

ANNOTATED CHECKLIST OF THE VASCULAR FLORA OF THE LANCE ROSIER UNIT OF THE BIG THICKET NATIONAL PRESERVE, HARDIN COUNTY, TEXAS

Larry E. Brown

*Houston Community College
1300 Holman*

Houston, Texas 77004, U.S.A.

and

Herbarium, Spring Branch Science Center

8856 Westview Drive

Houston, Texas 77055, U.S.A.

Barbara R. MacRoberts
and Michael H. MacRoberts

Bog Research

740 Columbia

Shreveport, Louisiana 71104, U.S.A.

and

Herbarium, Museum of Life Sciences

Louisiana State University in Shreveport

Shreveport, Louisiana, 71115, U.S.A.

Paul A. Harcombe,
Warren W. Pruess, I. Sandra Elsik

Department of Ecology and Evolutionary Biology

Rice University

Houston, Texas 77005, U.S.A.

Stanley D. Jones

Herbarium, Botanical Research Center

P.O. Box 6717

Bryan, Texas 77805, U.S.A.

ABSTRACT

An annotated, vouchered checklist is provided of the vascular plant taxa of the 10,100 hectare Lance Rosier Unit, Big Thicket National Preserve, Hardin County, in southeastern Texas. Documented for the unit are 694 taxa of which 71 (10%) are exotics.

RESUMEN

Se aporta un catálogo con comentarios y pliegos testigo de los táxones de plantas vasculares de las 10,100 hectáreas de la reserva Lance Rosier Unit, Big Thicket National Preserve, del condado de Hardin, en el sureste de Texas. Se documentan para la unidad 694 táxones de los que 71 (10%) son exóticos.

INTRODUCTION

This is the fourth part of an inventory, based upon available voucher specimens, of the vascular flora of the Big Thicket National Preserve, in southeastern Texas. In three previous papers, we provided an annotated checklist of the Hickory Creek, Turkey Creek, and Big Sandy Creek units (MacRoberts et al. 2002; Brown et al. 2005; Brown et al. 2006). In this paper, we provide an annotated checklist of the Lance Rosier Unit.

SITE AND METHODS

The Big Thicket is located mostly within the longleaf pine region of the West Gulf Coastal Plain in southeastern Texas (Parks & Cory 1936; McLeod 1971; Harcombe & Marks 1979; Marks & Harcombe 1981; Harcombe et al. 1993). The Big Thicket National Preserve consists of 12 units scattered over seven Texas counties. The units range from 222 to 10,100 hectares and total about 34,000 hectares (Peacock 1994). The Lance Rosier Unit consists of 10,100 hectares and is located in southern Hardin County (Fig. 1). It is relatively flat with poor drainage over most of the area. Elevation ranges from about 14 to 30 meters. The Little Pine Island Bayou runs through its western and southern sections. The Lance

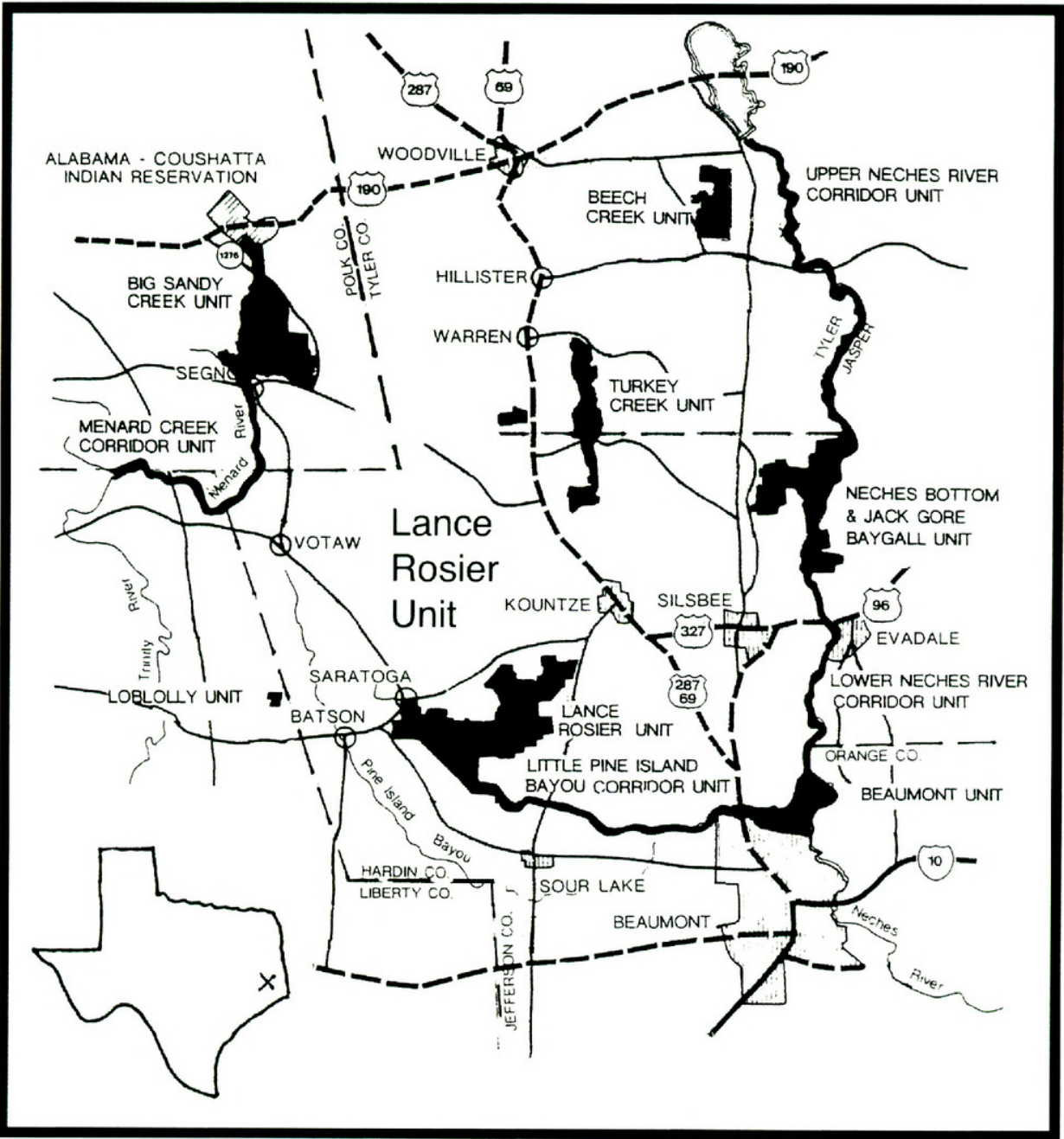


Fig. 1. Location of the Lance Rosier Unit, Big Thicket National Preserve, Texas.

Rosier Unit was chosen for inclusion in the Big Thicket National Preserve because of its wide range of plant communities (Ajilvsgi 1979; Harcombe & Marks 1979; Watson 1979; Harcombe & Marks 1981; MacRoberts & MacRoberts 1998). It is dominated by lower-slope hardwood pine forest and wetland pine savanna, but also has flatland hardwood forest, floodplain hardwood forest, and baygall thicket (Harcombe & Marks 1979; Marks & Harcombe 1981). Mima mounds are common in the wetland pine savanna sections. Fire suppression over the past 30 years has resulted in extensive midstory development and shading out of herbaceous vegetation. A map of community types can be found in Harcombe and Marks (1979), and details regarding soils, topography, and climate can be found in Deshotels (1978), Watson (1979, 1982), Harcombe and Marks (1979), and Marks and Harcombe (1981).

Like all units of the Big Thicket National Preserve, the Lance Rosier Unit had not previously been the subject of a detailed floristic inventory.

Larry Brown collected about 750 specimens during 15 field days beginning May 23, 2004 and ending May 14, 2006.

The MacRoberts' collected 73 specimens during a study of wetland pine savanna in 1997 and 1998. Stanley Jones collected 317 specimens during 2002 and 2003. Geraldine Watson collected 87 specimens over several years in the late 1970s and early 1980s. Other collectors (Sandi Elsik, Warren Pruess, William Carr, Paul Harcombe, Donna Streng, C. Liu, and Eric Keith) gathered 198 specimens. A search of the on line TAMU herbarium consortium database found some collections at TEX which were annotated and added to the list.

Because our purpose is to produce a list of taxa known to occur on the Lance Rosier Unit, a vouchered specimen was considered to be the only evidence acceptable for inclusion in the list. In all, more than 1331 herbarium specimens form the data for this report. All specimens at Rice University have been annotated by Larry Brown. A complete set of these mounted specimens are to be donated to TAES, the Tracy Herbarium, at Texas A&M University. Duplicates collections will be distributed to other herbaria.

In most cases, nomenclature follows Jones et al. (1997) and Kartesz and Meacham (1999). For *Dichanthelium* we followed a pre-publication key in Diggs et al. (2006). Some recent literature sources were followed, especially some nomenclature in the published Flora of North America volumes. In cases of multiple collections, no more than four are listed for each taxon.

RESULTS

The following is an annotated list of the Lance Rosier Unit taxa. Abbreviations used are given below.

CL = C. Liu. His specimens are at Rice University.

DS = Donna Streng. Her collections are at Rice University.

DW = David Wolf. His one specimen is at TEX.

