

THE RARE VASCULAR PLANTS OF TENNESSEE

Committee for Tennessee Rare Plants*

ABSTRACT

This paper presents a list of rare Tennessee plants and their degree of endangerment. The list includes 52 possibly extirpated, 58 endangered, 108 threatened and 123 taxa of special concern. These data are based primarily on specimens deposited in the University of Tennessee Herbarium, Knoxville and the Herbarium of Vanderbilt University. The needs for understanding and protection of these taxa and management of the unique habitats in which they occur are discussed.

INTRODUCTION

It has become increasingly obvious that much of Tennessee's landscape has been severely altered or destroyed by man's activities. Few natural areas are adequately protected and without judicious land and water management in the future, most of the State's natural heritage will soon be destroyed. Recent national concern for the future quality of the earth's environment is reflected in the federal Endangered Species Act (Public Law 93-205), state, regional (Styron, 1976), federal plant and animal lists, and local environmental controversies. In Tennessee, concern for the production of a rare plant list has come from a variety of sources: interested individuals, garden clubs, lists from other states, progress on the national rare plant list, the scientific community, and those involved in the preparation of environmental impact statements. The list of Tennessee rare plants included herewith attempts to indicate their present state of endangerment and known county distribution. It was preceded by those of Sharp (1948, 1974) and Goff, Stephenson, & Lewis (1975).

During the Spring of 1976 an *ad hoc* Committee for Tennessee Rare Plants began preparation of this list, using as reference sources the Herbarium of Vanderbilt University and the University of Tennessee Herbarium, Knoxville. Although by no means the only important collections of the State flora, these two herbaria represent by far the largest and most extensive collections. Our procedure was to catalog all vascular plants which are reported from three or fewer counties. Regional manuals, monographs, and other pertinent taxonomic papers were then consulted to determine the geographic distribution of each taxon. All introduced, cultivated, and escaped

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taxa were eliminated from the list. The remainder was then subjected to scrutiny by the committee and additional taxa were eliminated based on known weediness or other characteristics that would make their inclusion superfluous. In a few cases, we have included taxa known to occur in more than three counties. In general, these are taxa that are either commercially exploited (e.g., *Panax quinquefolium* and *Hydrastis canadensis*) or regionally endemic species with limited distributions and little or no possibility of further range extension (e.g., *Conradina verticillata*, Central Basin endemics, Southern Appalachian endemics). The resulting list is therefore a distillation of what is known of the county distribution and endangerment of our least frequently collected taxa, recognizing that working with these particular taxa represents a peculiar combination of both knowledge and ignorance. The final list includes some subjective judgments by the committee concerning inclusion or exclusion based on true rarity versus infrequent collection and the application of the criteria used below in assembling the list.

In September 1976, a letter was distributed to the State's botanists with the list appended. In November, a public workshop was held in conjunction with the Tennessee Academy of Science meeting and the list was examined and amended by approximately 40 participants. Since then we have had additional verbal and written communications and a few records have been added from other herbaria and from the literature.

The present list consists of four categories of taxa: Possibly Extirpated—Species considered endangered but which have not been seen in Tennessee within the last 20 years.

Endangered—Species now in danger of becoming extinct in Tennessee because of:

- their rarity throughout their range.
- their rarity in Tennessee as a result of sensitive habitat or restricted area of distribution.

Threatened—Species likely to become endangered in the immediately foreseeable future as a result of rapid habitat destruction or commercial exploitation.

Special Concern—Species requiring particular attention because:

- they are rare or distinctive in Tennessee because the State represents the limit or near-limit of their geographic range.
- their status is undetermined because of insufficient information.

