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# **MISSOURIENSIS**



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*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.

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## STUDIES IN THE FLORA OF MISSOURI, II.

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The following species have been identified as new to Missouri since the first installment of this series was published (Yatskievych and Figg, 1989). They are presented here to validate the presence of these plants in the state and to encourage botanists to locate other populations of these taxa.

*Hypericum majus* (A. Gray) Rusby (Clusiaceae) - The northern species, *Hypericum canadense* L., was reported for Missouri (Steyermark, 1963) far from its known range, based upon a single collection from Sullivan County (Steyermark 70133; F). This collection was not examined by the most recent student of this group (Webb, 1980). Using Webb's monograph, the specimen was studied and found to be *H. majus* (A. Gray) Rusby, a widespread, related taxon also known to occur in adjacent Iowa. Thus, *H. canadense* should be deleted from the state's flora and replaced with *H. majus*.

*Carex eleocharis* L. Bailey (Cyperaceae) - The occurrence of this species Missouri was first noted by the eminent "cyperologist", Anton Reznicek, during his annotations of the F. J. Hermann herbarium at the time of its purchase by the University of Michigan some years ago. Hermann, himself a specialist in the study of *Carex*, had received the following collection for determination from Viktor Muhlenbach, but had been unable to determine it with confidence:

ST. LOUIS CITY: Bremen Avenue freight yard, between  
Bremen Ave. and Angelica St., 26 May 1962, V. Muhlenbach  
1951 (MICH, MO).

This collection was not included in Muhlenbach's (1979, 1983) subsequent treatments of the railroad flora in the St. Louis area and only recently resurfaced during Dr. Reznicek's work with the *Carex* collections at the Missouri Botanical Garden, where a duplicate was discovered.

*Carex eleocharis* is a member of the section *Divisae*, which includes two other Missouri species, *C. douglasii* Boott and *C. praegracilis* W. Boott. In general appearance and in Steyermark's (1963) key to *Carex* species, *C. eleocharis* comes closest to *C. praegracilis*, but differs in its smooth, obtusely angled (vs. triangular, roughened) culms, its thinner (1-2 vs. 2-6 mm thick) rhizomes, its involute (vs. flattened) leaves, and its more compact inflorescences. It grows natively from Alaska and Arizona eastward to Manitoba

and Kansas and occurs throughout much of the Great Plains (Kolstad, 1986). As such, it seems possible that native populations of this sedge will eventually be found in dry prairies and rocky or sandy areas in western Missouri.

*Medicago minima* (L.) Bartal. (Fabaceae) - This introduced species, commonly known as small bur clover or prickly medick, is sometimes planted for forage or green manure and is becoming established in the southern and southeastern United States. It resembles *M. arabica* (L.) Hudson and *M. polymorpha* L., already known from Missouri, in its habit, flowers, and spiny fruits, but differs from both of these species in its minutely dentate, rather than lacerate stipules (Small and Jomphe, 1989). A new record of this bur clover is documented by the following collection:

SCOTT COUNTY: disturbed roadside, just west of  
Interstate 55 on Highway 62, Sikeston, 23 May 1989,  
Yatskievych, Ladd, & Summers 89-92 (MO).

*Myriophyllum spicatum* L. (Haloragaceae) - The Eurasian water milfoil appears to be a relatively recent introduction that has dramatically expanded its range during the last few decades. Couch and Nelson (1986) provided a historical perspective on the broadening North American distribution of this species, the oldest documented collection of which dates back only to 1942. These authors first reported the species from four counties scattered in the southern half of Missouri, but did not cite voucher specimens in their overview. Since that time three collections at the Missouri Botanical Garden herbarium have been annotated as this species by Dr. Susan Aiken, a specialist in the genus *Myriophyllum*. Although the exact counties represented in Couch and Nelson's distributional maps are not possible to determine with any surety, the MO specimens obviously represent different collections. Thus, this species is more widespread in the state than the following collections indicate:

CARTER COUNTY: shallow water of the Current River,  
south of Van Buren, 21 Sep 1980, B. Summers 778.

CRAWFORD COUNTY: cool water of the Meramec River,  
2 mi upstream from Onandaga Cave, 16 Sep 1984,  
B. Summers 1474.

MONTGOMERY COUNTY: submerged in deeper pools of old  
artificial pond, along County Road BB, 0.2 mi west of  
Highway 161 junction, 25 Aug 1985, A. Brant &  
R. Gereau 694.

*Myriophyllum spicatum* is relatively easily separated from the other three species listed by Steyermark (1963) for Missouri. From *M. pinnatum* (Walter)

Britton, Sterns, & Pogg., it can be separated by its opposite to whorled (vs. at least some alternate) leaves. *Myriophyllum heterophyllum* Michaux differs in its larger, toothed (rather than shorter, dissected) bracts subtending the flowers, and *M. aquaticum* (Vell. Conc.) Verdc. [= *M. brasiliense* Cambess. in Steyermark (1963)] has longer (2.5-3.5 vs. <2.0 cm) emergent leaves with longer (4-8 vs. <4 mm) divisions. Other differences in the flower morphologies also exist (Aiken, 1981).

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## TWO NOTEWORTHY COLLECTIONS OF *OROBANCHE* L. (*OROBANCHACEAE*) FROM MISSOURI

Timothy E. Smith  
Missouri Department of Conservation

The Section MYZORRHIZA of *Orobanche* L. is represented in Missouri by two taxa of uncertain nomenclature. Two collections in 1989 established that extant populations of both of these broomrapes occur within the state. The densely spicate inflorescences of taxa within Section MYZORRHIZA distinguishes them from *O. uniflora* Nutt. of the Section GYMNOCAULIS, the only other *Orobanche* known from Missouri. All members of the genus are achlorophyllous and parasitic on the roots of various vascular plants, particularly the Compositae. Steyermark (1963) recognized only *O. ludoviciana* Nutt. within Section MYZORRHIZA and cited only two collections, both from St. Louis County from the 1890s. A 1939 collection from McDonald County, near Pineville, was determined by its collector W. B. Drew to also be *O. ludoviciana*. None of the three collection sites is known to contain an extant population today. Because of a dearth of records, the Missouri Department of Conservation (Wilson, 1984) lists *O. ludoviciana* as a Missouri endangered species.

On June 20, 1989, I collected an *Orobanche* with a densely spicate inflorescence on a dolomite glade in southwestern Taney County (Smith 2903, MO). The specimen was identified as *O. multiflora* Nutt. using keys by Collins (Correll and Johnston 1970) and Van Bruggen (Great Plains Flora Association 1986). However, in an unpublished thesis by Collins (1973), the taxon is considered a subspecies of *O. ludoviciana*. Following Collins (1973 and pers. comm. 1989), my collection represents the easternmost site of a taxon that is widely distributed in the Great Plains. A recent inspection of the Drew specimen at UM by George Yatskievych (pers. comm.) indicated that the 1939 McDonald County record is apparently the same species as my Taney County collection. Since the McDonald County record contained only general location data, and the record is over fifty years old; the collection from Taney County is the only known extant site for the taxon in Missouri.

Following discussions with me and Dr. Collins, George Yatskievych searched for additional records of *Orobanche* in a suitable habitat in St. Louis County, where the two collections from the 1890s occurred. Amazingly, on his first attempt, Yatskievych located several plants on August 20, 1989 on the south bank of the Meramec River. The plants were determined to be parasitic on the roots of a large stand of Giant Ragweed, *Ambrosia trifida* L. The specimen (Yatskievych 89-320, MO) is best identified as *O. ludoviciana* according to area manuals (Steyermark 1963, Mohlenbrock 1986). Col-

lins (1973), in studying the nomenclature and typification of Section MYZORRHIZA, concluded that the name *O. ludoviciana* correctly applies to the more western taxon previously known as *O. multiflora*, rather than to the more eastern plants traditionally referred to as *O. ludoviciana*. He proposes the new taxon, *O. riparia* ined., for the plants of eastern Missouri, Illinois, and several other mid-western states. Unfortunately, because Collins' thesis remains unpublished, a valid new name for the eastern taxon does not yet exist.

Regardless of the eventual resolution of the taxonomic difficulties with Section MYZORRHIZA of *Orobanche*, the southwestern and eastern Missouri populations confirmed in 1989 should remain as separate species. The taxa differ in habitat and in host specificity. Morphologically, the eastern plants can be distinguished from western populations by their distinctly acute versus rounded, obtuse corolla lobes; more widely spaced flowers on much branched stems; and larger overall size (Collins 1973). For the present, it seems best to continue using the traditional nomenclature in this complex, i.e. *O. multiflora* for the southwestern Missouri plants and *O. ludoviciana* for the eastern Missouri plants. Future research should include locating additional populations of both taxa in the state and determining additional host species.

