

# **Checklist of the Liverworts and Hornworts of the Interior Highlands of North America In Arkansas, Illinois, Missouri and Oklahoma**

**Stephen L. Timme**

T. M. Sperry Herbarium - Biology

Pittsburg State University

Pittsburg, Kansas 66762

and

3 Bowness Lane

Bella Vista, AR 72714

[botanydoctor@hotmail.com](mailto:botanydoctor@hotmail.com)

**Paul Redfearn, Jr.**

5238 Downey Ave.

Independence, MO 64055

## **Introduction**

Since the last publication of a checklist of liverworts and hornworts of the Interior Highlands (1997), many new county and state records have been reported. To make the checklist useful, it was necessary to update it since its last posting.

The map of the Interior Highlands of North America that appears in Redfearn (1983) does not include the very southeast corner of Kansas. However, the Springfield Plateau encompasses some 88 square kilometers of this corner of the state and includes limestone and some sandstone and shale outcrops. The vegetation is typical Ozarkian flora, dominated by oak and hickory. This checklist includes liverworts and hornworts collected from Cherokee County, Kansas. Most of what is known for the area is the result of collections by R. McGregor published in 1955. The majority of his collections are deposited in the herbarium at the New York Botanical Garden (NY). This checklist only includes the region defined as the Interior Highlands of North America. This includes the Springfield Plateau, Salem Plateau, St. Francois Mountains, Boston Mountains, Arkansas Valley, Ouachita Mountains and Ozark Hills. It encompasses much of southern Missouri south of the Missouri River, southwest Illinois; most of Arkansas except the Mississippi Lowlands and the Coastal Plain, the extreme southeastern corner of Kansas, and eastern Oklahoma (Fig. 1). All counties are from Missouri unless followed by the state abbreviation.



Fig. 1. The Interior Highlands of North America including Arkansas, Illinois, Kansas, Missouri and Oklahoma. 1) Springfield Plateau 2) Salem Plateau 3) St. Francois Mountains 4) Boston Mountains 5) Arkansas Valley 6) Ouachita Mountains and 7) Ozark Hills. Modified with permission from the Missouri Botanical Garden, St. Louis.

The collections forming the basis of this checklist have been examined through field and herbarium studies by the first author unless the locality cited is followed by a parenthetical literature citation. The checklist is incomplete but will serve as a basis for the distribution of liverworts and hornworts in the Interior Highlands, and as a basis for future studies and reference.

Literature citations follow the checklist, followed by additional literature pertaining to the liverwort and hornwort flora of the Interior Highlands. All specimens are deposited in the Missouri Botanical Garden (MO) unless otherwise indicated parenthetically following the county. They include Duke University (DUKE), Southern Illinois University (SIU), University of Arkansas, Fayetteville (UARK), United States National Herbarium, Washington (US), Henderson State University (HEND), Field Museum of Natural History, IL (F) and the University of Missouri,

Columbia (UMO). Following the distribution of each species is a volume and page reference in Schuster's *The Hepaticae and Anthocerotae of North America East of the Hundredth Meridian*. The arrangement of families and genera follow Stotler and Stotler-Crandall (2007) – [www.bryophytes.plant.siu.edu/marchantiophyts.html](http://www.bryophytes.plant.siu.edu/marchantiophyts.html) and [www.bryophytes.plant.siu.edu/anthocerotophyta.html](http://www.bryophytes.plant.siu.edu/anthocerotophyta.html).

## MARCHANTIOPHYTA

### MARCHANTIOPSIDA Stotler & Stotl.-Crand.

#### SPHAEROCARPACEAE (Dumort.) Heeg

*Sphaerocarpos* Boehm.

*Sphaerocarpos michelii* Bellardi

**SPRINGFIELD PLATEAU:** Cherokee, KS (McGregor, 1955); **OZARK HILLS:** Jackson, IL (Schuette & Johnson, 2010). V-820.

*Sphaerocarpos texanus* Aust.