EK = Eric Keith. His collections are at Rice University.

GW = Geraldine Watson. Her specimens are at Rice University.

LB = Larry Brown. His specimens are at Rice University except for those few at SBSC.

MM = Barbara and Michael MacRoberts. Their specimens are at TEX, VDB, and BRIT. Also, as noted, one or two are at SBSC.

PH = Paul Harcombe. His collections are at Rice University

RJ = Ray Jordan. His collections are at TEX.

SEWP = Sandra Elsik and Warren Pruess. Their specimens are at Rice University.

SJ = Stanley Jones. His specimens are at Rice University.

WRC = William Carr. His specimens are at TEX.

***** = exotic

+ = see note at end of list.

ACANTHACEAE

Justicia ovata (Walter) Lindau var. *Lanceolata* (Chapm.)
R.W. Long, LB 30165; SEEKWP 3100

Ruellia caroliniensis (J.F. Gmel.) Steud, LB 30574; SEEKWP
3098

Ruellia humilis Nutt., SJ 14095, 14069; LB 30030

ACERACEAE

Acer rubrum L., SJSEWP, 15042, 15041; LB 30287

AGAVACEAE

Manfreda virginica (L.) Salisb. ex Rose, LB 31083

ALISMATACEAE

- Sagittaria papillosa* Buchenau, LB 29375, 29363, 30041; SJ 13757
Sagittaria platyphylla (Engelm.) J.G. Sm., LB 30170

ANACARDIACEAE

- Rhus copallinum* L., SJ 13762; LB 29863
Toxicodendron radicans (L.) Kuntze, LB 29837, SEWP 3053

ANNONACEAE

- Asimina parviflora* (Michx.) Dunal, SJ 13806; LB 31181

APIACEAE

- Centella erecta* (L.f.) Fernald, SJ 17780
Chaerophyllum tainturieri Hook. var. *tainturieri*, LB 30407; SJSEWP 15085
Cicuta maculata L., LB 30666; SJ 14091
 **Cyclospermum leptophyllum* (Pers.) Sprague ex Britton & Wilson, LB 30596
Eryngium integrifolium Walter, LB 30231, 30101, 30596, 30697
Eryngium prostratum Nutt. ex DC., LB 30587; SJ 13906
Hydrocotyle verticillata Thunb., LB 30069
Oxypolis filiformis (Walter) Britton, LB 30733, 30016; MM 3478; WRC 17231
Ptilimnium capillaceum (Michx.) Raf., LB 29344; SEEKWP 3094
Ptilimnium costatum (Elliott) Raf., LB 30254
Sanicula canadensis L., LB 29915; SJ 14073; GW 3102

APOCYNACEAE

- Trachelospermum difforme* (Walter) A. Gray, LB 30246

AQUIFOLIACEAE

- Ilex ambigua* (Michx.) Torr., SJ 14048
Ilex coriacea (Pursh) Chapm., LB 30678, 30111a; SJ 13866, 13773
Ilex decidua Walter, LB 29329; SJ 14242
Ilex longipes Chapman, LB 31056
Ilex opaca Soland., LB 29838; SJ 13776
Ilex vomitoria Aiton, LB 29983; SJ 13759

ARACEAE

- Arisaema triphyllum* (L.) Schott, SJ 13843

ARALIACEAE

- Aralia spinosa* L., LB 29854a

ARECACEAE

- Sabal minor* (Jacq.) Pers., SJ 14022; LB 30037

ARISTOLOCHIACEAE

- Aristolochia serpentaria* L., GW 156-2

ASCLEPIADACEAE

- Asclepias longifolia* Michx. subsp. *longifolia*, SJ 13992; LB 29379; MM 3874
Asclepias perennis Walter, LB 29929; SEEKWP 3104
Asclepias variegata L., LB 30055
Matelea gonocarpos (Walter) Shinnars, LB 30592, 29862; SJ 14243

ASPLENIACEAE

- Asplenium platyneuron* (L.) Britton, Sterns & Poggenb., LB 29910; SJ 13848, 14178

ASTERACEAE

- Acmella oppositifolia* (Lamarck) R.J. Jansen var. *repens* (Walter) R.J. Jansen, LB 29919; SJ 14245
Ageratina altissima (L.) King & H.E. Rob., GW 2006
Ambrosia artemisiifolia L., LB 30044, 30872
Ambrosia psilostachya DC., WP 068; LB 30872, 30891
Ambrosia trifida L., LB 30066
Amphiachyris dracunculoides (DC.) Nutt., GW 3142
Arnoglossum ovatum (Walter) H.E. Rob., SEEKWP 3115; SJ 14513
Baccharis halimifolia L., GW 3150
Bidens aristosa (Michx.) Britton, LB 30141, 29397; SJ 14084; GW 3083
Bidens bipinnata L., GW 3136, 3149
Bidens frondosa L., LB 30224, 30213; GW 1742
Boltonia diffusa Elliott, LB 29998, 30018; MM 3652; SJ 14027
Chaptalia tomentosa Vent., MM 3733; LB 31058
Chloracantha spinosa (Benth.) Nesom, GW 3409
Cirsium horridulum Michx., LB 30391, 30617; SEWP 3052
Conoclinium coelestinum (L.) DC., SJ 14088
Conyza canadensis (L.) Cronquist var. *canadensis*, SJSEWP 15090
Conyza canadensis (L.) Cronquist var. *glabrata* (A. Gray) Cronquist, LB 30068
 +*Coreopsis gladiata* Walter, LB 30229, 30901; MM 3662; CL 901127
 +*Echinacea pallida* (Nutt.) Nutt. var. *sanguinea* (Nutt.) Gandhi & R.D. Thomas, SJ 14098
Eclipta prostrata (L.) L., LB 30158
Elephantopus carolinianus Raeusch., LB 30053
Elephantopus nudatus A. Gray, LB 30239, 30772; GW 2412
Elephantopus tomentosus L., LB 30060, 30050; 30049; WP 069a
Erechtites hieraciifolia (L.) Raf. ex DC., LB 29940; SJ 13890
Erigeron philadelphicus L., SJSEWP 15093
Erigeron procumbens (Houst. ex Mill.) Nesom, WP 088
Erigeron strigosus Muhl. ex Willd., SJ 13819
Erigeron tenuis Torr. & A. Gray, SEWP 3073
Eupatorium capillifolium (Small) Lam., LB 30193; WP 070
Eupatorium hyssopifolium L., LB 30735, 30257; RJ s.n.
Eupatorium leucolepis (DC.) Torr. & A. Gray, MM 3641
Eupatorium mohrii Greene, LB 30897; PH 901146
Eupatorium perfoliatum L., LB 30635, 29368
Eupatorium rotundifolium L., LB 29361
 +*Eupatorium semiserratum* DC., LB 30166, 29979; RJ s.n.
Eupatorium serotinum Michx., LB 30142; RJ s.n.
Eurybia hemispherica (Alexander) Nesom, LB 30120
Euthamia leptoccephala (Torr. & A. Gray) Greene ex Porter & Britton, LB 29847, 30143; GW 3139

Gaillardia pulchella Foug. var. *pulchella*, LB 30625, 29854; SJ 14232
Gamochaeta coarctata (Willd.) Kerguelen, LB 30623, 30397
Gamochaeta pensylvanica (Willd.) Cabrera, LB 30601, 31229
Gamochaeta purpurea (L.) Cabrera, LB 30398, 30590; SEWP 3058; SJ 14264
Helenium amarum (Raf.) H. Rock var. *amarum*, LB 29887, 29878; SJSEWP 15048
Helenium drummondii H. Rock, SJ 13787; MM 3784, 3786
Helenium flexuosum Raf., LB 29957, 30059; SJ 14170; GW 3101
Helianthus angustifolium L., MM 3735; CL 901125
Heterotheca subaxillaris (Lam.) Britton & Rusby, LB 30194, SJ 14240
Hieracium gronovii L., LB 30720
**Hypochaeris microcephala* (Sch. Bip.) Cabrera var. *albiflora* (Kuntze) Cabrera, SJ 13932
Iva angustifolia Nutt. ex DC., LB 30071
Iva annua L., WP 062; LB 30249, 30249a
Krigia wrightii (A. Gray) K.L. Chambers ex K.J. Kim, LB 31165
Liatris acidota Engelm. & A. Gray, LB 29996; WRC 17233; MM 4005; SJ 14295
Liatris pycnostachya Michx., MM 3648b; LB 30238, 30232
Marshallia graminifolia (Walter) Small L.E. Watson, LB 30008; MM 3378; WRC 10838
Mikania scandens (L.) Willd., LB 30149, 29976
Pityopsis graminifolia (Michx.) Nutt., LB 30118; WP 059
+Pluchea baccharis (Mill.) Pruski, LB 29871, 30692; WRC 17707
Pluchea camphorata (L.) DC., LB 30183, 30058
Pluchea foetida (L.) DC., LB 29848; SJ 14511
Pseudognaphalium obtusifolium (L.) Hillard & Burt, LB 30076
Pyrrhopappus carolinianus (Walter) DC., SEEKWP 3074; LB 29864, 29376
Pyrrhopappus pauciflorus (D. Don) DC., GW 2004; LB 31158
Rudbeckia hirta L., LB 30652
Rudbeckia texana (Perdue) P. Cox & Urbatsch, LB 30582; SEEKWP 3106
Silphium gracile A. Gray, CL 901124
Smallanthus uvedalia (L.) Mack. ex Small, LB 31054
Solidago canadensis L. var. *scabra* Torr. & A. Gray, LB 30139
Solidago odora Aiton var. *odora*, LB 30255, 30221; WP 061
Solidago rugosa Mill. subsp. *asper* (Aiton) Cronquist, LB 29988
Solidago rugosa Mill. subsp. *rugosa*, LB 30140, 30884
Solidago sempervirens L. var. *mexicana* (L.) Fernald, LB 30191; GW 3462
Solidago tortifolia Elliott, RJ s.n.

