), L. morrowii Gray, and L. sempervirens L. var. sempervirens, Lonicera maackii (Rupr.) Maxim. may now be added to the list of adventive honeysuckles in Missouri. This species was found growing in a second growth oak-hickory forest on an east-facing slope just below Lake Springfield Dam southeast of Springfield in Greene County (Redfearn 33570, 33641, SMS). It was a small tree, about eight feet tall. This species has also been reported as an adventive in Illinois (Mohlenbrock & Ladd, 1978) and in Arkansas (Smith, 1978).

In the Flora of Missouri (Steyermark, 1963), L. maackii may be separated from other erect shrubby honeysuckles by flower pedicels that are distinctly shorter than the petioles of the subtending leaves.

LITERATURE CITED

- Mohlenbrock, R. H. and D. M. Ladd. 1968. Distribution of Illinois vascular plants. SIU Press, Carbondale. 494 pp.
- Smith, E. R. 1978. An atlas and annotated list of the vascular plants of Arkansas. Department of Botany and Microbiology, University of Arkansas, Fayetteville. 591 pp.
- Steyermark, J. A. 1963. Flora of Missouri. Iowa State Univ. Press, Ames, IA. lxxxiii + 1728 pp.

¹ Department of Biology, Southwest Missouri State University, Springfield, Missouri 65804-0095

COMMENTS ON FAMILY SYNOPSIS FOR THE MISSOURI FLORA, I

Julian A. Steyermark¹

Changes in the names of plants and their rank as to family, genus, and species are inevitable as more detailed studies are made by investigators. The tendency is to follow the most recent publications and to keep up with these changes. Although no one is compelled to do so, we are prone to accept what is "considered to be the latest word on the subject," unless there is evidence to the contrary.

The opinion, as expressed by Taylor and Turner (1985), that "the rank of forms is not useful" and the fact that "Kartesz and Kartesz do not include taxa under the rank of variety or subspecies" is quite another matter, and smacks too much of an attitude of finality, arbitrariness, and dictatorship. The wisdom of not recognizing forms must be seriously questioned. To submerge or suppress within the description of a given species one of its unusual features, be it flower or fruit color, fruit shape, or whatever other noteworthy differences, is an unfortunate omission. If Taylor and Turner's suggestion is followed, the conclusion that could be reached is that all forms could be eliminated at "one fell swoop."

To the defense of continuing forms, it must be emphasized that they serve a useful purpose: by giving them a name status, we place them in focus, on a botanical pedestal, so to speak, as something exceptional, something unusual not ordinarily associated with the species. The term form calls attention to what might be otherwise passed over in a description, and therefore designation as a form serves to indicate some special feature, something out of the ordinary.

Let us consider a few examples. The White Redbud (Cercis canadensis f. alba) is easily recognizable as completely at color variance from the usual rose-purple or lavender-rose colored typical C. canadensis. By giving it the rank of a form, we do not "clutter up the literature" as one proponent who wishes to eliminate forms would say, but rather we call attention officially to a color variation.

Another example is the Pink Dogwood (Cornus florida f. rubra). This is rarely encountered in a wild state in Missouri, but has become very popular in cultivation. Having a formal name serves the purpose of its being available as such under that name by commercial growers and customers as Pink Dogwood or f. rubra.

Rarely do we encounter a Persimmon (Diospyros virginiana) with the fruit dark or blue purple or plum blue in color (f. atra), or a Walnut (Juglans nigra) with an ellipsoid shaped fruit longer than broad (f. oblonga). Yet

such oddities have been furnished with special names in the rank of form in order to isolate them from the usual variations of salmon-orange or globose shaped fruits. We should also remember that previous investigators, including many keen and discriminating observers and thinkers, have chosen to single out such variations as meriting special formal names.

In a botanical democracy we are free to use the rank of form for any species which merits recognition because of an unusual divergence in color, shape, size, pubescence, or any other outstanding character, be it ever so small, but yet of such noteworthy distinction. It would certainly be unwise for our botanical science to ignore these interesting variations, which we term forms, and, at the suggestion of Taylor and Turner, or other authors, to eliminate them completely by sublimating them within the context of a general description. Our taxonomy has not yet reached a mathematical exactitude where we can automatically know the boundaries between the various ranks and subdivisions of a species. Until then, we are surely free to follow our particular judgments and concepts.

LITERATURE CITED

- Taylor, Mary S. and J. Turner. 1985. Family Synopsis of the Missouri Flora,
1. Missouriensis 6(2) 28-34.

¹ Herbarium, Missouri Botanical Garden, P. O. Box 299, St. Louis, Missouri 63166-0299

REQUEST FOR MATERIAL

The Missouri Botanical Garden hopes to increase its holdings of native Missouri Viburnum and Hickories in its living collection, and would appreciate receiving any material that Missouri Native Plant Society members might be able to contribute. Seeds should be accompanied by a pressed voucher specimen and complete collection data. If you think you might be able to send some material, please let George Rogers know in advance, so that he can concentrate his own field work in areas in which MONPS members are not working. Seeds, vouchers, and collection information should also be sent to: Dr. George Rogers, Horticultural Taxonomist, Missouri Botanical Garden, P. O. Box 299, St. Louis, MO 63166-0299.

MISSOURI BOTANICAL RECORD

Compiled & Edited by:

Wallace R. Weber & Jay Raveill

1986

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Equisetum arvense</i>	0010	Cape Girardeau	10/05/63	Donald R. Farrar 1052	SEMO
<i>Equisetum laevigatum</i>	0012	Cape Girardeau	13/07/67	Lucker 81	SEMO
<i>Equisetum hyemale</i>	0013	Cape Girardeau	23/04/62	Donald Calwell	SEMO
<i>Ophioglossum vulgatum</i> var. <i>pseudopodium</i>	0016	Cape Girardeau	07/04/74	Dan Green 45	SEMO
<i>Ophioglossum vulgatum</i> var. <i>pycnostichum</i>	0016	Cape Girardeau	03/05/74	Dan Green	SEMO
<i>Ophioglossum engelmanni</i>	0017	Cape Girardeau	04/04/76	Ohmart 860	SEMO
<i>Pteridium aquilinum</i> var. <i>pseudocaudatum</i>	0026	Cape Girardeau	21/04/76	Ohmart 877	SEMO
<i>Dryopteris marginalis</i>	0059	Cape Girardeau	30/04/75	Mike Burnett 48	SEMO
<i>Typha latifolia</i> f. <i>ambigua</i>	69	Cape Girardeau	13/06/56	Liz Renner 14	SEMO
<i>Typha angustifolia</i>	70	Cape Girardeau	12/07/76	T.E. Brooks	SEMO
<i>Typha glauca</i>	0071	Cape Girardeau	23/06/74	Dan Green	SEMO
<i>Potamogeton diversifolius</i>	0079	Cape Girardeau	11/06/76	Ohmart 1033	SEMO
<i>Najas guadalupensis</i>	0089	Cape Girardeau	11/06/76	Ohmart 1034	SEMO
<i>Bromus pubescens</i>	0107	Cape Girardeau	08/06/76	Ohmart 1009	SEMO
<i>Bromus racemosus</i>	0111	Cape Girardeau	16/06/69	Bufur 18	SEMO
<i>Poa compressa</i>	0133	Cape Girardeau	17/05/69	Lawless	SEMO
<i>Eragrostis hypnoides</i>	0143	Cape Girardeau	28/08/76	Ohmart 1476	SEMO
<i>Eragrostis pectinacea</i>	0147	Cape Girardeau	28/08/76	Ohmart 1478	SEMO
<i>Dactylis glomerata</i>	0164	Cape Girardeau	11/05/69	Roberts 51	SEMO
<i>Arundo donax</i>	0165	Cape Girardeau	27/10/70	T.E. Brooks 6037	SEMO
<i>Secale cereale</i>	0179	Cape Girardeau	15/05/69	Schoenwalder 71	SEMO
<i>Elymus villosus</i> f. <i>villosus</i>	0181	Cape Girardeau	16/06/69	Jim Lutz 32	SEMO
<i>Elymus canadensis</i> f. <i>canadensis</i>	0183	Cape Girardeau	13/07/67	Luker 83	SEMO

