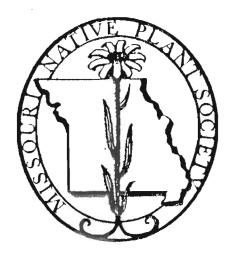
# **MISSOURIENSIS**



# JOURNAL OF THE MISSOURI NATIVE PLANT SOCIETY

Published for the Society
At
Southwest Missouri State University, Springfield

# **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.

Studies in the Flora of Missouri, II.  GEORGE YATSKIEVYCH	2
Two Noteworthy Collections of <i>Orobanche</i> L.  (Orobanchaceae) from Missouri.  TIMOTHY E. SMITH	5
Stenotaphrum secundatum (Poaceae) in Stone County.  A New Grass for Missouri.  LINDA S. ELLIS	7
Book Review: Wildflowers of Mississippi TIMOTHY E. SMITH	9
Robert H. Mohlenbrock: His Botanical Roots and His Influence on Missouri Botany. WALLACE R. WEBER	10
Missouri Botanical Record 12. WALLACE R. WEBER AND WILLIAM CORCORAN	17

# STUDIES IN THE FLORA OF MISSOURI, II.

George Yatskievych Flora of Missouri Project Missouri Botanical Garden P. O. Box 299, St. Louis, MO 63166

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 lowa. Thus, H. canadensis 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 southeasten 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 broadering 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).

#### LITERATURE CITED

- Aiken, S. G. 1981. A conspectus of *Myriophyllum* (Haloragaceae) in North America. Brittonia 33: 57-69.
- Couch, R. and E. Nelson. 1986. *Myriophyllum spicatum* in North America, pp. 8-18 in Proceedings, 1st International Symposium on Watermilfoil (*Myriophyllum spicatum*) and Related Haloragaceae Species, L. W. J. Anderson, ed. Aquatic Plant Management Society, Vicksburg, MS. v + 223 pp.
- Kolstad, O. A. 1986. Cyperaceae, pp. 1059-1113 in Flora of the Great Plains. Great Plains Flora Association. Univ. of Kansas Press, Lawrence, KS. vii, 1392 pp.
- Small, E. and M. Jomphe. 1989. A synopsis of the genus *Medicago* (Leguminosae). Canad. J. Bot. 67: 3260-3294 + 1 chart.
- Steyermark, J. A. 1963. Flora of Missouri. Iowa State Univ. Press, Ames, IA. Ixxxiii, 1725 pp. (pp. 1726-1728 (errata) added at second printing, 1968.)
- Webb, D. H. 1980. A Biosystematic Study of *Hypericum* Section *Spachium* in Eastern North America. Unpublished dissertation, Univ. of Tennessee, Knoxville, TN. x, 3 31 pp.
- Yatskievych, G. and D. Figg. 1989. Studies in the flora of Missouri, I. New records of introduced taxa. Missouriensis 10: 16-19.

# 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 MYZORRHI-ZA, 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 midwestern 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.

#### LITERATURE CITED

- Collins, L. T. 1973. Systematics of *Orobanche* Section MYZORRHIZA (Orobanchaceae) with emphasis on *Orobanche Iudoviciana*. Unpublished thesis, University of Wisconsin-Milwaukee. 219 pp.
- Correll, D. S. and M. C. Johnston. 1970. *Manual of the Vascular Plants of Texas*. University of Texas at Dallas, Richardson, TX. 1881 pp.
- Great Plains Flora Association. 1986. Flora of the Great Plains. University Press of Kansas, Lawrence. 1392 pp.
- Mohlenbrock, R. H. 1986. *Guide to the Vascular Flora of Illinois*. Southern Illinois University Press, Carbondale and Edwardsville. 507 pp.
- Steyermark, J. A. 1963. *Flora of Missouri*. Iowa State University Press, Ames, IA. 1728 pp.
- Wilson, J. H. 1984. Rare and Endangered Species of Missouri. Missouri Department of Conservation, Jefferson City. 17 pp.

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

Linda S. Ellis 911 W. 48th St. #105 Kansas City, MO 64112

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

Hitchcock, A. S. 1950. Manual of the Grasses of the United States, ed. 2, revised by A. Chase. U. S. Government Printing Office, Washington, DC. pp 585-6.

