

# MISSOURIENSIS

Journal of the Missouri Native Plant Society

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Volume 13

1992

Number 1

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Published for the Society  
at  
Southwest Missouri State University

## COUNTY RECORD VOUCHERS FOR VASCULAR PLANT SPECIES NEWLY RECORDED FOR MISSOURI SINCE 1963

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Research on the flora of Missouri and botanical explorations in the state during the past thirty years have resulted in the discovery of numerous new records of vascular plants not recorded in Steyermark's *Flora of Missouri* (1963). A recent update (Yatskievych and Turner, 1990) compiled information on these additions to the flora together into a comprehensive checklist, but a significant number of other new finds have been published since then (see below). New records for the Missouri flora continue to be discovered at the rate of ten to twelve taxa annually, and this rate shows no evidence of decline.

Corcoran and Weber (1991) recently summarized their efforts on behalf of the Missouri Native Plant Society (MONPS) to computerize the county-level distributions of all vascular plant taxa presently known to grow outside of cultivation in the state. During the past eleven years the distributional data from Steyermark's *Flora* have been supplemented with several thousand vouchered county records, which have been submitted largely by MONPS members and published in a series of columns in *Missouriensis* (for summary see Corcoran and Weber, 1991). However, with few exceptions (Raveill & Taylor, 1983, 1984), no previous attempt has been made to tabulate the county-level distributions for additions to the flora. The purpose of this paper is to present a tabulation of these records, based on a review of herbarium specimens, in a format that should allow easy incorporation into the Missouri Flora Atlas database. Plant collectors in Missouri may also benefit from the knowledge of which counties the newer plant records have been collected in.

### METHODS AND MATERIALS

A list of taxa recorded for Missouri since Steyermark (1963) was developed during library and herbarium research at the Flora of Missouri Project and has been continually updated. A map number was assigned to each taxon by aligning it with its closest relative in the existing flora (Weber and Corcoran, 1991). The first new record to be aligned with a given "Steyermark" taxon was designated with the map number of the related taxon, plus the suffix ".09". In a few cases, subsequent additions in the same species complex were designated ".19", ".29", etc.

An attempt was made to locate herbarium specimens to voucher the county-level distribution of each new record. In the interest of timeliness, some of

the records were verified through correspondence with curators at various herbaria. Herbarium records were tabulated using the format in the most recent *Missouri Botanical Record* (Weber and Corcoran, 1991). Herbarium abbreviations follow those in Holmgren et al. (1990), except for the following herbaria not included in that work: University of Missouri, Kansas City (UMKC), University of Missouri, Columbia, Integrated Pest Management Herbarium (UMO/IPM).

## RESULTS

We were unable to locate any vouchers to support thirteen of the taxa reported as occurring in Missouri by Yatskievych and Turner (1990) and the earlier references cited therein. In some cases, such as *Rapistrum rugosum*, these specimens exist, but have not been formally donated to an herbarium by their collectors. Most of the others probably exist in herbaria not inventoried during our study. Further research will be necessary to verify or eliminate these taxa as members of Missouri's flora. The taxa that could not be confirmed (followed by a suggested map number) are: *Aster lanceolatus* Willd. ssp. *hesperius* (A. Gray) Semple & Chmielewski (2200.40); *Carex diandra* Schrank (459.09); *Castanea pumila* (L.) Miller var. *pumila* (758.10); *Cicuta maculata* L. var. *bolanderi* (S. Watson) G. Mulligan (1654.10); *Cyperus luzulae* (L.) Retz. (387.09); *Populus deltoides* Bartram ex Marshall ssp. *monillifera* (Aiton) Eckenwalder (737.30); *Solidago bicolor* (2150.09); *Solidago rigida* L. ssp. *humilis* (Porter) Heard & Semple (2165.20); *Rapistrum rugosum* (L.) All. (1047.09); *Verbena urticifolia* L. var. *leiocarpa* Perry & Fern. (1840.20); *Viola affinis* Le Conte (1561.09); *Viola pratincola* E. Greene (1561.19).

In some cases, taxa listed by Yatskievych and Turner (1990) as new to Missouri represent the redetermination by specialists of plants included by Steyermark (1963) under a different name (the name in Steyermark corresponds to a valid taxon not occurring in Missouri). In cases where all Missouri material was misdetermined in a consistent fashion, no new map number is necessary. Table 1 lists the corrected names for such taxa and the Steyermark map number with which they correspond. Taxa in both tables 1 and 2 are listed alphabetically by family, with the pteridophytes, monocots, and dicots in that order. Reasons for excluding the taxa listed in Steyermark (1963) for these map numbers were given by Yatskievych and Turner (1990).

County records documenting the distributions of other taxa reported since 1963 are listed in table 2, along with suggested map numbers. The species listed in the *Supplement* that appeared in later printings of Steyermark's flora are also included, as these were not assigned maps or map numbers previously.

In some cases, the specimens cited and the counties of occurrence differ from those listed in the original published reports for these taxa. This may be because additional county records have been documented, or because we were unable to locate all of the original collections cited by some authors. In each case we have attempted to be as complete as possible in circumscribing the known range for every new addition to Missouri's flora published to date. Future collectors will undoubtedly expand our knowledge of the distributions of many of these plants in the state.

## DISCUSSION

The present tabulation represents an important step toward updating the distributional data on the flora of Missouri. However, much research is still necessary before a computerized atlas can hope to be reasonably precise and complete. One of the biggest potential problems in adding data on new records is the affect of these additions on the perceived ranges of existing species. In several cases, additions to the flora represent taxa segregated from previously recognized ones. For example, records representing both *Platanthera praeclara* and *Platanthera leucophaea* were included by Steyermark (1963) in his distributional data under *Habenaria leucophaea*. Similarly, many of the records ascribed to *Selaginella apoda* by Steyermark actually refer to the more recently described *Selaginella eclipses*. The existing taxa from which some of the taxa in table 2 have been segregated will require reexamination, and in some cases will have one or more counties deleted from their ranges.

## ACKNOWLEDGMENTS

We are indebted to the following botanists, who examined and verified records in their herbaria for this report: Nancy Hensold (F); Robin Kennedy (UMO); Paul Redfearn (SMS); Anton Reznicek (MICH). We also greatly appreciate the support that the members of MONPS have provided to the Flora of Missouri Project during its first half-decade of discovery.

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Table 1. New records representing replacements for taxa previously misdetermined in Steyermark (1963) and their corresponding map numbers. References validating these changes were cited in Yatskievych and Turner (1990).

| TAXON (NEW DETERMINATION)                                                 | MAP  |
|---------------------------------------------------------------------------|------|
| <i>Dryopteris celsa</i> (W. Palmer) Small                                 | 61   |
| <i>Fimbristylis puberula</i> (Michaux) M. Vahl var. <i>puberula</i>       | 404  |
| <i>Spiranthes ovalis</i> Lindley var. <i>erostellata</i> Catling          | 703  |
| <i>Torilis arvensis</i> (Hudson) Link                                     | 1642 |
| <i>Carduus nutans</i> L. ssp. <i>leiophyllus</i> (Petrovic) Stoy. & Stef. | 2354 |
| <i>Atriplex truncata</i> (Torrey) A. Gray                                 | 867  |
| <i>Hypericum majus</i> (A. Gray) Rusby                                    | 1544 |
| <i>Euphorbia cyathophora</i> Murray                                       | 1445 |
| <i>Utricularia macrorhiza</i> Le Conte                                    | 2018 |
| <i>Linum rigidum</i> Pursh var. <i>compactum</i> (Nelson) C. Rogers       | 1404 |
| <i>Ammannia robusta</i> Heer & Regel                                      | 1581 |
| <i>Oxalis florida</i> Salisb. ssp. <i>florida</i>                         | 1410 |
| <i>Rumex cristatus</i> DC.                                                | 813  |
| <i>Tamarix parviflora</i> DC.                                             | 1551 |
| <i>Kallstroemia parviflora</i> Norton                                     | 1419 |

Table 2. County records and map numbers for new additions to the Missouri flora since 1963. Where not indicated in a footnote, the literature source for each new report was cited by Yatskievych and Turner (1990). Footnotes follow the table.

| TAXA                                                               | COUNTY     | COLLECTOR                      | HERB | MAP NO |
|--------------------------------------------------------------------|------------|--------------------------------|------|--------|
| ADIANTACEAE                                                        |            |                                |      |        |
| <i>Pellaea glabella</i> Mett. ex Kuhn<br>var. <i>missouriensis</i> | Carter     | Gastony 83-41                  | IND  | 29.10  |
|                                                                    | Dent       | Gastony 83-31                  | IND  |        |
|                                                                    | Jefferson  | Yatskievych<br>& Gastony 90-14 | MO   |        |
|                                                                    | Pulaski    | Gastony 82-27c                 | IND  |        |
|                                                                    |            |                                |      |        |
| ASPLENIACEAE                                                       |            |                                |      |        |
| <i>Asplenium montanum</i> Willd.                                   | Montgomery | Dunlap 24754                   | UMO  | 42.09  |
| MARSILEACEAE                                                       |            |                                |      |        |
| <i>Pilularia americana</i> Braun                                   | Barton     | Dunlap s.n.                    | UMO  | 20.09  |
|                                                                    | Lincoln    | Schuette 1817                  | MO   |        |
| OPHIOGLOSSACEAE                                                    |            |                                |      |        |
| <i>Ophioglossum crotalophoroides</i> Walter                        | Oregon     | Thomas et al 38497             | MO   | 17.09. |
| <i>Ophioglossum petiolatum</i> Hook.                               | Pemiscot   | Thomas & Marx<br>34700         | MO   | 16.09  |
| EQUISETACEAE                                                       |            |                                |      |        |
| <i>Equisetum x ferrissii</i> Clute                                 | Clark      | Skinner 2143                   | MO   | 13.09  |
| <i>Equisetum pratense</i> Ehrh.                                    | Clark      | Jacobs s.n.                    | MO   | 10.09  |
| <i>Selaginella eclipses</i> Buck                                   | Barry      | Steyermark 22529               | MO   | 5.09   |
|                                                                    | Butler     | Yatskievych et al<br>91-235    | MO   |        |
|                                                                    | Carter     | Steyermark 11449               | MO   |        |
|                                                                    | Crawford   | Steyermark 19780               | MO   |        |
|                                                                    | Dent       | Steyermark 19393               | MO   |        |
|                                                                    | Douglas    | Wagner et al 74159             | MO   |        |
|                                                                    | Howell     | Redfearn & Weber<br>32789      | MO   |        |
|                                                                    | Iron       | Steyermark 19825               | MO   |        |
|                                                                    | Jefferson  | Redfearn 20811                 | SMS  |        |
|                                                                    | Laclede    | Steyermark 13897               | MO   |        |
|                                                                    | McDonald   | Bush s.n.                      | MO   |        |
|                                                                    | Oregon     | Steyermark 12103               | MO   |        |