Contributors for this issue: Otto Ohmart, Department of Biology, Southeast Missouri State University, Cape Girardeau, Missouri 63701, all specimens deposited in SEMO Herbarium; Paul L. Redfearn, Jr., Department of Biology, Southwest Missouri State University, Springfield, Missouri 65804-0095, all specimens deposited in SMS Herbarium.

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Hordeum jubatum</i> var. <i>jubatum</i>	0188	Cape Girardeau	02/06/78	Ohmart 2083	SEMO
<i>Sphenopholis nitida</i>	0197	Cape Girardeau	19/04/73	T.E. Brooks	SEMO
<i>Holcus lanatus</i>	0204	Cape Girardeau	01/06/75	W.R. Eddleman	SEMO
<i>Agrostis hyemalis</i>	0215	Cape Girardeau	01/06/75	W.R. Eddleman	SEMO
<i>Agrostis perennans</i> var. <i>aestivalis</i>	0216	Cape Girardeau	10/09/76	Ohmart and Thompson 1540	SEMO
<i>Cinna arundinaceae</i> var. <i>inexpansa</i>	0217	Cape Girardeau	15/07/72	T.E. Brooks 6677	SEMO
<i>Muhlenbergia racemosa</i>	0224	Cape Girardeau	12/10/77	Ohmart 2039	SEMO
<i>Leptochloa filiformis</i> var. <i>attenuata</i>	0255	Cape Girardeau	20/08/75	W.R. Eddleman	SEMO
<i>Cynodon dactylon</i>	0257	Cape Girardeau	05/05/69	Besand 54	SEMO
<i>Phalaris arundinacea</i>	0271	Cape Girardeau	11/06/76	Ohmart 1039	SEMO
<i>Paspalum fluitans</i>	0288	Cape Girardeau	28/08/76	Ohmart 1463	SEMO
<i>Paspalum floridanum</i> var. <i>glabratum</i>	0295	Cape Girardeau	22/09/76	Ohmart and Thompson 1614	SEMO
<i>Panicum linearifolium</i> var. <i>linearifolium</i>	0298	Cape Girardeau	07/06/78	Ohmart 2128	SEMO
<i>Panicum lanuginosum</i> var. <i>fasciculum</i>	0308	Cape Girardeau	07/06/78	Ohmart 2127	SEMO
<i>Panicum oligosanthos</i> var. <i>helleri</i>	0315	Cape Girardeau	03/08/76	Ohmart and Thompson 1326	SEMO
<i>Panicum latifolium</i>	0321	Cape Girardeau	08/06/76	Ohmart 1007	SEMO
<i>Echinochloa crusgalli</i> var. <i>crusgalli</i> f. <i>longiseta</i>	0338	Cape Girardeau	01/07/78	Ohmart 2142	SEMO
<i>Echinochloa muricata</i> var. <i>ludoviciana</i>	0339	Cape Girardeau	28/08/76	Ohmart 1449	SEMO
<i>Echinochloa muricata</i> var. <i>microstachys</i>	0339	Cape Girardeau	02/08/76	Ohmart 1314	SEMO
<i>Setaria geniculata</i>	0341	Cape Girardeau	29/09/76	Ohmart and Thompson 1621	SEMO
<i>Setaria viridis</i>	0343	Cape Girardeau	26/06/69	Dufer 64	SEMO
<i>Setaria faberii</i>	0344	Cape Girardeau	09/07/76	Ohmart 1198	SEMO
<i>Cenchrus longispinus</i>	0346	Cape Girardeau	08/10/70	T.E. Brooks 6706	SEMO
<i>Erianthus alopecuroides</i>	0349	Cape Girardeau	27/10/76	Ohmart and Thompson 1670	SEMO
<i>Andropogon ternarius</i>	0354	Cape Girardeau	06/11/77	Ohmart 2043	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Cyperus flavescens</i> var. <i>poaeformis</i>	0364	Cape Girardeau	30/08/73	T.E. Brooks 7238	SEMO
<i>Cyperus aristatus</i>	0368	Cape Girardeau	28/07/72	T.E. Brooks 6746	SEMO
<i>Cyperus acuminatus</i>	0371	Cape Girardeau	20/06/74	T.E. Brooks	SEMO
<i>Cyperus ferruginescens</i>	0375	Cape Girardeau	28/07/72	T.E. Brooks 6742	SEMO
<i>Cyperus esculentus</i> var. <i>esculentus</i> f. <i>angustispicatus</i>	0378	Cape Girardeau	18/07/67	D. Hart 71	SEMO
<i>Cyperus strigosus</i> var. <i>strigosus</i>	0379	Cape Girardeau	30/08/73	T.E. Brooks 7240	SEMO
<i>Eleocharis obtusa</i> var. <i>jejuna</i>	0396	Cape Girardeau	24/09/73	T.E. Brooks 7326	SEMO
<i>Eleocharis macrostachya</i>	0399	Cape Girardeau	19/06/73	T.E. Brooks 7090	SEMO
<i>Fimbristylis autumnalis</i>	0407	Cape Girardeau	24/09/73	T.E. Brooks 7328	SEMO
<i>Scirpus atrovirens</i> var. <i>georgianus</i>	0421	Cape Girardeau	29/06/76	Ohmart and Thompson 1139	SEMO
<i>Hemicarpha micrantha</i>	0429	Cape Girardeau	21/09/73	T.E. Brooks 7248	SEMO
<i>Carex retroflexa</i> var. <i>retroflexa</i>	0446	Reynolds	05/20/76	Nelson 1221	SMS
<i>Carex retroflexa</i> var. <i>retroflexa</i>	0446	Greene	05/06/76	Stalker 435	SMS
<i>Carex retroflexa</i> var. <i>retroflexa</i>	0446	St. Clair	09/02/82	Solecki 1003	SMS
<i>Carex rosea</i>	0448	Dent	05/25/75	Maupin 1062	SMS
<i>Carex rosea</i>	0448	Ozark	05/16/69	Redfearn 14625	SMS
<i>Carex cephalophora</i> var. <i>cephalophora</i>	0449	LaClede	05/31/78	Pyrh 5267	SMS
<i>Carex muhlenbergii</i>	0452	Cape Girardeau	02/05/64	Paula J. Johnson 7	SEMO
<i>Carex muhlenbergii</i> var. <i>muhlenbergii</i>	0452	Texas	06/27/69	Pyrh 181	SMS
<i>Carex muhlenbergii</i> var. <i>enervis</i>	0452	Barry	08/10/74	Sheldon	SMS
<i>Carex gravida</i> var. <i>gravida</i> f. <i>gravida</i>	0453	Dent	04/28/74	Maupin 457	SMS
<i>Carex gravida</i> var. <i>gravida</i> f. <i>gravida</i>	0453	Lawrence	05/08/53	Palmer 53459	SMS
<i>Carex gravida</i> var. <i>gravida</i> f. <i>gravida</i>	0453	Cole	06/02/78	Maupin 376	SMS
<i>Carex gravida</i> var. <i>gravida</i> f. <i>gravida</i>	0453	LaClede	05/31/78	Pyrh 5317	SMS