**SPRINGFIELD PLATEAU:** Benton, AR (UARK), Dade, Washington, AR (UARK); Bollinger and Franklin (Darigo 2004b), Jefferson and Perry (Darigo, 2008); Cherokee, KS; **SALEM PLATEAU:** Shannon (Gier 1955), St. Louis (Schuster, 1992-V); **BOSTON MTS.:** Faulkner, AR (UARK), Cherokee, OK (Darigo 2004b); **ARKANSAS VALLEY:** Conway, AR (UARK), Faulkner, AR (UARK), Pulaski, AR (UARK); **OUACHITA MTS.:** Polk, AR (UARK). V-814.

#### AYTONIACEAE Cavers

*Asterella* P. Beau.

*Asterella echinella* (Gott.) Underw.

**SPRINGFIELD PLATEAU:** Carroll, AR (Schuster 1992-VI); **SALEM PLATEAU:** Baxter, AR (UARK); **ARKANSAS VALLEY:** Pulaski, AR (UARK). VI-248.

*Asterella tenella* (L.) P. Beauv.

**SPRINGFIELD PLATEAU:** Benton, AR (UARK), Polk, Cherokee, KS; **SALEM PLATEAU:** Baxter, AR (UARK), Crawford; Dent and Franklin (Darigo 2004b), Gasconade; Phelps and Scott (Darigo 2008), St. Genevieve, Stoddard; Texas and Warren (Darigo 2004b), Camden, Carroll, AR (UARK),

Izard, AR (UARK), Perry, St. Louis, Stone, AR (UARK); **BOSTON MTS.**: Cleburne, AR (UARK), Jefferson, AR (UARK), Newton, AR, Searcy, AR (UARK), Washington, AR (UARK); Cherokee, OK (Darigo 2004b); **ARKANSAS VALLEY**: Conway, AR (UARK), Crawford, AR (UARK), Faulkner, AR (UARK), Sebastian, AR (UARK), Yell, AR (UARK); **BOSTON MTS.**: Madison (Darigo 2004b); **OUACHITA MTS.**: Grant, AR (UARK), Scott, AR (UARK). VI-235.

***Mannia*** Opiz.

***Mannia californica*** (Gott.) L. C. Wheeler

**SALEM PLATEAU**: Stone, AR (Schuster 1992-VI); **BOSTON MTS.**: Marion, AR (Schuster 1992-VI). VI-185.

***Mannia fragrans*** (Balbis) Frye & Clark

**SALEM PLATEAU**: Boone (Schuster 1992-VI) & Franklin (Darigo 2000). VI-192.

***Mannia triandra*** (Scop.) Grolle

**SPRINGFIELD PLATEAU**: McDonald; **SALEM PLATEAU**: Camden, Howell, Shannon; **BOSTON MTS.**: Newton, AR (Schuster 1992-VI). VI-208.

***Reboulia*** Raddi

***Reboulia hemisphaerica*** (L.) Raddi

**SPRINGFIELD PLATEAU**: Barry, Benton, AR (UARK), Callaway, Cedar (Darigo 2008), Cherokee, OK (Darigo 2004b) Cherokee, KS (McGregor 1955), Douglas; St. Charles and St. Clair (Darigo 2008,); **SALEM PLATEAU**: Baxter, AR (UARK), Benton, Camden, Carter (DUKE), Crawford (Darigo 2008), Dent; Franklin (Darigo 2000), Howell (Darigo 2008), Madison, AR (UARK), Marion, AR (UARK), Phelps (Darigo 2004a), Shannon (UMO), Warren & Washington (Darigo 2008); **ST. FRANCOIS MTS.**: Iron (Darigo 2008); **BOSTON MTS.**: Franklin, AR, Faulkner, AR (UARK), Newton, AR (UARK), Washington, AR (Schuster 1992-VI); **ARKANSAS VALLEY**: Conway, AR (UARK), Crawford, AR (UARK), Logan, AR (UARK); **OUACHITA MTS.**: Garland, AR (UARK), Hot Spring, AR (Majestyk 2001), Howard, AR (UARK), Polk, AR (DUKE), Saline, AR; **OZARK HILLS**: Union, IL (Darigo 2000). VI-152.