TABLE 2 (CONTINUED)

|                                                |                |                             |      |        |
|------------------------------------------------|----------------|-----------------------------|------|--------|
|                                                | Osage          | Steiermark 27643            | MO   |        |
|                                                | Ozark          | Steiermark 15588            | MO   |        |
|                                                | Polk           | Steiermark 71392            | MO   |        |
|                                                | Pulaski        | Steiermark 25281            | MO   |        |
|                                                | Ripley         | Steiermark 14288            | MO   |        |
|                                                | Ste. Genevieve | Steiermark 21103            | MO   |        |
|                                                | Shannon        | Yatskievych et al 90-422    | MO   |        |
|                                                | Taney          | Steiermark 66353            | MO   |        |
|                                                | Texas          | Steiermark 14581            | MO   |        |
|                                                | Washington     | Steiermark 21051            | MO   |        |
| CYPERACEAE                                     |                |                             |      |        |
| <sup>1</sup> <i>Carex abscondita</i> Mackenzie | Ripley         | Yatskievych et al 89-131    | MO   | 496.09 |
| <i>Carex atlantica</i> L. Bailey               | Shannon        | Orzell 261B                 | MO   | 465.09 |
| ssp. <i>atlantica</i>                          | Stoddard       | Steiermark 78281            | MO   |        |
|                                                | Wayne          | Orzell 927                  | MO   |        |
| <i>Carex bicknellii</i> Britton                | Barton         | Castaner 5273               | WARM | 478.10 |
| var. <i>opaca</i> F. J. Herm.                  | Ripley         | Yatskievych et al 89-131    | MO   |        |
|                                                | Stoddard       | Yatskievych et al 89-120    | MO   |        |
| <i>Carex bromoides</i> Schk. ex Willd.         | Bollinger      | Christ s.n.                 | MO   | 465.29 |
|                                                | Butler         | Summers 426                 | MO   |        |
|                                                | Wayne          | Orzell 1010                 | MO   |        |
| <i>Carex crawfordii</i> Fern.                  | St. Louis      | Muehlenbach 3751            | MO   | 467.09 |
| <i>Carex eleocharis</i> L. Bailey              | St. Louis      | Muehlenbach 1951            | MO   | 443.09 |
| <i>Carex platyphylla</i> J. Carey              | Howard         | Smith 82                    | US   | 496.19 |
| <i>Carex socialis</i> Mohl.                    | Pemiscot       | Steiermark 5115 & Schwegman | MO   | 448.09 |
|                                                | Mississippi    | Yatskievych 92-114          | MO   |        |
| <i>Carex sterilis</i> Willd.                   | Dent           | Orzell 982                  | MICH | 465.19 |
|                                                | St. Francois   | Orzell 263                  | MICH |        |
|                                                | Shannon        | Orzell 262                  | MICH |        |
| <i>Carex sychnocephala</i> J. Carey            | Platte         | Castaner 10089              | MO   | 466.09 |
| <i>Cyperus flavicomus</i> Michaux              | Stoddard       |                             | UMO  | 364.09 |
| <sup>2</sup> <i>Cyperus grayioides</i> Mohl.   | Mississippi    | Bryson 10472                | MO   | 384.09 |
|                                                | New Madrid     | Carter 8263                 | MO   |        |
|                                                | Scott          | Bryson 10478                | MO   |        |
| <i>Cyperus retroflexus</i> Buckley             | Mississippi    | Bryson 10473                | MO   | 382.09 |
| <i>Eleocharis atropurpurea</i> (Retz.) Kunth   | Platte         | Castaner 7260               | WARM | 396.09 |
| <i>Fimbristylis miliacea</i> (L.) M. Vahl      | Stoddard       | Taylor s.n.                 | UMO  | 407.07 |
| <i>Fuirena simplex</i> M. Vahl                 | Holt           | Steiermark 15094            | MO   | 427.10 |
| var. <i>aristulata</i> (Torrey) Kral           | Jackson        | Bush 223                    | MO   |        |
| <i>Scirpus deltarum</i> Schuyler               | Holt           | Steiermark 15116            | MO   | 413.09 |

TABLE 2 (CONTINUED)

|                                           |             |                                |       |        |
|-------------------------------------------|-------------|--------------------------------|-------|--------|
| <i>Scirpus pedicellatus</i> Fern.         | Howard      | Steyermark 14781               | MO    | 425.09 |
|                                           | Adair       | Palmer & Steyer-<br>mark 41144 | MO    |        |
|                                           | Mason       | Steyermark 40585               | WIS   |        |
|                                           | Putnam      | Palmer &<br>Steyermark 41071   | MO    |        |
| <i>Scirpus saximontanus</i> Fern.         | Platte      | Castaner 7259                  | WARM  | 410.09 |
| DIOSCORIACEAE                             |             |                                |       |        |
| <i>Dioscorea batatas</i> Decne.           | Howell      | Summers 3515                   | MO    | 658.09 |
|                                           | Reynolds    | Nelson s.n.                    | MODNR |        |
|                                           | Wayne       | Yatskievych et al.             | MO    |        |
|                                           |             | 89-170                         |       |        |
| HYDROCHARITACEAE                          |             |                                |       |        |
| <sup>3</sup> <i>Egeria densa</i> Planchon | Oregon      | Redfearn 26628                 | SMS   | 101.09 |
| IRIDACEAE                                 |             |                                |       |        |
| <i>Iris orientalis</i> Miller             | Platte      | Henderson 67-687               | UMKC  | 668.09 |
| JUNCACEAE                                 |             |                                |       |        |
| <i>Juncus gerardii</i> Loisel             | St. Louis   | Muehlenbach 2356               | MO    | 590.09 |
| LEMNACEAE                                 |             |                                |       |        |
| <i>Lemna aequinoctialis</i> Welw.         | Dent        | Palmer &<br>Steyermark 41419   | MO    | 561.09 |
|                                           | Dunklin     | Trelease s.n.                  | MO    |        |
|                                           | Howell      | Steyermark 5222                | MO    |        |
|                                           | Jackson     | Bush s.n.                      | MO    |        |
|                                           | Jasper      | Palmer 2200                    | MO    |        |
|                                           | Ozark       | Kellogg s.n.                   | MO    |        |
|                                           | Ripley      | Yatskievych et al.<br>89-127   | MO    |        |
|                                           | St. Charles | Sarger s.n.                    | MO    |        |
|                                           | St. Louis   | Thompson s.n.                  | MO    |        |
|                                           | Wayne       | Steyermark 6587                | MO    |        |
| <i>Lemna obscura</i> (Austin) Daubs       | Dunklin     | Bush s.n.                      | MO    | 558.09 |
|                                           | St. Louis   | Thompson s.n.                  | MO    |        |
|                                           | Scott       | Eggert s.n.                    | MO    |        |
| <i>Lemna turionifera</i> Landolt          | Clark       | Steyermark 28744               | F     | 560.09 |
|                                           | Jackson     | Bush 156                       | MO    |        |

TABLE 2 (CONTINUED)

| LILIACEAE                                        |              |                              |    |        |
|--------------------------------------------------|--------------|------------------------------|----|--------|
| <i>Allium burdickii</i> (Hanes)<br>A. G. Jones   | DeKalb       | Steyermark 69532             | MO | 616.09 |
|                                                  | Dent         | Chandler 5070                | MO |        |
|                                                  | Jefferson    | Turner s.n.                  | MO |        |
|                                                  | Mercer       | Palmer &<br>Steyermark 41325 | MO |        |
| <i>Convallaria majalis</i> L.                    | Jackson      | Henderson 65-112             | MO | 642.09 |
| <i>Erythronium rostratum</i> W. Wolf             | Madison      | Summers 3155                 | MO | 629.09 |
| <i>Narcissus x medioluteus</i> Miller            | St. Louis    | Muehlenbach 3503             | MO | 660.09 |
| NAJADACEAE                                       |              |                              |    |        |
| <sup>3</sup> <i>Najas flexilis</i> All.          | Butler       | Summers 5137                 | MO | 13.09  |
|                                                  | Wayne        | Summers 5318                 | MO |        |
| ORCHIDACEAE                                      |              |                              |    |        |
| <i>Platanthera praeclara</i><br>Sheviak & Bowles | Atchison     | Summers 1531                 | MO | 690.09 |
| <i>Spiranthes magnicamporum</i><br>Sheviak       | Camden       | Summers 1571                 | MO | 702.09 |
|                                                  | Christian    | Summers 1579                 | MO |        |
|                                                  | Franklin     | Shea 291                     | MO |        |
|                                                  | Howell       | Summers 935                  | MO |        |
|                                                  | Jefferson    | Summers 1500                 | MO |        |
|                                                  | Miller       | M. Wallace s.n.              | MO |        |
|                                                  | Montgomery   | Schuette 1637                | MO |        |
|                                                  | Ozark        | Yatskievych 88-252           | MO |        |
|                                                  | St. Francois | Summers 638                  | MO |        |
|                                                  | Shannon      | Summers et al.<br>3913       | MO |        |
|                                                  | Stone        | Summers 975                  | MO |        |
|                                                  | Taney        | Redfearn &<br>& Wu 33219     | MO |        |
|                                                  | Texas        | Summers &<br>Ryan 3786       | MO |        |
|                                                  | Webster      | Summers 3111                 | MO |        |
|                                                  | Wright       | Summers &<br>Ryan 3868       | MO |        |
| <i>Tipularia discolor</i> (Pursh) Nutt.          | Butler       | Summers &<br>Pelton s.n.     | MO | 712.09 |
|                                                  | Oregon       | Summers 2854                 | MO |        |
|                                                  | Stoddard     | Summers 3056                 | MO |        |