**Soliva sessilis* Ruiz & Pavon., SEEKWP 3077; LB 31168
**+Soliva anthemifolia* (Jussieu) Sweet, LB 31233
**Sonchus asper* (L.) Hill, SJSEWP 15092; LB 31160
Symphyotrichum divaricatum (Nutt.) Nesom, GW 1574; LB 30215
Symphyotrichum dumosum (L.) Nesom, LB 30235, 30240; SJ 14257; MM 3648
Symphyotrichum lateriflorum (L.) A. & D. Love, WP 058
Symphyotrichum racemosum (Elliott) Nesom, LB 30244, 30881, 30880
Vernonia missurica Raf., LB 29833, 30889
Xanthium strumarium L., LB 29912
**Youngia japonica* (L.) DC., SJ 14021; LB 31049

AZOLLACEAE

Azolla caroliniana Willd., LB 30902

BERBERIDACEAE

Podophyllum peltatum L., GW 3048

BETULACEAE

Carpinus caroliniana Walter, SJ 14176

Ostrya virginiana (Mill.) K. Koch, SJ 14114, 14173; LB 30093

BIGNONIACEAE

Bignonia capreolata L., LB 29328, 30091; WP 091

Campsis radicans (L.) Seem. ex Bureau, LB 29832; SJ 14250

Catalpa bignonioides Walter, LB 29340

BLECHNACEAE

Woodwardia areolata (L.) T. Moore, LB 30777

Woodwardia virginica (L.) Sm., LB 29396

BORAGINACEAE

Heliotropium procumbens Mill., LB 30160, 30672

Myosotis macrosperma Engelm., SEWP 3063

BRASSICACEAE

Cardamine bulbosa (Schreb. Ex Mull.) Britton, Sterns, Poggenb., GW 3049

**Cardamine debilis* D. Don, LB 30292a

**Cardamine hirsuta* L., LB 30292

Lepidium virginicum L., LB 30603

BROMELIACEAE

Tillandsia usneoides (L.) L., LB 29904; SJ 13845

BUDDLEJACEAE

Polypremum procumbens L., LB 29896

BURMANNIACEAE

Burmanna capitata (J.F. Gmel.) Mart., LB 30107

CACTACEAE

Opuntia stricta (Haw.) Haw., GW 1639

CALLITRICHACEAE

Callitriche heterophylla Pursh, SJSEWP 15076

Callitriche peploides Nutt., SJSEWP 3107; LB 31228

CAMPANULACEAE

Lobelia cardinalis L., LB 30167

Lobelia flaccidifolia Small, LB 30636, 29362; MM 3920
Lobelia puberula Michx., SJ 14261; LB 30241
Lobelia reverchonii B.L. Turner, LB 30230; PH 901144
Triodanis biflora (Ruiz & Pavon) Greene, LB 30604
Triodanis perfoliata (L.) Nieuwl., GW 3061

CAPRIFOLIACEAE

**Lonicera japonica* Thunb., SEWP 3065
Lonicera sempervirens L., SJ 13929
Sambucus nigra L. subsp. *canadensis* (L.) R. Bolli, LB 30390; SEEKWP 3105
Viburnum dentatum L., SEEKWP 3078; LB 29861a, 29853
Viburnum nudum L. var. *nudum*, SJ 13998; LB 29401, 30033

CARYOPHYLLACEAE

**Cerastium glomeratum* Thuill., SJSEWP 15066
Sagina decumbens (Elliott) Torr. & A. Gray, LB 30400; SEEKWP 3108
**Stellaria media* (L.) Vill., SJSEWP 15063

CISTACEAE

+*Lechea minor* L., LB 30003

COMMELINACEAE

Commelina virginica L., LB 30153

CONVOLVULACEAE

Dichondra carolinensis Michx., LB 30075; SJ 13849
Evolvulus sericeus Sw., LB 30121
Ipomoea coccinea L., GW 3154
Ipomoea cordatotriloba Dennst. var. *cordatotriloba*, LB 29867; SJ 14235

CORNACEAE

Cornus florida L., SJSEWP 15043; LB 31047
Cornus foemina Mill., LB 29938; SJ 13758
Nyssa aquatica L., SJ 14122
Nyssa biflora Walter, LB 29407; WRC 17365
Nyssa sylvatica Marshall., LB 29336, 29978

CRASSULACEAE

Penthorum sedoides L., LB 30671

CUCURBITACEAE

Cayaponia quinqueloba (Raf.) Shinnars, SJ 14515

CUPRESSACEAE

Taxodium distichum (L.) L. C. Rich., LB 30207, 29917; SEEKWP 3099

CYPERACEAE

Carex abscondita Mack., SJ 13851
Carex albicans Willd. ex Spreng. subsp. *australis* (Bailey) J.H. Rettig, SEEKWP 3097; LB 30291
Carex annectens E.P. Bicknell, LB 30382
Carex basiantha Steud., SJ 13696; LB 30610
Carex blanda Dewey, SJ 13916
Carex bulbostylis Mack., LB 31163
Carex caroliniana Schwein, LB 30612, 30575
Carex cherokeensis Schwein., SJSEWP 15049

Carex complanata Torr. & Hook., LB 30381, 29330; SJ 14552, 13864
Carex crebriflora Wieg., SJ 14553, 13597
Carex crus-corvi Shuttl. ex Kunze, SEEKWP 3102
Carex debilis Michx. var. *debilis*, SJ 13860; LB 31075
Carex digitalis Willd. var. *asymetrica* Fernald, SJ 13852
Carex flaccosperma Dewey, SJ 13803; LB 30388a; SEWP 3054
Carex frankii Kunth, LB 30598; SEEKWP 3090
Carex gigantea Rudge, SJ 14177, 14020
Carex glaucescens Elliott, CL 901119; SJ 14162
Carex intumescens Rudge, SEEKWP 3112; SJ 13857; LB 31077
Carex jorii Bailey, LB 30781; SJ 14016
Carex leavenworthii Dewey, SJSEWP 15079
Carex longii Mack., SJ 13863; LB 30581, 29341
Carex louisianica Bailey, LB 29845
Carex oxylepis Torr. & Hook. var. *oxylepis*, SJ 13917
Carex retroflexa Muhl. ex Willd., LB 30406, 30602; SJSEWP 15080
Carex striatula Michx., SJ 13804
Carex tetrastachya Scheele, SJ 13862
Carex texensis Bailey, LB 30395; SJSEWP 15056
Carex triangularis Boeck., SJ 13908; LB 30578
Carex tribuloides Wahlenb. var. *sangamonensis* Clokey, LB 30607; SEEKWP 3088
Carex verrucosa Muhl., SJ 14024
Carex vulpinoidea Michx., LB 30383
Cladium mariscus J. Pohl subsp. *jamaicense* (Crantz) Kukenth., LB 30898, 19238b (SBSC), 19421 (SBSC); SJ 14423
Cyperus acuminatus Torr. & Hook. ex Torr., LB 29891a
Cyperus articulatus L., LB 30154, SJ 14058
**Cyperus enterianus* Boeckl., LB 29914
Cyperus erythrorhizos Muhl., LB 30151
Cyperus haspan L., LB 30262, 29947; SJ 14041
Cyperus ochraceus Vahl, LB 30885
Cyperus odoratus L., LB 30712
Cyperus oxylepis Nees ex Steud., SJ 14060, 14260
Cyperus polystachyos Rottb., SJ 14059; GW 3165
Cyperus pseudovegetus Steud., SJ 13867, 14076, 14010
Cyperus retrorsus Chapm., SJ 14271
Cyperus strigosus L., SJ 14277
Cyperus surinamensis Rottb., SJ 14267
Cyperus thyriiflorus Jungh., LB 29905; SJ 14174; SEEKWP
Cyperus virens Michx., SJ 13896; LB 29339
Eleocharis baldwinii (Torr.) Chapman, LB 30387, 30163
Eleocharis geniculata (L.) Roemer & J.S. Schultes, LB 30212, 29946
Eleocharis microcarpa Torr., LB 30654, 30643; SJ 14550; MM 3852
Eleocharis montana Roem. & Schult., LB 30890
Eleocharis montevidensis Kunth, LB 29333; SJ 14070
Eleocharis tuberculosa R.Br., MM 3858; LB 30216, 29961; WRC 17230