Of the 58 rare Tennessee plants in the Federal Register (U. S. Dept. of the Interior, 1975, 1976), we have excluded the following:

ENDANGERED

Clematis addisonii Britt.—does not occur in Tennessee (Dennis, 1976)

Clematis gattingeri Small—synonymous with *Clematis viorna* (Dennis, 1976)

Draba incisa—a *nomen nudum*

Elodea linearis (Rybd.) H. St. John—of doubtful validity, known only from the type

Geum geniculatum Michx.—no Tennessee specimens seen although it occurs on Roan Mountain in North Carolina (Radford, Ahles, & Bell, 1968)

Helianthus eggertii Small—not uncommon

Pycnanthemum curvipes (Greene) Grant & Epling—no Tennessee specimens seen

Silphium integrifolium Michx., var. *gattingeri* Perry—of doubtful validity, known only from the type

Solidago spithamea M. A. Curtis—no Tennessee specimens seen

THREATENED

Carex purpurifera Mackenzie—not uncommon

Platanthera flava (L.) Farwell—not uncommon

Platanthera peramoena Gray—not uncommon

Rhododendron bakeri (Lemmon & McKay) Hume—apparently conspecific with *Rhododendron cumberlandense* E. L. Braun

Saxifraga careyana Gray—not uncommon

Saxifraga caroliniana Gray—does not occur in Tennessee (Lord, 1960)

Synandra hispidula (Michx.) Baillon—not uncommon

The absence of cultivated plants on this list should not suggest that these taxa are of little value, as much of our native flora is already in cultivation (Bailey, 1961). Similarly, concern for rare plants need not be based solely on their uniqueness or esoteric value. The African species of *Rauwolfia* were rare botanical curiosities, but today they are cultivated for drugs such as the tranquilizer reserpine. Also, the antihistamine Ephedrine is extracted from the slow *Ephedra* of the southwestern U. S. Several of our native plants are collected and sold as drug sources (Krochmal, 1968), thus depleting these natural resources. Several taxa in this text designated as commercially exploited are so indicated because of depletion by herb and nursery collectors, and wildflower gardeners.

The list in its present form represents approximately 10 per cent of the State's flora and should be considered tentative. New collections will uncover additional plants in need of protection while other species will be found to be more common than our current information indicates. Rare plants are known to occur in each of the State's major physiographic provinces with higher frequencies from the Central Basin, southeastern and northern Highland Rim, the Cumberland Plateau, and the Unaka Mountains. The patterns of distribution indicate that these taxa often occur together in unique landscape features which provide sound justification for permanent preservation of these unique habitats.

Interested persons across the State who find these plants are encouraged to notify staff of the University of Tennessee and/or the Herbarium of Vanderbilt University. Such information contributes not only to this project but also to State and regional projects underway. However, care should be taken to protect new populations, and collections should *not* be made from currently known localities.

It is also hoped that this publication will generate educational programs, necessary legislation, public awareness, and general concern for this significant portion of Tennessee's natural heritage.

POSSIBLY EXTIRPATED

ASTERACEAE

Aster praealtus Poir.—Davidson, Johnson
Eupatorium leucolepis (DC.) T & G.—Coffee
Helenium brevifolium (Nutt.) Wood—Morgan
Helianthus glaucophyllus D. M. Smith—Johnson
Ratibida columnifera (Nutt.) Woot. & Standl.—Davidson, Richards (1968)*

Rudbeckia subtomentosa Pursh—Montgomery
Tetragonotheca helianthoides L.—Knox

CAMPANULACEAE

Lobelia amoena Michx.—Polk

CAPRIFOLIACEAE

Linnaea borealis L.—Sevier

CARYOPHYLLACEAE

Paronychia argyrocoma (Michx.) Nutt.—Cumberland
Silene ovata Pursh—Cocke, Marion

CRASSULACEAE

Sedum rosea (L.) Scopoli—Carter, Gattinger (1901)

CYPERACEAE

Cladium mariscoides (Muhl.) Torr.—Middle Tennessee, Sharp, et al. (1956)

Dichromena latifolia Baldwin—Coffee, Gattinger (1901)
Rhynchospora capillacea Torr.—Campbell
Rhynchospora rariflora (Michx.) Ell.—Van Buren, Warren
Rhynchospora wrightiana Boeckler—Bledsoe
Scleria minor (Britt.) Stone—Bledsoe

ERICACEAE

Kalmia angustifolia L. var. *caroliniana* (Small) Fern.—Johnson

EUPHORBIACEAE

Croton alabamensis E. A. Smith—Coffee, Farmer & Thomas (1969)

FABACEAE

Apios priceana Robins.—Davidson, Montgomery
Crotalaria purshii DC.—Blount

HYPERICACEAE

Hypericum majus (Gray) Britt.—Morgan

ISOETACEAE

Isoetes melanopoda Gay & Durieu—Rutherford

LAMIACEAE

Pycnanthemum verticillatum (Michx.) Pers.—Fentress
Scutellaria montana Chapm.—Hamilton