**CONOCEPHALACEAE** Müll. Frib. ex Grolle

***Conocephalum*** Hill.

*Conocephalum conicum* (L.) Underw.

**SALEM PLATEAU:** Bollinger, Callaway & Crawford (Darigo 2004), Douglas (Darigo 2000), Gasconade (Darigo 2002), St. Charles (Darigo 2000), Franklin & Warren (Darigo 2008);  
**SPRINGFIELD PLATEAU:** Barry, Benton, AR (UARK), Polk; **SALEM PLATEAU:** Baxter, AR (UARK), Benton, Camden, Carroll, AR (UARK), Carter, Dallas, Dent, Independence, AR (UARK), Jefferson, Laclede, Madison, AR, Marion, AR (UARK), Oregon, Ozark, Pulaski, Ozark (F), Ripley, Shannon, Stone, AR (DUKE), Texas; **ST. FRANCIS MTS.:** Iron (Darigo 2002), Madison (Darigo 2004), Reynolds (Darigo 2002) **BOSTON MTS.:** Conway, AR (UARK), Crawford, AR (UARK), Franklin, AR (DUKE), Newton (UARK), Pope, AR, Washington, AR (MO); **ARKANSAS VALLEY:** Franklin, AR (UARK); **OUACHITA MTS.:** Garland, AR (UARK), Montgomery, AR (UARK), Perry (Darigo 2008). VI-95.

**LUNULARIACEAE** Klinggr.

*Lunularia* Adans.

*Lunularia cruciata* (L.) Dumort.

**SPRINGFIELD PLATEAU:** Benton, AR. VI-85.

**MARCHANTIACEAE** (Bisch.) Lindl.

*Dumontiera* Nees

*Dumontiera hirsuta* (Sw.) Nees

**SPRINGFIELD PLATEAU:** Benton, AR (UARK); **SALEM PLATEAU:** Carter, Madison, AR, Marion, AR (Schuster 1992-VI), Oregon, Ozark, Shannon, Stone, AR (UARK); **BOSTON MTS.:** Franklin, AR, Faulkner, AR (UARK), Madison, AR; **OUACHITA MTS.:** Montgomery, AR (DUKE), Pulaski, AR (UARK). VI-383.

*Marchantia* L.

*Marchantia aquatica* (Nees) Burgeff

**SALEM PLATEAU:** Washington (Darigo 2004); **ST. FRANCOIS MTS.:** Reynolds (Darigo 2004a). VI 334.

*Marchantia papillata* Raddi subsp. *inflexa* (Nees et Mont.) Schust.

**SALEM PLATEAU:** Izard, AR (Schuster 1992-VI). VI-354.

***Marchantia polymorpha* L.**

**SPRINGFIELD PLATEAU:** Barry, Greene, Washington, AR (UARK); **SALEM PLATEAU:** Camden, Carter, Dent; Douglas (Darigo 2004a), Laclede, Ozark, Phelps, Shannon, Stone, AR (DUKE), Warren (Darigo 2008); **ST. FRANCOIS MTS.:** Iron (Darigo 2002), Reynolds; **BOSTON MTS.:** Faulkner, AR (UARK), Newton, AR (UARK). VI-324.