Fimbristylis autumnalis Roem. & Schult., LB 30157, 30036; GW 3166b

**Fimbristylis miliacea* (L.) Vahl, LB 30157a, 29989

Fimbristylis puberula Vahl var. *puberula* Vahl, SJ 14101; LB 31182

Fuirena breviseta (Cov.) Cov., LB 30727, 29948; MM 3480; WRC 17696; SJ 14110

Fuirena bushii Kral, LB 29393, 30010, 19239; SJ 14296

Isolepis carinata Hook. & Arn. ex Torr., LB 30409

Kyllinga brevifolia Rottb., LB 30087

Kyllinga odorata Vahl, SJ 14268

Kyllinga pumila Michx., LB 30263

Rhynchospora caduca Elliott, MM 3479b, 3540 LB 29883a

Rhynchospora colorata (L.) H. Pfeiffer, LB 29880, 29417; SJ 13770

Rhynchospora corniculata (Lam.) A. Gray, LB 29369

Rhynchospora divergens Chapm., LB 29410

Rhynchospora elliottii A. Dietr., LB 19280; MM 3927, 3948; SJ 14081

Rhynchospora fascicularis (Michx.) Vahl, LB 30217

Rhynchospora filifolia A. Gray, LB 30658, 30020; MM 3485, 3851

Rhynchospora globularis (Chapm.) Small, var. *globularis* LB 15998; MM 3864, 3938

Rhynchospora globularis (Chapm.) Small var. *pinetorum* (Britton & Small ex Small) Gale, SJ 14074

Rhynchospora glomerata (L.) Vahl, LB 30260; MM 3646; WRC 17703a; SJ 14163

Rhynchospora gracilentia A. Gray, MM 3844c; LB 30645, 30021; SJ 14613

Rhynchospora inexpansa (Michx.) Vahl, LB 30079, 30073; MM 3541; SJ 14164

Rhynchospora latifolia (Baldw. ex Elliott) Thomas, SJ 14077; MM 3940

Rhynchospora mixta Britton, LB 29895; SJ 14106

Rhynchospora perplexa Chapm. ex M. A. Curt. LB 30633, 30632, 30629, 29354

Rhynchospora plumosa Elliott, LB 30236; WRC 17355; MM 3488b; SJ 13936

Rhynchospora pusilla Chapm. ex M. A. Curtis, LB 30665, 30024a, 20417; MM 3479

Rhynchospora rariflora Elliott, LB 30630, 29383, 29353; MM 3867

Rhynchospora recognita (Gale) Kral, LB 29416, 30647, 29390; SJ 14080

Scirpus cyperinus Palla, LB 30696

Scleria georgiana Core, MM 3386 (SBSC), 3488; SJ 13768; LB 15999 (SBSC)

Scleria oligantha Michx., LB 30608, 30576; SEEKWP 3110

Scleria pauciflora Muhl. ex Willd., LB 30015; SJ 13797

Scleria reticularis Michx., MM 6667

Scleria triglomerata Michx., LB 30649, 29355, 30061; SEEKWP 3111

CYRILLACEAE

Cyrilla racemiflora L., LB 30006; SJ 14089

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) Kuhn, WP 090; LB 30045

DROSERACEAE

Drosera brevifolia Pursh, SJ 13769; MM 3781

Drosera capillaris Poir., LB 29418; SJ 14043; MM 3860; GW 3064

DRYOPTERIDACEAE

Polystichum acrostichoides (Michx.) Schott, LB 30614, 30056, 29984

Woodsia obtusa (Spreng.) Torr. subsp. *obtusa*, SJ 14018

EBENACEAE

Diospyros virginiana L., LB 29937a; SJ 14051, 14248

ERICACEAE

Rhododendron canescens (Michx.) Sweet, SJSEWP 15044; LB 31080

Rhododendron viscosum (L.) Torr., SJ 14119

Vaccinium arboreum Marshall, SJ 13785; LB 29953, 30280

Vaccinium corymbosum L., LB 30412, 30223; SJ 13799, 14167

ERIOCAULACEAE

Eriocaulon decangulare L., LB 29398; SJ 14156; WRC 17697; GW 3100

Lachnocaulon anceps Morong, LB 29415; SJ 13774

EUPHORBIACEAE

Acalypha gracilens A. Gray, GW 3138; LB 30210, 30715, 30077

Acalypha virginica L., SJ 14165

**Caperonia palustris* (L.) St.-Hil., GW 3138

Chamaesyce cordifolia (Elliott) Small, SJ 14198

Chamaesyce humistrata (Engelm.) Small GW 3162

Chamaesyce maculata (L.) Small, LB 30201, 29935, 30713

Chamaesyce nutans (Lag.) Small, GW 3106, 3168; LB 30195, 30202

Croton capitatus Michx., WP 069; LB 29921

Croton glandulosus L. var. *glandulosus* Muell.-Arg. LB 30718, 29855

Croton monanthogynus Michx., LB 30886

Euphorbia corollata L., LB 30732a, 30252, 30099

Phyllanthus caroliniensis Walter, LB 30896, 30198, GW 3085

**Phyllanthus urinaria* L., LB 29868; GW 3105, 3140

**Triadica sebifera* (L.) Small, SEEKWP 3096

**Vernicia fordii* (Hemsl.) Airy-Shaw, SEEKWP 3109; LB 30090

FABACEAE

**Albizia julibrissin* Durazz., SEEKWP 3083; LB 30248, 30051

Amorpha fruticosa L., LB 30618, 29926

Baptisia bracteata Muhl. ex Elliott var. *laevicaulis* (A. Gray ex Canby) Isley, LB 31085

Centrosema virginianum (L.) Benth., LB 29851; GW 3145

Cercis canadensis L. var. *canadensis*, SJSEWP 15054
Chamaecrista fasciculata (Michx.) Greene, LB 29849
Chamaecrista nictitans (L.) Moench, GW 3137
Desmanthus illinoensis Mac. Mill., LB 30667
Desmodium glabellum (Michx.) DC., LB 30721
Desmodium laevigatum (Nutt.) DC., GW 3144
Desmodium paniculatum DC., LB 30185, 30043; SJ 14071; GW 3152
Erythrina herbacea L., LB 30615
Galactia volubilis (L.) Britton, LB 29860; GW 3148
Gleditsia tricanthos L., GW 2717
Glottidium vesicarium (Jacq.) Harper, LB 30716, 29943, 29925
Lespedeza virginica (L.) Britton, GW N20
Lupinus subcarnosus Hook., GW 3074; LB 31052
**Medicago lupulina* L., LB 30408; SEEKWP 3081
**Medicago polymorpha* L., LB 30286
Mimosa hystricina (Small ex Britton & Rose) B.L. Turner, MM 3660
**Melilotus indicus* (L.) All., SEWP 3048; LB 31048
Mimosa hystricina (Small ex Britton & Rose) B.L. Turner, LB 29387, 29373; MM 3660; SJ 13779
Mimosa strigillosa Torr. & A. Gray, LB 30714
Neptunia pubescens Benth., LB 31238
Senna obtusifolia (L.) Irwin & Barneby, LB 29918
Sesbania drummondii (Rydb.) Cory, SEEKWP 3103; LB 30181, 29927
Sesbania herbacea (Mill.) McVaugh, LB 30710; WP 065
Strophostyles umbellata (Muhl. ex Willd.) Britton, LB 30057; SJ 14086, 14263
Tephrosia onobrychoides Nutt., SJ 14298; LB 29999
**Trifolium campestre* Schreb., SJSEWP 15050
**Trifolium dubium* Sibthorp, LB 30403
**Trifolium repens* L., SEWP 3062; SJSEWP 15096
**Vicia hirsuta* (L.) S.F. Gray, LB 30402, 31053; SEWP 3067
Vicia ludoviciana Nutt. subsp. *ludoviciana*, GW 3073; LB 31051
Vicia minutiflora D. Dietr., SJSEWP 15091
**Vicia sativa* L. subsp. *nigra* (L.) Ehrh., SEWP 3066
**Vicia tetrasperma* LB 30620
Wisteria frutescens (L.) Poir., LB 30619

FAGACEAE

Castanea pumila (L.) Mill., SEEKWP 3116; SJ 13784
Fagus grandifolia Ehrh., WP 178; LB 31078
Quercus alba L., LB 29337
Quercus falcata Michx., LB 30584, 29374, 29977; SJ 13801
Quercus hemisphaerica W. Bartram ex Willd., LB 30282; SJ 14107, 13763
Quercus incana W. Bartram, SJ 14082
Quercus laurifolia Michx., LB 30591, 30174, 29922 SJSEWP 16466
Quercus lyrata Walter, LB 29928; SJ 13783; GW 514
Quercus margaretta (Ashe) Ashe, LB 31173
Quercus marilandica Muench., SJ 13792
Quercus michauxii Nutt., LB 29840; SJ 13850

Quercus nigra L., LB 29385, 29331; SJSEWP 150843
Quercus pagoda Raf., SJ 13844, 13838, 14116
Quercus phellos L., LB 29391, 30025, 29975
Quercus stellata Wangerh., SJ 13793
Quercus velutina Lam., SJ 14056
Quercus virginica Mill., WP 180

GENTIANACEAE

**Centaurium floribundum* (Benth.) B.L. Rob., LB 30583
**Centaurium pulchellum* (Sw.) Druce, LB 30597, 30094; SEEKWP 3075
Sabatia arenicola Greenm., SJ 13870
Sabatia calycina A. Heller, LB 30673
Sabatia campestris Nutt., SJ 14096
Sabatia gentianoides Elliott, MM 3635