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## **STENOTAPHRUM SECUNDATUM (POACEAE) IN STONE COUNTY. A NEW GRASS FOR MISSOURI**

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*Stenotaphrum secundatum* (Walter) Kuntze, commonly called St. Augustine grass, is a warm season turf grass that is widespread in the American tropics and as far north as coastal South Carolina. It is also grown extensively in lawns and has become established in Texas and California (Hitchcock, 1950).

*Stenotaphrum*, a Greek name meaning "narrow trench", describes perfectly the solitary or paired flowering spikelets, which are embedded in a fleshy rachis 10 to 30 cm tall. The vegetative portion has a compressed habit of branching, stoloniferous culms with short, obtusely tipped leaf blades usually less than 15 cm long (Fig. 1).

This grass was introduced as sod in 1961 to the site of Cedar Hollow Resort, owned by Harold H. Ellis, where it became established and persisted until the present. Cedar Hollow Resort is located on Table Rock Lake in southern Stone County, ca. 18 miles southwest of Reeds Spring and ca 40 miles north of the Arkansas border.

This site was first discovered by the author in a routine botanical survey of the property in 1987. Consulting the *Flora of Missouri* (Steyermark, 1963) yielded no help in identification, so the specimen was brought to the attention of Dr. Norlan Henderson when the Stone County specimens were donated to the University of Missouri, Kansas City, Herbarium. Dr. Henderson identified the plant as *Stenotaphrum secundatum*. The voucher specimen (Ellis 87-161) was added to that collection and additional specimens sent to Dr. George Yatskievych at Missouri Botanical Garden.

The location in which this grass was planted has been a key factor in its ability to persist so far out of its normal range. The grass was originally planted along a south-facing cinder block building and has formed a thick, thatchy strip 50 feet long and 5 feet wide. Smaller patches subsequently spread out spontaneously from this monocultural strip and thin to occasional patches where less protected. Table Rock Lake is within 150 yards of the site and the warming influence of a large body of water probably has helped the grass to persist. However, The area does receive a hard freeze each year, which is inconsistent with the natural range of this plant.

Care recommendations for this grass as a turf cultivar include moist, mucky soils and a neutral to alkaline pH, none of which it receives at its Missouri station. The site, if anything, is baked dry in summer and has pH 5-6. Although the plant does not seem to have expanded its original area much (a thorough survey of nearby areas has not been done), it has persisted in its original location for 28 years (filling in adjacent areas) without the introduction of additional material.

#### LITERATURE CITED

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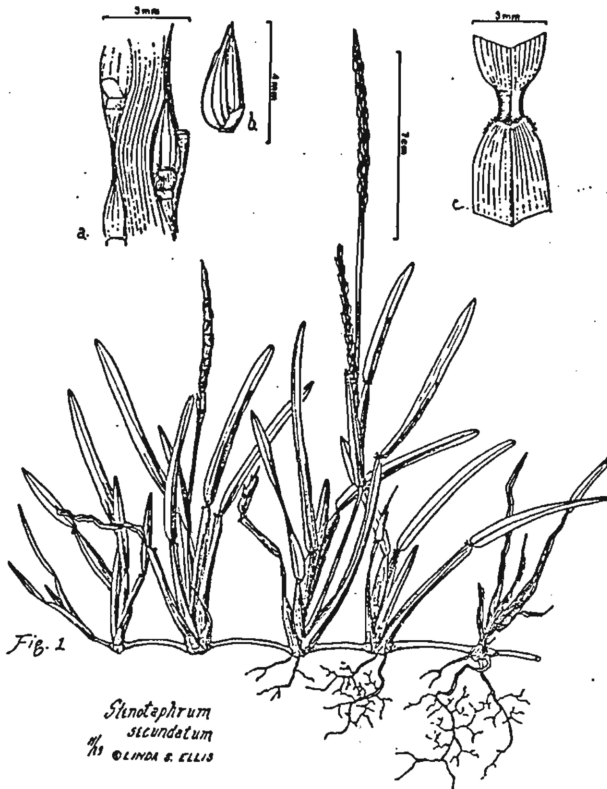


Figure 1. - Habit, a. portion of inflorescence, b. spiklet, c. portion of leaf with ligule.

**Wildflowers of Mississippi** by S. Lee Timme, copyright 1989. University Press of Mississippi, Jackson, MS, xx + 278 pp., cloth (ISBN 0-87805-395-6), \$40.00.

Mississippians have long awaited a manual of the state's flora and a guide to the state's wildflowers. The latter of these needs has been suitably met by this recent publication. With excellent reproduction of over 500 color photographs, this attractive book is equally at home on the coffee table or in the backpack. Dr. Timme, a Missouri native and graduate of Southwest Missouri State University, began putting together this guide while a doctoral student at Mississippi State University with encouragement of the Mississippi Native Plant Society.

The introductory section explains the organization of the 521 species described, which is alphabetical by family, genus, and species within the two classes --monocots and dicots. Also included are a map and brief descriptions of the ten physiographic regions of the state.

The body of the text consists of family and species' descriptions with a generous number of illustrating photographs. Following the scientific and common names, descriptions detail leaves, inflorescences, fruits, flowering dates, habitats, and distribution within Mississippi. Comments follow some entries describing uses of the plant, its geographic origin, similar species, or other notes. Technical terminology in the descriptions is minimized, and a glossary as well as line drawing of vegetative and floral characteristics are included before the single index of common and scientific names. The arrangement of the species by family and genus favors the use of the book by the professional over the amateur wildflower enthusiast. The addition of a simplified identification key to plant families would have facilitated the plant identification by those not knowledgeable of family characteristics.

While readers will recognize many species that our state has in common with Mississippi, many of the plants from the coastal region of Mississippi may be unfamiliar.

Reference lists of floristic manuals and other wildflower guides applicable to the area are provided and will be useful for readers desiring additional sources of information on Mississippi plants. *Timothy E. Smith, Missouri Department of Conservation.*

## ROBERT H. MOHLENBROCK: HIS BOTANICAL ROOTS AND HIS INFLUENCE ON MISSOURI BOTANY\*

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None of Dr. Mohlenbrock's professional botanical colleagues here today has known him quite as long as I; therefore, I believe it is appropriate that I should speak about his early botanical interests, those persons who influenced his very productive and distinguished career, and the impact of his influence on others.

My acquaintance with Bob goes back to the late 1940's when both of us were students at Murphysboro (Illinois) Township High School. There we came under the influence of Esther Smith (Figure 2), a biology teacher par excellence. Esther was one of those rare individuals whose enthusiasm for biology was not confined to the classroom. She had a well organized biology club whose members she encouraged to work on some kind of project. The emphasis of a majority of those projects was natural history. At the end of the year, if she thought they were worthy projects, only then were you allowed to enter the project into science fair competition. In the 1952 MTHS yearbook, a description of the Audubon Biology Club contains this passage in reference to science fair projects (1952):

"...they represent the results of many hours spent in field surveys and laboratory investigations. Members of this organization learn how to work scientific problems in connection with their various science projects. They have, and are still making, some real contributions to the natural history knowledge of southern Illinois."

Some of her student's science fair projects included such topics as Field Survey of Trees (Figure 1), The Ferns of Southern Illinois, the Mosses of Southern Illinois, the Reptiles and Amphibians of southern Illinois, and the Fish of Southern Illinois.

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\*This was the text of an address given by the author at the "Robert H. Mohlenbrock Symposium", a symposium honoring Dr. Mohlenbrock's retirement from the Department of Botany, Southern Illinois University, Carbondale.

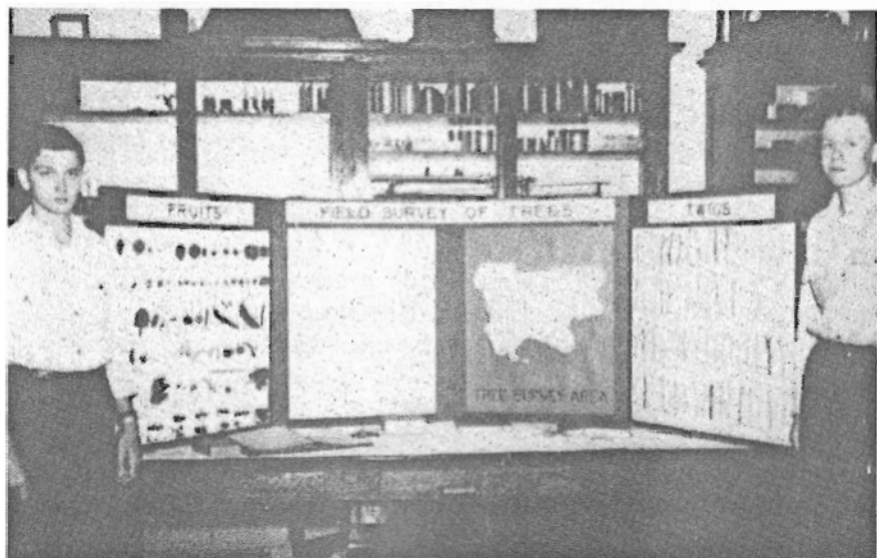


Figure 1. Bob Mohlenbrock (right) and Kenneth Stewart (now Professor Stewart at Miami University, Oxford, OH) with their 1950 Science Fair Project.