***Pressia* Corda**

***Pressia quadrata* (Scop.) Nees**

**SALEM PLATEAU:** Camden, Jefferson (Gier 1955), Stone, AR (Schuster, 1992-VI). VI-369.

**OXYMITRACEAE** Müll. Frib. Ex Grolle

***Oxymitra* Bisch. ex Lindenb.**

***Oxymitria incrassata* (Brot.) Sergio & Sim-Sim**

**SPRINGFIELD PLATEAU:** St. Clair. VI-403.

**RICCIACEAE** Reichenb.

***Riccia* L.**

***Riccia beyrichiana* Hampe ex Lehm.**

**SPRINGFIELD PLATEAU:** Barry (Gier 1955), St. Clair (Darigo 2008), Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Baxter, AR (UARK), Carroll, AR (UARK), Izard, AR (McGregor 1960), Marion, AR (UARK), Moniteau and Pulaski (Darigo 2008); **ST. FRANCOIS MTS.:** St. Francois; **BOSTON MTS.:** Conway, AR (UARK), Crawford, AR (UARK), Washington, AR (UARK); **ARKANSAS VALLEY:** Scott, AR (UARK), Sebastian, AR (UARK). VI-660.

***Riccia bifurca* Hoffm.**

**SPRINGFIELD PLATEAU:** Dade; Cherokee, KS (McGregor 1955). VI-654.

***Riccia campbelliana* M. A. Howe**

**SPRINGFIELD PLATEAU:** Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Baxter, AR (UARK), Carroll, AR (UARK), Izard, AR (UARK); **BOSTON MTS.:** Conway, AR (Jacobs 1951), Faulkner, AR (UARK), Washington, AR (UARK); **ARKANSAS VALLEY:** Logan, AR (UARK). VI-576.

*Riccia canaliculata* Hoffm.

**ARKANSAS VALLEY:** Conway, AR (UARK). **BOSTON MTS.:** White, AR (Schuster, 1992-VI). VI 461.

*Riccia cavernosa* Hoffm.

**SALEM PLATEAU:** Shannon

**ARKANSAS VALLEY:** Conway, AR. VI-487.

*Riccia crystallina* L.

**SPRINGFIELD PLATEAU:** Barry (Darigo 2008); **SALEM PLATEAU:** Taney (Darigo 2008). VI 494.

*Riccia dictyospora* Howe

**SPRINGFIELD PLATEAU:** St. Clair (Darigo 2008), Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Baxter, AR (UARK), Independence, AR (UARK); **ARKANSAS VALLEY:** Conway, AR (Schuster, 1992-VI). VI-568.

*Riccia fluitans* L.

**SPRINGFIELD PLATEAU:** Barry, Newton, St. Clair; **SALEM PLATEAU:** Camden (UMO), Dent, Howell, Osage, Oregon, Phelps, Ripley, Shannon, Stone, Texas; **BOSTON MTS.** Conway, AR (UARK), White, AR; **ARKANSAS VALLEY:** Franklin (Darigo 2004a); **OUACHITA MTS.:** Hempstead, AR (UARK); **OZARK HILLS:** Union, IL (SIU). VI-478.

*Riccia frostii* Aust.

**SPRINGFIELD PLATEAU:** Dade (Darigo 2008); **SALEM PLATEAU:** Shannon (Gier 1955); **ARKANSAS VALLEY:** Conway, AR (UARK). VI 497.

*Riccia hirta* (Aust.) Underw.

**SPRINGFIELD PLATEAU:** Barry and Dade (Darigo 2008), Benton, AR (UARK), Cherokee, KS (McGregor 1955), Newton, Washington, AR (UARK); **SALEM PLATEAU:** Butler (Darigo 2008), Carroll, AR (UARK), Douglas and Franklin (Darigo 2008), Izard, AR (UARK), Lawrence, AR (UARK), Oregon (Darigo 2008), Texas; **BOSTON MTS.:** Crawford, AR (UARK), Franklin, AR (UARK), White,

AR (UARK); **ARKANSAS VALLEY**: Conway, AR (UARK); OUACHITA MTS.: Hempstead, AR (UARK). VI-635.

*Riccia huebeneriana* subsp. *sullivantii* (Aust.) Schust.