GERANIACEAE

Geranium carolinianum L., SEWP 3075; LB 30285

GROSSULARIACEAE

Itea virginica L., SJ 14118, 14023

HALORAGACEAE

Myriophyllum pinnatum (Walter) Britton, Sterns, Poggenb., SJ 13921
Proserpinaca palustris L., SJ 13913; LB 30644
Proserpinaca pectinata Lam., LB 30644; GW 3108; MM 3475; DS 090

HAMAMELIDACEAE

Liquidambar styraciflua L., SJSEWP 15071

HYDROPHYLLACEAE

Hydrolea ovata Nutt. ex Choisy, LB 29958; GW 3109

HYPERICACEAE

Hypericum crux-andreae (L.) Crantz, LB 29412, 29994; SJ 13788; MM 3389
Hypericum galioides Lam., LB 30728, 29944; SJ 14514; MM 4001
Hypericum mutilum L., LB 30002; SJ 14160
Triadenum walteri (J.G. Gmel.) Gleason, LB 30180, 29892, 30780; GW 3093

IRIDACEAE

Sisyrinchium angustifolium Mill., GW 3054; LB 29358; PHCLLB s.n. (SBSC)
Sisyrinchium atlanticum E.P. Bicknell, SJ 13760, 14255; MM 3875; LB 31169
Sisyrinchium langloisii Greene, LB 31174
Sisyrinchium rosulatum E. P. Bicknell, GW 3061; SEWP 3061
Sisyrinchium sagittiferum E. P. Bicknell, GW 3082 LB 30410, 31029

JUGLANDACEAE

Carya aquatica (Michx.) Nutt., LB 29937, 30085
Carya illinoensis K. Koch, LB 30893
Carya texana Buckley, LB 30046; SJ 13970
Carya tomentosa (Lam. ex Poir.) Nutt., LB 30611, 30579
Juglans nigra L., LB 29913

JUNCACEAE

- Juncus acuminatus* Michx., SJ 13898, 14012
Juncus brachycarpus Weigel, LB 29408; SJ 13899, 14099
Juncus coriaceus Mack., LB 29932, 29945; SJSEWP 15068
Juncus dichotomus Elliott, LB 31167
Juncus diffusissimus Buckley, SJ 13900, 14008
Juncus effusus L., LB 30155; SEWP 3071
Juncus elliotii Chapm., SJ 14061; LB 29342, 31180C
Juncus marginatus Rostk., SJ 14002, 14065; LB 29347
Juncus nodatus Coville, SJ 13901
Juncus repens Michx., SJ 14013 LB 30641
Juncus tenuis Willd., LB 30086; SJ 14074a, 13897
Juncus validus Coville, LB 29334

LAMIACEAE

- Hedeoma hispidum* Pursh, LB 31166
Hyptis alata (Raf.) Shinnars, LB 29885; MM 3484
Lycopus rubellus Moench, LB 30242; PH 901159
Monarda punctata L., LB 29859
**Perilla frutescens* (L.) Britton, LB 29890; GW 3052
Prunella vulgaris L., SJ 13919
Pycnanthemum albescens Torr. & A. Gray, LB 30196, 29954
Salvia coccinea Buchoz ex Etlinger, SJ 14259
Salvia lyrata L., LB 30054; SJSEWP 15047
Scutellaria integrifolia L., SJ 13789, 14549, 14052; MM 3876
Stachys crenata Raf., LB 30396; SEWP 3068

LAURACEAE

- Persea palustris* (Raf.) Sarg., LB 30211, 29866, 29381, 29359
Sassafras albidum (Nutt.) Nees, LB 30222

LEMNACEAE

- *Landoltia punctata* (G. Meyer) Les & D.J. Crawford, LB 29893, 31069
Wolffia brasiliensis Wedd., LB 30878, 31070
Wolffia columbiana H. Karst., LB 31070a
Wolffiella gladiata (Hegelm.) Hegelm., LB 31068

LENTIBULARIACEAE

- Pinguicula pumila* Michx., SJ 13702; MM 3761

LILIACEAE

- Alettris aurea* Walter, LB 30028, 29991; SJ 14094; MM 3639
Allium canadense L. var. *canadense*, SJ 13765, 13874
Hymenocallis lirioides (Raf.) Shinnars, SEWP 3072
Hypoxis rigida Chapm. LB 30233, 31171
Hypoxis wrightii (Baker) Brackett, LB 31159
**Narcissus tazetta* L., WP 098
Nothoscordum bivalve (L.) Britton, SJSEWP 15046
**Ophiopogon jaburan* Lodd., LB 30092
Schoenolirion croceum (Michx.) Wood, SJ 14548; MM 3783, LB 31057
**Zephyranthes candida* Herb., LB 29911; SE 4581

LINACEAE

- Linum medium* (Planch.) Britton var. *texanum* (Planch.) Fernald, LB 303728a, 30657; SJ 14055; MM 3546

- Linum striatum* Walter, LB 30653, 30639; SJ 14169; GW 3075

LOGANIACEAE

- Gelsemium sempervirens* (L.) Aiton f., LB 29386, 30279; SJSEWP 15038
Mitreola petiolata (J.F. Gmel.) Torr. & A. Gray, LB 29881; SJ 14159
Mitreola sessilifolia (J.F. Gmel.) G. Don, LB 30012; MM 3483; PH 901141

LYCOPODIACEAE

- Lycopodiella appressa* (Chapm.) Cranfill, GW 3435; WRC 17358, 17228; MM 3734

LYGODIACEAE

- *Lygodium japonicum* (Thunb. ex Murray) Sw., LB 29888, 29856; SJSEWP 15045

LYTHRACEAE

- *Cuphea carthagenensis* (Jacq.) J.F. Macbr., GW 3076
**Lagerstroemia indica* L., LB 30600
Lythrum alatum Pursh var. *lanceolatum* (Elliott) Torr. & A. Gray, LB 30042; SJ 14270
Rotala ramosior (L.) Koehne, LB 30161; GW 3090

MAGNOLIACEAE

- Magnolia grandiflora* L., LB 29857; SJ 14239
Magnolia virginiana L., SJ 14038

MALVACEAE

- *Abutilon theophrasti* Medik., GW 3134
Hibiscus moscheutos L., LB 30173; GW 3094
Malvastrum coromandelianum (L.) Garcke, GW 3088
Modiola caroliniana (L.) G. Don, SEWP 3064
Sida rhombifolia L., LB 30694
Sida spinosa L., GW 3163

MELASTOMATACEAE

- Rhexia lutea* Walter, LB 30663; MM 3388; WRC 17227; SJ 14054
Rhexia mariana L., MM 3489; SJ 14155, 14015; GW 3126

MORACEAE

- Morus rubra* L., LB 29939

MYRICACEAE

- Morella caroliniensis* (Mill.) Small, SJ 14117, 14062
Morella cerifera (L.) Small, LB 30047; WRC 17356

OLEACEAE

- Chionanthus virginicus* L., WP 087; LB 29335, 31071
Fraxinus americana L., LB 30251
Fraxinus caroliniana Mill., SJ 14175
Fraxinus pennsylvanica Marshall., LB 29924
**Ligustrum sinense* Lour., LB 29865; SJ 14068

ONAGRACEAE

- Gaura lindheimeri* Engelm. & A. Gray, LB 30007; WRC 17701; SJ 14510; DS 124
Gaura longiflora Spach, LB 30146
Ludwigia alternifolia L., LB 29879; SJ 14509
Ludwigia decurrens Walter, LB 30152

Ludwigia glandulosa Walter, LB 29987; SJ 14234; GW 3104

Ludwigia grandiflora (Michx.) Greuder & Burdet, GW 3180

Ludwigia hirtella Raf.; LB 29951, 29367; SJ 14171; DS 123

Ludwigia linearis Walter, MM 3538; LB 29959, 29992

Ludwigia microcarpa Michx., LB 30684

Ludwigia octovalvis (Jacq.) P.H. Raven, LB 30725

Ludwigia palustris (L.) Elliott, LB 30669, 30159

Ludwigia peploides (Kunth) P.H. Raven, LB 30148

Ludwigia pilosa Walter, LB 30774, 30122a, 30032; CL 901157

Oenothera biennis L., LB 30247

Oenothera laciniata Hill, SEWP 3069, SJSEWP 15086

Oenothera speciosa Nutt., LB 30624; SEEKWP 3101

OPHIOGLOSSACEAE

Botrychium biternatum (Sav.) Underwood, GW 3051

Ophioglossum crotalophoroides Walter, LB 31050

Ophioglossum petiolatum Hook., LB 30394

ORCHIDACEAE

Calopogon tuberosus (L.) Britton, Sterns, Poggenb., LB 29406, 29392; SJ 14079; MM 3924

Listera australis Lindl., SJ 13698

Spiranthes cernua (L.) L. C. Rich., WP 060

Spiranthes floridana (Wherry) Cory, LB 20418(SBSC)