LILIACEAE

Melanthium hybridum Walt.—Sevier, Unicoi
Melanthium virginicum L.—Lincoln
Zigadenus densus (Desr.) Fern.—Coffee

LYCOPODIACEAE

Lycopodium annotinum L.—Blount

MYRICACEAE

Comptonia peregrina (L.) Coulter—Scott

ORCHIDACEAE

Listera australis Lindl.—Coffee
Listera smallii Wieg.—Johnson, Sevier
Platanthera integra (Nutt.) Gray ex Beck—Coffee

POACEAE

Trisetum spicatum (L.) Richter var. *molle* (Michx.) Beal—Carter, Lamson-Scribner (1894)

POLYGONACEAE

Polygonum cilinode Michx.—Blount

PONTEDERIACEAE

Heteranthera limosa (Sw.) Willd.—Davidson, Montgomery

*Certain taxa for which we have seen no specimens are cited from the literature.

PORTULACACEAE

Talinum teretifolium Pursh—Rhea

RANUNCULACEAE

Anemone canadensis L.—Knox
Anemone caroliniana Walt.—Davidson, Rutherford
Ranunculus trichophyllus Chaix—Montgomery

RHAMNACEAE

Rhamnus alnifolius L'Hér.—Campbell

ROSACEAE

Crataegus harbisoni Beadle—Lawrence, Obion, Shelby
Spiraea virginiana Britton—Van Buren

SARRACENIACEAE

Sarracenia oreophila (Kearney) Wherry—Fentress, Sharp, *et al.* (1960)
Sarracenia purpurea L.—Mississippi, Tennessee & Duck Rivers, Gattinger (1901)

SCROPHULARIACEAE

Aureolaria patula (Chapm.) Pennell—Montgomery, Roane, Sevier
Gerardia gatesii (Benth.) Pennell—Polk
Gratiola floridana Nutt.—Franklin, Hamilton
Schwalbea americana L.—Coffee, Fentress, Pennell (1935)
Veronica comosa Richter—Rutherford
Veronica scutellata L.—Johnson

ENDANGERED

ANACARDIACEAE

Cotinus obovatus Raf.—Franklin, Marion

APIACEAE

Perideridia americana (Nutt.) Reichenb.—Davidson, Rutherford

ARACEAE

Symplocarpus foetidus (L.) Nutt.—Carter, Johnson

ASPLENIACEAE

Dryopteris spinulosa (Muell.) Watt—Johnson
Phyllitis scolopendrium (L.) Newman—Marion

ASTERACEAE

Cacalia rugelii (Chapm.) Barkley & Cronquist—Cocke, Sevier
Echinacea tennesseensis (Beadle) Small—Davidson, Rutherford
Heterotheca ruthii (Small) Harms—Polk
Liatis cylindracea Michx.—Rutherford
Marshallia grandiflora Beadle & Boynton—Cumberland, Roane
Senecio robbinsii Oakes ex Rusby—Carter
Silphium brachiatum Gattinger—Franklin, Polk
Solidago rupestris Raf.—Davidson, Montgomery

BORAGINACEAE

Onosmodium subsectosum Mackenzie & Bush—Rutherford

BRASSICACEAE

Arabis perstellata E. L. Br. var. *ampla* Rollins—Davidson
Arabis shortii (Fern.) Gl. var. *phalacrocarpa* (Hopkins) Steyerl.—Humphreys, Montgomery
Erysimum capitatum (Dougl.) Greene—DeKalb, Putnam, Smith
Leavenworthia exigua Rollins var. *lutea* Rollins—Maury
Lesquerella perforata Rollins—Smith, Wilson
Lesquerella stonensis Rollins—Rutherford

CARYOPHYLLACEAE

Arenaria fontinalis (Short & Peter) Shinnars—Cheatham, Davidson, Williamson
Cerastium arvense L. var. *oblongifolium* (Torr.) Hollick & Britt.—Maury

CONVOLVULACEAE

Evolvulus pilosus Nutt.—Rutherford, Wilson

CRASSULACEAE

Sedum nevii Gray—Polk
Sedum smallii (Britt.) Ahles—Franklin, Grundy, Hamilton, Marion, Rhea