Not only did Esther Smith encourage her students to work on these projects, but if it involved field work, she took them into the field to collect or observe whatever was necessary. All in all she had a great influence on her students, whether or not they continued their studies at the college level.

However, there was a small nucleus of seven students who graduated within a four year span, all of whom went on to Southern Illinois University-Carbondale to major in some area of biology. All ultimately obtained PhDs. Not only did this group represent a special group of students who were influenced by Esther Smith, but they in turn had an influence on each other long before receiving degrees, particularly on those in the group still in high school (Figure 2). Without a doubt, my enthusiasm for botany was enhanced by Bob Mohlenbrock, who taught me many species of flowering plants while I was still in high school, and before my first course in plant taxonomy. I am also quite certain that 3 of his peers--Bill Hardy, Tom Collins, and Ray Hatcher--who were all a year ahead of Bob in school, had some influence on him (Figure 2).

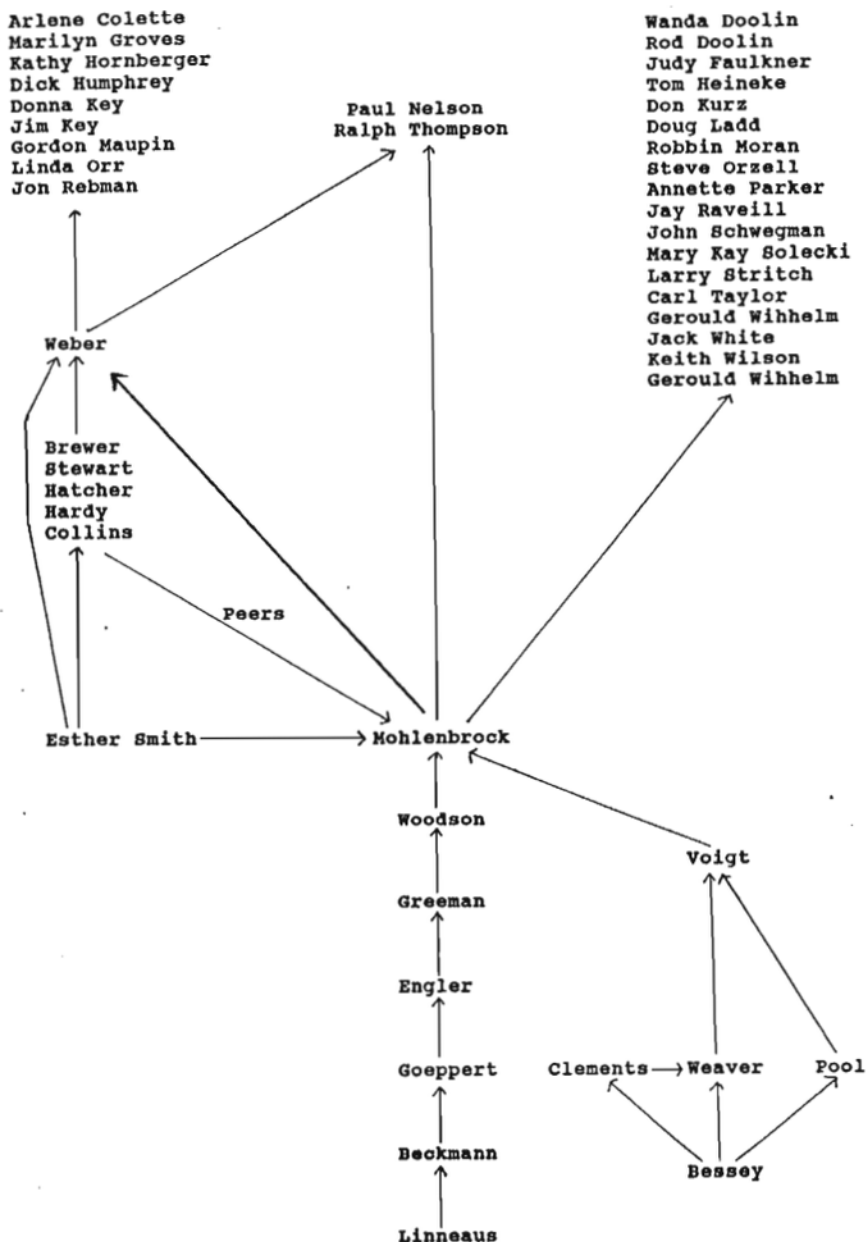


Figure 2. A chart depicting the "Academic Genealogy" of Robert H. Mohlenbrock. The lower half of this chart shows the relationship between RHM and his peers, teachers, and their teachers. The upper half shows his influence on others.

During the period that Bob pursued both his baccalaureate and master's degrees at SIU, he was obviously influenced by a number of his college professors, including Bill Marberry, Leo Kaplan, Walter Welch, and Margaret Kaeiser. The person who influenced him most at SIU, of course, was John Voigt (Figure 2), who taught him ecology and plant taxonomy and served as his thesis advisor as he completed a floristic study of Giant City State Park. During the years we were both students at SIU, we were field companions many times, and I learned much from him on those occasions.

After completing his master's degree at SIU, Bob went on to Washington University and the Missouri Botanical Garden in St. Louis, where he worked with Bob Woodson (Figure 2), his major advisor, on a monograph of *Stylosanthos*.

If we look a little deeper at Bob Mohlenbrock's "root system", we find he has a highly distinguished lineage, as do all of you who are his students. Robert Woodson, his PhD advisor, wrote in an address as the president of the American Society of Plant Taxonomists, the following (1954): "I have disciples now, and must remember that I am a son of Greenman, who was a son of Engler, who was a son of Goeppert, who was a son of Beckmann, who was a son of Linnaeus (Figure 2)." As a plant taxonomist, you can't have a genealogy much more impressive than that. Yet if we look at John Voigt's academic genealogy, we see that his lineage is just as impressive. Voigt studied under John Weaver, who was a student of Fredrick Clements, and both were students of Charles Bessey. In his book, "American Botany, 1873-1892", Andrew Denny Rodgers states that Bessey spent the winter of 1872-73 at Harvard studying under Asa Gray (Figure 2). This probably laid the foundations of his (Bessey) knowledge of systematic botany, especially in its philosophical aspects.

As you can see, I believe very strongly that the influence of others plays a great role in what kind of person each of us ultimately becomes. That is not to take anything away from our honoree. Bob Mohlenbrock is a unique and highly successful person, but part of what he is was shaped by those who taught him. Therefore, it seems appropriate to look at another aspect of Bob's contributions to botany--who are the persons Bob Mohlenbrock, in his 40+ years of teaching, has influenced and what have been their accomplishments?

Influence is accumulative, and if we look in totality at the accomplishments of Bob Mohlenbrock, including his sphere of influence on others, we would be here a long time. Therefore, since I have a special interest in the botany of the state of Missouri, I will restrict my remarks to his direct and indirect influence on "Missouri Botany."

Although Bob is considered to be "the" authority on Illinois plants, it is interesting to note that he has made a significant contribution to Missouri botany as well. I have divided my considerations into seven parts, each of which includes lists of

the contributions of either Robert H. Mohlenbrock, his students, or students of his students (Figure 2). In the case of 1st and 2nd generation students, the name in parenthesis indicates the teacher of that person.

### 1. CONTRIBUTIONS INVOLVING FLORISTIC STUDIES OF VARIOUS GEOGRAPHIC AREAS OF MISSOURI

The following list includes localities in Missouri that have been studied floristically either by RHM or 1st and 2nd generation students. Each study has resulted in either a published paper, thesis, or submitted reports; or represents a study still in progress.

|                                               |                                |
|-----------------------------------------------|--------------------------------|
| Hickory Creek Canyon                          | Robert Mohlenbrock             |
| Ball Mill Resurgence Area                     | Robert Mohlenbrock             |
| Big Oak Tree State Park                       | Wanda Doolin (Mohlenbrock)     |
| Bennett Spring State Park                     | Doug Ladd (Mohlenbrock)        |
| Johnson Shut-Ins State Park                   | Paul Nelson (Mohlenbrock)      |
| Hawn State Park                               | Mary Kay Solecki (Mohlenbrock) |
| Upper Aux Vas Creek                           | Carl Taylor (Mohlenbrock)      |
| LaPetite Gemme Prairie                        | Paul Nelson (Weber)            |
| Cedar Gap Area, Webster County, MO            | Ralph Thompson (Weber)         |
| Studies of Mingo National<br>Wildlife Reserve | Ralph Thompson (Mohlenbrock)   |
| Bona Glade Natural Area                       | Arlene Collette (Weber)        |
| Roaring River State Park                      | Kathy Hornberger (Weber)       |
| Montauk State Park                            | Gordon Maupin (Weber)          |
| Piney Creek Wilderness                        | Jon Rebman (Weber)             |
| Ha Ha Tonka State Park (In progress)          | Marylin Groves (Weber)         |
| Grand Gulf State Park (In progress)           | Linda Orr (Weber)              |