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Carex scoparia</i> var. <i>scoparia</i> f. <i>scoparia</i>	0467	Cape Girardeau	29/06/76	Ohmart and Thompson 1138	SEMO
<i>Carex digitalis</i>	0497	Cape Girardeau	18/04/67	Porchey 35	SEMO
<i>Carex granularis</i> var. <i>haleana</i>	0502	Cape Girardeau	20/05/69	Furry 54	SEMO
<i>Carex emoryi</i>	0528	Cape Girardeau	01/05/69	Ann Overall 1	SEMO
<i>Carex lurida</i>	0534	Cape Girardeau	29/06/76	Ohmart and Thompson 1144	SEMO
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Cape Girardeau	02/05/64	Paula J. Johnson 3	SEMO
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	Cape Girardeau	18/04/69	Richard Rowlett 1	SEMO
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Barry	05/03/69	Redfearn 26035	SMS
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Dent	05/14/60	Whaley	SMS
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Douglas	04/25/64	Redfearn 12139	SMS
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Greene	04/14/58	Redfearn 3442	SMS
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Hickory	04/25/64	Shook	SMS
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Ste. Genevieve	05/08/64	Redfearn	SMS
<i>Arisaema atrorubens</i> f. <i>viride</i>	0551	Stone	05/09/67	Redfearn 21287	SMS
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	Barry	05/12/79	Hornberger 141	SMS
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	Dent	04/28/74	Maupin 488	SMS
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	Douglas	04/25/64	Redfearn 14385	SMS
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	Greene	04/25/33	Coffman	SMS
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	Howell	04/19/80	Redfearn 32203	SMS
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	St. Francois	04/10/77	Blackwell 42	SMS
<i>Arisaema atrorubens</i> f. <i>zebrinum</i>	0551	Shannon	04/29/61	Redfearn 8098	SMS
<i>Arisaema draconium</i>	0552	Polk	05/08/63	Eggers 524	SMS
<i>Arisaema draconium</i>	0552	Shannon	05/14/61	Redfearn 8146	SMS
<i>Acorus calamus</i>	0554	Lawrence	07/09/79	Pyrach 4049	SMS
<i>Spirodelia polyrhiza</i>	0555	Cape Girardeau	21/05/64	Frances Ward 113	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Spirodela polyrhiza</i>	0555	Barry	07/24/79	Hornberger 618	SMS
<i>Spirodela polyrhiza</i>	0555	Reynolds	07/08/75	Breyfogle 343	SMS
<i>Spirodela polyrhiza</i>	0555	Stoddard	05/20/72	Weber	SMS
<i>Lemna perpusilla</i>	0560	Vernon	06/07/60	Redfearn 5878	SMS
<i>Lemna valdiviana</i>	0561	Carter	05/29/60	Redfearn 5743	SMS
<i>Tradescantia ozarkana</i>	0568	Greene	05/09/74	Redfearn 31973	SMS
<i>Tradescantia virginiana</i> f. <i>virginiana</i>	0570	Cape Girardeau	02/05/64	Paula J. Johnson 117	SEMO
<i>Tradescantia virginiana</i> f. <i>virginiana</i>	0570	Barry	05/21/80	Hornberger 958	SMS
<i>Tradescantia virginiana</i> f. <i>virginiana</i>	0570	McDonald	04/30/66	Redfearn 18500	SMS
<i>Tradescantia virginiana</i> f. <i>virginiana</i>	0570	Newton	05/11/58	Paden	SMS
<i>Tradescantia virginiana</i> f. <i>virginiana</i>	0570	Reynolds	05/10/75	Nelson 42	SMS
<i>Tradescantia tharpaii</i>	0571	Ozark	05/08/65	Redfearn 17033	SMS
<i>Commelina communis</i>	0575	Gasconade	10/12/74	Niewald 19	SMS
<i>Commelina communis</i>	0575	Lawrence	11/02/56	Palmer 64705	SMS
<i>Commelina communis</i>	0575	Shannon	07/11/69	Redfearn 347	SMS
<i>Commelina erecta</i> var. <i>angustifolia</i> f. <i>angustifolia</i>	0579	Cape Girardeau	13/07/67	Jones 27	SEMO
<i>Commelina erecta</i> var. <i>erecta</i> f. <i>erecta</i>	0579	Barry	07/22/68	Redfearn 24532	SMS
<i>Commelina erecta</i> var. <i>erecta</i> f. <i>erecta</i>	0579	Dent	09/21/74	Maupin 916	SMS
<i>Commelina erecta</i> var. <i>erecta</i> f. <i>erecta</i>	0579	Greene	09/12/74	Key 161	SMS
<i>Commelina erecta</i> var. <i>erecta</i> f. <i>erecta</i>	0579	Phelps	05/30/77	Lewis	SMS
<i>Commelina erecta</i> var. <i>erecta</i> f. <i>erecta</i>	0579	Shannon	06/26/70	Witherspoon 347	SMS
<i>Commelina erecta</i> var. <i>erecta</i> f. <i>intercurva</i>	0579	Shannon	06/24/70	Witherspoon 303	SMS
<i>Juncus effusus</i> var. <i>solutus</i>	0585	Cole	06/21/79	Maupin 379	SMS
<i>Juncus secundus</i>	0589	Cape Girardeau	13/07/76	Ohmart and Thompson 1248	SEMO
<i>Juncus secundus</i>	0589	Wright	06/09/78	Pyrarh 5439	SMS