ERICACEAE

Pyrola rotundifolia L. var. *americana* (Sw.) Fern.—Sullivan

ERIOCAULACEAE

Lachnocaulon anceps (Walt.) Morong—Cumberland

FABACEAE

Thermopsis fraxinifolia M. A. Curtis—Hamilton

HAEMODORACEAE

Lachnanthes caroliniana (Lam.) Dandy—Coffee

HYMENOPHYLLACEAE

Trichomanes petersii Gray—Blount, Franklin, Monroe, Sevier, Shields (1939)

HYPERICACEAE

Hypericum ellipticum Hook.—Johnson

LAMIACEAE

Conradina verticillata Jernison—Cumberland, Fentress, Morgan, Scott, White

LILIACEAE

Allium stellatum Fraser—Davidson, Rutherford
Lilium grayi S. Wats.—Carter, Johnson; commercially exploited
Lilium philadelphicum L.—Grundey; commercially exploited
Trillium pusillum Michx.—Sumner
Veratrum woodii Robbins—Grundey

ONAGRACEAE

Oenothera missouriensis Sims—Rutherford

ORCHIDACEAE

Cypripedium reginae Walt.—Claiborne
Platanthera integrilabia (Correll) Luer—Cumberland, Fentress, Franklin, Grundy
Platanthera nivea (Nutt.) Luer—Coffee
Platanthera orbiculata (Pursh) Lindley—Carter, Unicoi

POACEAE

Calamagrostis cainii Hitchc.—Sevier
Calamovilfa arcuata K. E. Rogers—Cumberland
Glyceria nubigena W. A. Anderson—Blount, Sevier

POLYGONACEAE

Polygonella americana (F. & M.) Small—Morgan

RANUNCULACEAE

Caltha palustris L.—Carter, Johnson
Delphinium exaltatum Ait.—Anderson
Ranunculus longirostris Godr.—Montgomery, Robertson

ROSACEAE

Geum radiatum Gray—Blount, Carter, Sevier
Prunus pumila L.—Coffee, Franklin
Sanguisorba canadensis L.—Carter
Spiraea alba Du Roi—Johnson

RUBIACEAE

Houstonia montana (Chickering) Small—Carter

SCROPHULARIACEAE

Collinsia verna Nutt.—Clay, Sumner
Gerardia pseudaphylla (Pennell) Pennell—Coffee, Dickson, Warren
Tomanthera auriculata (Michx.) Raf.—Carroll

XYRIDACEAE

Xyris tennesseensis Kral—Lewis

THREATENED

ALISMACEAE

Sagittaria graminea Michx. var. *graminea*—Coffee, Fentress
Sagittaria graminea Michx. var. *platyphylla* Engelm.—Cumberland, Lake, Obion

APIACEAE

Ammoselinum popei T. & G.—Davidson, Rutherford, Wilson
Hydrocotyle americana L.—Scott, Van Buren
Polytaenia nuttalli DC.—Davidson, McNairy, Robertson

ARALIACEAE

Panax quinquefolium L.—Infrequent over the state and commercially exploited

ASTERACEAE

Aster ericoides L.—Loudon, McNairy
Aster sericeus Vent.—Coffee, Roane
Cacalia suaveolens L.—Dickson, Humphreys, Lewis, Williamson
Chrysogonum virginianum L.—Claiborne, Bradley
Eupatorium luciae-brauniae Fern.—Fentress, Pickett, Scott
Hieracium scabrum Michx.—Johnson, Pickett
Polymnia laevigata Beadle—Franklin, Marion, Rhea
Prenanthes roanensis (Chickering) Chickering—Carter
Silphium laciniatum L.—Carroll, Henry
Silphium pinnatifidum Ell.—Coffee