+*Spiranthes longilabris* MM 4041

Spiranthes odorata (Nutt.) Lindl., LB 30894

Spiranthes praecox (Walter) S. Watson, MM 3863; LB 31178

Spiranthes tuberosa Raf., SJ 14093

Spiranthes vernalis Engelm. & A. Gray, MM 3919

OSMUNDACEAE

Osmunda regalis L. var. *spectabilis* (Willd.) A. Gray, LB 29360; WP 098

OXALIDACEAE

Oxalis corniculata L. var. *wrightii* (A. Gray) B.L. Turner, LB 30385; GW 3077

**Oxalis debilis* Kunth var. *corymbosa* (DC.) Lourteig, LB 30389, 30250; SEWP 3051

Oxalis lyonii Pursh, (T) SJSEWP 15055

PASSIFLORACEAE

Passiflora incarnata L., LB 29907; SJSEWP 16461

Passiflora lutea L., LB 30613, 30067

PHYTOLACCACEAE

Phytolacca americana L., SJ 14272 PINf

Pinus echinata Mill., LB 30113a

Pinus palustris Mill., LB 29384

Pinus taeda L., LB 30144, 29399; SEEKWP 3092

PLANTAGINACEAE

**Plantago major* L., LB 30289, 30284

Plantago virginica L., LB 30404, 29882; SEWP 3060

PLATANACEAE

Platanus occidentalis L., LB 29852

POACEAE

Agrostis hyemalis (Walter) Britton, Sterns, Poggenb., SEWP 3059; SJ 13868

Andropogon glomeratus (Walter) Britton, Sterns, Poggenb., LB 30188; WP 063

Andropogon virginicus L., LB 30882, 30172; CL 901126

Anthraenantia texana Kral, LB 30234; WRC 10840; MM 3727, 3665

Aristida longispica Poir. var. *geniculata* (Raf.) Fernald, LB 30256

Aristida longispica Poir. var. *longispica*, LB 30236a

Aristida palustris (Chapm.) Vasey, LB 30730, 30729; WRC 17232; MM 3542

Aristida purpurascens Poir. var. *virgata* (Trin.) Allred, LB 30237, 30228, 30227, 29956

Arundinaria gigantea (Walter) Muhl., SJSEWP 15072

Axonopus fissifolius (Raddi) Kuhlm., SJ 14113; MM 3653b; LB 30680, 30674

Axonopus furcatus (Flüggé) A. S. Hitchc., LB 29349 PH 901161; SJ 14115

**Briza minor* L., SJSEWP 15053

**Bromus catharticus* Vahl, LB 30599; SEEKWP 3095

Chasmanthium latifolium (Michx.) Yates, SJ 14252

Chasmanthium laxum (L.) Yates var. *laxum*, LB 29839

Chasmanthium laxum (L.) Yates var. *sessiliflorum* (Poir.) Wipff & S. Jones, LB 30717

Coelorachis rugosa (Nutt.) Nash, LB 30736; MM 3721, 3637

**Cynodon dactylon* (L.) Pers., LB 30621; SEEKWP 3086

Dichanthelium aciculare (Desv. ex Poir.) Gould & Clark var. *angustifolium* (Elliott) S.L. Hatch, LB 30588, 31184, 30035; SJ 14459

Dichanthelium acuminatum (Sw.) Gould & C.A. Clark var. *acuminatum* SJ 14556; LB 29357, 30695

Dichanthelium acuminatum (Sw.) Gould & C.A. Clark var. *densiflorum* (E.L. Rand & Redfield) Gould & C.A. Clark, LB 29371

Dichanthelium acuminatum (Sw.) Gould & C.A. Clark var. *longiligulatum* (Nash) Gould & C.A. Clark, LB 30626, 29346; MM 3482; CL 901136

Dichanthelium boscii (Poir.) Gould & Clark, LB 30609, 29908, 30876, 31230

Dichanthelium commutatum (Schultes) Gould subsp. *commutatum*, LB 29883, 29982; SJSEWP 15058

Dichanthelium commutatum (Schultes) Gould subsp. *equilaterale* (Scribner) Freckman & Lelong, LB 30063 (SBSC)

Dichanthelium consanguineum (Kunth) Gould & C.A. Clark LB 30650; MM 3862

Dichanthelium dichotomum (L.) Gould var. *dichotomum*, LB 30586, 30585, 30642a, 29897

Dichanthelium dichotomum (L.) Gould & C.A. Clark subsp. *microcarpon* (Muhl. ex Elliott.) Freckman & Lelong, LB 30642, 29897, 29986

Dichanthelium dichotomum (L.) Gould subsp. *nitidus* (Lam.) Freckman & Lelong, LB 31162

- Dichanthelium ensifolium* (Baldw. ex Elliott) Gould subsp. *ensifolium*, LB 30089, 29897
- Dichanthelium laxiflorum* (Lam.) Gould, LB 29842; SJSEWP 15057
- +*Dichanthelium ovale* (Elliott) Gould & C.A. Clark WRC 17362
- Dichanthelium ovale* (Elliott) Gould & C.A. Clark subsp. *villosissimum* (Nash) Freckman & Lelong, LB 30660, 30651; SJ 14554; WRC 17366
- Dichanthelium polyanthes* (Schult.) Mohlenbr., LB 30589, 31319
- Dichanthelium ravenelii* (Scribner & Merr.) Gould & C.A. Clark, LB 30699
- Dichanthelium scabriusculum* (Elliott) Gould & C.A. Clark, LB 30034, 29980, 29348
- Dichanthelium scoparium* (Lam.) Gould, LB 30659, 30261, 29370; SJ 14042
- Dichanthelium sphaerocarpon* (Elliott) Gould, LB 29345, 30004; SJ 14460
- Dichanthelium tenue* (Muhl.) Freckman & Lelong, LB 29377; SJ 14557
- Dichanthelium wrightianum* (Scribn.) Freckmann, MM 3385
- Digitaria ciliaris* (Retz.) Koel., LB 30226, 30190, 29903, 30072
- **Digitaria ischaemum* (Schreb.) Schreb. LB 30189
- Echinochloa walteri* (Pursh) Heller, SJ 14290
- **Eleusine indica* (L.) Gaertn., LB 30078
- Elymus virginicus* L., SJ 14276
- Eragrostis elliottii* S. Watson, LB 30187; PH 901148
- Eragrostis hypnoides* (Lam.) Britton, Sterns, Poggenb., LB 30177
- Eragrostis refracta* (Muhl.) Scribn., GW 2400; MM 3654
- Eragrostis secundiflora* (J. Presl) subsp. *Oxylepis* (Torr.) S. D.Koch, LB 29872; SJ 14075; PH 901143
- **Eremochloa ophiuroides* (Munro) Hack., LB 30065
- Hordeum pusillum* Nutt., LB 30405; SEEKWP 3085
- Leersia hexandra* Sw., LB 30038
- Leersia lenticularis* Michx., LB 30166a; SJ 14172
- Leersia virginica* Willd., LB 30197; SJ 13856
- **Lolium arundinaceum* (Schreb.) S.J. Darbyshire, SJ 15095
- Melica mutica* Walter, SJ 13697
- Muhlenbergia capillaris* (Lam.) Trin., CI 901128; MM 3656; LB 30900, 31081
- Muhlenbergia expansa* (Poir.) Trin., GW 2408a; MM 3724 (SBSC)
- Oplismenus hirtellus* (L.) Beauv., LB 30169, 29916
- Panicum anceps* Michx., LB 29899; PH 901140
- Panicum brachyanthum* Steud., LB 30187; CL 901156
- Panicum dichotomiflorum* Michx., LB 30711, 30888
- Panicum gymnocarpon* Elliott, LB 30779
- Panicum hemitomom* J.A. Schultes, SJ 14019
- **Panicum repens* L., LB 29343
- Panicum rigidulum* Bosc ex Nees, LB 30175; PH 901163, 901167, MM 3732
- Panicum tenerum* Bey. ex Trin., LB 19343, 30019; WRC 17698; MM 3487
- Panicum verrucosum* Muhl., MM 3666; LB 30184, 30259
- Panicum virgatum* L., LB 30111
- **Parapholis incurva* (L.) C.E. Hubbard, SJ 13865
- **Paspalum dilatatum* Poir., LB 29884
- Paspalum floridanum* Michx., LB 30192, 30123, 30770
- Paspalum laeve* Michx., LB 30775, 30171, 29963; MM 3663
- Paspalum langei* (Fourn.) Nash, LB 29902a; SJSEWP 16460
- Paspalum lividum* Trin., LB 30162
- Paspalum minus* Fourn., LB 30879, 30640, 30096, 19238 (SBSC)
- **Paspalum notatum* Flügge, LB 29964, 29405, 19238 (SBSC)
- Paspalum plicatulum* Michx., SJ 14067
- Paspalum praecox* Walter, LB 30026; CL 901158; SJ 14105; MM 3731
- Paspalum setaceum* Michx., LB 29876, 29870a
- **Paspalum urvillei* Steud., LB 29942; GW 3023; SEEKWP 3093
- **Poa annua* L., SJSEWP 15061
- Poa autumnalis* Muhl. ex Elliott, LB 31055
- **Polypogon monspeliensis* Muhl. ex Elliott, LB 30606
- Saccharum baldwinii* Sprengel, LB 30168, 29931, 30773
- Saccharum giganteum* (Walter) Pers., LB 30147, 30892
- Schizachyrium scoparium* (Michx.) Nash var. *divergens* (Hack.) Gould, PH 901145; CL 901122; DW s.n.
- Sorghum halepense* (L.) Pers., LB 30594, 29941; SEEK 3084
- Sphenopholis obtusata* (Michx.) Scribn., SJ 13915; GW 2246b; LB 31164
- Sporobolus indicus* (L.) R.Br., LB 30622, 29909
- Sporobolus silveanus* Swallen, LB 14907 (SBSC), 14702 (SBSC); PH 901147
- Steinchisma hians* (Elliott) Nash, SJ 13892
- Tridens ambiguus* (Elliott) J.A. Schultes, WRC 17234; CL 901120; GW 2406; MM 3544
- Tridens flavus* (L.) Hitchc. var. *flavus*, LB 29923; WP 066
- Tridens strictus* (Nutt.) Nash, LB 30145, 30258; CL 901121; MM 3722
- Tripsacum dactyloides* (L.) L., SJ 14025
- Urochloa platyphylla* (Munro ex Wright) R.Webster, GW 3164
- POLYGALACEAE**
- Polygala cruciata* var. *cruciata* L., LB 29995; SJ 14111, 14425, 14293
- Polygala incarnata* L., LB 30655
- Polygala leptocaulis* Torr. & A. Gray, LB 30691, 30687; SJ 14161, 13993
- Polygala mariana* Mill., LB 29400, 30027; MM 3726
- Polygala ramosa* Elliott, LB 30017; SJ 14158; MM 3877
- POLYGONACEAE**
- Brunnichia ovata* (Walter) Shinnars, LB 29846