TABLE 2 (CONTINUED)

| POACEAE                                                                                                                |              |                                        |        |        |
|------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------|--------|--------|
| <i>Agropyron desertorum</i> (Fisher ex Link) Schultes                                                                  | Franklin     | <i>Davit s.n.</i>                      | MO     | 176.09 |
|                                                                                                                        | St. Louis    | <i>Muehlenbach 2471</i>                | MO     |        |
| <i>Aira caryophyllaea</i> L.                                                                                           | Greene       | <i>Toney s.n.</i>                      | UMO    | 268.09 |
|                                                                                                                        | Howell       | <i>Summers 2696</i>                    | MO     |        |
|                                                                                                                        | Taney        | <i>Castaner 1085</i>                   | WARM   |        |
|                                                                                                                        | Wayne        | <i>Freckmann 12497</i>                 | UWSP   |        |
| <i>Bothriochloa bladhii</i> (Retz.) S. T. Blake                                                                        | Howell       | <i>Bennett 901</i>                     | UMO    | 357.09 |
| <i>Bromus arvensis</i> L.                                                                                              | St. Louis    | <i>Muehlenbach 4172</i>                | MO     | 111.19 |
| <i>Bromus commutatus</i> Schrader                                                                                      | Barton       | <i>G. &amp; K. Yatskievych 88-34</i>   | MO     | 111.09 |
|                                                                                                                        | Benton       | <i>Steyermark 5777</i>                 | MO     |        |
|                                                                                                                        | Jackson      | <i>Bush s.n.</i>                       | MO     |        |
|                                                                                                                        | Jasper       | <i>Palmer 3781</i>                     | MO     |        |
|                                                                                                                        | Marion       | <i>Davis 8839</i>                      | MO     |        |
|                                                                                                                        | Monroe       | <i>Hinterthuer 173A</i>                | MO     |        |
|                                                                                                                        | St. Clair    | <i>Castaner 5789</i>                   | MO     |        |
|                                                                                                                        | St. Louis    | <i>Muehlenbach 3269</i>                | MO     |        |
| <i>Chasmanthium laxum</i> (L.) Yates ssp. <i>sessiliflorum</i> (Poiret) L. Clark                                       | St. Louis    | <i>Kellogg s.n.</i>                    | MO     | 163.10 |
| <i>Cynosurus echinatus</i> L.                                                                                          | St. Louis    | <i>Muehlenbach 1628</i>                | MO     | 193.09 |
| <i>Dichanthelium sabulorum</i> (Lam.) Gould & C. A. Clark var. <i>thinium</i> (A. Hitchc. & Chase) Gould & C. A. Clark | Reynolds     | <i>Nelson s.n.</i>                     | MO-DNR | 308.09 |
| <i>Echinochloa utilis</i> Ohwi & Yab.                                                                                  | St. Louis    | <i>Muehlenbach 3349</i>                | MO     | 337.01 |
| <i>Elymus elongatus</i> (Host) Rumem.                                                                                  | St. Louis    | <i>Muehlenbach 2756</i>                | MO     | 174.09 |
| <i>Eragrostis barrelieri</i> Daveau                                                                                    | St. Louis    | <i>Muehlenbach 2732</i>                | MO     | 149.09 |
| <i>Eragrostis curtipedicellata</i> Buckley                                                                             | St. Louis    | <i>Muehlenbach 1993</i>                | MO     | 155.09 |
| <i>Eragrostis elliottii</i> S. Watson                                                                                  | St. Louis    | <i>Muehlenbach 3183</i>                | MO     | 154.09 |
| <i>Eragrostis multicaulis</i> Steudel                                                                                  | St. Louis    | <i>Muehlenbach 3723</i>                | MO     | 147.09 |
| <i>Eragrostis secundiflora</i> C. Presl ssp. <i>oxylepis</i> (Torrey) S. Koch                                          | St. Louis    | <i>Muehlenbach 1931</i>                | MO     | 155.19 |
| <i>Eriochloa villosa</i> (Thumb.) Kunth                                                                                | Audrain      | <i>Bullard s.n.</i>                    | UMO    | 283.09 |
|                                                                                                                        | St. Francois | <i>G. &amp; K. Yatskievych 88-213</i>  | MO     |        |
| <i>Leptochloa dubia</i> (Kunth) Nees                                                                                   | St. Louis    | <i>Muehlenbach 2407</i>                | MO     | 255.09 |
| <i>Lolium persicum</i> Boiss. & Hohen.                                                                                 | St. Louis    | <i>Muehlenbach 1176</i>                | MO     | 193.09 |
| <i>Lolium rigidum</i> Gaudin                                                                                           | St. Louis    | <i>Muehlenbach 1411</i>                | MO     | 193.19 |
| <sup>4</sup> <i>Microstegium vimineum</i> (Trin.) A. Camus                                                             | Oregon       | <i>Summers &amp; Dodd 3920</i>         | MO     | 347.29 |
| <i>Miscanthus sacchariflorus</i> (Maxim.) Hackel                                                                       | Johnson      | <i>Delozier 1315</i>                   | MO     | 347.09 |
| <i>Miscanthus sinensis</i> Andersson                                                                                   | Warren       | <i>Steyermark &amp; Branson 132195</i> | MO     | 347.19 |

TABLE 2 (CONTINUED)

|                                                                           |           |                                         |        |        |
|---------------------------------------------------------------------------|-----------|-----------------------------------------|--------|--------|
| <i>Paspalum urvillei</i> Steudel                                          | St. Louis | <i>Muehlenbach 3070</i>                 | MO     | 293.09 |
| <i>Pennisetum ciliare</i> (L.) Link                                       | St. Louis | <i>Muehlenbach 1627</i>                 | MO     | 346.09 |
| <i>Poa interior</i> Rydb.                                                 | Cass      | <i>Smith 2429</i>                       | MO     | 140.09 |
| <i>Sacciolepis striata</i> (L.) Nash                                      | Oregon    | <i>Yatskievych &amp; Summers 90-404</i> | MO     | 336.09 |
| <i>Sclerochloa dura</i> (L.) P. Beauv.                                    | Barry     | <i>Ladd 6346</i>                        | MO-DNR | 164.09 |
|                                                                           | Dallas    | <i>Ladd 4836</i>                        | MO-DNR |        |
|                                                                           | Laclede   | <i>Ladd 6239</i>                        | MOR    |        |
|                                                                           | St. Louis | <i>Ladd 13935</i>                       | MO     |        |
|                                                                           | St. Louis | <i>G. &amp; K. Yatskievych 90-272</i>   | MO     | 343.10 |
| <i>Setaria viridis</i> (L.) P. Veauv.<br>var. <i>major</i> (Gaudin) Posp. | Stone     | <i>Ellis s.n.</i>                       | MO     | 323.09 |
| <i>Stenotaphrum secundatum</i> (Walter) Kunze                             | Jaspe     | <i>Christ 19-3-3A</i>                   | MO     | 117.09 |
| <i>Vulpia bromoides</i> (L.) Gray                                         |           |                                         |        |        |

## PONTEDERIACEAE

|                                                  |             |                         |     |        |
|--------------------------------------------------|-------------|-------------------------|-----|--------|
| <i>Heteranthera multiflora</i> (Griseb.) C. Horn | Bates       | <i>Steyermark 21282</i> | MO  | 582.09 |
|                                                  | Boone       | <i>Christian s.n.</i>   | UMO |        |
|                                                  | Christian   | <i>Palmer 64386</i>     | UMO |        |
|                                                  | Clay        | <i>Mackenzie s.n.</i>   | MO  |        |
|                                                  | Greene      | <i>Standley 9066</i>    | US  |        |
|                                                  | Holt        | <i>Demetrio s.n.</i>    | MO  |        |
|                                                  | Jackson     | <i>Bush 443</i>         | MO  |        |
|                                                  | Laclede     | <i>Moore s.n.</i>       | F   |        |
|                                                  | Lincoln     | <i>Kellogg 823</i>      | MO  |        |
|                                                  | Livingston  | <i>Bush 9418</i>        | F   |        |
|                                                  | Newton      | <i>Palmer 53019</i>     | UMO |        |
|                                                  | St. Charles | <i>Kellogg s.n.</i>     | MO  |        |
| <i>Heteranthera rotundifolia</i> (Kunth) Griseb. | Barry       | <i>Steyermark 65114</i> | MO  | 583.09 |
|                                                  | Buchanan    | <i>Steyermark 70105</i> | F   |        |
|                                                  | Christian   | <i>Palmer 58238</i>     | UMO |        |
|                                                  | Greene      | <i>Blankenship s.n.</i> | MO  |        |
|                                                  | Holt        | <i>Demetrio 3</i>       | F   |        |
|                                                  | Howell      | <i>Steyermark 23581</i> | MO  |        |
|                                                  | Jackson     | <i>Bush 845</i>         | MO  |        |
|                                                  | Jasper      | <i>Palmer 2623</i>      | MO  |        |
|                                                  | Laclede     | <i>Steyermark 64723</i> | F   |        |
|                                                  | Lawrence    | <i>Palmer 51319</i>     | F   |        |
|                                                  | McDonald    | <i>Bush s.n.</i>        | MO  |        |
|                                                  | Montineau   | <i>Steyermark 76609</i> | MO  |        |
|                                                  | New Madrid  | <i>Coll s.n.</i>        | UMO |        |
|                                                  | Newton      | <i>Palmer 63278</i>     | UMO |        |
|                                                  | Oregon      | <i>Steyermark 78901</i> | UMO |        |
|                                                  | Pemiscot    | <i>Steyermark 26707</i> | F   |        |
|                                                  | Polk        | <i>Palmer 66926</i>     | UMO |        |
|                                                  | Stone       | <i>Steyermark 22705</i> | MO  |        |