### 2. CONTRIBUTIONS INVOLVING FLORISTIC STUDIES OF MISSOURI ECOSYSTEMS

|                                        |                                                      |
|----------------------------------------|------------------------------------------------------|
| Terrestrial Communities of<br>Missouri | Paul Nelson (Mohlenbrock &<br>Weber)                 |
| Missouri Glades                        | Doug Ladd (Mohlenbrock) & P.<br>Nelson (Mohlenbrock) |
| Missouri Fens                          | Steve Orzell (Mohlenbrock)                           |
| Prairie Management Studies             | Mary Kay Solecki (Mohlenbrock)                       |

### 3. CONTRIBUTIONS INVOLVING THE STUDIES OF VARIOUS MISSOURI TAXA

|                              |                           |
|------------------------------|---------------------------|
| Lichens of Missouri          | Doug Ladd (Mohlenbrock)   |
| Ferns of Missouri            | Jim Key (Weber)           |
| Illustrations of Ferns of MO | Paul Nelson (Mohlenbrock) |

|                              |                                  |
|------------------------------|----------------------------------|
| <i>Geocarpon</i>             | W.R. Weber & R. Humphrey (Weber) |
| Woody Shrubs and Vines of MO |                                  |
| (In progress)                | Don Kurz (Mohlenbrock)           |
| Illustrations of Shrubs and  |                                  |
| Vines of MO (in progress)    | Paul Nelson (Mohlenbrock)        |

#### 4. CONTRIBUTIONS BY PERSONS WHO HOLD POLICY MAKING JOB POSITIONS INVOLVING NATURAL AREA PRESERVATION, LAND MANAGEMENT, AND BOTANICAL STUDIES PROJECTS

|                             |                           |
|-----------------------------|---------------------------|
| Director of Natural History |                           |
| Section, DNR                | Paul Nelson (Mohlenbrock) |
| Assistant Natural History   |                           |
| Administrator, MDC          | Don Kurz (Mohlenbrock)    |
| Director of Stewardship     |                           |
| Program, Nature Conservancy | Doug Ladd (Mohlenbrock)   |

#### 5. CONTRIBUTIONS INVOLVING INVENTORY AND CONSULTING WORK OR OTHER AGENCY WORK

|                              |                                |
|------------------------------|--------------------------------|
| Rare Plant Survey (MDC)      | Annette Parker (Mohlenbrock)   |
| Wildlife Agent (MDC)         | Rod Doolin (Mohlenbrock)       |
| Rare Plant Survey (MDC)      | Jay Raveill (Mohlenbrock)      |
| Natural Heritage Botanist    | Larry Stritch (Mohlenbrock)    |
| Proposed Biosphere Reserve   | Judy Faulkner (Mohlenbrock)    |
|                              | Jack White (Mohlenbrock)       |
|                              | Steve Orzell (Mohlenbrock)     |
| Inventory (MDC)              |                                |
| State Lands Inventory &      |                                |
| Prairie Inventory (MDC)      | Mary Kay Solecki (Mohlenbrock) |
| Floristic Survey of Bootheel |                                |
| Counties (Memphis Corps of   |                                |
| Engineers)                   | Tom Heineke (Mohlenbrock)      |
| Mississippi River Inventory  | Dan Evans (Mohlenbrock)        |

#### 6. CASUAL CONTRIBUTIONS BY PERSONS WHO HAVE COLLECTED IN MISSOURI, THEREBY CONTRIBUTING TO THE KNOWLEDGE OF ITS FLORA

Keith Wilson (Mohlenbrock)  
 John Schwegman (Mohlenbrock)  
 Gerould Wilhelm (Mohlenbrock)

## 7. MISCELLANEOUS CONTRIBUTIONS

Atlas Project Involving an  
Update of County  
Distribution Records

Wallace R. Weber (Mohlenbrock)  
Jay Raveill (Mohlenbrock)

Board Member and Charter  
Member of the Missouri  
Native Plant Society

Robert H. Mohlenbrock

Modern Pollen Spectra in  
Pond Sediments of  
Southwest Missouri

Dona Key (Weber)

R. H. Mohlenbrock's Regular  
Feature Article in Natural  
History Magazine Has  
Included Feature Articles  
About Several MO Areas in  
Mark Twain National Forest

Robert H. Mohlenbrock

In closing I would like to paraphrase a statement by Harry Baker Humphrey from his book, the "Makers of North American Botany." In his discussion of Charles Bessey, who on several occasions, visited Harvard University to study with Asa Gray, writes: "What the latter (Bessey) carried away from his teacher was to be reflected again and again in those who went out into the world from the Nebraska laboratory and lecture hall." As our friend and teacher, Bob Mohlenbrock, retires, let us not only remember his published contributions to botany, but that he passed on to us a legacy of the importance of field botany at a time when it was not always popular. And as we prepare to enter the 21st century, let us fervently hope that his legacy will live on and will be reflected again and again, not only by those of us who have gone out into the world from his laboratory at SIU, but by those to whom we have also passed this legacy.

## LITERATURE CITED

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- Humphrey, H. B. 1961. *Makers of North American Botany*. The Ronald Company. New York.
- Woodson, R. E. 1954. Why I Like Taxonomy--Seven Meditations. *Bull. Torr. Bot. Club* 81 (1): 87-94.

**MISSOURI BOTANICAL RECORD 12**

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The *Missouri Botanical Record* is the official register for new county records of all vascular plant taxa in Missouri. To qualify for inclusion in this record, a voucher specimen of the record taxon must be deposited in a recognized herbarium and verified by the curator. Following the format used below, please submit all records to Dr. Wallace R. Weber, Department of Biology, Southwest Missouri State University, Springfield, MO 65804-0095.

In the *Flora of Missouri*, Steyermark used only a single map number to refer to each species, even though several subspecific taxa were listed. In these instances, various symbols were used to represent each taxon on a single Missouri map with counties. In the *Missouri Botanical Record* a decimal system is used, with .1 assigned to the first subspecific taxon listed by Steyermark under each map, .2 for the second, and so on. Point nine nine (.99) is used to designate a species in which Steyermark included one or more subspecific taxa, but which was not specified by the collector. Point zero nine (.09) identifies a taxon not included by Steyermark. The letters "v" and "f" refer to variety and form respectively, while "nv" indicates that no subspecific category has been recognized.

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| MAP #         | TAXON                                                          | COUNTY         | DATE     | COLLECTOR               | HERB |
|---------------|----------------------------------------------------------------|----------------|----------|-------------------------|------|
| LYCOPODIACEAE |                                                                |                |          |                         |      |
| 2             | <i>Lycopodium lucidulum</i><br>v. <i>lucidulum</i>             | Howell         | 5/24/79  | Summers 464             | MBG  |
| EQUISETACEAE  |                                                                |                |          |                         |      |
| 12            | <i>Equisetum laevigatum</i>                                    | Douglas        | 7/21/76  | Summers 254             | MBG  |
| POLYPODIACEAE |                                                                |                |          |                         |      |
| 26            | <i>Pteridium aquilinum</i>                                     | St. Francois   | 6/18/79  | Summers 481             | MBG  |
| 39            | <i>Onoclea sensibilis</i>                                      | Jefferson      | 8/5/79   | Summers 552             | MBG  |
| 44            | <i>Asplenium resiliens</i>                                     | Warren         | 8/12/79  | Summers 563             | MBG  |
| CUPRESSACEAE  |                                                                |                |          |                         |      |
| 67.2          | <i>Juniperus virginiana</i><br>v. <i>crebra</i>                | St. Francois   | 4/22/77  | Summers 306             | MBG  |
| TYPHACEAE     |                                                                |                |          |                         |      |
| 70            | <i>Typha angustifolia</i>                                      | Lewis          | 06/01/82 | Conrad<br>& Kangas 9663 | NEMO |
| 70            | <i>Typha angustifolia</i>                                      | Knox           | 06/30/89 | Conrad 12350            | NEMO |
| NAJADACEAE    |                                                                |                |          |                         |      |
| 83            | <i>Potamogeton nodosus</i>                                     | Ste. Genevieve | 8/16/78  | Summers 406             | MBG  |
| ALISMACEAE    |                                                                |                |          |                         |      |
| 90            | <i>Alisma plantago-aquatica</i>                                | Sullivan       | 7/13/88  | Gleason 228             | NEMO |
| GRAMINEAE     |                                                                |                |          |                         |      |
| 106           | <i>Bromus inermis</i>                                          | Sullivan       | 07/13/88 | Gleason 209             | NEMO |
| 113           | <i>Bromus japonicus</i>                                        | Sullivan       | 07/07/83 | Broyles                 | NEMO |
| 120.1         | <i>Festuca elatior</i> v. <i>elatior</i><br>f. <i>aristata</i> | Iron           | 05/23/88 | Conrad 11736            | NEMO |
| 129           | <i>Glyceria striata</i><br>v. <i>striata</i>                   | Sullivan       | 07/07/83 | Broyles                 | NEMO |
| 132.99        | <i>Poa annua</i>                                               | Howell         | 7/2/99   | Summers 826             | MBG  |