BETULACEAE

Alnus crispa (Ait.) Pursh—Carter

BRASSICACEAE

Cardamine clematitidis Shuttlew.—Blount, Carter, Polk, Sevier
Cardamine flagellifera O. E. Schultz—Blount, Knox, Polk, Sevier
Cardamine rotundifolia Michx.—Grainger, Hawkins, Scott, Unicoi
Draba ramosissima Desv.—Blount, DeKalb, Putnam
Leavenworthia exigua Rollins var. *exigua*—Central Basin
Leavenworthia stylosa Gray—Central Basin
Leavenworthia torulosa Gray—Central Basin and southern Great Valley
Lesquerella densipila Rollins—Central Basin
Lesquerella globosa (Desv.) Wats.—Cheatham, Davidson, Maury, Montgomery, Trousdale
Lesquerella lescurei (Gray) S. Wats.—Central Basin and dissected Highland Rim

CAMPANULACEAE

Lobelia canbyi Gray—Coffee, Cumberland, Warren
Lobelia gattingeri Gray—Central Basin

CAPRIFOLIACEAE

Diervilla lonicera Miller—Anderson, Cheatham
Diervilla sessilifolia Buckley var. *rivularis* (Gattinger) Ahles—Marion, Polk, Unicoi

CARYOPHYLLACEAE

Arenaria groenlandica (Retz.) Sprengel var. *groenlandica*—Carter
Arenaria lanuginosa (Michx.) Rohrback—Giles
Silene caroliniana Walt. var. *pennsylvanica* (Michx.) Fern.—Carter, Sullivan, Washington

CHENOPODIACEAE

Chenopodium standleyanum Aellen—Cumberland, Knox, Maury

CYPERACEAE

Carex misera Buckley—Blount, Sevier
Carex muricata L. var. *ruthii* (Mackenzie) Gl.—Blount, Cocke, Sevier
Cymophyllum fraseri (Andr.) Mackenzie—Blue Ridge Province of East Tennessee
Fimbristylis puberula (Michx.) Vahl—Blount, Coffee, Rutherford
Rhynchospora perplexa Britt. ex Small—Coffee, Marion, Warren
Scirpus cespitosus L.—Carter, Sevier
Scirpus expansus Fern.—Carter, Unicoi

DROSERACEAE

Drosera capillaris Poir.—Bledsoe, Cumberland, McNairy, Van Buren
Drosera leucantha Shinnars—Coffee, Franklin, Lewis, Warren

ERICACEAE

Gaylussacia dumosa (Andrz.) T. & G.—Coffee, Franklin
Gaylussacia ursina (M. A. Curtis) T. & G. ex Gray—Blount, Polk, Sevier
Leucothoe racemosa (L.) Gray—Morgan
Monotropsis odorata Schweinitz—Blount, Grundy, Sevier
Pieris floribunda (Pursh) B. & H.—Sevier
Vaccinium macrocarpon Ait.—Johnson, Polk

FABACEAE

Astragalus tennesseensis Gray—Central Basin
Lespedeza angustifolia (Pursh) Ell.—Coffee, Lincoln, Warren
Petalostemum candidum (Willd.) Michx.—Davidson, Rutherford, Wilson
Petalostemum foliosum Gray—Davidson, Rutherford, Williamson
Petalostemum gattingeri Heller—Central Basin and southern Great Valley
Psoralea subacaulis T. & G.—Central Basin

FUMARIACEAE

Adlumia fungosa (Ait.) Greene—Blount, Campbell, Cocke, Sevier, Washington

GENTIANACEAE

Gentiana austromontana Pringle & Sharp—Carter, Johnson, Unicoi, Washington
Gentiana linearis Froel.—Sevier

HAMAMELIDACEAE

Fothergilla major (Sims) Lodd—Grainger, Greene, Scott, Sevier

HYDROPHYLLACEAE

Hydrophyllum virginianum L.—Sevier, Sullivan
Phacelia ranunculacea (Nutt.) Constance—Montgomery, Obion

HYMENOPHYLLACEAE

Trichomanes boschianum Sterm. ex Bosch.—Franklin, Monroe, Scott

HYPERICACEAE

Hypericum adpressum Barton—Coffee, Warren
Hypericum graveolens Buckley—Johnson, Sevier
Hypericum mitchellianum Rydb.—Blount, Sevier, Unicoi

IRIADACEAE

Iris prismatica Pursh—Coffee, Warren

JUNCACEAE

Juncus gymnocarpus Coville—Blount, Sevier

LAMIACEAE

Meehania cordata (Nutt.) Britt.—Hancock
Pycnanthemum montanum Michx.—Cocke, Johnson, Sevier, Unicoi
Salvia reflexa Hornem.—Davidson
Scutellaria saxatilis Riddell—Cumberland, Johnson
Stachys clingmanii Small—Blount, Monroe, Sevier