TABLE 2 (CONTINUED)

|                                                                                                  | Taney       | Steyermark 22787    | MO  |         |
|--------------------------------------------------------------------------------------------------|-------------|---------------------|-----|---------|
| SMILACACEAE                                                                                      |             |                     |     |         |
| <i>Smilax illinoensis</i> Mangaly                                                                | Franklin    | McBride et al. 46   | MO  | 652.09  |
|                                                                                                  | Jefferson   | Steyermark 1066     | MO  |         |
|                                                                                                  | Pike        | Steyermark 28611    | F   |         |
|                                                                                                  | Schuyler    | Steyermark 69915    | F   |         |
| ACERACEAE                                                                                        |             |                     |     |         |
| <sup>5</sup> <i>Acer ginnala</i> Maxim.                                                          | Lincoln     | Ebinger 25164       | MO  | 1484.09 |
| AMARANTHACEAE                                                                                    |             |                     |     |         |
| <i>Amaranthus tricolor</i> L.                                                                    | St. Louis   | Muehlenbach 3449    | MO  | 883.09  |
| ANACARDIACEAE                                                                                    |             |                     |     |         |
| <i>Toxicodendron radicans</i><br>(L.) Kuntze ssp. <i>pubens</i><br>(Engelm. ex S. Watson) Gillis | Carter      | Gillis 3795         | MSC | 1472.20 |
|                                                                                                  | Henry       | Hitchcock s.n.      | MO  |         |
|                                                                                                  | Iron        | Smith 441           | F   |         |
|                                                                                                  | Jackson     | Bush s.n.           | MO  |         |
| APIACEAE                                                                                         |             |                     |     |         |
| <i>Berula erecta</i> (Hudson) Cov.<br>var. <i>incisum</i> (Torrey) Cronq.                        | Lafayette   | Gremaud s.n.        | MO  | 661.09  |
|                                                                                                  | Saline      | Kramer s.n.         | MO  |         |
| <i>Tropocarpus aethusae</i> Nutt.<br>ex DC.                                                      | Mississippi | Summers 4946        | MO  | 1639.09 |
| ASCLEPIADACEAE                                                                                   |             |                     |     |         |
| <i>Asclepias subverticillata</i><br>(A. Gray) Vail                                               | St. Louis   | Muehlenbach 2000    | MO  | 1763.09 |
| ASTERACEAE                                                                                       |             |                     |     |         |
| <i>Artemisia absinthium</i> L.                                                                   | St. Louis   | Muehlenbach 1706    | MO  | 2341.09 |
| <sup>6</sup> <i>Aster macrophyllus</i> L.                                                        | Howell      | Summers 3305        | MO  | 2176.09 |
|                                                                                                  | Shannon     | Summers 3110        | MO  |         |
|                                                                                                  | Texas       | Summers 1480        | MO  |         |
|                                                                                                  | Lafayette   | Gremaud et al. s.n. | MO  | 2202.09 |
| <i>Bidens alba</i> (L.) DC.<br>var. <i>radiata</i> (Schultz-Bip) Ballard                         | St. Louis   | Muehlenbach 3046    | MO  | 2299.09 |
| <i>Bidens coronata</i> (L.) Britton                                                              | St. Louis   | Muehlenbach 3706    | MO  | 2304.09 |

TABLE 2 (CONTINUED)

|                                                                                                                            |                |                                                |             |         |
|----------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------|-------------|---------|
| <i>Boltonia diffusa</i> Elliott                                                                                            | St. Louis      | Letterman s.n.                                 | NY          | 2174.10 |
| var. <i>diffusa</i>                                                                                                        |                |                                                |             |         |
| <i>Centaurea diffusa</i> Lam.                                                                                              | Howard         | Slater 1667                                    | UMO/<br>IPM | 2371.09 |
|                                                                                                                            | St. Louis      | Muehlenbach 1659                               | MO          |         |
| <i>Centaurea diluta</i> Dryander                                                                                           | St. Louis      | Muehlenbach 3299                               | MO          | 2365.19 |
| <i>Cirsium texanum</i> Buckley                                                                                             | St. Louis      | Muehlenbach 2663                               | MO          | 2359.09 |
| var. <i>texanum</i>                                                                                                        |                |                                                |             |         |
| <i>Cosmos parviflorus</i> (Jacq.) Pers.                                                                                    | St. Louis      | Muehlenbach 2285                               | MO          | 2308.09 |
| <i>Crepis tectorum</i> L.                                                                                                  | St. Louis      | Muehlenbach 1802                               | MO          | 2399.09 |
| <i>Echinacea simulata</i> McGregor                                                                                         | Butler         | McGregor 17154                                 | KANU        | 2262.09 |
|                                                                                                                            | Camden         | Brooks 19798                                   | MO          |         |
|                                                                                                                            | Cape Girardeau | Palmer 18016                                   | MO          |         |
|                                                                                                                            | Carter         | McGregor 17183                                 | KANU        |         |
|                                                                                                                            | Crawford       | McGregor 15636                                 | KANU        |         |
|                                                                                                                            | Dent           | McGregor 15635                                 | KANU        |         |
|                                                                                                                            | Dunklin        | Bauer 11450                                    | F           |         |
|                                                                                                                            | Franklin       | Greenman 4121                                  | MO          |         |
|                                                                                                                            | Iron           | Palmer 18088                                   | MO          |         |
|                                                                                                                            | Jefferson      | Eggert s.n.                                    | MO          |         |
|                                                                                                                            | Oregon         | Harms 321                                      | KANU        |         |
|                                                                                                                            | Phelps         | Steyermark 25337                               | MO          |         |
|                                                                                                                            | Reynolds       | McGregor 17192                                 | KANU        |         |
|                                                                                                                            | St. Francois   | Steyermark 28797                               | F           |         |
|                                                                                                                            | St. Louis      | Churchill 4120                                 | MO          |         |
|                                                                                                                            | Shannon        | Harms 322                                      | KANU        |         |
|                                                                                                                            | Texas          | Harms 325                                      | KANU        |         |
|                                                                                                                            | Washington     | Dewart s.n.                                    | MO          |         |
| <i>Eupatorium capillifolium</i><br>(Lam.) Small                                                                            | St. Louis      | Muehlenbach 3812                               | MO          | 2122.09 |
| <sup>7</sup> <i>Eupatorium maculatum</i> L.                                                                                | Lafayette      | Ladd 13302                                     | MOR         | 2118.09 |
| <sup>8</sup> <i>Evax prolifera</i> Nutt. ex DC.                                                                            | Ozark          | Webster Groves<br>Nature Study<br>Society s.n. | MO          | 2218.09 |
| <i>Gutierrezia texana</i> (DC.)<br>Torrey & A. Gray                                                                        | St. Louis      | Muehlenbach 1715                               | MO          | 2142.09 |
| <i>Helianthus rigidus</i> (Cass.) Desf.<br>ssp. <i>subrhomboides</i> (Rydb.)<br>Heiser, D. M. Smith, Clev., & W.<br>Martin | St. Louis      | Muehlenbach 2745                               | MO          | 2273.20 |
| <i>Heliopsis helianthoides</i> (L.)<br>Sweet var. <i>helianthoides</i>                                                     | St. Louis      | Sherff s.n.                                    | MO          | 2250.20 |
| <i>Iva annua</i> L. var. <i>caudata</i><br>(Small) R. Pike                                                                 | Marion         | Davis 6287                                     | MO          | 2220.20 |
|                                                                                                                            | Jackson        | Woodson 877                                    | MO          |         |
|                                                                                                                            | St. Louis      | Glatfelter s. n.                               | MO          |         |
| <i>Lactuca sativa</i> L.                                                                                                   | St. Louis      | Muehlenbach 4002                               | MO          | 2389.09 |