|       |                                                                         |          |          |              |      |
|-------|-------------------------------------------------------------------------|----------|----------|--------------|------|
| 134   | <i>Poa pratensis</i>                                                    | Sullivan | 05/20/84 | Broyles      | NEMO |
| 145   | <i>Eragrostis frankii</i><br>v. <i>frankii</i>                          | Adair    | 08/17/77 | Conrad 7761  | NEMO |
| 194   | <i>Koeleria cristata</i>                                                | Sullivan | 07/07/83 | Broyles      | NEMO |
| 212   | <i>Agrostis stolonifera</i><br>v. <i>major</i>                          | Sullivan | 07/07/83 | Broyles      | NEMO |
| 263   | <i>Chloris verticillata</i>                                             | Adair    | 09/09/89 | Conrad 12354 | NEMO |
| 271   | <i>Phalaris arundinacea</i>                                             | Sullivan | 07/13/88 | Gleason 262  | NEMO |
| 320   | <i>Panicum clandestinum</i>                                             | Sullivan | 07/13/88 | Gleason 214  | NEMO |
| 338.1 | <i>Echinochloa crusgalli</i><br>v. <i>crusgalli</i> f. <i>longiseta</i> | Sullivan | 07/13/88 | Gleason 198  | NEMO |
| 339   | <i>Echinochloa muricata</i><br>v. <i>muricata</i>                       | Sullivan | 08/24/88 | Gleason 291  | NEMO |

## CYPERACEAE

|       |                                                   |                |          |             |      |
|-------|---------------------------------------------------|----------------|----------|-------------|------|
| 368   | <i>Cyperus aristatus</i>                          | Oregon         | 7/2/79   | Summers 501 | MBG  |
| 393   | <i>Eleocharis acicularis</i>                      | Sullivan       | 07/07/83 | Broyles     | NEMO |
| 421.2 | <i>Scirpus atrovirens</i><br>v. <i>georgianus</i> | Sullivan       | 06/26/88 | Gleason 140 | NEMO |
| 446   | <i>Carex retroflexa</i><br>v. <i>retroflexa</i>   | St. Francois   | 5/12/79  | Summers 432 | MBG  |
| 448   | <i>Carex rosea</i>                                | St. Francois   | 5/12/79  | Summers 431 | MBG  |
| 500   | <i>Carex blanda</i>                               | St. Francois   | 5/22/79  | Summers 446 | MBG  |
| 517.1 | <i>Carex complanata</i><br>v. <i>hirsuta</i>      | Howell         | 7/19/79  | Summers 528 | MBG  |
| 532   | <i>Carex hystricina</i>                           | Ste. Genevieve | 6/9/76   | Summers 224 | MBG  |
| 542   | <i>Carex squarrosa</i>                            | Sullivan       | 09/11/88 | Gleason 358 | NEMO |

## LEMNACEAE

|     |                    |           |         |             |     |
|-----|--------------------|-----------|---------|-------------|-----|
| 558 | <i>Lemna minor</i> | Jefferson | 6/28/79 | Summers 494 | MBG |
|-----|--------------------|-----------|---------|-------------|-----|

## COMMELINACEAE

|     |                                                       |        |         |             |     |
|-----|-------------------------------------------------------|--------|---------|-------------|-----|
| 567 | <i>Tradescantia subasper</i><br>v. <i>subaspera</i>   | Texas  | 7/2/76  | Summers 252 | MBG |
| 570 | <i>Tradescantia virginica</i><br>f. <i>virginiana</i> | Howell | 5/17/80 | Summers 715 | MBG |

## JUNCACEAE

|       |                                              |           |          |             |      |
|-------|----------------------------------------------|-----------|----------|-------------|------|
| 589   | <i>Juncus secundus</i>                       | St. Louis | 7/3/79   | Summers 502 | MBG  |
| 590.1 | <i>Juncus tenuis</i><br>f. <i>anthelatus</i> | Sullivan  | 07/13/88 | Gleason 239 | NEMO |

## LILIACEAE

626.99 *Hermocallis fulva* Sullivan 07/13/88 Gleason  
& Conrad, 253 NEMO

656.1 *Smilax bon-nox*  
*v. hederaefolia* Shannon 5/18/78 Summers 394 MBG

## IRIDACEAE

678.1 *Sisyrinchium campestre*  
*f. kansanum* Sullivan 05/06/83 Broyles NEMO

## ORCHIDACEAE

682 *Cypripedium calceolus*  
*v. parviflorum* Howell 5/17/80 Summers 708 MBG

682.2 *Cypripedium calceolus*  
*v. pubescens* Howell 5/17/80 Summers 710 MBG

689 *Habenaria lacera*  
*v. lacera* Warren 6/22/79 Summers 489 MBG

697.09 *Calopogon tuberosus* St. Francois 6/29/80 Summers 740 MBG

699 *Spiranthes tuberosa*  
*v. tuberosa* Howell 8/13/75 Summers 171 MBG

704 *Spiranthes lucida* Douglas 6/10/80 Summers 738 MBG

705 *Goodyera pubescens* Howell 7/12/80 Summers 747 MBG

708 *Corallorhiza odontorhiza*  
*v. odontorhiza* Washington 8/22/75 Summers 176 MBG

711 *Liparis loeselii* Carter 6/20/79 Summers 487 MBG

712 *Aplectrum hyemale*  
*f. hyemale* Douglas 4/5/80 Summers 650 MBG

## SALICACEAE

722.1 *Salix rigida*  
*v. rigida f. mollis* St. Louis 3/22/79 Summers 415 MBG

722 *Salix rigida*  
*f. angustata* St. Louis 3/22/79 Summers 416 MBG

## JUGLANDACEAE

746 *Carya laciniosa* Sullivan 07/13/88 Gleason 261 NEMO

## ULMACEAE

|       |                                                 |        |         |             |     |
|-------|-------------------------------------------------|--------|---------|-------------|-----|
| 785.1 | <i>Celtis tenuifolia</i><br><i>v. georgiana</i> | Greene | 8/30/76 | Summers 273 | MBG |
|-------|-------------------------------------------------|--------|---------|-------------|-----|

## POLYGONACEAE

|        |                                                           |          |          |                       |      |
|--------|-----------------------------------------------------------|----------|----------|-----------------------|------|
| 829.1  | <i>Polygonum pensylvanicum</i> v. & f. <i>laevigatum</i>  | Sullivan | 09/12/87 | Conrad<br>& Gronefeld | NEMO |
| 829.99 | <i>Polygonum pensylvanicum</i> v. <i>laevigatum</i>       | Howell   | 8/14/76  | Summers 257           | MBG  |
| 830    | <i>Polygonum lapathifolium</i><br>v. <i>lapathifolium</i> | Sullivan | 07/13/88 | Gleason 232           | NEMO |
| 833    | <i>Polygonum persicaria</i><br>v. <i>persicaria</i>       | Sullivan | 07/13/88 | Gleason 202           | NEMO |

## CHENOPODIACEAE

|     |                                   |        |          |             |      |
|-----|-----------------------------------|--------|----------|-------------|------|
| 848 | <i>Chenopodium botrys</i>         | Howell | 9/18/79  | Summers 593 | MBG  |
| 857 | <i>Chenopodium gigantospermum</i> | Adair  | 08/28/89 | Bell        | NEMO |

## AMARANTHACEAE

|     |                                                     |       |        |             |     |
|-----|-----------------------------------------------------|-------|--------|-------------|-----|
| 889 | <i>Froelichia floridana</i><br>v. <i>campestris</i> | Ozark | 6/3/77 | Summers 320 | MBG |
|-----|-----------------------------------------------------|-------|--------|-------------|-----|

## NYCTAGINACEAE

|     |                             |          |         |             |      |
|-----|-----------------------------|----------|---------|-------------|------|
| 891 | <i>Mirabilis nyctaginea</i> | Sullivan | 8/24/88 | Gleason 317 | NEMO |
| 893 | <i>Mirabilis albida</i>     | Oregon   | 8/14/76 | Summers 263 | MBG  |

## PORTULACACEAE

|     |                                                 |           |         |             |     |
|-----|-------------------------------------------------|-----------|---------|-------------|-----|
| 905 | <i>Claytonia virginica</i><br>f. <i>robusta</i> | St. Louis | 4/25/72 | Summers 105 | MBG |
|-----|-------------------------------------------------|-----------|---------|-------------|-----|