Steyermark, J. A. 1963. *Flora of Missouri*, Iowa State University Press, Ames, IA. 1xxxiii + 1725 pp. (+ errata, 3pp. second - sixth printings).

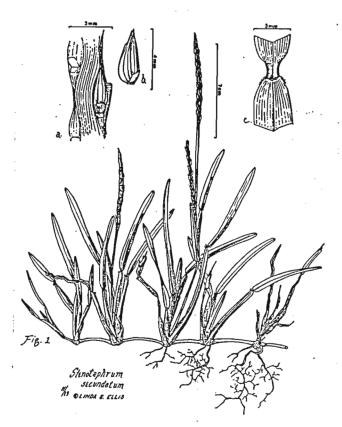


Figure 1. - Habit, a. portion of inflorescence, b. spiklet, c. portion of leaf with liquile.

**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, it 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 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\*

Wallace R. Weber
Department of Biology
Southwest Missouri State University
Springfield MO 65804

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.

<sup>\*</sup>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.

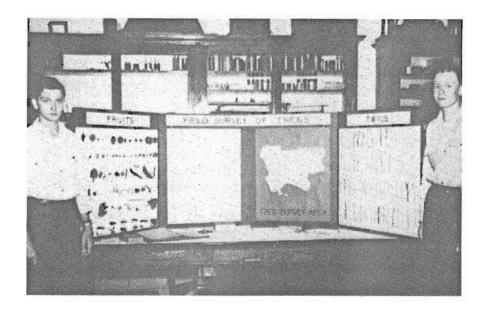


Figure 1. Bob Mohlenbrock (right) and Kenneth Stewart (now Professor Stewart at Miami University, Oxford, OH) with their 1950 Science Fair Project.

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).

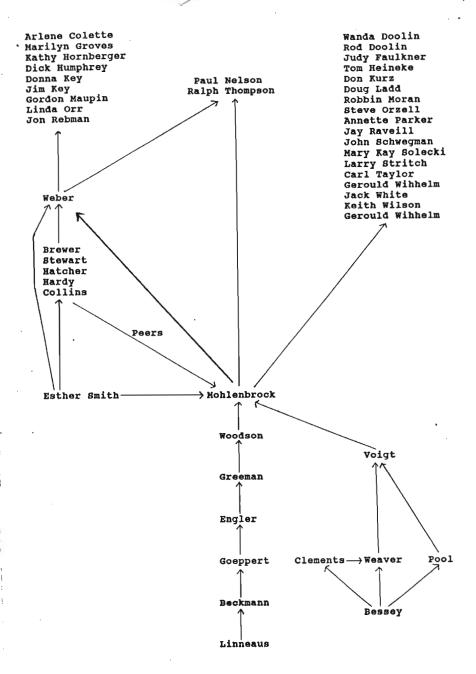


Figure 2. A chart depicting the "Academic Genealogy" of Robert H. Mohlen-brock. The lower half of this chart shows the relationship between RHM and his peers, teachers, and their teachers. The upper half shows his influence on others.

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 GEO-GRAPHIC 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
Ball Mill Resurgence Area
Big Oak Tree State Park
Bennett Spring State Park
Johnson Shut-Ins State Park
Hawn State Park
Upper Aux Vas Creek
LaPetite Gemme Prairie
Cedar Gap Area, Webster County, MO
Studies of Mingo National
Wildlife Reserve
Bona Glade Natural Area

Montauk State Park
Piney Creek Wilderness
Ha Ha Tonka State Park (In progress)
Grand Gulf State Park (In progress)

Robert Mohlenbrock Robert Mohlenbrock Wanda Doolin (Mohlenbrock)

Doug Ladd (Mohlenbrock)
Paul Nelson (Mohlenbrock)
Mary Kay Solecki (Mohlenbrock)
Carl Taylor (Mohlenbrock)

Paul Nelson (Weber)
Ralph Thompson (Weber)

Ralph Thompson (Mohlenbrock)
Arlene Collette (Weber)
Kathy Hornberger (Weber)
Gordon Maupin (Weber)
Jon Rebman (Weber)

Marylin Groves (Weber)

Linda Orr (Weber)

# 2. CONTRIBUTIONS INVOLVING FLORISTIC STUDIES OF MISSOURI ECOSYSTEMS

Terrestrial Communities of Missouri

Roaring River State Park

Missouri Glades

Missouri Fens

Prairie Management Studies

Paul Nelson (Mohlenbrock &

Weber)

Doug Ladd (Mohlenbrock) & P.