TABLE 2 (CONTINUED)

|                                                       |              |                    |     |         |
|-------------------------------------------------------|--------------|--------------------|-----|---------|
| <i>Liatris scariosa</i> (L.) Willd.                   | Barry        | Bush 3189          | MO  | 2133.09 |
| var. <i>nieuwlandii</i> Lunell                        | Iron         | Russell s.n.       | MO  |         |
|                                                       | Oregon       | Summers 2838       | MO  |         |
|                                                       | Pike         | Davis 6172         | MO  |         |
|                                                       | St. Louis    | Hersford s.n.      | MO  |         |
|                                                       | Stone        | Robertson 318      | MO  |         |
| <i>Picris echinoides</i> L.                           | St. Louis    | Muehlenbach 3300   | MO  | 2380.09 |
| <i>Picris hieracioides</i> L.                         | St. Louis    | Muehlenbach 3377   | MO  | 2380.19 |
| ssp. <i>hieracioides</i>                              |              |                    |     |         |
| <i>Ratibida tagetes</i> (E. James)                    | St. Louis    | Muehlenbach 2029   | MO  | 2266.09 |
| Barnhart                                              |              |                    |     |         |
| <i>Senecio ampullaceus</i> Hook.                      | St. Louis    | Muehlenbach 1735   | MO  | 2347.09 |
| <i>Senecio tomentosus</i> Michaux                     | Barry        | Bush 276           | MO  | 2348.09 |
| <i>Solidago rigida</i> L. ssp.                        | Jefferson    | Steyermark 4457    | MO  | 2165.10 |
| <i>glabrata</i> (E. Braun) Heard & Semple             | Ozark        | Yatskievych 88-253 | MO  |         |
| <i>Tagetes patula</i> L.                              | St. Louis    | Muehlenbach 1461   | MO  | 2322.09 |
| <i>Verbesina encelioides</i> (Cav.) Benth. & Hook. f. | Dunklin      | Steyermark 83410   | MO  | 2288.10 |
| ssp. <i>encelioides</i>                               | Jackson      | Bush 9392          | MO  |         |
|                                                       | St. Louis    | Eisendrath s.n.    | MO  |         |
| <i>Vernonia xillinoensis</i> Gleason                  | Boone        | Jeffrey 186        | MO  | 2113.09 |
|                                                       | Chariton     | Steyermark 26453   | MO  |         |
|                                                       | Gasconade    | Steyermark 8253    | MO  |         |
|                                                       | Iron         | Steyermark 12863   | MO  |         |
|                                                       | Jackson      | Bush 11508         | MO  |         |
|                                                       | Johnson      | Steyermark 24659   | MO  |         |
|                                                       | Lewis        | Shoop 1142         | MO  |         |
|                                                       | Lincoln      | Steyermark 8959    | MO  |         |
|                                                       | Marion       | Davis 9760         | MO  |         |
|                                                       | Randolph     | Steyermark 16026   | MO  |         |
|                                                       | St. Charles  | Steyermark 9252    | MO  |         |
|                                                       | St. Francois | Shoop 1161         | MO  |         |
|                                                       | St. Louis    | Greenman 4009      | MO  |         |
|                                                       | Scotland     | Shoop 1140         | MO  |         |
|                                                       | Scott        | Eggert s.n.        | MO  |         |
|                                                       | Shannon      | Steyermark 12695   | MO  |         |
|                                                       | Washington   | anonymous s.n.     | MO  |         |
| <i>Vernonia x peralta</i> Daniels                     | Boone        | Daniels s.n.       | UMO | 2113.19 |

## BORAGINACEAE

|                                                              |           |             |     |         |
|--------------------------------------------------------------|-----------|-------------|-----|---------|
| <i>Brunnera macrophylla</i> (Adams) I. M. Johnston           | Boone     | Allison 21  | UMO | 1830.09 |
| <i>Heliotropium curassavicum</i> L. var. <i>curassavicum</i> | Cooper    | Jagger s.n. | MO  | 1816.09 |
| <i>Myosotis stricta</i> Link ex Roemer & Schultes            | St. Louis | Christ s.n. | MO  | 1831.09 |

TABLE 2 (CONTINUED)

| BRASSICACEAE                                               |                       |                  |      |         |
|------------------------------------------------------------|-----------------------|------------------|------|---------|
| <i>Alliaria petiolata</i> (M. Bieb.)<br>Cavara & Grande    | Holt                  | McGregor 36900   | MO   | 1101.09 |
|                                                            | Jackson               | Henderson 67-333 | UMKC |         |
|                                                            | Linn                  | Schuetz 1978     | MO   |         |
|                                                            | St. Louis             | Boufford 18953   | MO   |         |
|                                                            | Taney                 | Scott 3251       | SOTO |         |
| <i>Alyssum alyssoides</i> (L.) L.                          | Cass                  | Henderson 66-361 | MO   | 1061.09 |
|                                                            | Holt                  | Henderson 67-726 | UMKC |         |
| <i>Alyssum desertorum</i> Stapf                            | Pettis                | Miller 77        | WARM | 1061.19 |
| <i>Arabis glabra</i> (L.) Bernh.                           | St. Louis             | Lodewyks s.n.    | MO   | 1080.09 |
| <i>Aubrieta deltoidea</i> (L.) DC.                         | Boone                 | Allison 15       | UMO  | 1066.09 |
| <i>Brassica napus</i> L. var. <i>napus</i>                 | St. Louis             | Muehlenbach 100  | MO   | 1042.09 |
| <i>Brassica oleracea</i> L.                                | St. Louis             | Muehlenbach 2088 | MO   | 1042.19 |
| <i>Cardamine diphylla</i> (Michaux)<br>Alph. Wood          | Chariton              | Young s.n.       | CM   | 1076.09 |
| <i>Cardaria draba</i> (L.) Desv.                           | Clinton               | Henderson 66-291 | MO   | 1054.10 |
| ssp. <i>chalepensis</i> (L.) O. Sculz                      |                       |                  |      |         |
| <i>Lepidium latifolium</i> L.                              | Jackson               | Henderson 75-01  | MO   | 1051.09 |
| <i>Lobularia maritima</i> (L.) Desv.                       | Jackson               | Bush s.n.        | MO   | 1061.29 |
|                                                            | St. Louis             | Muehlenbach 3450 | MO   |         |
| <i>Rorippa tenerrima</i> E. Greene                         | St. Louis             | Engelmann s.n.   | MO   | 1089.09 |
| <i>Rorippa truncata</i> (Jepson)<br>Stuckey                | Jackson               | Bush s.n.        | MO   | 1089.19 |
|                                                            | St. Charles           | Eggert s.n.      | MO   |         |
|                                                            | St. Louis             | Eggert s.n.      | MO   |         |
| CACTACEAE                                                  |                       |                  |      |         |
| <i>Opuntia polyacantha</i> Haw.<br>var. <i>polyacantha</i> | Jasper                | Palmer s.n.      | US   | 1575.09 |
| CANNABACEAE                                                |                       |                  |      |         |
| <i>Humulus lupulus</i> L.                                  | Andrew                | Steyermark 15154 | MO   | 792.10  |
| var. <i>pubescens</i> E. Small                             | Barry                 | Trelease 1196    | MO   |         |
|                                                            | Cape Girar-<br>ardeau | Kellogg s.n.     | MO   |         |
|                                                            | Harrison              | Steyermark 76553 | MO   |         |
|                                                            | Jackson               | Bush 6956        | MO   |         |
|                                                            | Jasper                | Palmer 1258      | MO   |         |
|                                                            | Jefferson             | Eggert s.n.      | MO   |         |
|                                                            | Marion                | Davis 3092       | MO   |         |
|                                                            | Ralls                 | Davis 3713       | MO   |         |
|                                                            | St. Francois          | Bush s.n.        | MO   |         |
|                                                            | St. Louis             | Engelmann s.n.   | MO   |         |

TABLE 2 (CONTINUED)

| CAPRIFOLIACEAE                               |             |                         |     |         |
|----------------------------------------------|-------------|-------------------------|-----|---------|
| <i>Lonicera maackii</i> (Rupr.) Maxim.       | Franklin    | <i>Croat 3902</i>       | MO  | 2063.09 |
|                                              | St. Louis   | <i>Muehlenbach 3985</i> | MO  |         |
| <i>Lonicera xylosteum</i> L.                 | Jasper      | <i>Palmer 69188</i>     | MO  | 2063.19 |
|                                              | St. Louis   | <i>Summers 2748</i>     | MO  |         |
| <i>Sambucus canadensis</i> L.                | Hickory     | <i>Castaner 4219</i>    | MO  | 2081.30 |
| var. <i>laciniata</i> A. Gray                |             |                         |     |         |
| <i>Symphoricarpos albus</i> (L.)             | St. Louis   | <i>Muehlenbach 3485</i> | MO  | 2070.09 |
| S. F. Blake                                  |             |                         |     |         |
| <i>Triosteum angustifolium</i> L.            | Phelps      | <i>Kellogg 23</i>       | US  | 2073.20 |
| var. <i>angustifolium</i> f. <i>rubrum</i>   |             |                         |     |         |
| F. Lane                                      |             |                         |     |         |
| CAROPHYLLACEAE                               |             |                         |     |         |
| <i>Cerastium pumilum</i> Curtis              | St. Louis   | <i>Muehlenbach 3231</i> | MO  | 924.09  |
| ssp. <i>pumilum</i> f. <i>medium</i> Moeschl |             |                         |     |         |
| <i>Cerastium semidecandrum</i> L.            | St. Louis   | <i>Muehlenbach 3520</i> | MO  | 924.19  |
| <i>Dianthus plumarius</i> L.                 | Camden      | <i>McReynolds</i>       | LSU | 947.09  |
|                                              |             | 750713                  |     |         |
| <i>Lychnis coronaria</i> (L.) Desr.          | St. Louis   | <i>Solomon s.n.</i>     | MO  | 933.09  |
|                                              | Stone       | <i>Kastler s.n.</i>     | UMO |         |
| <i>Myosoton aquaticum</i> (L.) Moench        | Clay        | <i>Raveill 2319</i>     | MO  | 918.09  |
| <i>Sagina procumbens</i> L.                  | Ripley      | <i>Yatskievych et</i>   | MO  | 913.09  |
|                                              |             | al. 89-136              |     |         |
| <i>Silene armeria</i> L.                     | St. Louis   | <i>Muehlenbach 3451</i> | MO  | 934.09  |
| CELASTRACEAE                                 |             |                         |     |         |
| <i>Euonymus fortunei</i> (Turcz.)            | St. Louis   | <i>Muehlenbach 3142</i> | MO  | 1479.09 |
| Hand.-Mazz.                                  |             |                         |     |         |
| CHENOPODIACEAE                               |             |                         |     |         |
| <i>Atriplex heterosperma</i> Bunge           | St. Louis   | <i>Muehlenbach 1026</i> | MO  | 864A.09 |
| <sup>9</sup> <i>Beta vulgaris</i> L.         | St. Louis   | <i>Muehlenbach 1963</i> | MO  | 864.09  |
| <i>Chenopodium ficifolium</i> Smith          | St. Louis   | <i>D'Arcy 5963</i>      | MO  | 859.09  |
| <i>Chenopodium opulifolium</i>               | St. Louis   | <i>Muehlenbach 3301</i> | MO  | 860.09  |
| Schrader ex Koch & Ziz                       |             |                         |     |         |
| <i>Chenopodium watsonii</i> Nelson           | St. Louis   | <i>Muehlenbach 1795</i> | MO  | 860.19  |
| <i>Salsola collina</i> Pallas                | St. Charles | <i>Yatskievych et</i>   | MO  | 874.09  |
|                                              |             | al. 88-223              |     |         |
|                                              | St. Louis   | <i>Muehlenbach 2176</i> | MO  |         |