## CARYOPHYLLACEAE

|        |                               |                |         |             |     |
|--------|-------------------------------|----------------|---------|-------------|-----|
| 914.99 | <i>Arenaria serpyllifolia</i> | Ste. Genevieve | 4/20/75 | Summers 145 | MBG |
| 922.99 | <i>Cerastium vulgatum</i>     | Douglas        | 4/5/80  | Summers 665 | MBG |
| 922.99 | <i>Cerastium vulgatum</i>     | Howell         | 3/22/80 | Summers 641 | MBG |
| 926.99 | <i>Cerastium vicosum</i>      | Howell         | 3/28/81 | Summers 827 | MBG |
| 930    | <i>Holosteum umbellatum</i>   | Webster        | 4/12/76 | Summers 197 | MBG |

|     |                          |              |         |             |     |
|-----|--------------------------|--------------|---------|-------------|-----|
| 937 | <i>Silene cserei</i>     | St. Francois | 7/4/78  | Summers 401 | MBG |
| 950 | <i>Dianthus prolifer</i> | Greene       | 6/26/77 | Summers 334 | MBG |

## RANUNCULACEAE

|        |                                                           |                |         |             |     |
|--------|-----------------------------------------------------------|----------------|---------|-------------|-----|
| 968.99 | <i>Thalictrum revolutum</i>                               | Ste. Genevieve | 5/15/76 | Summers 218 | MBG |
| 977    | <i>Isopyrum biternatum</i>                                | Ste. Genevieve | 3/7/76  | Summers 190 | MBG |
| 1005   | <i>Clematis dioscoreifolia</i><br>v. <i>discoreifolia</i> | Greene         | 9/1/75  | Summers 178 | MBG |

## PAPAVERACEAE

|      |                       |        |         |             |     |
|------|-----------------------|--------|---------|-------------|-----|
| 1026 | <i>Papaver dubium</i> | Greene | 5/23/81 | Summers 852 | MBG |
|------|-----------------------|--------|---------|-------------|-----|

## FUMARIACEAE

|      |                          |              |         |             |     |
|------|--------------------------|--------------|---------|-------------|-----|
| 1037 | <i>Corydalis montana</i> | Ozark        | 4/15/76 | Summers 210 | MBG |
| 1037 | <i>Corydalis montana</i> | St. Francois | 4/18/81 | Summers 838 | MBG |

## CRUCIFERAE

|         |                                                    |                |         |             |     |
|---------|----------------------------------------------------|----------------|---------|-------------|-----|
| 1054    | <i>Cardaria draba</i>                              | Atchison       | 5/18/79 | Summers 445 | MBG |
| 1057    | <i>Thlaspi perfoliatum</i>                         | Greene         | 6/13/76 | Summers 230 | MBG |
| 1057    | <i>Thlaspi perfoliatum</i>                         | St. Louis      | 4/9/79  | Summers 418 | MBG |
| 1062.99 | <i>Draba verna</i>                                 | Howell         | 3/22/80 | Summers 640 | MBG |
| 1062    | <i>Draba verna</i><br>v. <i>verna</i>              | Texas          | 3/28/81 | Summers 821 | MBG |
| 1075    | <i>Cardamine parviflora</i><br>v. <i>arenicola</i> | Howell         | 4/14/76 | Summers 202 | MBG |
| 1080.99 | <i>Arabis hirsuta</i>                              | Ste. Genevieve | 5/15/76 | Summers 220 | MBG |
| 1090.99 | <i>Rorippa islandica</i>                           | Ozark          | 6/3/77  | Summers 319 | MBG |
| 1092    | <i>Iodanthus pinnatifidus</i>                      | Oregon         | 5/18/78 | Summers 392 | MBG |
| 1096    | <i>Erysimum cheiranthoides</i>                     | Crawford       | 5/5/79  | Summers 430 | MBG |
| 1097    | <i>Erysimum repandum</i>                           | St. Francois   | 4/18/81 | Summers 839 | MBG |

## SAXIFRAGACEAE

|        |                                                |        |         |             |     |
|--------|------------------------------------------------|--------|---------|-------------|-----|
| 1122.1 | <i>Heuchera puberula</i><br>f. <i>glabrata</i> | Howell | 9/27/80 | Summers 816 | MBG |
| 1122.1 | <i>Heuchera puberula</i><br>f. <i>glabrata</i> | Howell | 5/24/79 | Summers 460 | MBG |

## ROSACEAE

|         |                                                     |                |          |             |      |
|---------|-----------------------------------------------------|----------------|----------|-------------|------|
| 1152    | <i>Amelanchier humilis</i><br>v. <i>humilis</i>     | Douglas        | 04/00/80 | Jones       | NEMO |
| 1167.99 | <i>Crataegus crus-galli</i>                         | Howell         | 4/14/76  | Summers 201 | MBG  |
| 1171    | <i>Crataegus reverchoni</i><br>v. <i>discolor</i>   | Howell         | 5/24/79  | Summers 456 | MBG  |
| 1218    | <i>Geum vernum</i>                                  | Ste. Genevieve | 4/20/74  | Summers 131 | MBG  |
| 1222    | <i>Rubus occidentalis</i><br>f. <i>occidentalis</i> | St. Francois   | 4/18/81  | Summers 840 | MBG  |
| 1243    | <i>Rosa setigera</i><br>v. & f. <i>setigera</i>     | Sullivan       | 06/26/88 | Gleason 139 | NEMO |
| 1260    | <i>Prunus hortulana</i>                             | Sullivan       | 08/24/88 | Gleason 302 | NEMO |
| 1263    | <i>Prunus persica</i>                               | Howell         | 04/05/80 | Summers 666 | MBG  |
| 1267.99 | <i>Prunus virginiana</i>                            | Greene         | 5/1/80   | Summers 675 | MBG  |

## LEGUMINOSAE

|        |                                                                            |                |          |              |      |
|--------|----------------------------------------------------------------------------|----------------|----------|--------------|------|
| 1287   | <i>Crotalaria sagittalis</i><br>v. <i>sagittalis</i>                       | Howell         | 6/26/75  | Summers 167  | MBG  |
| 1289.1 | <i>Trifolium pratense</i><br>v. <i>pratense</i><br>f. <i>leucochraceum</i> | Howell         | 5/19/73  | Summers 110  | MBG  |
| 1293   | <i>Trifolium repens</i>                                                    | St. Francois   | 9/30/79  | Summers 630  | MBG  |
| 1299   | <i>Trifolium campestre</i>                                                 | Sullivan       | 07/13/88 | Gleason 244  | NEMO |
| 1300   | <i>Trifolium dubium</i>                                                    | Crawford       | 05/17/89 | Conrad 12087 | NEMO |
| 1301   | <i>Medicago sativa</i><br>f. <i>sativa</i>                                 | Sullivan       | 06/26/88 | Gleason 132  | NEMO |
| 1302.1 | <i>Medicago lupulina</i><br>v. <i>glandulosa</i>                           | Sullivan       | 07/26/88 | Gleason 273  | NEMO |
| 1308   | <i>Lotus corniculatus</i>                                                  | St. Louis      | 5/24/75  | Summers 165  | MBG  |
| 1308   | <i>Lotus corniculatus</i>                                                  | Sullivan       | 06/26/88 | Gleason 115  | NEMO |
| 1320   | <i>Amorpha canescens</i><br>f. <i>canescens</i>                            | Ste. Genevieve | 6/9/76   | Summers 223  | MBG  |
| 1322.2 | <i>Amorpha fruticosa</i><br>v. <i>oblongifolia</i>                         | Howell         | 5/16/78  | Summers 387  | MBG  |
| 1322.3 | <i>Amorpha fruticosa</i><br>v. <i>angustifolia</i>                         | Sullivan       | 07/13/88 | Gleason 175  | NEMO |
| 1335   | <i>Coronilla varia</i>                                                     | Phelps         | 6/16/79  | Summers 480  | MBG  |
| 1351   | <i>Desmodium paniculatum</i><br>v. <i>paniculatum</i>                      | St. Francois   | 9/4/77   | Summers 357  | MBG  |
| 1353   | <i>Desmodium laevigatum</i>                                                | St. Francois   | 9/3/79   | Summers 571  | MBG  |
| 1357   | <i>Lespedeza thunbergii</i>                                                | Howell         | 9/11/76  | Summers 284  | MBG  |
| 1359   | <i>Lespedeza intermedia</i><br>f. <i>intermedia</i>                        | St. Francois   | 9/30/79  | Summers 625  | MBG  |

- 1364.3 *Lespedeza capitata*  
           *v. stenophylla*  
           *f. argentea*                      St. Francois    9/4/77    Summers 359    MBG

## LINACEAE

- 1405    *Linum sulcatum*                      Ste. Genevieve 10/18/75 Summers 187    MBG

## OXALIDACEAE

- 1408.1 *Oxalis violacea*  
           *v. violacea f. albida*                      St. Francois    4/29/79    Summers 420    MBG