Nelson (Mohlenbrock)

Steve Orzell (Mohlenbrock)

Mary Kay Solecki (Mohlenbrock)

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

Lichens of Missouri Ferns of Missouri Illustrations of Ferns of MO Doug Ladd (Mohlenbrock)

Jim Key (Weber)

Paul Nelson (Mohlenbrock)

Geocarpon

Woody Shrubs and Vines of MO

(In progress

Illustrations of Shrubs and

Vines of MO (in progress)

W.R. Weber & R. Humphrey (Weber)

Don Kurz (Mohlenbrock)

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)
Wildlife Agent (MDC)

Rare Plant Survey (MDC)

Natural Heritage Botanist

Proposed Biosphere Reserve

Inventory (MDC)

State Lands Inventory &

Prairie Inventory (MDC) Floristic Survey of Bootheel

Counties (Memphis Corps of

Engineers)

Mississippi River Inventory

Annette Parker (Mohlenbrock) Rod Doolin (Mohlenbrock) Jay Raveill (Mohlenbrock Larry Stritch (Mohlenbrock) Judy Faulkner (Mohlenbrock)

Jack White (Mohlenbrock) Steve Orzell (Mohlenbrock)

Mary Kay Solecki (Mohlenbrock)

Tom Heineke (Mohlenbrock)
Dan Evans (Mohlenbrock)

 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)

Jav Raveill (Mohlenbrock)

Board Member and Charter

Member of the Missouri

Native Plant Society

Modern Pollen Spectra in Pond Sediments of

Southwest Missouri

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

Dona Key (Weber)

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

Crimson and Corn. 1950. The 1950 Edition of the Murphysboro (Illinois) Township High School Yearbook.

Humphey, 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

Wallace R. Weber Department of Biology Southwest Missouri State University Springfield, MO 65804-0095

William Corcoran
Department of Geosciences,
Southwest Missouri State University
Springfield, MO 65804-0095

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.

Contributors for this issue include: Melvin Conrad. Dept. of Biology, Northwest Missouri State University, Kirksville, MO 63501, and Bill Summers, P. O. Box 6975, St. Louis, MO.

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

134 145	Poa pratensis Eragrostis frankii	Sullivan	05/20/84	Broyles	NEMO
	v. frankii	Adair	08/17/77	Conrad 7761	NEMO
194	Koeleria cristata	Sullivan	07/07/83		NEMO
212	Agrostis stonlonifera				
	v. major	Sullivan	07/07/83	Broyles	NEMO
263	Chloris verticillata	Adair	09/09/89	Conrad 12354	NEMO
271	Phalaris arundinacea	Sullivan	07/13/88	Gleason 262	NEMO
320	Panicum clandestinum	Sullivan	07/13/88	Gleason 214	NEMO
338.1	Echinochloa crusgalli				
	v. crusgalli f. longiseta	Sullivan	07/13/88	Gleason 198	NEMO
339	Echinochloa muricata				
	v. muricata	Sullivan	08/24/88	Gleason 291	NEMO
		CYPERACEAE			
368	Cyperus aristatus	Oregon	7/2/79	Summers 501	MBG
393	Eleocharis acicularis	Sullivan	07/07/83		NEMO
421.2	Scirpus atrovirens		, ,		
	v. georgianus	Sullivan	06/26/88	Gleason 140	NEMO
446	Carex retroflexa				
	v. retroflexa	St. Francois	5/12/79	Summers 432	MBG
448	Carex rosea	St. Francois	5/12/79	Summers 431	MBG
500	Carex blanda	St. Francois	5/22/79	Summers 446	MBG
517. <b>1</b>	Carex complanata				
	v. hirsuta	Howell	7/19/79	Summers 528	MBG
532	Carex hystricina	Ste.Genevieve	6/9/76	Summers 224	MBG
542	Carex squarrosa	Sullivan	09/11/88	Gleason 358	NEMO
		LEMNACEAE			4
558	Lemna minor	Jefferson	6/28/79	Summers 494	MBG ·
	C	OMMELINACEA	Æ		
567	Tradescantia subasper				
567	v. subaspera	Texas	7/2/76	Summers 252	MBG
570	Tradescantia virginica	Texas	7/2/76	Summer's 252	WIDC
370	f. virginiana	Howell	5/17/80	Summers 715	MBG
			, , , , , , ,		
		JUNCACEAE			
589	Juncus secundus	St. Louis	7/3/79	Summers 502	MBG
590.1	Juncus tenuis	0 111	0= /40 /0=	01	NERCO
	f. anthelatus	Sullivan	07/13/88	Gleason 239	NEMO