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
Juncus tenuis f. tenuis	0590	Greene	06/13/60	Redfearn 6066	SMS
Juncus tenuis f. tenuis	0590	LaClede	05/13/60	Pyrarh 5283	SMS
Juncus biflorus	0594	Cape Girardeau	27/06/67	Fish 67	SEMO
Juncus scirpoides	0598	Cape Girardeau	09/06/52	Louis W. Fields 31	SEMO
Amianthus muscaetoxicum	0608	Barry	06/21/79	Hornberger 350	SMS
Allium tricoccum	0616	Cape Girardeau	12/07/76	Baker 34	SEMO
Allium sativum	0617	Dallas	04/06/82	Ladd 6153	SMS
Allium sativum	0617	Greene	05/28/79	Key 2410	SMS
Allium vineale f. compactum	0618	Cape Girardeau	07/06/78	Ohmart 2108	SEMO
Allium vineale f. vineale	0618	Barry	06/05/78	Timme 177	SMS
Allium nutabile	0622	St. Clair	06/06/70	Redfearn	SMS
Lilium michiganense	0627	Polk	06/23/79	Timme 352	SMS
Lilium michiganense	0627	St. Clair	06/26/65	Henderson 65-429	SMS
Lilium michiganense	0627	Henry	06/03/80	Timme 472	SMS
Erythronium americanum	0629	Christian	04/03/61	Pyle 4	SMS
Erythronium americanum	0629	Dent	04/16/75	Maupin 324	SMS
Erythronium americanum	0629	Vernon	05.07/61	Householder	SMS
Erythronium americanum	0629	Wright	04/24/71	Thompson 55	SMS
Erythronium albidum var. mesochoreum	0630	Cape Girardeau	05/04/60	Ron Garrett	SEMO
Erythronium albidum var. mesochoreum	0630	McDonald	04/02/60	Houk 177	SMS
Erythronium albidum var. mesochoreum	0630	Polk	04/12/75	Nelson 3	SMS
Erythronium albidum var. mesochoreum	0630	Christian	03/27/82	Redfearn 32859	SMS
Camassia scilloides	0631	Cape Girardeau	19/04/69	Schoenwalder 26	SEMO
Muscari botryoides	0636	Cape Girardeau	12/04/75	Karen Christian 190	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
Muscari botryoides	0636	Christian	04/10/60	Merry	SMS
Muscari botryoides	0636	LaClede	06/02/78	Pyrah 5422	SMS
Muscari botryoides	0636	Marion	05/06/62	Secker 22	SMS
Muscari botryoides	0636	Shannon	05/12/62	Klopf	SMS
Smilacina racemosa var. cylindrata	0640	Barry	05/12/79	Hornberger 124	SMS
Polygonatum biflorum	642	Cape Girardeau	20/05/58	Ray Reiker 32	SEMO
Polygonatum biflorum f. biflorum	642	Douglas	08/14/69	Redfearn 26384	SMS
Polygonatum biflorum f. biflorum	642	Greene	05/28/79	Key 2371	SMS
Polygonatum biflorum f. biflorum	642	Shannon	05/18/63	Eggers 664	SMS
Polygonatum biflorum f. biflorum	642	Stoddard	04/17/63	Criger	SMS
Polygonatum biflorum f. biflorum	642	Taney	05/16/65	Utterback	SMS
Polygonatum biflorum f. biflorum	642	Texas	05/27/78	Pyrah 5223	SMS
Polygonatum canaliculatum	0643	Dent	05/29/74	Maupin 528	SMS
Trillium sessile f. viridiflorum	645	Barry	04/20/70	Hornberger 41	SMS
Trillium viride var. viride	646	Washington	05/16/60	Whaley	SMS
Trillium viride var. viride	646	Wayne	05/09/64	Redfearn 14496	SMS
Trillium recurvatum f. shayi	647	Cape Girardeau	24/04/65	Arlon Meyer, Jr. 1066	SEMO
Trillium recurvatum var. recurvatum	647	Ozark	05/08/65	Redfearn 17035	SMS
Smilax pulverulenta	651	Ozark	05/16/64	Redfearn 14634	SMS
Smilax ecirrhata	653	Cape Girardeau	07/05/60	Rhodes 32	SEMO
Smilax glauca var. glauca	654	LaClede	06/02/78	Pyrah 5410	SMS
Smilax bona-nox var. bona-nox	656	Stone	09/28/74	Nelson 517	SMS
Smilax bona-nox var. bona-nox	656	Taney	07/13/77	Hicks 647	SMS
Smilax bona-nox var. bona-nox	656	Texas	06/29/83	Redfearn 188	SMS
Smilax bona-nox var. hederifolia	656	Dent	09/14/69	Redfearn 1270	SMS

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Smilax bona-nox</i> var. <i>hederaefolia</i>	656	Shannon	09/25/76	Pope	SMS
<i>Narcissus pseudo-narcissus</i>	0660	Cape Girardeau	02/04/64	F. Ward 1	SEMO
<i>Hypoxis hirsuta</i>	0663	Cape Girardeau	29/04/77	Ohmart and Thompson 1687	SEMO
<i>Hypoxis hirsuta</i>	0663	Dade	05/02/82	Redfearn 32833	SMS
<i>Iris virginica</i> var. <i>shrevei</i>	0670	Cape Girardeau	21/05/77	Dan Green	SEMO
<i>Belamcanda chinensis</i>	676	Barry	07/18/79	Hornberger 579	SMS
<i>Belamcanda chinensis</i>	676	Howell	08/04/61	Redfearn 8631	SMS
<i>Sisyrinchium albidum</i>	677	Texas	05/26/78	Pyrar 5109	SMS
<i>Sisyrinchium campestre</i>	678	Cape Girardeau	10/05/70	Norman Driske 23	SEMO
<i>Sisyrinchium campestre</i> f. <i>campestre</i>	678	Barry	04/29/60	Houk 234	SMS
<i>Sisyrinchium campestre</i> f. <i>campestre</i>	678	Douglas	04/25/64	Cornwell 21	SMS
<i>Sisyrinchium campestre</i> f. <i>campestre</i>	678	Monroe	95/25/80	Moyer 39	SMS
<i>Sisyrinchium campestre</i> f. <i>campestre</i>	678	Wright	05/17/64	Redfearn 14720	SMS
<i>Sisyrinchium campestre</i> f. <i>kansanum</i>	678	Vernon	05/06/61	Householder	SMS
<i>Sisyrinchium angustifolium</i> (bermudiana)	679	Dent	05/28/74	Maupin 510	SMS
<i>Cypripedium calceolus</i> var. <i>pubescens</i>	682	Cape Girardeau	26/04/78	Susan Wessel 52	SEMO
<i>Cypripedium calceolus</i> var. <i>parviflorum</i>	682	Webster	05/11/84	Redfearn 33432	SMS
<i>Orchis spectabilis</i>	685	Howell	04/19/71	Redfearn 32211	SMS
<i>Habenaria peramoena</i>	692	Cape Girardeau	13/07/76	Ohmart and Thompson 1255	SEMO
<i>Corallorhiza odontorhiza</i> f. <i>odontorhiza</i>	708	Phelps	11/15/82	Hansman	SMS
<i>Liparis liliifolia</i> f. <i>liliifolia</i>	710	Barry	05/25/80	Timme 423	SMS
<i>Saururus cernuus</i>	714	Dade	06/07/70	Redfearn 26935	SMS
<i>Saururus cernuus</i>	714	Madison	07/28/64	Redfearn 1141	SMS
<i>Saururus cernuus</i>	714	Lawrence	06/19/59	Redfearn 4301	SMS