TABLE 2 (CONTINUED)

## CISTACEAE

|                                               |        |                  |   |         |
|-----------------------------------------------|--------|------------------|---|---------|
| <i>Helianthemum canadense</i> (L.)<br>Michaux | Maries | Steiermark 27590 | F | 1552.09 |
|-----------------------------------------------|--------|------------------|---|---------|

## CONVOLVULACEAE

|                                            |           |                         |    |         |
|--------------------------------------------|-----------|-------------------------|----|---------|
| <i>Calystegia macounii</i> (E. Greene)     | Jackson   | <i>Bush 1998</i>        | MO | 1780.09 |
| Brummitt                                   |           |                         |    |         |
| <sup>6</sup> <i>Dichondra carolinensis</i> | Howell    | <i>Summers 2840</i>     | MO | 1771.09 |
| Michaux                                    |           |                         |    |         |
| <i>Ipomoea amnicola</i> Morong             | Jackson   | <i>Bush 9691</i>        | MO | 1777.09 |
| <i>Ipomoea cairica</i> (L.) Sweet          | St. Louis | <i>Muehlenbach 1711</i> | MO | 1778.09 |
| <i>Jacquemontia tamnifolia</i> (L.)        | St. Louis | <i>Muehlenbach 3188</i> | MO | 1778.09 |
| Griseb.                                    |           |                         |    |         |
| <i>Stylisma pickeringii</i> (Torrey)       | Clark     | <i>Conrad 11099</i>     | MO | 1771.19 |
| A. Gray var. <i>pattersonii</i> (Fern.     |           |                         |    |         |
| & B. G. Schubert) Myint                    |           |                         |    |         |

CRASSULACEAE

|                                       |           |            |   |         |
|---------------------------------------|-----------|------------|---|---------|
| <i>Sedum acre</i> L. ssp. <i>acre</i> | Iron      | Smith 1077 | F | 1113.09 |
|                                       | St. Louis | Sherff 191 | F |         |

## CUCURBITACEAE

|                           |           |                  |    |         |
|---------------------------|-----------|------------------|----|---------|
| <i>Cucumis sativus</i> L. | St. Louis | Muehlenbach 1847 | MO | 2093.09 |
|---------------------------|-----------|------------------|----|---------|

DIPSACACEAE

|                               |                      |                         |             |         |
|-------------------------------|----------------------|-------------------------|-------------|---------|
| <i>Dipsacus laciniatus</i> L. | Boone                | <i>Baumgartner s.n.</i> | MO          | 2088.09 |
|                               | Caldwell             | <i>Dierker 1214</i>     | UMO/<br>IPM |         |
|                               | Calloway             | <i>Dierker 1275</i>     | UMO/<br>IPM |         |
|                               | Cass                 | <i>Henderson 78-08</i>  | UMKC        |         |
|                               | Clark                | <i>Dierker 1223</i>     | UMO/<br>IPM |         |
|                               | Cooper               | <i>Dierker 1350</i>     | UMO/<br>IPM |         |
|                               | DeKalb               | <i>Dierker 1212</i>     | UMO/<br>IPM |         |
|                               | Harrison             | <i>Henderson 68-658</i> | UMKC        |         |
|                               | Howard               | <i>Dierker 1208</i>     | UMO/<br>IPM |         |
|                               | Johnson              | <i>Philbrick 1634</i>   | UMO/<br>IPM |         |
| Knox                          | <i>Dierker 00695</i> | UMO/<br>IPM             |             |         |

TABLE 2 (CONTINUED)

|                                             |                |                                       |             |         |
|---------------------------------------------|----------------|---------------------------------------|-------------|---------|
|                                             | Lewis          | <i>Huckla &amp; Obermeyer 00595</i>   | UMO/<br>IPM |         |
|                                             | Linn           | <i>Dierker 1311</i>                   | UMO/<br>IPM |         |
|                                             | Livingston     | <i>Dierker 1215</i>                   | UMO/<br>IPM |         |
|                                             | Macon          | <i>Dierker 1312</i>                   | UMO/<br>IPM |         |
|                                             | Marion         | <i>Dierker 1618</i>                   | UMO/<br>IPM |         |
|                                             | Montgomery     | <i>Gereau &amp; Brant 1814</i>        | MO          |         |
|                                             | Pike           | <i>Summers 1101</i>                   | MO          |         |
|                                             | Ralls          | <i>Orzell 241</i>                     | MO          |         |
|                                             | Randolph       | <i>Dierker 1313</i>                   | UMO/<br>IPM |         |
|                                             | St. Louis      | <i>Denison s.n.</i>                   | MO          |         |
|                                             | Shelby         | <i>Dierker 1558</i>                   | UMO/<br>IPM |         |
|                                             | Wright         | <i>Castaner 4334</i>                  | MO          |         |
| ELAEAGNACEAE                                |                |                                       |             |         |
| <i>Elaeagnus umbellata</i> Thumb.           | Douglas        | <i>Smith 2850</i>                     | MO          | 1578.09 |
|                                             | St. Louis      | <i>G. &amp; K. Yatskievych 91-40</i>  | MO          |         |
|                                             | Ste. Genevieve | <i>Muehlenbach 21354</i>              | MO          |         |
|                                             | Shannon        | <i>G. &amp; K. Yatskievych 89-86</i>  | MO          |         |
|                                             | Stoddard       | <i>Yatskievych &amp; Ladd 90-334</i>  | MO          |         |
|                                             | Warren         | <i>Raechal et al. 119</i>             | MO          |         |
| EUPHORBIACEAE                               |                |                                       |             |         |
| <i>Acalypha deamii</i> (Weath.) H. E. Ahles | St. Louis      | <i>Steyermark 479</i>                 | MO          | 1438.09 |
|                                             | Pulaski        | <i>Steyermark 25410</i>               | MO          |         |
| <i>Croton lindheimerianus</i> Scheele       | St. Louis      | <i>Muehlenbach 1965</i>               | MO          | 1432.09 |
| <i>Tragia betonicifolia</i> Nutt.           | Jasper         | <i>Demaree 40340</i>                  | SMU         | 1441.09 |
|                                             | McDonald       | <i>Yatskievych &amp; Smith 90-212</i> | MO          |         |
| <i>Tragia ramosa</i> Torrey                 | Barry          | <i>Bush 15010</i>                     | MO          | 1441.19 |
|                                             | Jasper         | <i>Kellogg 1029</i>                   | MO          |         |
|                                             | Ozark          | <i>Palmer 34726</i>                   | MO          |         |
|                                             | Ste. Genevieve | <i>Kellogg 1849</i>                   | MO          |         |
|                                             | Stone          | <i>Bush 15955</i>                     | MO          |         |

TABLE 2 (CONTINUED)

| FABACEAE                                                   |                |                                      |      |         |  |
|------------------------------------------------------------|----------------|--------------------------------------|------|---------|--|
| <i>Aeschynomene indica</i> L.                              | New Madrid     | <i>Steyermark 83501</i>              | UMO  | 1324.09 |  |
|                                                            | Stoddard       | <i>Dunn 215557</i>                   | UMO  |         |  |
| <i>Desmodium strictum</i> (Pursh) D.C.                     | Stoddard       | <i>Korschgen &amp; Toney s.n.</i>    | UMO  | 1343.09 |  |
| <i>Lespedeza bicolor</i> Turcz.                            | St. Louis      | <i>Muehlenbach 3671</i>              | MO   | 1357.09 |  |
| <i>Medicago minima</i> (L.) Bartal.                        | Scott          | <i>Yatskievych et al. 89-92</i>      | MO   | 1304.09 |  |
| <i>Pisum sativum</i> L. var. <i>sativum</i>                | St. Louis      | <i>Muehlenbach 2597</i>              | MO   | 1382.09 |  |
| <i>Vicia cracca</i> L.                                     | St. Francois   | <i>G. &amp; K. Yatskievych 89-54</i> | MO   | 1378.09 |  |
|                                                            | St. Louis      | <i>Muehlenbach 3571</i>              | MO   |         |  |
| FAGACEAE                                                   |                |                                      |      |         |  |
| <i>Quercus x introgressa</i><br>P. Thompson                | Lafayette      | <i>Thompson 74-161</i>               | MO   | 765.09  |  |
| FUMARIACEAE                                                |                |                                      |      |         |  |
| <i>Fumaria officinalis</i> L.                              | Holt           | <i>Henderson 67-704</i>              | UMKC | 1037.09 |  |
| GENTIANACEAE                                               |                |                                      |      |         |  |
| <i>Gentiana andrewsii</i> Griseb.<br>var. <i>andrewsii</i> | St. Louis      | <i>Letterman s.n.</i>                | MO   | 1734.10 |  |
|                                                            | Ste. Genevieve | <i>Steyermark 71039</i>              | F    |         |  |
| GERANIACEAE                                                |                |                                      |      |         |  |
| <i>Erodium texanum</i> A. Gray                             | St. Louis      | <i>Muehlenbach 1711</i>              | MO   | 1417.09 |  |
| GROSSULARIACEAE                                            |                |                                      |      |         |  |
| <sup>11</sup> <i>Ribes americanum</i> Miller               | Schuyler       | <i>Ladd 15130</i>                    | MOR  | 1133.09 |  |
| HALORAGACEAE                                               |                |                                      |      |         |  |
| <i>Myriophyllum spicatum</i> L.                            | Carter         | <i>Summers 778</i>                   | MO   | 1623.09 |  |
|                                                            | Crawford       | <i>Summers 1474</i>                  | MO   |         |  |
|                                                            | Montgomery     | <i>Brant &amp; Gereau 694</i>        | MO   |         |  |
| HYDRANGEACEAE                                              |                |                                      |      |         |  |
| <i>Philadelphus coronarius</i> L.                          | St. Louis      | <i>Muehlenbach 2858</i>              | MO   | 1128.09 |  |