**Polygonum cespitosum* Blume var. *longisetum* (De Bruyn) Stewart, LB 31318

Polygonum densiflorum Meisn., LB 30179; GW 3166a

Polygonum hydropiperoides Michx., SJ 13891

Polygonum punctatum Elliott, WP 064; LB 30150, 30084a; GW NO2

Polygonum virginianum L., LB 30088, 30209

**Rumex crispus* L., SJ 13859, 14251

Rumex chrysocarpus Moris, LB 31234

**Rumex pulcher* L., LB 30605; SEEKWP 3089

POLYPODIACEAE

Pleopeltis polypodioides Andrews & Windham subsp. *michauxiana* (Weatherby) Andrews & Windham, LB 30084

PRIMULACEAE

**Anagallis arvensis* L., SJSEWP 15051

Anagallis minima (L.) E.H.L. Krause, LB 31178a

Samolus valerandi L. subsp. *parviflorus* (Raf.) Hultén, LB 29889; SJ 13831

RANUNCULACEAE

Clematis crispa L., LB 30723, 30580; WP 092; SJ 14262

Ranunculus hispidus Michx. var. *nitidus* (Chapm.) T. Duncan, SJSEWP 15064

Ranunculus pusillus Poir., SJSEWP 15074

RHAMNACEAE

Berchemia scandens (Hill) K. Koch, LB 29874; SEWP 3049

Rhamnus caroliniana Walter, WP 099

ROSACEAE

Crataegus berberifolia Torr. & A. Gray, SJ 14249

Crataegus brachyacantha Sarg. & Engelm., LB 30205, 29930; GW 3041

Crataegus marshallii Egglest., SJ 14244

Crataegus opaca Hook. & Arn., SJ 13761; LB 30206, 29836, 19244

Crataegus spathulata Michx., LB 30679

Crataegus viridis L., SJ 14253

**Duchesnea indica* (Andr.) Focke, SJSEWP 15062

Photinia pyrifolia (Lam.) K.R. Robertson & J.B. Phipps, LB 29402; SJSEWP 15039; SJ 13996

Prunus caroliniana (Mill.) Aiton, SJ 13909

Prunus serotina Ehrh., SJ 14108

**Pyracantha koidzumi* (Hayata) Rehder, SEWP 3055

**Rosa bracteata* J.C. Wendl., SJ 14063

Rubus argutus Link, LB 30873, 30577; SEEKWP 3082

Rubus trivialis Michx., SJSEWP 15052

**Spiraea cantoniensis* Lour., LB 30398a

RUBIACEAE

Cephalanthus occidentalis L., SJ 14258; LB 30384

Diodia teres Walter, LB 29873

Diodia virginiana L., LB 29990a; MM 3475

Galium aparine L., SJSEWP 15094

Galium obtusum Bigelow, SJ 14268a

Galium pilosum Aiton, LB 30593; SJ 14241; SJSEWP 16462; GW 3066

Galium tinctorium (L.) Scop., SJSEWP 15073

Gardenia augusta Merr., SJ 14143

Houstonia pusilla Schoepf, LB 30393; SJSEWP 15060

Mitchella repens L., LB 29841, 30074; SJ 13794

Oldenlandia boscii (DC.) Chapm., LB 30662, 30220

Oldenlandia uniflora L., GW 3420

**Sherardia arvensis* L., SEWP 3070; SJSEWP 15082

Stenaria nigricans (Lam.) Terrell, SJ 14039; PH 901162; LB 31226

RUTACEAE

**Poncirus trifoliata* (L.) Raf., SJ 14254

SALICACEAE

Salix nigra Marshall., LB 29949

SARRACENIACEAE

+*Sarracenia alata* Wood, LB 30726; SJ 13777; WRC 17354

SAURURACEAE

Saururus cernuus L., LB 29835; SJ 14168

SCROPHULARIACEAE

Agalinis fasciculata (Elliott) Raf., SJ 13861, 14506

Agalinis heterophylla (Nutt.) Small ex Britton, LB 30208; GW 3135, 3401

Agalinis purpurea (L.) Pennell, LB 30875, 30214, 30144a; GW 3129

Agalinis viridis (Small) Pennell, LB 30218

Aureolaria flava (L.) Farw. var. *flava* LB 29955, 30001; SJ 14045, 14236

Bacopa caroliniana (Walter) Robins. LB 30778

Bacopa monnieri (L.) Pennell, LB 30203, 29886

Gratiola brevifolia Raf., LB 29364; SJ 14003; GW 3117; MM 3916

Gratiola pilosa Michx., LB 30000; GW 3127; PH 901155

Gratiola virginiana L., SJSEWP 15075

**Lindernia crustacea*, (L.) F. Muell., LB 29900, 30080

Mecardonia acuminata (Walter) Small, LB 30200, 30100; PH 901142

Mecardonia procumbens (Mill.) Small, SJSEWP 15089; GW 3160

Micranthemum umbrosum (J.G. Gmel.) Blake, LB 30178, 30164

Scoparia dulcis L., LB 30719, 30204, 29901; SJ 14072

**Verbascum thapsus* L., GW 3047

**Veronica arvensis* L., LB 30401

Veronica peregrina L., LB 30401a, 30386

**Veronica polita* Fries, LB 30290

SELAGINELLACEAE

Selaginella apoda (L.) Spring, SJSEWP 15077; LB 30281

SMILACACEAE

Smilax bona-nox L., SEWP 3050, SJ 14066

Smilax glauca Walter, LB 30182, 30022; SJ 14007

Smilax laurifolia L., SJ 13778; LB 29389, 30113, 30874

Smilax pumila Walter, LB 30225, 29894; SJ 13904

Smilax rotundifolia L., LB 29365

Smilax smallii Morong, LB 30040

Smilax walteri Pursh, GW 2405

SOLANACEAE

Physalis cordata Mill., GW 3153

Physalis pubescens L., LB 30399; GW 3065

Solanum carolinense L., SEEKWP 3076; LB 29875

Solanum elaeagnifolium Cav., SJ 14246; GW 3146

STYRACACEAE

Styrax americanus Lam. LB 30384a, 30243; SJ 13910

Styrax grandifolius Aiton, SJ 14005

SYMPLOCACEAE

Symplocos tinctoria (L.) L'Her, LB 29834, 29378, 30095;
WRC 17360

THELYPTERIDACEAE

Thelypteris kunthii (Desv.) Morton, LB 29898; SJ 13933

TYPHACEAE

Typha latifolia L., LB 31073

ULMACEAE

Celtis laevigata Willd., LB 29861

Planera aquatica J.F. Gmel., LB 30156, 29932; SJSEWP
15067

Ulmus alata Michx., LB 29920; SJSEWP 15067

Ulmus americana L., LB 29858, 30288

URTICACEAE

Boehmeria cylindrica (L.) Sw., LB 30616, 29891, 30052

VALERIANACEAE

Valerianella radiata (L.) Dufr., SJSEWP 15088

VERBENACEAE

Callicarpa americana L., WP 179

**Glandularia pulchella* (Sweet) Troncoso, SJ 14247;
SJSEWP 15087

Lantana urticoides Heyek, GW 3141

Phyla nodiflora (L.) Greene, SEEKWP 3079; LB 29869; SJ
14097

**Verbena brasiliensis* Vell., LB 30722; SEEKWP 3080

Verbena halei Small, LB 30070; SEEKWP 3114

Verbena scabra Vahl, LB 29902

VIOLACEAE

Viola lanceolata subsp. *vittata* (Greene) Russell., WRC
17357; SJ 13699; MM 3762; LB 30296

Viola palmata L., SJSEWP 15059; SJ 13700; GW 30469;
LB 30294

Viola sororia Willd. var. *missouriensis* (Greene) McKin-
ney, GW 3050; LB 31067

VISACEAE

Phoradendron serotinum (Raf.) M.C. Johnston, SJ 14505;
GW 3173

VITACEAE

Ampelopsis arborea (L.) Koehne, WP 067; LB 29934

Parthenocissus quinquefolia (L.) Planch., LB 29850

Vitis aestivalis Michx., LB 30724, 30062; SJ 14105

Vitis cinerea (Engelm) Millard. var. *cinerea*, LB 29326; SJ
14116a

Vitis rotundifolia Michx., SEEKWP 3087; LB 30219,
30003a

XYRIDACEAE

Xyris ambigua Bey. ex Kunth, LB 29419, 30116; SJ 14083;
GW 3446

Xyris baldwiniana Schult., LB 29413; SJ 14045a

Xyris difformis Chapm. var. *difformis*, MM 3657

Xyris jupicai L. C. Rich., LB 30218a; SJ 14275

Xyris laxifolia Mart. var. *iridifolia* (Chapm.) Kral, LB 30083;
GW 3107a

Xyris stricta Chapm. var. *obscura* Kral, LB 30109, 29950,
29981; MM 3535

Notes

Coreopsis gladata.—We are merging *C. linifolia* with this species following Strother (2006).