## GERANIACEAE

- 1415    *Geranium pusillum*                      Howell            5/16/78    Summers 385    MBG  
 1417    *Erodium cicutarium*                      Greene            6/26/77    Summers 336    MBG  
 1417    *Erodium cicutarium*                      St. Louis        6/26/77    Summers 332    MBG

## ZYGOPHYLLACEAE

- 1418    *Tribulus terrestris*                      Howell            7/13/73    Summers 117    MBG

## POLYYGALACEAE

- 1425    *Polygala incarnata*                      Howell            6/16/76    Summers 237    MBG  
 1425    *Polygala incarnata*                      Oregon            7/4/73    Summers 115    MBG  
 1427.99 *Polygala verticillata*                      Ste. Genevieve 9/20/75    Summers 181    MBG

## EURPHORBIACEAE

- 1428    *Phyllanthus caroliniensis*                      Howell            8/17/80    Summers 757    MBG  
 1445    *Euphorbia heterophylla*  
           *v. heterophylla*                      Warren            8/12/79    Summers 560    MBG

## ACERACEAE

- 1486    *Acer negundo*  
           *v. negundo*                      Sullivan            07/13/88    Gleason 189    NEMO

## MALVACEAE

- 1518    *Malva neglecta*                      Howell            11/18/78    Summers 413    MBG  
 1524    *Callirhoe alcaeoides*                      Webster            5/26/81    Summers 855    MBG

## HYPERICACEAE

|      |                               |        |         |             |     |
|------|-------------------------------|--------|---------|-------------|-----|
| 1543 | <i>Hypericum gymnanthum</i>   | Ozark  | 6/30/76 | Summers 243 | MBG |
| 1546 | <i>Hypericum gentianoides</i> | Howell | 9/23/73 | Summers 121 | MBG |

## VIOLACEAE

|      |                                           |              |          |             |      |
|------|-------------------------------------------|--------------|----------|-------------|------|
| 1561 | <i>Viola sororia</i><br>f. <i>sororia</i> | Douglas      | 4/5/80   | Summers 662 | MBG  |
| 1561 | <i>Viola sororia</i><br>f. <i>sororia</i> | Knox         | 04/17/88 | Gleason 4   | NEMO |
| 1562 | <i>Viola sagittata</i>                    | St. Francois | 4/8/77   | Summers 302 | MBG  |

## ONAGRACEAE

|        |                                            |          |          |             |      |
|--------|--------------------------------------------|----------|----------|-------------|------|
| 1608   | <i>Oenothera linifolia</i>                 | Webster  | 5/26/81  | Summers 861 | MBG  |
| 1616.1 | <i>Gaura biennis</i><br>v. <i>pitcheri</i> | Sullivan | 08/24/88 | Gleason 280 | NEMO |

## HALORAGIDACEAE

|      |                                 |        |         |             |     |
|------|---------------------------------|--------|---------|-------------|-----|
| 1621 | <i>Myriophyllum brasiliense</i> | Carter | 9/21/80 | Summers 778 | MBG |
|------|---------------------------------|--------|---------|-------------|-----|

## UMBELLIFERAE

|        |                                               |          |          |             |      |
|--------|-----------------------------------------------|----------|----------|-------------|------|
| 1642   | <i>Torilis japonica</i>                       | Sullivan | 07/13/88 | Gleason 172 | NEMO |
| 1679.2 | <i>Daucus carota</i><br>f. <i>epurpuratus</i> | Sullivan | 06/26/88 | Gleason 114 | NEMO |

## PYROLACEAE

|      |                             |         |         |             |     |
|------|-----------------------------|---------|---------|-------------|-----|
| 1689 | <i>Monotropa uniflora</i>   | Douglas | 9/19/79 | Summers 610 | MBG |
| 1689 | <i>Monotropa uniflora</i>   | Oregon  | 5/25/80 | Summers 731 | MBG |
| 1690 | <i>Monotropa hypopithys</i> | Oregon  | 9/19/79 | Summers 602 | MBG |

## ERICACEAE

|         |                                                                 |              |         |             |     |
|---------|-----------------------------------------------------------------|--------------|---------|-------------|-----|
| 1691.99 | <i>Rhododendron roseum</i>                                      | Howell       | 5/24/79 | Summers 457 | MBG |
| 1695.1  | <i>Vaccinium stamineum</i><br>v. <i>neglectum</i>               | Greene       | 5/10/75 | Summers 159 | MBG |
| 1696    | <i>Vaccinium vacillans</i><br>v. <i>crinitum</i> f. <i>alba</i> | St. Francois | 7/23/78 | Summers 403 | MBG |

## PRIMULACEAE

- 1707.1 *Anagallis arvensis*  
f. *caerulea* Greene 6/12/76 *Summers* 226 MBG

## APOCYNACEAE

- 1744 *Amsonia ciliata*  
v. *filifolia* Howell 6/26/75 *Summers* 166 MBG  
1745 *Vinca minor* Howell 4/15/76 *Summers* 205 MBG  
1749 *Apocynum cannabinum*  
v. *cannabinum* Sullivan 07/13/88 *Gleason* 166 NEMO

## ASCLEPIADACEAE

- 1758 *Asclepias variegata* Ozark 6/15/76 *Summers* 235 MBG

## CONVOLVULACEAE

- 1781 *Convolvulus pellitus*  
f. *anestius* Greene 6/26/77 *Summers* 337 MBG  
1791 *Cuscuta polygonorum* Howell 7/19/80 *Summers* 752 MBG

## POLEMONIACEAE

- 1797.3 *Phlox pilosa* v. *fulgida*  
f. *albiflora* St. Louis 4/16/76 *Summers* 211 MBG

## HYDROPHYLLACEAE

- 1810 *Phacelia purshii* Ste. Genevieve 5/9/76 *Summers* 215 MBG  
1812 *Phacelia bipinnatifida* Oregon 5/25/80 *Summers* 732 MBG

## BORAGINACEAE

- 1819 *Echium vulgare*  
v. *vulgare* Crawford 6/24/79 *Summers* 490 MBG  
1822 *Onosmodium subsetosum* Taney 8/20/77 *Summers* 341 MBG  
1831.99 *Myosotis virginica* Webster 5/26/81 *Summers* 853 MBG  
1831 *Myosotis virginica*  
v. *virginica* Howell 5/18/74 *Summers* 133 MBG

## LABIATAE

|        |                                               |                |          |             |      |
|--------|-----------------------------------------------|----------------|----------|-------------|------|
| 1874   | <i>Leonurus cardiaca</i>                      | Howell         | 6/9/80   | Summers 735 | MBG  |
| 1877   | <i>Lamium amplexicaule</i>                    | Howell         | 3/28/81  | Summers 824 | MBG  |
| 1877   | <i>Lamium amplexicaule</i>                    | St. Francois   | 3/21/81  | Summers 818 | MBG  |
| 1877   | <i>Lamium amplexicaule</i>                    | Texas          | 3/28/81  | Summers 823 | MBG  |
| 1878   | <i>Lamium purpureum</i>                       | Howell         | 2/18/74  | Summers 129 | MBG  |
| 1878   | <i>Lamium purpureum</i>                       | Ste. Genevieve | 3/30/81  | Summers 835 | MBG  |
| 1883   | <i>Salvia azurea</i><br>v. <i>grandiflora</i> | Sullivan       | 09/11/88 | Gleason 373 | NEMO |
| 1911.5 | <i>Mentha cardiaca</i>                        | Sullivan       | 08/24/88 | Gleason 310 | NEMO |
| 1913   | <i>Mentha piperita</i>                        | Oregon         | 9/17/79  | Summers 589 | MBG  |

## SOLANACEAE

|        |                                                          |          |          |             |      |
|--------|----------------------------------------------------------|----------|----------|-------------|------|
| 1922   | <i>Solanum villosum</i>                                  | Howell   | 7/1/76   | Summers 249 | MBG  |
| 1933.1 | <i>Physalis longifolia</i><br>v. & f. <i>subglabrata</i> | Sullivan | 07/13/88 | Gleason 154 | NEMO |

## SCROPHULARIACEAE

|      |                                                  |                |         |             |     |
|------|--------------------------------------------------|----------------|---------|-------------|-----|
| 1948 | <i>Bacopa rotundifolia</i>                       | Howell         | 7/19/80 | Summers 754 | MBG |
| 1957 | <i>Lindernia anagallidea</i>                     | Dallas         | 9/4/76  | Summers 280 | MBG |
| 1984 | <i>Veronica serpyllifolia</i>                    | Crawford       | 5/4/79  | Summers 429 | MBG |
| 1989 | <i>Veronica polita</i>                           | Greene         | 4/25/81 | Summers 842 | MBG |
| 1989 | <i>Veronica polita</i>                           | Howell         | 4/29/75 | Summers 156 | MBG |
| 1997 | <i>Gerardia gattingeri</i>                       | St. Francois   | 9/30/79 | Summers 626 | MBG |
| 2006 | <i>Castilleja coccinea</i><br>f. <i>coccinea</i> | Ste. Genevieve | 5/26/74 | Summers 135 | MBG |