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
Salix nigra	713	Greene	09/22/76	Hilton 311	SMS
Salix alba var. calva	720	Dent	05/10/75	Maupin 1003	SMS
Salix rigida var. rigida f. rigida	722	Cape Girardeau	09/07/76	Ohmart and Thompson 1203	SEMO
Salix rigida var. rigida f. mollis	0722	Cape Girardeau	16/10/51	McCracken and Baudendistel 41	SE
MO					
Salix humilis var. humilis	725	Jasper	09/12/20	Palmer 19102	SMS
Carya ovata f. fraxinifolia	745	Cape Girardeau	20/04/77	Mary Shelly	SEMO
Maclura pomifera	790	Cape Girardeau	25/09/49	Jennings Mason	SEMO
Humulus japonicus	793	Cape Girardeau	27/09/70	T.E. Brooks 5932	SEMO
Parietaria pensylvanica var. pensylvanica	800	Cape Girardeau	09/07/76	Ohmart 1200	SEMO
Aristolochia tomentosa	0805	Cape Girardeau	27/08/78	Ohmart 2177	SEMO
Rumex arifolius var. furginus	818	Cape Girardeau	01/09/76	Ohmart and Thompson 1485	SEMO
Polygonum erectum	821	Cape Girardeau	13/10/76	Ohmart and Thompson 1660	SEMO
Polygonum pensylvanicum var. laevigatum f. laevigatum	829	Cape Girardeau	01/09/76	Ohmart and Thompson 1488	SEMO
Polygonum lapathifolium var. lapathifolium	830	Cape Girardeau	28/08/76	Ohmart 1452	SEMO
Polygonum hydropiper	832	Cape Girardeau	26/06/76	Ohmart 1114	SEMO
Polygonum persicaria var. persicaria	833	Cape Girardeau	07/07/72	R. Clinard and T.E. Brooks 96	SE
MO					
Polygonum hydropiperoides var. hydropiperoides f. hydropiperoides	835	Cape Girardeau	13/07/76	Ohmart and Thompson 1249	SEMO
Polygonum convolvulus var. convolvulus	839	Cape Girardeau	15/06/76	Ohmart 1044	SEMO
Polygonum scandens var. cristatum	840	Cape Girardeau	01/09/76	Ohmart and Thompson 1481	SEMO
Fagopyrum sagittatum	842	Cape Girardeau	15/05/65	George T. Roberson	SEMO
Chenopodium album	860	Cape Girardeau	15/05/63	C.M. Lesch 139	SEMO
Amaranthus tamariscifolius	0877	Cape Girardeau	03/08/76	Ohmart and Thompson 1325	SEMO
Amaranthus palmeri	0878	Cape Girardeau	3/10/73	Ohmart 1	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Amaranthus spinosus</i>	0880	Cape Girardeau	29/07/67	D. Fish 1	SEMO
<i>Amaranthus graecizans</i>	0886	Cape Girardeau	29/9/76	Ohmart and Thompson 1632	SEMO
<i>Froelichia floridana</i> var. <i>campestris</i>	0889	Cape Girardeau	01/07/78	Ohmart 2137	SEMO
<i>Mirabilis nyctaginea</i>	0891	Cape Girardeau	02/05/64	Benno Joa 53	SEMO
<i>Portulaca oleracea</i>	900	Cape Girardeau	24/08/78	Ohmart 2176	SEMO
<i>Portulaca mundularia</i>	903	Christian	07/31/58	Redfearn 3822	SMS
<i>Arenaria serpyllifolia</i> var. <i>serpyllifolia</i>	914	Cape Girardeau	30/05/78	Ohmart 2077	SEMO
<i>Arenaria patula</i> var. <i>robusta</i>	917	Cape Girardeau	05/04/74	D. Green 101	SEMO
<i>Cerastium vulgatum</i> var. <i>vulgatum</i> f. <i>glandulosum</i>	922	Cape Girardeau	08/04/73	Bill Eddleman	SEMO
<i>Cerastium arvense</i>	923	Cape Girardeau	05/04/62	Banaker 1	SEMO
<i>Lychnis alba</i>	933	Cape Girardeau	18/05/58	Rosemary Barker	SEMO
<i>Nelumbo lutea</i>	0956	Cape Girardeau	07/07/67	Buchheit 34	SEMO
<i>Ranunculus harveyi</i>	0984	Cape Girardeau	11/04/67	Gill 21	SEMO
<i>Ranunculus harveyi</i> f. <i>harveyi</i>	0984	Douglas	04/16/66	Redfearn 18929	SMS
<i>Ranunculus harveyi</i> f. <i>harveyi</i>	0984	Marion	04/06/62	Secker 25c	SMS
<i>Ranunculus harveyi</i> f. <i>harveyi</i>	0984	Ste. Genevieve	05/08/64	Redfearn 14560	SMS
<i>Ranunculus harveyi</i> f. <i>harveyi</i>	0984	Webster	04/12/71	Thompson 35	SMS
<i>Ranunculus harveyi</i> f. <i>pilosus</i>	0984	Christian	04/10/60	Merry	SMS
<i>Ranunculus harveyi</i> f. <i>pilosus</i>	0984	Iron	05/20/80	Redfearn 32253	SMS
<i>Ranunculus sardous</i>	995	Cape Girardeau	12/05/75	Ohmart 736	SEMO
<i>Clematis dioctoreifolia</i> var. <i>dioctoreifolia</i>	1005	Cape Girardeau	11/10/70	T.E. Brooks 5949	SEMO
<i>Podophyllum peltatum</i> f. <i>deamii</i>	1011	Webster	05/11/84	Redfearn 33433	SMS
<i>Stylophorum diphyllum</i>	1023	Cape Girardeau	25/03/76	Terry Wills	SEMO
<i>Brassica rapa</i>	1042	Cape Girardeau	17/05/70	Bill Eddleman 1	SEMO
<i>Brassica napus</i> var. <i>napobrassica</i>	1043	Cape Girardeau	03/05/76	Terry Wills 1	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Lepidium campestre</i>	1049	Cape Girardeau	13/04/76	Ohmart 876	SEMO
<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	1052	Cape Girardeau	05/05/76	J. Goldsberry 49	SEMO
<i>Arabis lyrata</i> var. <i>lyrata</i> f. <i>parvisiliqua</i>	1079	Cape Girardeau	07/04/65	Dale Vitt 33	SEMO
<i>Arabis missouriensis</i>	1082	Cape Girardeau	24/03/52	Francis H. Bentley 1	SEMO
<i>Arabis canadensis</i>	1084	Cape Girardeau	26/06/76	Ohmart 1122	SEMO
<i>Rorippa islandica</i> var. <i>fernaldiana</i>	1090	Cape Girardeau	05/05/76	Ohmart 889	SEMO
<i>Rorippa islandica</i> var. <i>hispida</i>	1090	Cape Girardeau	11/06/76	Ohmart 1013	SEMO
<i>Erisimum repandum</i>	1097	Cape Girardeau	30/05/78	Ohmart 2076	SEMO
<i>Sisymbrium officinale</i> var. <i>leiocarpum</i>	1099	Cape Girardeau	05/05/76	G.L. Caplinger 42	SEMO
<i>Heuchera americana</i> var. <i>interior</i>	1124	Cape Girardeau	26/04/77	Joe Touchette 62	SEMO
<i>Pyrus malus</i>	1147	Cape Girardeau	28/04/76	Tom O'Brien 45	SEMO
<i>Pyrus coronaria</i>	1149	Cape Girardeau	01/05/68	Downing 36	SEMO
<i>Crataegus crus-galli</i>	1167	Cape Girardeau	05/05/60	Suzuki	SEMO
<i>Crataegus mollis</i>	1185	Cape Girardeau	02/05/65	Arlon Meyer Jr. 1109	SEMO
<i>Fragaria virginiana</i>	1205	Cape Girardeau	22/04/73	Bill Eddleman	SEMO
<i>Duchesnea indica</i>	1207	Cape Girardeau	09/05/63	C.M. Lesch 165	SEMO
<i>Potentilla norvegica</i> var. <i>norvegica</i>	1211	Cape Girardeau	29/06/76	Ohmart and Thompson 1148	SEMO
<i>Potentilla paradoxa</i>	1213	Cape Girardeau	29/09/76	Ohmart and Thompson 1633	SEMO
<i>Rubus allegheniensis</i> var. <i>plausus</i>	1231	Cape Girardeau	11/05/65	Barbara Hill 101	SEMO