TABLE 2 (CONTINUED)

| LAMIACEAE                                           |                |                                       |       |         |
|-----------------------------------------------------|----------------|---------------------------------------|-------|---------|
| <i>Leonurus marrubiastrum</i> L.                    | Holt           | <i>Priesendorf 847</i>                | MO    | 1875.09 |
| <i>Lycopus uniflorus</i> Michaux                    | Miller         | <i>Steyermark 6766</i>                | F     | 1907.09 |
|                                                     | Ste. Genevieve | <i>Trelease 1148</i>                  | MO    |         |
|                                                     | St. Louis      | <i>Pammel s.n.</i>                    | MO    |         |
|                                                     | Scotland       | <i>Steyermark</i>                     | F     |         |
| <i>Stachys hyssopifolia</i> Michaux                 | St. Louis      | <i>Eggert s.n.</i>                    | MO    | 1881.09 |
| <i>Stachys pilosa</i> Nutt. var.                    | Franklin       | <i>Berg 7</i>                         | MO    | 1879.30 |
| <i>arenicola</i> (Britton) G. Mulligan              | St. Louis      | <i>Comte 2427</i>                     | MO    |         |
| LINACEAE                                            |                |                                       |       |         |
| <i>Linum virginianum</i> L.                         | Bollinger      | <i>Steyermark 14119</i>               | MO    | 1407.09 |
|                                                     | Christian      | <i>Steyermark 23179</i>               | MO    |         |
|                                                     | Franklin       | <i>Steyermark 8264</i>                | MO    |         |
|                                                     | Greene         | <i>Blankenship s.n.</i>               | MO    |         |
|                                                     | Howell         | <i>Steyermark 23440</i>               | MO    |         |
|                                                     | Iron           | <i>Kellogg 1830</i>                   | MO    |         |
|                                                     | McDonald       | <i>Bush s.n.</i>                      | MO    |         |
|                                                     | Ozark          | <i>G. &amp; K. Yatskievych 91-145</i> | MO    |         |
|                                                     | Reynolds       | <i>Steyermark 19722</i>               | MO    |         |
|                                                     | Shannon        | <i>Steyermark 12212</i>               | MO    |         |
|                                                     | Wayne          | <i>Steyermark 6437</i>                | MO    |         |
| LOASACEAE                                           |                |                                       |       |         |
| <i>Mentzelia albescens</i> (Gillies & Arn.) Griseb. | Crawford       | <i>Christ s.n.</i>                    | MO    | 1574.09 |
|                                                     | Jasper         | <i>Palmer 69221</i>                   | MO    |         |
|                                                     | Pulaski        | <i>Summers 4670</i>                   | MO    |         |
| MAGNOLIACEAE                                        |                |                                       |       |         |
| <i>Magnolia tripetala</i> L.                        | St. Louis      | <i>Harriman 3071</i>                  | OSH   | 960.09  |
| MALVACEAE                                           |                |                                       |       |         |
| <i>Gossypium hirsutum</i> L.                        | Dunklin        | <i>Eggert s.n.</i>                    | MO    | 1534.09 |
|                                                     | Jasper         | <i>Palmer 1488</i>                    | MO    |         |
|                                                     | Jackson        | <i>Bush 9473</i>                      | MO    |         |
|                                                     | St. Louis      | <i>Muehlenbach 3031</i>               | MO    |         |
| MIMOSACEAE                                          |                |                                       |       |         |
| <i>Albizia julibrissin</i> Durazz.                  | Stoddard       | <i>Yatskievych &amp; Ladd 90-338</i>  | MO    | 1271.09 |
|                                                     | Wayne          | <i>Thompson s.n.</i>                  | BEREA |         |

TABLE 2 (CONTINUED)

| OLEACEAE                                                                                  |                |                                      |     |          |  |
|-------------------------------------------------------------------------------------------|----------------|--------------------------------------|-----|----------|--|
| <sup>4</sup> <i>Ligustrum obtusifolium</i> Sieb. & Zucc.                                  | Franklin       | <i>Davit s.n.</i>                    | MO  | 1722.09  |  |
| <sup>4</sup> <i>Ligustrum sinense</i> Lour.                                               | Dunklin        | <i>Yatskievych &amp; Ladd 90-296</i> | MO  | 1722.19  |  |
| ONAGRACEAE                                                                                |                |                                      |     |          |  |
| <i>Gaura sinuata</i> Nutt. ex Ser.                                                        | St. Louis      | <i>Muehlenbach 2760</i>              | MO  | 1618.09  |  |
| <i>Oenothera clelandii</i> W. Dietr., Raven & W. L. Wagner                                | Clark          | <i>Wilson s.n.</i>                   | MO  | 1604.09  |  |
|                                                                                           | Jackson        | <i>Bush 2139</i>                     | MO  |          |  |
|                                                                                           | St. Louis      | <i>Muehlenbach 942</i>               | MO  |          |  |
|                                                                                           | Washington     | <i>Bush 9414</i>                     | F   |          |  |
| <i>Oenothera heterophylla</i> Spach ssp. <i>heterophylla</i>                              | St. Louis      | <i>Muehlenbach 1018</i>              | MO  | 1604.19  |  |
| OROBANCHACEAE                                                                             |                |                                      |     |          |  |
| <i>Orobanche multiflora</i> Nutt.                                                         | McDonald       | <i>Drew s.n.</i>                     | UMO |          |  |
|                                                                                           | Taney          | <i>Smith 2903</i>                    | MO  | 2015A.09 |  |
| PAPAVERACEAE                                                                              |                |                                      |     |          |  |
| <i>Eschscholzia californica</i> Cham.                                                     | St. Louis      | <i>Muehlenbach 1788</i>              | MO  | 1029.09  |  |
| PLANTAGINACEAE                                                                            |                |                                      |     |          |  |
| <i>Plantago arenaria</i> Waldst. & Kit.                                                   | St. Louis      | <i>Muehlenbach 3977</i>              | MO  | 2036.09  |  |
| <i>Plantago wrightiana</i> Decne.                                                         | St. Louis      | <i>Muehlenbach 1779</i>              | MO  | 2030.09  |  |
| PLUMBAGINACEAE                                                                            |                |                                      |     |          |  |
| <i>Ceratostigma plumbaginoides</i> Bunge                                                  | Boone          | <i>Dunn 22697</i>                    | UMO | 844.09   |  |
| POLYGONACEAE                                                                              |                |                                      |     |          |  |
| <i>Polygonum cuspidatum</i> Siebold & Zucc. var. <i>compactum</i> (Hook. f.) L. H. Bailey | St. Louis      | <i>Muehlenbach 3356</i>              | MO  | 841.10   |  |
| <i>Rumex dentatus</i> L.                                                                  | St. Louis      | <i>Muehlenbach 3195</i>              | MO  | 817.09   |  |
| PRIMULACEAE                                                                               |                |                                      |     |          |  |
| <i>Dodecatheon frenchii</i> (Vasey) Rydb.                                                 | Ste. Genevieve | <i>Nelson 1809</i>                   | MO  | 1698.09  |  |

TABLE 2 (CONTINUED)