LENTIBULARIACEAE

Utricularia subulata L.—Cumberland, Fentress, Morgan

LILIACEAE

Lilium canadense L.—Middle & East Tennessee; commercially exploited
Lilium michiganense Farw.—Cumberlands & Middle Tennessee; commercially exploited
Tofieldia racemosa (Walt.) BSP.—Coffee
Trillium lancifolium Raf.—Hamilton, Marion
Schoenolirion croceum (Michx.) Gray—Davidson, Rutherford, Wilson
Xerophyllum asphodeloides (L.) Nutt.—Blount, Greene
Zigadenus leimanthoides Gray—Coffee, Grundy

LYCOPODIACEAE

Lycopodium alopecuroides L.—Coffee, Fentress
Lycopodium selago L.—Carter, Sevier

LYTHRACEAE

Didiplis diandra (DC.) Wood—Hardin, Henry

NYCTAGINACEAE

Mirabilis albida (Walt.) Heimerl—Rutherford
Mirabilis linearis (Pursh) Heimerl—Maury

ONAGRACEAE

Ludwigia sphaerocarpa Ell.—Coffee, Franklin

ORCHIDACEAE

Platanthera psychodes (L.) Lindley—Carter, Johnson, Monroe, Sevier

POLEMONIACEAE

Phlox bifida Beck—Davidson, Rutherford, Wilson

POLYGONACEAE

- Eriogonum longifolium* Nutt. var. *harperi* (Goodm.) Reveal—DeKalb, Putnam, Smith
Polygonum arifolium L.—Henry, Johnson

PORTULACACEAE

- Talinum calcacticum* Ware—Central Basin
Talinum mengesii W. Wolf—Grundy, Marion, Morgan, Rhea

POTAMOGETONACEAE

- Potamogeton tennesseensis* Fern.—Cumberland, Fentress, Morgan, Polk

PRIMULACEAE

- Lysimachia fraseri* Duby—Hamilton, Polk, Sevier, Stewart

RANUNCULACEAE

- Cimicifuga rubifolia* Kearney—River bluffs of the Ridge and Valley Province and Montgomery Co.
Hydrastis canadensis L.—Infrequent over the state and commercially exploited
Ranunculus flabellaris Raf.—Lake, Obion, Robertson
Thalictrum coriaceum (Britt.) Small—Claiborne, Sevier

ROSACEAE

- Amelanchier sanguinea* (Pursh) DC.—Cumberland, Sevier

SANTALACEAE

- Buckleya distichophylla* (Nutt.) Torr.—Carter, Cocke, Greene, Sullivan, Unicoi, Washington

SAXIFRAGACEAE

- Heuchera longiflora* Rydb. var. *aceroides* (Rydb.) Rosend., Butt. & Lak.—Cocke, Greene, Sullivan

SCHISANDRACEAE

- Schisandra glabra* (Brickell) Rehder—Shelby, Tipton

SCROPHULARIACEAE

- Pedicularis lanceolata* Michx.—Coffee, Union, Warren

TAXACEAE

- Taxus canadensis* Marsh.—Pickett

VIOLACEAE

- Viola egglestoni* Brainerd—Central Basin

VITACEAE

- Vitis rupestris* Scheele—Davidson

XYRIDACEAE

- Xyris fimbriata* Ell.—Coffee

SPECIAL CONCERN

ACERACEAE

- Acer saccharum* Marsh. ssp. *leucoderme* (Small) Desmarais—Hamilton, Polk

APIACEAE

- Heracleum maximum* Bartram—Blount, Cocke, Unicoi

ARISTOLOCHIACEAE

- Hexastylis virginica* (L.) Small—Johnson

ASCLEPIADACEAE

- Asclepias purpurascens* L.—Stewart

ASPLENIACEAE

- Dryopteris cristata* (L.) Gray—Carter, Johnson
Thelypteris phegopteris (L.) Slosson—Sevier
Woodsia scopulina D. C. Eat.—Carter, Johnson, Unicoi
Woodwardia virginica (L.) Smith—Blount, Coffee, Marion, Van Buren