<i>Rubus ostryifolius</i>	1236	Cape Girardeau	07/04/60	Mac Suzuki 83	SEMO
<i>Rosa multiflora</i>	1242	Cape Girardeau	07/05/64	Paula J. Johnson 38	SEMO
<i>Rosa setigera</i> var. <i>setigera</i> f. <i>setigera</i>	1243	Cape Girardeau	07/06/78	Ohmart 2116	SEMO
<i>Rosa canina</i>	1249	Cape Girardeau	31/07/73	Jean Wandel	SEMO
<i>Prunus mexicana</i>	1258	Cape Girardeau	31/03/63	Donald R. Farrar 1023	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Prunus americana</i>	1259	Cape Girardeau	15/04/60	Mac Suzuki 83	SEMO
<i>Prunus angustifolia</i>	1262	Cape Girardeau	10/04/69	Furry 1	SEMO
<i>Prunus virginiana</i>	1267	Cape Girardeau	11/05/65	George T. Roberson	SEMO
<i>Desmanthus illinoensis</i>	1269	Cape Girardeau	28/08/76	Ohmart 1448	SEMO
<i>Gymnocladus dioica</i>	1272	Cape Girardeau	11/05/63	Tom Reich 122	SEMO
<i>Gleditsia triacanthos</i> var. <i>inermis</i>	1273	Cape Girardeau	28/09/53	G.E. Cammerer	SEMO
<i>Cassia marilandica</i>	1276	Cape Girardeau	03/08/76	Ohmart and Thompson 1340	SEMO
<i>Cassia fasciculata</i> var. <i>robusta</i>	1279	Cape Girardeau	28/08/76	Ohmart 1443	SEMO
<i>Trifolium reflexum</i> var. <i>reflexum</i>	1297	Cape Girardeau	08/06/76	Ohmart 984	SEMO
<i>Trifolium dubium</i>	1300	Cape Girardeau	27/04/65	Arlon Meyer, Jr. 1964	SEMO
<i>Medicago lupulina</i> var. <i>glandulosa</i>	1302	Cape Girardeau	09/07/76	Kathy Thompson 109	SEMO
<i>Medicago lupulina</i> var. <i>lupulina</i>	1302	Cape Girardeau	09/05/75	Mark Friedlein 124	SEMO
<i>Amorpha fruticosa</i> var. <i>angustifolia</i>	1322	Cape Girardeau	04/05/63	Ann Friemel 79	SEMO
<i>Wisteria frutescens</i>	1325	Cape Girardeau	11/05/63	Tom Reich 40	SEMO
<i>Robinia hispida</i> var. <i>hispida</i>	1327	Cape Girardeau	10/05/70	Mike Mitchell 21	SEMO
<i>Coronilla varia</i>	1335	Cape Girardeau	24/05/68	Graff 69	SEMO
<i>Vicia sativa</i> var. <i>segetalis</i>	1372	Cape Girardeau	30/04/76	Wayne Daume	SEMO
<i>Vicia dasycarpa</i>	1379	Cape Girardeau	06/05/62	Gilbert Baumker	SEMO
<i>Lathyrus hirsutus</i>	1384	Cape Girardeau	04/05/76	Wayne Daume	SEMO
<i>Lathyrus latifolius</i>	1385	Cape Girardeau	14/07/67	Wagner 94	SEMO
<i>Strophostyles helvola</i> var. <i>helvola</i>	1393	Cape Girardeau	01/09/76	Ohmart and Thompson 1501	SEMO
<i>Strophostyles umbellata</i> var. <i>umbellata</i>	1394	Cape Girardeau	03/08/76	Ohmart and Thompson 1338	SEMO
<i>Amphicarpa bracteata</i> var. <i>bracteata</i>	1398	Cape Girardeau	29/07/75	William Teeters 97	SEMO
<i>Oxalis corniculata</i>	1409	Cape Girardeau	18/04/63	Ann Friemel 35	SEMO
<i>Croton capitatus</i> var. <i>capitatus</i>	1432	Cape Girardeau	23/08/78	Ohmart 2175	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Acalypha ostryaefolia</i>	1437	Cape Girardeau	13/10/76	Ohmart and Thompson 1663	SEMO
<i>Euphorbia dentata</i> f. <i>dentata</i>	1444	Cape Girardeau	03/09/76	Ohmart 1322	SEMO
<i>Euphorbia heterophylla</i> var. <i>graminifolia</i>	1445	Cape Girardeau	23/09/77	Ohmart and Koehler 2025	SEMO
<i>Euphorbia corollata</i> var. <i>paniculata</i>	1453	Cape Girardeau	13/07/76	Ohmart and Thompson 1257	SEMO
<i>Euphorbia serpens</i>	1456	Cape Girardeau	22/09/76	Ohmart and Thompson 1618	SEMO
<i>Rhus aromatica</i> var. <i>illinoensis</i>	1471	Cape Girardeau	27/04/77	Ohmart 10	SEMO
<i>Acer nigrum</i>	1483	Cape Girardeau	05/03/62	P.L. Roth 1	SEMO
<i>Aesculus glabra</i> var. <i>glabra</i> f. <i>pallida</i>	1487	Cape Girardeau	16/07/76	Ohmart 1260	SEMO
<i>Impatiens pallida</i>	1491	Cape Girardeau	02/06/76	Cosk	SEMO
<i>Rhamnus lanceolata</i>	1496	Cape Girardeau	06/05/62	Donald Culwell	SEMO
<i>Rhamnus caroliniana</i>	1497	Cape Girardeau	10/10/51	Perrochione 106	SEMO
<i>Vitis aestivalis</i> var. <i>aestivalis</i>	1506	Cape Girardeau	11/06/76	Ohmart 1018	SEMO
<i>Abutilon theophrasti</i>	1530	Cape Girardeau	20/10/70	T.E. Brooks 5993	SEMO
<i>Hibiscus syriacus</i>	1531	Cape Girardeau	02/07/58	Ronald d. Reed 109	SEMO
<i>Hibiscus trionum</i>	1534	Cape Girardeau	01/09/76	Ohmart and Thompson 1490	SEMO
<i>Viola pedata</i> var. <i>lineariloba</i> f. <i>alba</i>	1557	Cape Girardeau	20/04/52	Mildred Hadden 115	SEMO
<i>viola triloba</i> f. <i>triloba</i>	1563	Cape Girardeau	17/04/61	Mary L. Casey 115	SEMO
<i>Passiflora incarnata</i>	1573	Cape Girardeau	12/07/67	Baker 41	SEMO
<i>Opuntia compressa</i>	1575	Cape Girardeau	10/05/63	Tom Reich 41	SEMO
<i>Ammannia coccinea</i>	1582	Cape Girardeau	28/08/76	Ohmart 1455	SEMO
<i>Lythrum alatum</i>	1584	Cape Girardeau	31/07/67	Jones 83	SEMO
<i>Jussiaea leptocarpa</i> var. <i>leptocarpa</i>	1593	Cape Girardeau	22/09/76	Ohmart and Thompson 1615	SEMO
<i>Ludwigia alternifolia</i> var. <i>pubescens</i>	1594	Cape Girardeau	30/07/67	Hart 102	SEMO
<i>Chaerophyllum tainturieri</i>	1637	Cape Girardeau	13/04/65	Bill Robbins 14	SEMO
<i>Taenidia integerrima</i>	1658	Cape Girardeau	27/04/65	James Schraer 147	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Thaspium trifoliatum</i> var. <i>flavum</i>	1670	Cape Girardeau	02/05/64	Thomas H. McCracken 93	SEMO
<i>Vaccinium arboreum</i> var. <i>arboreum</i>	1694	Cape Girardeau	15/05/65	B. Robbins 145	SEMO
<i>Vaccinium stamineum</i>	1695	Cape Girardeau	12/05/62	G. Baunker	SEMO
<i>Hottonia inflata</i>	1710	Cape Girardeau	20/04/65	Arlon Meyer Jr. 1001	SEMO
<i>Forestiera acuminata</i>	1720	Cape Girardeau	18/04/63	Donald A. Farrar 1075	SEMO
<i>Obolaria virginica</i>	1739	Cape Girardeau	12/05/62	Donald Calwell	SEMO
<i>Asclepias verticillata</i>	1763	Cape Girardeau	27/07/76	Ohmart 1304	SEMO
<i>Ipomoea purpurea</i>	1776	Cape Girardeau	09/07/67	Hart 38	SEMO
<i>Ipomoea pandurata</i> f. <i>leviuscula</i>	1777	Cape Girardeau	13/07/76	Ohmart and Thompson 1251	SEMO
<i>Convolvulus sepium</i> var. <i>sepium</i> f. <i>sepium</i>	1780	Cape Girardeau	29/06/76	Ohmart and Thompson 1136	SEMO