## LILIACEAE

626.99	Hermocallisfulva	Sullivan	07/13/88	Gleason & Conrad, 253	NEMO
656.1	Smilax bon-nox v. hederaefolia	Shannon	5/18/78	Summers 394	MBG
			0, 10, 10		
		IRIDACEAE			
678.1	Sisyrinchium campestre				
	f. kansanum	Sullivan	05/06/83	Broyles	NEMO
		ORCHIDACEAE	Ē		
682	Cypripedium calceolus				
0000	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
697.09 699	Calopogon tuberosus Spiranthes tuberosa	St. Francois	6/29/80	Summers 740	MBG
	v. tuberosa	Howeil	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
	·	JUGLANDACEA	Ξ		
746	Carya laciniosa	Sullivan	07/13/88	Gleason 261	NEMO

# ULMACEAE

785.1	Celtis tenuifolia v. georgiana	Greene	8/30/76	Summers 273	MBG
	1	POLYGONACEA	ΛE		
829.1	Polygonum pensylvan- icum v. & f. laevigatum	Sullivan	09/12/87	Conrad & Gronefeld	NEMO
829.99	Polygonum pensylvan- icum v. laevigatum	Howell	8/14/76	Summers 257	MBG
830	Polygonum lapathifolium v. lapathifolium	Sullivan	, ,	Gleason 232	NEMO
833	Polygonum persicaria v. persicaria	Sullivan	, ,	Gleason 202	NEMO
		HENOPODIACE		G1043011 202	IVEIVIO
	C	HENOPODIACE	AE		
848 857	Chenopodium botrys Chenopodium giganto-	Howell	9/18/79	Summers 593	MBG
	spermum	Adair	08/28/89	Bell	NEMO
	А	MARANTHACE	4E		
889	Froelichia floridana v. campestris	Ozark	6/3/77	Summers 320	MBG
	N	NYCTAGINACEA	Æ		
891 893	Mirabilis nyctaginea Mirabilis albida	Sullivan Oregon	8/24/88 8/14/76	Gleason 317 Summers 263	NEMO MBG
	Р	ORTULACACEA	ΛE		
905	Claytonia virginica f. robusta	St. Louis	4/25/72	Summers 105	MBG
	CA	RYOPHYLLACE	AE		
914.99 922.99 922.99 926.99 930	Arenaria serpyllifolia Cerastium vulgatum Cerastium vulgatum Cerastium vicosum Holosteum umbellatum	Ste.Genevieve Douglas Howell Howell Webster	4/20/75 4/5/80 3/22/80 3/28/81 4/12/76	Summers 145 Summers 665 Summers 641 Summers 827 Summers 197	MBG MBG MBG MBG MBG