ASTERACEAE

- Carduus spinosissimus* Walt.—Bradley
Spilanthes americana (Mutis) Hieron. var. *repens* (Walt.) A. H. Moore—Lauderdale, Tipton

BRASSICACEAE

- Arabis glabra* (L.) Bernh.—Wayne
Arabis hirsuta (L.) Scop.—Wilson
Arabis patens Sullivant—Knox

CAMPANULACEAE

- Campanula aparinoides* Pursh—Blount, Carter, Johnson

CAPRIFOLIACEAE

- Lonicera canadensis* Marsh.—Sevier
Lonicera dioica L.—Johnson, Washington, Duncan (1967)
Lonicera flava Sims—Franklin, Hamilton, Duncan (1967)
Lonicera prolifera (Kirchner) Rehder—Davidson, Duncan (1967)

CARYOPHYLLACEAE

- Stellaria alsine* Grimm—Carter, Cocke
Stellaria longifolia Muhl.—Blount, Johnson

CELASTRACEAE

- Euonymus obovatus* Nutt.—Knox, Monroe, Sevier

CISTACEAE

- Helianthemum bicknellii* Fern.—Blount
Helianthemum canadense (L.) Michx.—Blount, Sevier
Helianthemum propinquum Bicknell—Blount, Coffee, Monroe
Lechea leggettii Britt. & Holl.—Coffee, White

CYPERACEAE

- Bulbostylis ciliatifolia* (Ell.) Fern. var. *coarctata* (Ell.) Kral—Fayette
Carex barrattii Schwein. & Torr.—Coffee
Carex buxbaumii Wahlenb.—Cumberland
Carex comosa Boott—Lewis, Montgomery
Carex crawei Dewey—Davidson, Wilson
Carex davisii Schwein. & Torr.—Davidson
Carex gravida Bailey—Knox, Meigs, Montgomery
Carex hirtifolia Mackenzie—Coffee
Carex howei Mackenzie—Chester, Hardeman
Carex lacustris Willd.—Montgomery
Carex lanuginosa Michx.—Madison, Underwood (1945)
Carex molesta Mackenzie—Davidson, Underwood (1945)
Carex muricata L. var. *angustata* Carey—Campbell, Grundy, Johnson
Carex muskingumensis Schwein.—Montgomery
Carex oxylepis Torr. & Hook var. *pubescens* J. K. Underwood—Cheatham, Lawrence, Rutherford
Carex pedunculata Muhl.—Marion
Carex reniformis (Bailey) Small—Gibson, Hancock, Humphreys
Carex rostrata Stokes—Johnson, Robertson, Sullivan
Carex schweinitzii Dewey—Knox, Underwood (1945)
Carex trisperma Dewey—Blount
Carex vestita Willd.—Franklin
Cyperus brevifolioides Thieret & Delahoussaye—Washington
Cyperus engelmannii Steudel—Obion
Cyperus dentatus Torr.—Polk
Cyperus haspan L.—Coffee, Warren
Cyperus plukenetii Fern.—McNairy, Sequatchie
Eleocharis equisetoides (Ell.) Torr.—Fentress, Putnam, Rutherford
Eleocharis intermedia (Muhl.) Schult.—Campbell, Union
Eriophorum virginicum L.—Cumberland, Fentress, Johnson, Marion, Polk
Fuirene squarrosa Michx.—Henderson, Polk
Rhynchospora alba (L.) Vahl.—Johnson
Rhynchospora macrostachya Torr.—Coffee
Scleria verticillata Muhl. ex Willd.—Coffee

ERICACEAE

- Menziesia pilosa* (Michx.) Juss.—Carter, Sevier
Vaccinium tenellum Ait.—Lincoln

FABACEAE

- Rhynchosia latifolia* Nutt.—Chester

FAGACEAE

- Quercus nuttallii* Palm.—Gibson, Obion, Shelby

HYDROCHARITACEAE

- Elodea nuttallii* (Planchon) St. John—Lake

IRIDACEAE

- Iris fulva* Ker—Dyer, Lake, Gibson

LAMIACEAE

- Salvia azurea* Lam. var. *grandiflora* Benth.—Henry

LILIACEAE

- Clintonia borealis* (Ait.) Raf.—Cocke, Sevier, Unicoi
Erythronium rostratum Wolf—Lawrence, Wayne
Smilax laurifolia L.—Polk
Streptopus roseus Michx.—Sevier
Trillium cernuum L.—Carter