<i>Convolvulus arvensis</i> f. <i>arvensis</i>	1782	Cape Girardeau	00/05/58	Ted Ziegler	SEMO
<i>Cuscuta cuspidata</i>	1783	Cape Girardeau	28/08/76	Ohmart 1475	SEMO
<i>Phlox pilosa</i> var. <i>fulgida</i> f. <i>fulgida</i>	1797	Cape Girardeau	21/04/76	Mike Burnett 74	SEMO
<i>Onosmodium hispidissimum</i>	1821	Cape Girardeau	29/09/76	Ohmart and Thompson 1627	SEMO
<i>Mertensia virginica</i> f. <i>berdi</i>	1836	Cape Girardeau	01/04/73	Bill Eddleman	SEMO
<i>Verbena urticifolia</i> var. <i>urticifolia</i>	1840	Cape Girardeau	09/07/76	Ohmart and Thompson 1208	SEMO
<i>Verbena simplex</i>	1843	Cape Girardeau	16/07/76	Ohmart 1267	SEMO
<i>Verbena bracteata</i>	1844	Cape Girardeau	17/07/72	Russell Clinard 156	SEMO
<i>Verbena canadensis</i> f. <i>canadensis</i>	1845	Cape Girardeau	10/04/74	Alan Boehm	SEMO
<i>Glechoma hederacea</i> var. <i>hederacea</i>	1867	Cape Girardeau	29/04/74	Dan Green 85	SEMO
<i>Stachys palustris</i> var. <i>nipigonensis</i>	1879	Cape Girardeau	03/08/76	Ohmart 1323	SEMO
<i>Monarda fistulosa</i>	1888	Cape Girardeau	18/07/75	Ohmart 874	SEMO
<i>Monarda citriodora</i>	1891	Cape Girardeau	16/06/69	Dufur 32	SEMO
<i>Pycnanthemum pilosum</i>	1903	Cape Girardeau	03/08/76	Ohmart and Thompson 1334	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Lycopus americanus</i> var. <i>americanus</i>	1908	Cape Girardeau	28/08/76	Ohmart 1472	SEMO
<i>Mentha arvensis</i> var. <i>villosa</i> f. <i>villosa</i>	1911	Cape Girardeau	01/09/76	Ohmart and Thompson 1494	SEMO
<i>Solanum carolinense</i> f. <i>albiflorum</i>	1924	Cape Girardeau	11/07/67	Wagner 83	SEMO
<i>Lycopersicon esculentum</i>	1928	Cape Girardeau	27/10/76	Ohmart and Thompson 1672	SEMO
<i>Physalis heterophylla</i> var. <i>heterophylla</i>	1931	Cape Girardeau	13/07/76	Ohmart and Thompson 1241	SEMO
<i>Physalis angulata</i> var. <i>pendula</i>	1935	Cape Girardeau	28/08/76	Ohmart 1469	SEMO
<i>Datura stramonium</i> var. <i>tatula</i>	1941	Cape Girardeau	28/08/76	Ohmart 1440	SEMO
<i>Paulownia tomentosa</i>	1947	Cape Girardeau	21/08/78	Ohmart 2168	SEMO
<i>Bacopa rotundifolia</i>	1948	Cape Girardeau	23/09/77	Ohmart and L. Koehler 2024	SEMO
<i>Verbascum blattaria</i> f. <i>erubescens</i>	1961	Cape Girardeau	16/07/76	Ohmart 1265	SEMO
<i>Collinsia verna</i>	1973	Cape Girardeau	02/05/74	Myra Reinbott 38	SEMO
<i>Kickxia elatine</i>	1978	Cape Girardeau	06/11/77	Ohmart 2046	SEMO
<i>Orobancha uniflora</i>	2015	Cape Girardeau	15/05/58	L.J. Daniel	SEMO
<i>Phryma leptostachya</i> var. <i>leptostachya</i>	2025	Cape Girardeau	26/06/76	Ohmart 1120	SEMO
<i>Spermacoce glabra</i>	2049	Cape Girardeau	09/07/76	Ohmart and Thompson 1201	SEMO
<i>Houstonia caerulea</i>	2054	Cape Girardeau	05/04/75	Karen Christian 165	SEMO
<i>Houstonia longifolia</i> var. <i>tenuifolia</i>	2058	Cape Girardeau	07/05/64	Frances Ward 65	SEMO
<i>Lonicera japonica</i> var. <i>japonica</i>	2064	Cape Girardeau	04/05/77	Ohmart	SEMO
<i>Lonicera sempervirens</i> var. <i>sempervirens</i>	2065	Cape Girardeau	02/05/77	Jon Kern 31	SEMO
<i>Valerianella olitoria</i>	2083	Cape Girardeau	30/04/62	Gilbert Baumker	SEMO
<i>Cucurbita pepo</i> var. <i>ovifera</i>	2090	Cape Girardeau	15/09/77	Ohmart 2016	SEMO
<i>Cucumis melo</i> var. <i>melo</i>	2093	Cape Girardeau	29/09/76	Ohmart and Thompson 1631	SEMO
<i>Lobelia spicata</i> var. <i>leptostachys</i>	2107	Cape Girardeau	28/06/76	Ohmart 1121	SEMO
<i>Lobelia spicata</i> var. <i>spicata</i>	2107	Cape Girardeau	22/06/76	Ohmart 1110	SEMO
<i>Vernonia baldwini</i> var. <i>baldwini</i> f. <i>baldwini</i>	2114	Cape Girardeau	16/07/76	Ohmart 1259	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
<i>Eupatorium altissimum</i>	2119	Cape Girardeau	02/08/76	Ohmart and Thompson 1316	SEMO
<i>Eupatorium incarnatum</i>	2126	Cape Girardeau	12/09/76	Ohmart 1553	SEMO
<i>Solidago juncea</i> f. <i>juncea</i>	2154	Cape Girardeau	27/07/76	Ohmart 1309	SEMO
<i>Solidago rugosa</i> var. <i>aspera</i>	2161	Cape Girardeau	10/09/76	Ohmart and Thompson 1533	SEMO
<i>Boltonia asteroides</i> var. <i>decurrens</i>	2173	Cape Girardeau	03/10/76	T.E. Brooks 7856	SEMO
<i>Aster patens</i> var. <i>patens</i>	2182	Cape Girardeau	24/09/76	Ohmart and Thompson 1644	SEMO
<i>Aster pilosus</i> var. <i>pilosus</i> f. <i>pilosus</i>	2189	Cape Girardeau	12/09/76	Ohmart 1552	SEMO
<i>Aster dumosus</i> var. <i>strictior</i>	2194	Cape Girardeau	10/10/78	Ohmart 2185	SEMO
<i>Aster ontarionis</i>	2197	Cape Girardeau	22/09/76	Ohmart and Thompson 1611	SEMO
<i>Erigeron annuus</i> f. <i>annuus</i>	2207	Cape Girardeau	17/06/52	L.W. Fields 168	SEMO
<i>Erigeron divaricatus</i>	2211	Cape Girardeau	14/07/76	Ohmart and Thompson 1275	SEMO
<i>Iva xanthifolia</i>	2222	Cape Girardeau	03/10/73	Ohmart	SEMO
<i>Silphium perfoliatum</i> f. <i>perfoliatum</i>	2240	Cape Girardeau	16/07/76	Ohmart 1265	SEMO
<i>Heliopsis helianthoides</i> var. <i>scabra</i>	2250	Cape Girardeau	22/06/76	Ohmart 1111	SEMO
<i>Rudbeckia triloba</i> var. <i>triloba</i>	2259	Cape Girardeau	16/07/76	Ohmart 1264	SEMO
<i>Helianthus strumosus</i>	2281	Cape Girardeau	27/07/76	Ohmart 1295	SEMO
<i>Verbesina helianthoides</i>	2286	Cape Girardeau	22/06/76	Ohmart 1109	SEMO
<i>Coreopsis palmata</i>	2295	Cape Girardeau	11/06/76	Ohmart 1010	SEMO
<i>Bidens cernua</i> var. <i>cernua</i> f. <i>cernua</i>	2298	Cape Girardeau	28/08/76	Ohmart 1447	SEMO
<i>Bidens comosa</i>	2300	Cape Girardeau	28/08/76	Ohmart 1467	SEMO
<i>Bidens vulgata</i> var. <i>vulgata</i> f. <i>puberula</i>	2301	Cape Girardeau	01/09/76	Ohmart and Thompson 1496	SEMO
<i>Bidens frondosa</i> var. <i>frondosa</i> f. <i>frondosa</i>	2302	Cape Girardeau	01/09/76	Ohmart and Thompson 1580	SEMO
<i>Bidens bipinnata</i>	2306	Cape Girardeau	18/08/72	T.E. Brooks 6831	SEMO
<i>Anthemis arvensis</i> var. <i>agrestis</i>	2325	Cape Girardeau	09/07/76	Ohmart and Thompson 1204	SEMO