937 950	Silene cserei Dianthus prolifer	St. Francois Greene	7/4/78 6/26/77	Summers 401 Summers 334	MBG MBG
	F	RANUNCULACE	AE.		
968.99 977 1005	Thalictrum revolutum Isopyrum biternatum Clematis dioscoreifolia	Ste.Genevieve Ste.Genevieve	, ,	Summers 218 Summers 190	MBG MBG
	v. discoreifolia	Greene	9/1/75	Summers 178	MBG
		PAPAVERACEA	E		
1026	Papaver dubium	Greene	5/23/81	Summers 852	MBG
		FUMARIACEAE			
1037	Corydalis montana	Ozark	4/15/76	Summers 210	MBG
1037	Corydalis montana	St. Francois	4/18/81	Summers 838	MBG
		CRUCIFERAE			
1054	Cardaria draba	Atchison	5/18/79	Summers 445	MBG
1057	Thlaspi perfoliatum	Greene	6/13/76	Summers 230	MBG
1057	Thlaspi perfoliatum	St. Louis	4/9/79	Summers 418	MBG
1062.99	Draba verna	Howell	3/22/80	Summers 640	MBG
1062	Draba verna				
	v.verna	Texas	3/28/81	Summers 821	MBG
1075	Cardamine parviflora				
	v. arenicola	Howell	4/14/76	Summers 202	MBG
1080.99	Arabis hirsuta	Ste.Genevieve	5/15/76	Summers 220	MBG
1090.99	Rorippaislandica	Ozark	6/3/77	Summers 319	MBG
1092	Iodanthus pinnatifidus	Oregon	5/18/78	Summers 392	MBG
1096	Erysimum cheiranthoides	Crawford	5/5/79	Summers 430	MBG
1097	Erysimum repandum	St. Francois	4/18/81	Summers 839	MBG
	s	SAXIFRAGACEA	E		
1122.1	Heuchera puberula				
4400 4	f. glabrata	Howell	9/27/80	Summers 816	MBG
1122.1	Heuchera puberula				
	f. glabrata	Howell	5/24/79	Summers 460	MBG

# ROSACEAE

1152	Amelanchier humilis				
	v. humilis	Douglas	04/00/80	Jones	NEMO
1167.99	Crataegus crus-galli	Howell	4/14/76	Summers 201	MBG
1171	Crataegus reverchoni				
	v. discolor	Howell	5/24/79	Summers 456	MBG
1218	Geum vernum	Ste.Genevieve	4/20/74	Summers 131	MBG
1222	Rubus occidentalis				
	f. occidentalis	St. Francois	4/18/81	Summers 840	MBG
1243	Rosa setigera				
	v. & f. setigera	Sullivan	06/26/88	Gleason 139	NEMO
1260	Prunus hortulana	Sullivan	08/24/88	Gleason 302	NEMO
1263	Prunus persica	Howell	04/05/80	Summers 666	MBG
1267.99	Prunus virginiana	Greene	5/1/80	Summers 675	MBG
		LEGUMINOSAE			
1287	Cratalaria aggittalia				
.201	Crotalaria sagittalis	Howell	6/06/75	Summers 167	MBG
1289.1	v. sagittalis Trifolium pratense	Howell	6/26/75	Summers for	WIBG
1209.1	v. pratense				
	f. leucochraceum	Howell	5/19/73	Summers 110	MBG
1293	Trifolium repens	St. Francois	9/30/79	Summers 630	MBG
1299	Trifolium campestre	Sullivan	07/13/88		NEMO
1300	Trifolium dubium	Crawford	, ,	Conrad 12087	NEMO
1301	Medicago sativa	Orawrord	00/11/03	0011144 12001	IVENIO
. 50 1	f. sativa	Sullivan	06/26/88	Gleason 132	NEMO
1302.1	Medicago lupulina	Jamvan	00/20/00	Groudon roz	IVEIVIO
.002.1	v. glandulosa	Sullivan	07/26/88	Gleason 273	NEMO
1308	Lotus corniculatus	St. Louis	5/24/75	Summers 165	MBG
1308	Lotus corniculatus	Sullivan	, ,	Gleason 115	NEMO
1320	Amorpha canescens	•	,,		
	f. canescens	Ste.Genevieve	6/9/76	Summers 223	MBG
1322.2	Amorpha fruticosa		-, -, -		
	v. oblongifolia	Howell	5/16/78	Summers 387	MBG
1322.3	Amorpha fruticosa		, ,		
	v. angustifolia	Sullivan	07/13/88	Gleason 175	NEMO
1335	Coronilla varia	Phelps	6/16/79	Summers 480	MBG
1351	Desmodium paniculatum	,	, ,		
	v. paniculatum	St. Francois	9/4/77	Summers 357	MBG
1353	Desmodium laevigatum	St. Francois	9/3/79	Summers 571	MBG
1357	Lespedeza thunbergii .	Howell	9/11/76	Summers 284	MBG
1359	Lespedezaintermedia		•		
	f. intermedia	St. Francois	9/30/79	Summers 625	MBG