## BIGNONIACEAE

|      |                         |          |          |             |      |
|------|-------------------------|----------|----------|-------------|------|
| 2009 | <i>Campsis radicans</i> | Sullivan | 06/26/88 | Gleason 142 | NEMO |
|------|-------------------------|----------|----------|-------------|------|

## ACANTHACEAE

|        |                                                    |                |          |             |      |
|--------|----------------------------------------------------|----------------|----------|-------------|------|
| 2019.2 | <i>Ruellia strepens</i><br>f. <i>cleistantha</i>   | Ste. Genevieve | 8/9/75   | Summers 170 | MBG  |
| 2021.5 | <i>Ruellia humilis</i><br>v. <i>expansa</i>        | Sullivan       | 07/26/88 | Gleason 266 | NEMO |
| 2029   | <i>Plantago lanceolata</i><br>v. <i>lanceolata</i> | Sullivan       | 06/26/88 | Gleason 145 | NEMO |

## RUBIACEAE

|         |                                                  |         |          |              |      |
|---------|--------------------------------------------------|---------|----------|--------------|------|
| 2037    | <i>Sherardia arvensis</i>                        | Greene  | 6/26/77  | Summers 333  | MBG  |
| 2042    | <i>Galium circaeans</i><br>v. <i>circaeans</i>   | Shannon | 05/26/88 | Conrad 11807 | NEMO |
| 2050.99 | <i>Diodia virginiana</i>                         | Ozark   | 8/15/76  | Summers 265  | MBG  |
| 2050    | <i>Diodia virginiana</i><br>v. <i>virginiana</i> | Dallas  | 7/22/79  | Summers 539  | MBG  |

## CAPRIFOLIACEAE

|      |                                                           |              |         |             |     |
|------|-----------------------------------------------------------|--------------|---------|-------------|-----|
| 2072 | <i>Triosteum angustifolium</i><br>v. <i>angustifolium</i> | St. Francois | 4/22/77 | Summers 305 | MBG |
|------|-----------------------------------------------------------|--------------|---------|-------------|-----|

## DIPSACACEAE

|         |                            |          |          |              |      |
|---------|----------------------------|----------|----------|--------------|------|
| 2088.09 | <i>Dipsacus laciniatus</i> | Randolph | 09/02/80 | Mumberg      | NEMO |
| 2088.09 | <i>Dipsacus laciniatus</i> | Marion   | 07/23/89 | Conrad 12353 | NEMO |

## CAMPANULACEAE

|      |                                                           |         |         |             |     |
|------|-----------------------------------------------------------|---------|---------|-------------|-----|
| 2098 | <i>Campanula rapunculoides</i><br>f. <i>rapunculoides</i> | Greene  | 6/5/76  | Summers 221 | MBG |
| 2099 | <i>Campanula americana</i><br>f. <i>alba</i>              | Warren  | 8/12/79 | Summers 556 | MBG |
| 2102 | <i>Specularia biflora</i>                                 | Webster | 5/26/81 | Summers 858 | MBG |
| 2109 | <i>Lobelia siphilitica</i><br>v. <i>hybrida</i>           | Carter  | 9/21/80 | Summers 777 | MBG |
| 2109 | <i>Lobelia siphilitica</i><br>v. <i>hybrida</i>           | Shannon | 9/21/80 | Summers 771 | MBG |

## COMPOSITAE

|         |                                                       |                |         |             |     |
|---------|-------------------------------------------------------|----------------|---------|-------------|-----|
| 2112.99 | <i>Vernonia altissima</i>                             | Oregon         | 9/17/79 | Summers 580 | MBG |
| 2114.2  | <i>Vernonia baldwini</i><br>v. <i>interior</i>        | Webster        | 7/25/79 | Summers 545 | MBG |
| 2130.2  | <i>Kuhnia eupatorioides</i><br>v. <i>angustifolia</i> | Carter         | 9/21/80 | Summers 784 | MBG |
| 2135    | <i>Liatris ligulistylis</i>                           | Ste. Genevieve | 9/18/76 | Summers 288 | MBG |
| 2137    | <i>Liatris mucronata</i>                              | Taney          | 8/20/77 | Summers 344 | MBG |
| 2139.2  | <i>Liatris squarrosa</i><br>v. <i>glabrata</i>        | Camden         | 8/7/76  | Summers 255 | MBG |
| 2139    | <i>Liatris squarrosa</i><br>v. <i>hirsuta</i>         | Stone          | 9/5/76  | Summers 281 | MBG |

|         |                                                                              |                |          |             |      |
|---------|------------------------------------------------------------------------------|----------------|----------|-------------|------|
| 2143    | <i>Heterotheca latifolia</i>                                                 | Greene         | 9/20/79  | Summers 611 | MBG  |
| 2144    | <i>Chrysopsis pilosa</i>                                                     | Dallas         | 9/24/80  | Summers 814 | MBG  |
| 2144    | <i>Chrysopsis pilosa</i>                                                     | Webster        | 9/24/80  | Summers 813 | MBG  |
| 2145.2  | <i>Chrysopsis villosa</i><br>v. <i>camporum</i>                              | Greene         | 9/20/79  | Summers 612 | MBG  |
| 2149    | <i>Solidago buckleyi</i>                                                     | Oregon         | 9/17/79  | Summers 590 | MBG  |
| 2175    | <i>Aster paludosus</i><br>subsp. <i>hemisphericus</i>                        | Howell         | 9/23/73  | Summers 125 | MBG  |
| 2182.99 | <i>Aster patens</i>                                                          | Greene         | 9/23/80  | Summers 789 | MBG  |
| 2186    | <i>Aster sericeus</i><br>f. <i>sericeus</i>                                  | Ste. Genevieve | 10/11/75 | Summers 186 | MBG  |
| 2187    | <i>Aster laevis</i> v. <i>laevis</i><br>f. <i>laevis</i>                     | St. Francois   | 9/30/79  | Summers 627 | MBG  |
| 2187    | <i>Aster laevis</i> v. <i>laevis</i><br>f. <i>latifolius</i>                 | Ste. Genevieve | 10/18/75 | Summers 188 | MBG  |
| 2190    | <i>Aster parviceps</i>                                                       | St. Francois   | 9/3/79   | Summers 569 | MBG  |
| 2201    | <i>Aster ptarmicoides</i>                                                    | St. Francois   | 9/25/77  | Summers 381 | MBG  |
| 2201    | <i>Aster ptarmicoides</i>                                                    | Webster        | 8/30/76  | Summers 275 | MBG  |
| 2208.2  | <i>Erigeron strigosus</i><br>v. <i>beyrichii</i>                             | Sullivan       | 08/24/88 | Gleason 284 | NEMO |
| 2266    | <i>Ratibida columnifera</i><br>f. <i>pulcherrima</i>                         | Howell         | 6/4/77   | Summers 321 | MBG  |
| 2266    | <i>Ratibida columnifera</i><br>f. <i>columnifera</i>                         | Taney          | 6/25/77  | Summers 331 | MBG  |
| 2277.99 | <i>Helianthus hirsutus</i>                                                   | St. Francois   | 9/11/77  | Summers 372 | MBG  |
| 2283    | <i>Helianthus tuberosus</i><br>v. <i>tuberosus</i>                           | Carter         | 9/21/80  | Summers 783 | MBG  |
| 229.998 | <i>Bidens cernua</i>                                                         | St. Francois   | 9/30/79  | Summers 628 | MBG  |
| 2302    | <i>Bidens frondosa</i><br>v. <i>frondosa</i>                                 | Howell         | 9/19/79  | Summers 607 | MBG  |
| 2323.1  | <i>Achillea millefolium</i><br>subsp. <i>millefolium</i><br>f. <i>roseum</i> | Webster        | 5/26/81  | Summers 857 | MBG  |
| 2323.2  | <i>Achillea millefolium</i><br>subsp. <i>lanulosa</i>                        | Adair          | 05/04/80 | Walker 29   | NEMO |
| 2352.09 | <i>Arcticum minus</i><br>f. <i>pallidum</i>                                  | Webster        | 9/4/76   | Summers 279 | MBG  |
| 2361    | <i>Cirsium muticum</i>                                                       | St. Francois   | 9/4/77   | Summers 364 | MBG  |
| 2374.09 | <i>Chichorium intybus</i><br>f. <i>roseum</i>                                | Greene         | 7/25/79  | Summers 548 | MBG  |
| 2389    | <i>Lactuca scariola</i><br>f. <i>scariola</i>                                | Sullivan       | 07/26/88 | Gleason 275 | NEMO |
| 2402    | <i>Prenanthes crepidinea</i>                                                 | Stone          | 9/11/76  | Summers 285 | MBG  |
| 2404    | <i>Prenanthes aspera</i>                                                     | St. Francois   | 9/20/78  | Summers 409 | MBG  |