TAXON	MAP #	COUNTY	DATE	COLLECTOR	HERB
Matricaria chamomilla var. chamomilla	2328	Cape Girardeau	11/05/75	Ohmart 734	SEMO
Matricaria matricarioides	2329	Cape Girardeau	02/05/76	Ohmart 886	SEMO
Cirsium altissimum f. altissimum	2359	Cape Girardeau	01/09/76	Ohmart and Thompson 1400	SEMO
Cirsium carolinianum	2360	Cape Girardeau	02/05/64	Joan Blann 6	SEMO
Hypochaeris radicata	2379	Cape Girardeau	26/06/78	Ohmart 2130	SEMO
Tragopogon dubius	2382	Cape Girardeau	06/11/77	Ohmart 2041	SEMO
Taraxacum officinale	2385	Cape Girardeau	09/05/52	Harvey Shell	SEMO
Sonchus oleraceus f. oleraceus	2387	Cape Girardeau	07/07/72	R. Clinard and T.E. Brooks 94	SE
MO					
Lactuca canadensis var. latifolia f. latifolia	2391	Cape Girardeau	03/08/76	Ohmart and Thompson 1329	SEMO
Lactuca canadensis var. longifolia f. angustipes	2391	Cape Girardeau	03/08/76	Ohmart and Thompson 1330	SEMO
Lactuca canadensis var. longifolia f. longifolia	2391	Cape Girardeau	02/08/76	Ohmart 1315	SEMO
Lactuca canadensis var. obovata f. obovata	2391	Cape Girardeau	04/08/76	Thompson 142	SEMO
Lactuca floridana var. floridana f. floridana	2395	Cape Girardeau	10/09/76	Ohmart and Thompson 1535	SEMO
Lactuca floridana var. villosa	2395	Cape Girardeau	10/09/76	Ohmart and Thompson 1536	SEMO