1364.3	Lespedeza capitata v. stenophylla	0. 5	- / . /		
	f. argentea	St. Francois	9/4/77	Summers 359	MBG
		LINACEAE			
1405	Linum sulcatum	Ste.Genevieve	10/18/75	Summers 187	MBG
		OXILIDACEAE			
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
	Z	YGOPHYLLACE	AE		
1418	Tribulus terrestris	Howell	7/13/73	Summers 117	MBG
	F	OLYYGALACEA	E		
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
	E	URPHORBIACE	ΑE		
1428 1445	Phyllanthus caroliniensis Euphorbia heterophylla	Howell	8/17/80	Summers 757	MBG
	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	Hypericum gymnanthum	Ozark	6/30/76	Summers 243	MBG
1546	Hypericum gentianoides	Howell	9/23/73	Summers 121	MBG
		VIOLACEAE			
1561	Viola sororia f. sororia	Douglas	4/5/80	Summers 662	MBG
1561	Viola sororia	Douglas	4/3/60	Summers 002	WIDG
	f. sororia	Knox	04/17/88	Gleason 4	NEMO
1562	Viola sagittata	St. Francois	4/8/77	Summers 302	MBG
		ONAGRACEAE			
1608	Oenothera linifolia	Webster	5/26/81	Summers 861	MBG
1616.1	Gaura biennis		_,,		
	v. pitcheri	Sullivan	08/24/88	Gleason 280	NEMO
	н	ALORAGIDACE	ΑE		
1621	Myriophyllum brasiliense	Carter	9/21/80	Summers 778	MBG
	•	UMBELLIFERAE	:		
		OWIDEEEN ENAL	-		
1642 1679.2	Torilis japonica Daucus carota	Sullivan	07/13/88	Gleason 172	NEMO
10/9.2	f. epurpuratus	Sullivan	06/26/88	Gleason 114	NEMO
		PYROLACEAE			
1689	Monotropa uniflora	Douglas	9/19/79	Summers 610	MBG
1689	Monotropa uniflora	Oregon	5/25/80	Summers 731	MBG
1690	Monotropa hypopithys	Oregon	9/19/79	Summers 602	MBG
		ERICACEAE			
1691 99	Rhododendron roseum	Howell	5/24/79	Summers 457	MBG
1695.1	Vaccinium stamineum		0,2.,,,	52	20
	v. neglectum	Greene	5/10/75	Summers 159	MBG
1696	Vaccinium vacillans v. crinitum f. alba	Ct Eropoolo	7/22/79	Summers 403	MBG
	v. crimitum t. aiba	St. Francois	7/23/78	Summers 403	MEG

## PRIMULACEAE

1707.1	Anagallis arvensis f. caerulea	Greene	6/12/76	Summers 226	MBG
		APOCYNACEAE	=		
1744 1745 1749	Amsonia ciliata v. filifolia Vinca minor Apocynum cannabinum v. cannabinum	Howell Howell Sullivan	6/26/75 4/15/76 07/13/88	Summers 166 Summers 205 Gleason 166	MBG MBG NEMO
	Α	SCLEPIADACEA	ΛE		
1758	Asclepias variegata	Ozark	6/15/76	Summers 235	MBG
	CC	ONVOLVULACE	AE		
1781 1791	Convolvulus pellitus f. anestius Cuscuta polygonorum P	Greene Howell OLEMONIACEA	6/26/77 7/19/80 E	Summers 337 Summers 752	MBG MBG
1797.3	Phlox pilosa v. fulgida f. albiflora	St. Louis	4/16/76 :AE	Summers 211	MBG
1810 1812	Phacelia purshii Phacelia bipinnatifida	Ste.Genevieve Oregon BORAGINACEAE	5/25/80	Summers 215 Summers 732	MBG MBG
1819 1822 1831.99 1831	Echium vulgare v. vulgare Onosmodium subsetosum Myosotis virginica Myosotis virginica v. virginica	Crawford Taney Webster Howell	6/24/79 8/20/77 5/26/81 5/18/74	Summers 490 Summers 341 Summers 853 Summers 133	MBG MBG MBG MBG