Dichanthelium ovale.—WRC 17362 has the papillose-based hairs of subsp. *villosissimum* but the longer (up to 3 mm) spikelets of subsp. *ovale* (refer to Diggs et al. 2006). Thus we are unable to assign a subspecies to this collection.

Echinacea pallida var. **sanguinea.**—This globally rare (G3) species was once on the Texas rare plant list (Pool et al. 2002; Wildlife Diversity Program 2004). It occurs in many east Texas counties (Turner et al. 2003).

Eupatorium semiserratum.—Although not mapped in Texas by Turner et al. (2003) nor by Siripum and Schilling (2006), plants matching the key characters and description in Siripum and Schilling (2006) are found in east Texas.

Lechea minor.—This is the first report of this species for Texas; details are to be provided in a future publication.

Pluchea baccharis.—An older name for *P. rosea*.

Sarracenia alata.—This species was introduced to the Lance Rosier Unit in the 1960s or

1970s where it has thrived. It occurs naturally and is common in other parts of the Big Thicket region.

Soliva anthemifolia.—This name replaces *S. mutisii* in Flora of North America volume 19.

Spiranthes longilabris.—This globally rare (G3) species was once on the Texas rare plant list (Pool et al. 2002; Wildlife Diversity Program 2004). In Texas, it occurs in wetland pine savannas only in Hardin and Newton Counties (Liggio & Liggio 1999).

Vicia hirsuta.—Jerry Flook (1975) reported this introduced legume from Shelby County and Turner et al. (2003) mapped it only in this county. It is a frequent weed near the site of the former Teel residence along the road to Little Pine Island Bayou.

DISCUSSION

There are 114 families (113 native) and 352 genera (311 native) for the 694 taxa (612 native) on the Lance Rosier Unit list. Ten percent of the taxa are non-native. Eight families: Poaceae (96 taxa), Cyperaceae (87 taxa), Asteraceae (84 taxa), Fabaceae (38 taxa), Scrophulariaceae (19 taxa), Onagraceae (16 taxa), Rosaceae (15 taxa), Euphorbiaceae (15 taxa), and Rubiaceae (14 taxa), account for 56 % of the taxa collected. The largest genera are *Carex* (31 taxa), *Dichanthelium* (21 taxa), *Rhynchospora* (19 taxa), *Cyperus* (15 taxa), *Quercus* (15 taxa), and *Juncus* (12 taxa).

We compared the present list of species for Lance Rosier Unit with a sample of the species reported by Turner et al. (2003) in their *Atlas of the Vascular Plants of Texas* and found that only 74% of the species on the Lance Rosier Unit list are reported as occurring in Hardin County in that source. This is not surprising considering that, until recently, little focused collecting has been undertaken in the Big Thicket region. Basic floristic collecting and documenting in the Big Thicket region are still needed.

While it is the case that our list is incomplete, as are all floras, and a few taxa reported here may no longer exist on the unit. Most taxa that have grown in the Lance Rosier Unit during the past quarter century have been collected (probably 85+ %). We estimate that the Lance Rosier Unit has about 620 to 705 native species/taxa.

ACKNOWLEDGMENTS

This study was supported in part by a National Park Service Cooperative Agreement No. CA 14001004 to Paul Harcombe who also provided the publication funds. Thanks to Tom Wendt and Lindsay Woodruff at TEX for the prompt loan of some critical specimens and to Eric Keith of Raven Environmental who reviewed the paper.

REFERENCES

- AJILVSGI, G. 1979. Wild flowers of the Big Thicket, east Texas, and western Louisiana. Texas A. & M. Press, College Station.
- BROWN, L.E., B.R. MACROBERTS, M.H. MACROBERTS, P.A. HARCOMBE, W.W. PRUESS, I.S. ELSIK, and D. JOHNSON. 2005. Annotated checklist of the vascular flora of the Turkey Creek Unit of the Big Thicket National Preserve, Tyler and Hardin counties, Texas. Sida 21:1807-1827.
- BROWN, L.E., B.R. MACROBERTS, M.H. MACROBERTS, P.A. HARCOMBE, W.W. PRUESS, I.S. ELSIK, and S.D. JONES. 2006. Annotated checklist of the vascular flora of the Big Sandy Unit of the Big Thicket National Preserve, Polk County, Texas. Sida 22:705-723.
- DESHOTELS, J.D. 1978. Soil survey for the Big Thicket National Preserve, Texas. U.S.D.A. Soil Conservation Service, College Station, Texas.

- DIGGS, JR., G.M., B.L. LIPSCOMB, M.D. REED, and R.J. O'KENNON. 2006. Illustrated flora of East Texas. vol 1. Sida Bot. Misc. 26:1-1594.
- FLOOK, J.M. 1975. Additions and corrections to the flora of Texas. Sida 6:114.
- HARCOMBE, P.A. and P.L. MARKS. 1979. Forest vegetation of the Big Thicket National Preserve. Unpublished report: U.S. Park Service, Santa Fe, New Mexico.
- HARCOMBE, P.A., J.S. GLITZENSTEIN, R.G. KNOX, S.L. ORZELL, and E.L. BRIDGES. 1993. Vegetation of the longleaf pine region of the West Gulf Coastal Plain. Proc. Ann. Tall Timbers Fire Ecol. Conf. 18:83-103.
- JONES, S.D., J.K. WIPFF, and P.M. MONTGOMERY. 1997. Vascular plants of Texas. Univ. Texas Press, Austin.
- KARTESZ, J.T. and C.A. MEACHAM. 1999. Synthesis of North American flora. Version 1.0. North Carolina Botanical Garden. Chapel Hill.
- LIGGIO, J. and A.O. LIGGIO. 1999. Wild orchids of Texas. Univ. Texas Press, Austin.
- MACROBERTS, B.R. and M.H. MACROBERTS. 1998. Floristics of wetland pine savannas in the Big Thicket National Preserve, southeastern Texas. Phytologia 85:40-50.
- MACROBERTS, B.R., M.H. MACROBERTS, and L.E. BROWN. 2002. Annotated checklist of the vascular flora of the Hickory Creek Unit of the Big Thicket National Preserve, Tyler County, Texas. Sida 20:781-795.
- MARKS, P.L. and P.A. HARCOMBE. 1981. Forest vegetation of the Big Thicket, southeast Texas. Ecol. Monogr. 51:287-305.
- MCLEOD, C.A. 1971. The Big Thicket forest of east Texas. Texas J. Sci. 23:221-233.
- PARKS, H.B. and V.L. CORY. 1936. Biological survey of the east Texas Big Thicket area. Texas Agric. Exp. Sta., College Station.
- PEACOCK, H.H. 1994. Nature lover's guide to the Big Thicket. Texas A. & M. Press, College Station.
- POOL, J.M., J.R. SINGHURST, D.M. PRICE, and W.R. CARR. 2002. List of the rare plants of Texas. Wildlife Diversity program of the Texas Parks and Wildlife Department and the Nature Conservancy, Austin, Texas. Unpublished January 2000 edition.
- SIRIPUM, K.C. and E.E. SCHILLING. 2006. *Eupatorium*. In: Flora of North America, vol. 21. Oxford University Press. New York, NY.
- STROTHER, J.L. 2006. *Coreopsis* section *Eublepharis*. In: Flora of North America, vol. 21. Oxford University Press. New York, NY.
- TURNER, B.L., H. NICHOLS, G. DENNY, and O. DORON. 2003. Atlas of the vascular plants of Texas. Sida Bot. Misc. 24: 1-888.
- WATSON, G.E. 1979. Big Thicket plant ecology: an introduction. Big Thicket Mus. Publ. Ser., No. 5, Saratoga, Texas.
- WATSON, G.E. 1982. Vegetational survey of Big Thicket National Preserve. Unpublished report. Big Thicket National Preserve, Beaumont, Texas.
- WILDLIFE DIVERSITY PROGRAM. 2004. A list of the rare plants of Texas. Wildlife Diversity Program of Texas Parks and Wildlife Department and The Nature Conservancy of Texas. Unpublished report.



Brown, Larry E. et al. 2006. "ANNOTATED CHECKLIST OF THE VASCULAR FLORA OF THE LANCE ROSIER UNIT OF THE BIG THICKET NATIONAL PRESERVE, HARDIN COUNTY, TEXAS." *SIDA, contributions to botany* 22, 1175–1189.

View This Item Online: <https://www.biodiversitylibrary.org/item/34586>

Permalink: <https://www.biodiversitylibrary.org/partpdf/163871>

Holding Institution

Missouri Botanical Garden, Peter H. Raven Library

Sponsored by

Missouri Botanical Garden

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.