LOGANIACEAE

- Gelsemium sempervirens* (L.) Ait. f.—Hamilton, Rhea

MAGNOLIACEAE

- Magnolia virginiana* L.—McNairy, Polk

NAJADACEAE

- Najas quadalupensis* (Spreng.)—Grundy, Lake
Najas minor All. Magnus—Grundy

ONAGRACEAE

- Epilobium angustifolium* L.—Unicoi
Ludwigia leptocarpa (Nutt.) Hara—Lake, Shelby

OPHIOGLOSSACEAE

- Botrychium alabamense* Maxon—Hamblen, Monroe, Putnam
Botrychium matricariaefolium A. Br.—Sevier, Washington
Ophioglossum crotalophoroides Walt.—Shelby

OROBANCHACEAE

- Orobanche ludoviciana* Nutt.—Lauderdale

ORCHIDACEAE

- Spiranthes ovalis* Linkley—Montgomery, Roane

PINACEAE

- Abies fraseri* (Pursh) Poir.—Carter, Sevier
Tsuga caroliniana Engelm.—Carter, Johnson, Sevier, Unicoi

POACEAE

- Agrostis borealis* Hartm. var. *americana* (Scribn.) Fern.—Carter, Sharp *et al.* (1956)
Bromus ciliatus L.—Sevier
Elymus interruptus Buckley—Putnam
Elymus svensonii Church—Davidson, Smith
Festuca paradoxa Desv.—Coffee, Fayette
Glyceria acutiflora Torr.—Grundy, Warren
Glyceria grandis S. Wats.—Johnson
Glyceria laxa Scribn.—Johnson
Gymnopogon brevifolius Trinius—Coffee
Muhlenbergia torreyana (Schult.) Hitchc.—Coffee, Svenson (1941)
Panicum curtifolium Nash—Franklin
Panicum ensifolium Baldwin ex Ell.—Fentress
Panicum hemitomom Schult.—Coffee, Warren
Panicum leucothrix Nash—Coffee, Warren
Paspalum bifidum (Bertoloni) Nash—McNairy
Poa palustris L.—Carter
Poa saltuensis Fern. & Wieg.—Blount, Van Buren
Sacciolepis striata (L.) Nash—Polk
Tridens flavus (L.) Hitchc. var. *chapmanii* (Small) Shinners—McNairy

POLYGALACEAE

- Polygala boykinii* Nutt.—Rutherford
Polygala mariana Miller—McNairy
Polygala nana (Michx.) DC.—Rhea
Polygala nuttallii T. & G.—Coffee

POTAMOGETONACEAE

- Potamogeton ephydrus* Raf.—Blount, Johnson, Polk
Potamogeton foliosus Raf. var. *maecellus* Fern.—Cumberland

PRIMULACEAE

- Lysimachia terrestris* (L.) BSP.—Coffee, Unicoi, Warren
Trientalis borealis Raf.—Sullivan

RANUNCULACEAE

- Ranunculus allegheniensis* Britt.—Carter, Hawkins, Morgan

ROSACEAE

- Potentilla tridentata* Ait.—Carter, Unicoi
Prunus virginiana L.—Blount, Polk, Sevier

RUBIACEAE

- Galium asprellum* Michx.—Johnson
Galium mollugo L.—Carter, Davidson

SALICACEAE

- Populus grandidentata* Michx.—Morgan, Sevier, Washington

SCROPHULARIACEAE

- Scymeria cassioides* (J. F. Gmelin) Blake—Bradley, Pennell (1935)

SPARGANIACEAE

- Sparganium androcladum* (Engelm.) Morong—Blount

SYMPLOCACEAE

- Symplocos tinctoria* (L.) L'Her.—Carroll, Polk

ULMACEAE

- Ulmus crassifolia* Nutt.—Shelby

VERBENACEAE

- Verbena stricta* Vent.—Henry, Obion, Weakley

XYRIDACEAE

- Xyris iridifolia* Chapman—Coffee, Grundy, Warren
Xyris jupicai Richard—Putnam, Warren

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