# LABIATAE

1874 1877 1877 1877 1878 1878 1883 1911.5	Leonurus cardiaca Lamium amplexicaule Lamium amplexicaule Lamium amplexicaule Lamium purpureum Lamium purpureum Salvia azurea v. grandiflora Mentha cardiaca Mentha piperita	Howell Howell St. Francois Texas Howell Ste.Genevieve Sullivan Sullivan Oregon SOLANACEAE	09/11/88	Summers 735 Summers 824 Summers 818 Summers 823 Summers 129 Summers 835 Gleason 373 Gleason 310 Summers 589	MBG MBG MBG MBG MBG MBG NEMO NEMO MBG
		002/11/102/12			
1922	Solanum villosum	Howell	7/1/76	Summers 249	MBG
1933.1	Physalis longifolia v. & f. subglabrata	Sullivan	07/13/88	Gleason 154	NEMO
	SCI	ROPHULARIACE	EAE		
1948	Bacopa rotundifolia	Howell	7/19/80	Summers 754	MBG
1957	Lindernia anagallidea	Dallas	9/4/76	Summers 280	MBG
1984	Veronica serpyllifolia	Crawford	5/4/79	Summers 429	MBG
1989	Veronica polita	Greene	4/25/81	Summers 842	MBG
1989	Veronica polita	Howell	4/29/75	Summers 156	MBG
1997 2006	Gerardia gattingeri Castilleja cocinea	St. Francois	9/30/79	Summers 626	MBG
	f. coccinea	Ste.Genevieve	5/26/74	Summers 135	MBG
	E	BIGNONIACEAE			
2009	Campsis radicans	Sullivan	06/26/88	Gleason 142	NEMO
	,	ACANTHACEAE			
2019.2	Ruellia strepens f. cleistantha	Ste.Genevieve	8/9/75	Summers 170	MBG
2021.5	Ruellia humilis v. expansa	Sullivan	07/26/88	Gleason 266	NEMO
2029	Plantago lanceolata				
	v.lanceolata	Sullivan	06/26/88	Gleason 145	NEMO

v. hirsuta

Summers 281

MBG

9/5/76

## RUBIACEAE

2037 2042	Sherardia arvensis Galium circaezans	Greene	6/26/77	Summers 333	MBG
	v. circaezans	Shannon	05/26/88	Conrad 11807	NEMO
2050.99	Diodiavirginiana	Ozark	8/15/76	Summers 265	MBG
2050	Diodia virginiana				
	v.virginiana	Dallas	7/22/79	Summers 539	MBG
		A BB!EO! ! A OE A	_		
	(	CAPRIFOLIACEA	LE.		
2072	Triosteum angustifolium				
	v. angustifolium	St. Francois	4/22/77	Summers 305	MBG
	·		, ,		
		DIPSACACEAE			
	Dipsacus Iaciniatus	Randolph	, .	Mumberg	NEMO
2088.09	Dipsacus laciniatus	Marion	07/23/89	Conrad 12353	NEMO
	C	AMPANULACEA	VE.		
	O	AIVII AIVOLAGEA	\L		
2098	Campanula rapunculoides	:			
	f. rapunculoides	Greene	6/5/76	Summers 221	MBG
2099	Campanula americana			·	
	f. alba	Warren	8/12/79	Summers 556	MBG
2102	Specularia biflora	Webster	5/26/81	Summers 858	MBG
2109	Lobelia siphilitica				
0400	v. hybrida	Carter	9/21/80	Summers 777	MBG
2109	Lobelia siphilitica v. hybrida	Shannon	9/21/80	Summers 771	MBG
	v. IIybiida	Silamion	9/21/00	Summers // I	WIBG
		COMPOSITAE			
2112.99	Vernonia altissima	Oregon	9/17/79	Summers 580	MBG
2114.2	Vernonia baldwini				
	v.interior	Webster	7/25/79	Summers 545	MBG
2130.2	Kuhnia eupatorioides	_		_	
0.100	v. angustifolia	Carter	9/21/80	Summers 784	MBG
2135	Liatris ligulistylis	Ste.Genevieve	,	Summers 288	MBG
2137 2139.2	Liatris mucronata Liatris squarrosa	Taney	8/20/77	Summers 344	MBG
2133.2	v. glabrata	Camden	8/7/76	Summers 255	MBG
2139	Liatris squarrosa	Jamaon	5/,//0	Ç2,1111010 £00	

Stone

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