| RANUNCULACEAE                                                   |                |                                |       |         |
|-----------------------------------------------------------------|----------------|--------------------------------|-------|---------|
| <i>Anemone quinquefolia</i> L.                                  | Shannon        | <i>Christ s.n.</i>             | MO    | 1001.09 |
| <i>Caltha palustris</i> L. var. <i>palustris</i>                | Lafayette      | <i>Gremaud s.n.</i>            | MO    | 964.09  |
| <i>Clematis catesbyana</i> Pursh                                | Barry          | Trelease 935                   | MO    | 1004.09 |
|                                                                 | Christian      | <i>Steyermark 23111</i>        | MO    |         |
|                                                                 | Douglas        | <i>Steyermark 23642</i>        | MO    |         |
|                                                                 | Greene         | <i>Stalker &amp; Nelson</i>    | NCU   |         |
|                                                                 |                | 478                            |       |         |
|                                                                 | Howell         | <i>Summers 1079</i>            | MO    |         |
|                                                                 | Shannon        | <i>Bush 1</i>                  | MO    |         |
|                                                                 | Stone          | <i>Palmer 23881</i>            | MO    |         |
|                                                                 | Taney          | <i>Bush 99</i>                 | MO    |         |
| <i>Consolida regalis</i> Gray                                   | St. Louis      | <i>Muehlenbach 3106</i>        | MO    | 971.09  |
| <i>Ranunculus ficaria</i> L. var.                               | Cole           | <i>Figg s.n.</i>               | MO    | 995A.09 |
| <i>pulbifera</i> Marsden-Jones                                  | St. Louis      | <i>Brown s.n.</i>              | MO    | 995A.09 |
| <sup>10</sup> <i>Ranunculus testicularis</i> Crantz             | Lewis          | <i>Ladd 14840</i>              | MO    | 981.09  |
|                                                                 | Lincoln        | <i>Schuetz 1380</i>            | MO    |         |
|                                                                 | Montgomery     | <i>D. &amp; C. Darigo 1101</i> | MO    |         |
| RESEDACEAE                                                      |                |                                |       |         |
| <i>Reseda lutea</i> L. ssp. <i>lutea</i><br>var. <i>lutea</i>   | St. Louis      | <i>Muehlenbach 3931</i>        | MO    | 1110.09 |
| ROSACEAE                                                        |                |                                |       |         |
| <sup>4</sup> <i>Aphanes microcarpa</i> (Boiss. & Reuter) Rothm. | Howell         | <i>Summers 3248</i>            | MO    | 1241.09 |
| <i>Geum virginianum</i> L.                                      | Ste. Genevieve | <i>Solecki</i>                 | MODNR |         |
| <i>Malus baccata</i> (L.) Borkh.                                | St. Louis      | <i>Muehlenbach 3402</i>        | MO    | 1147.09 |
| <i>Potentilla argentea</i> L.                                   | St. Louis      | <i>Muehlenbach 3584</i>        | MO    | 1215.09 |
| <i>Prunus armeniaca</i> L.                                      | St. Louis      | <i>Muehlenbach 2987</i>        | MO    | 1263.09 |
| <i>Spiraea x vanhouttei</i> (Briot) Zabel                       | Barry          | <i>Redfearn &amp; Eggers</i>   | SMS   | 1139.09 |
|                                                                 |                | 14431                          |       |         |
|                                                                 | Stoddard       | <i>Hall 42</i>                 | SEMO  |         |
| RUBIACEAE                                                       |                |                                |       |         |
| <i>Galium divaricatum</i> Pourret ex Lam.                       | Henry          | <i>Castaner 5831</i>           | WARM  | 2039.09 |
| <i>Galium pedemontanum</i> (Bellardi) All.                      | Christian      | <i>Sanders 2801</i>            | SOTO  | 2039.19 |
|                                                                 | Cole           | <i>Raveill 2053</i>            | MO    |         |
|                                                                 | Greene         | <i>Brant &amp; Gereau 552</i>  | MO    |         |
|                                                                 | Iron           | <i>Ahles 7960</i>              | KANU  |         |
|                                                                 | Oregon         | <i>Summers 3177</i>            | MO    |         |
|                                                                 | Osage          | <i>Brant &amp; O'Donnell</i>   | MO    |         |
|                                                                 |                | 1853                           |       |         |

TABLE 2 (CONTINUED)

|                                                           | Taney<br>Wright     | Sanders 2785<br>Brant & Gereau 560 | MICH<br>MO |         |
|-----------------------------------------------------------|---------------------|------------------------------------|------------|---------|
| SALICACEAE                                                |                     |                                    |            |         |
| <i>Salix x rubens</i> Schrank                             | St. Louis           | Muehlenbach 2068                   | MO         | 718.09  |
| SAXIFRAGACEAE                                             |                     |                                    |            |         |
| <i>Heuchera americana</i> L.                              | McDonald            | Kellogg s.n.                       | MO         | 1124.20 |
| var. <i>americana</i>                                     | St. Louis           | Engelmann s.n.                     | WIS        |         |
| SCROPHULARIACEAE                                          |                     |                                    |            |         |
| <i>Veronica anagallis-aquatica</i> L.                     | Taney               | Olson s.n.                         | SOTO       | 1986.09 |
| <sup>4</sup> <i>Veronica beccabunga</i> L.                | Ste. Gene-<br>vieve | Summers 219                        | MO         | 1986.19 |
| <i>Veronica chamaedrys</i> L.                             | Boone               | Love 438                           | UMO        | 1986.29 |
| <i>Veronica hederifolia</i> L.                            | Barry               | Toney s.n.                         | UMO        | 1989.09 |
|                                                           | Greene              | Key 2128                           | SMS        |         |
|                                                           | Jefferson           | Yatskievych et al.<br>90-25        | MO         |         |
|                                                           | St. Louis           | Anderson s.n.                      | MO         |         |
| <i>Veronica latifolia</i> L.                              | Johnson             | Barrow 140                         | WARM       | 1986.39 |
| <i>Veronica persica</i> Poir.                             | Boone               | Dunn 23526                         | UMO        | 1989.19 |
|                                                           | Johnson             | Praetorius 63                      | WARM       |         |
| SOLANACEAE                                                |                     |                                    |            |         |
| <i>Physalis acutifolia</i> (Wiers)<br>Sandw.              | St. Louis           | Muehlenbach 759                    | MO         | 1935.09 |
| <i>Physalis alkekengi</i> L.                              | Boone               | Dunn 13806                         | UMO        | 1937.09 |
|                                                           | Callaway            | Craghead s.n.                      | UMO        |         |
| STERCULIACEAE                                             |                     |                                    |            |         |
| <i>Melochia corchorifolia</i> L.                          | St. Louis           | Muehlenbach 2880                   | MO         | 1514.09 |
| ULMACEAE                                                  |                     |                                    |            |         |
| <i>Ulmus crassifolia</i> Nutt.                            | Butler              | Pelton s.n.                        | MO         | 780.09  |
|                                                           | Dunklin             | Heineke s.n.                       | MO         |         |
| VALERIANACEAE                                             |                     |                                    |            |         |
| <i>Valerianella woodsiana</i> (Torrey<br>& A. Gray) Walp. | St. Louis           | Glatfelter s.n.                    | MICH       | 2086.09 |

TABLE 2 (CONTINUED)

| VERBENACEAE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                         |    |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------|----|---------|
| <i>Verbena brasiliensis</i> Vell. Conc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | St. Louis | <i>Muehlenbach</i> 3439 | MO | 1840.09 |
| <i>Verbena officinalis</i> L. ssp. <i>halei</i><br>(Small) S. Barber                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | St. Louis | <i>Muehlenbach</i> 1256 | MO | 1840.19 |
| VIOLACEAE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                         |    |         |
| <i>Viola arvensis</i> Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | St. Louis | <i>Muehlenbach</i> 3863 | MO | 1571.09 |
| VITACEAE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                         |    |         |
| <sup>11</sup> <i>Parthenocissus tricuspidata</i><br>(Sieblod & Zucc.) Planchon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | St. Louis | <i>Muehlenbach</i> 2927 | MO | 1504.09 |
| <div>-----</div> <div><div><div><div><div>1</div><div>The Nature Conservancy, 1991</div></div><div><div>2</div><div>Carter and Bryson, 1991</div></div><div><div>3</div><div>Whitley et al., 1990</div></div><div><div>4</div><div>Yatskievych and Summers, 1991</div></div><div><div>5</div><div>Ebinger and McClain, 1991</div></div><div><div>6</div><div>Summers and Yatskievych, 1990</div></div><div><div>7</div><div>Ladd, 1990</div></div><div><div>8</div><div>Sullivan, 1991</div></div><div><div>9</div><div>Muehlenbach, 1979</div></div><div><div>10</div><div>Ladd and Schuette, 1990</div></div><div><div>11</div><div>Ladd et al., 1991</div></div></div></div><div data-kind="parent" data-rs="2"></div></div> |           |                         |    |         |

## A NEW *ERYNGIUM* FOR MISSOURI

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In late September, 1990, a specimen of Leavenworth eryngo, *Eryngium leavenworthii* Torrey & Gray was submitted for identification to the Integrated Pest Management office of the University, Columbia. The specimen was subsequently deposited as a voucher specimen in the University of Missouri Herbarium (UMO), UMO #178954. Based upon questionable label information on an 1879 specimen collected by Broadhead, Steyermark (1963) excluded this species from his flora of the state. Therefore, the collection reported here is a new record for Missouri.

According to R. Redman of the U.S.D.A., S.C.S. Office in Butler, MO, the specimen, along with several hundred others of the same species, was growing in a pasture in Bates County a few miles east of Butler. A variety of native grasses and introduced forbs and grasses constituted the plant community of the pasture. Information submitted with the plant indicated that several plants had been noted in the pasture in 1989. By 1990 several hundred had appeared. It was conjectured that the seed was probably contained in hay brought in from Nebraska in 1988. However, neither the Great Plains Flora Association (G.P.F.A.) (1977) nor McGregor (1986) indicate the presence of this plant in Nebraska. This, however, does not negate its unreported presence there. The presence of the plant in Crawford, Bourbon, and Linn Counties, Kansas which border Missouri in the vicinity of Bates County Missouri is indicated (G.P.F.A. 1977).

*Eryngium leavenworthii* is readily separated from the other two species of the genus known to Missouri. It is separated from *Eryngium yuccifolium*, which has parallel-veined leaves, by its spine tipped, net-veined, palmately pinnatifid leaves. The purplish to reddish (white) flowering heads topped by four to eight erect spinescent bractlets 1-3.5 cm long are strikingly different from the whitish flowering heads of *Eryngium yuccifolium*, which lack these terminal bractlets. *Eryngium leavenworthii* is an annual or winter annual with a taproot; *Eryngium yuccifolium* is a perennial with fascicles of tuberous roots. Both *Eryngium leavenworthii* and *E. yuccifolium* are erect growing plants while the third species, *Eryngium prostratum*, grows prostrate on the ground, has small heads of blue flowers,

and is a perennial with fibrous roots.

#### LITERATURE CITED

- McGregor, R. L. 1986. Apiaceae, pp. 594-604 in Great Plains Flora Association, *Flora of the Great Plains*. Univ. Press of Kansas, Lawrence. vii, 1392 pp.
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