**SPRINGFIELD PLATEAU**: Cedar; **SALEM PLATEAU**: Shannon; **OZARK HILLS**: Union, IL (SIU). VI-457.

*Riccia lamellosa* Raddi (Including *Riccia austinii* Steph.)

**SPRINGFIELD PLATEAU**: Benton, AR (UARK); **SALEM PLATEAU**: Carroll, AR (UARK), Independence, AR (UARK), St. Clair (He, Allen & Redfearn 1986); **ARKANSAS VALLEY**: Conway, AR. **BOSTON MTS.**: Conway, AR (UARK), Crawford, AR (UARK), White, AR (Schuster 1992-VI). VI-535.

*Riccia macallisteri* Howe

**SPRINGFIELD PLATEAU**: Barry; **SALEM PLATEAU**: Izard, AR (Schuster 1992-VI), St. Louis. VI-558.

*Riccia membranacea* Gott. & Lindenb.

**SPRINGFIELD PLATEAU**: Benton, Butler, Stoddard (Gier 1955), Benton, AR (UARK), Washington, AR (UARK); **SALEM PLATEAU**: Benton, Butler, Greene, AR (UARK), Lawrence, AR (UARK), Stoddard; **BOSTON MTS.**: Cleburne, AR (UARK), Franklin, AR (UARK), Washington, AR (UARK), White, AR (UARK); **OUACHITA MTS.**: McCurtain, OK (Little 1936a), Pulaski, AR (UARK). VI-502.

*Riccia ozarkiana* McGregor

**SPRINGFIELD PLATEAU**: Barry (McGregor 1960); **SALEM PLATEAU**: Izard, AR (Schuster, 1992-VI). VI-678.

*Riccia rhenana* Lorbeer ex K. Müll.

**SPRINGFIELD PLATEAU**: Lawrence, Newton; St. Clair (Gier 1955); **SALEM PLATEAU**: Shannon (Gier 1955); **ARKANSAS VALLEY**: Conway, AR (UARK). VI-474.

*Riccia sorocarpa* Aust.

**SPRINGFIELD PLATEAU**: Barry, Dade; Newton (Darigo 2008), Cherokee, KS (McGregor 1955); **SALEM PLATEAU**: Boone; **BOSTON MTS.**: Conway, AR (UARK), Washington, AR (UARK). VI-592.

*Riccia stenophylla* Spr.

**SPRINGFIELD PLATEAU:** Newton and St. Clair (Darigo 2008); **SALEM PLATEAU:** Bollinger, Camden, Cole, Dallas, Dent, Howell, Jefferson, Lawrence; Oregon and Phelps (Darigo 2008), Ripley (Darigo 1999), St. Charles, St. Louis, Shannon, Stone, Texas, Warren and Wayne (Darigo 2008); **OZARK HILLS:** Jackson, IL and Johnson, IL (Darigo 2008). VI-467.

***Ricciocarpos*** Corda

***Ricciocarpos natans*** (L.) Corda

**SPRINGFIELD PLATEAU:** Greene, Cherokee, KS; **SALEM PLATEAU:** Franklin (Darigo 2002), Howell (Darigo 2000), Jefferson (Darigo 2001), Oregon, Ozark, Ripley; St. Charles (Darigo 1998), St. Louis (Gier 1955), Stoddard, Texas, Warren (Darigo 2000); **BOSTON MTS.:** Conway, AR (UARK), Faulkner, AR (UARK), Washington, AR (UARK); **OUACHITA MTS.:** Hempstead, AR (UARK); **OZARK HILLS:** Union, IL (SIU). VI-415.

#### **JUNGERMANNIOPSIDA** Stotler & Stotl.-Crandall

**FOSSOMBRONIACEAE** Hazsl.

***Fossombronia*** Raddi

***Fossombronia brasiliensis*** Steph.

**SALEM PLATEAU:** Crawford, Franklin and Lawrence (Darigo 2008), Jefferson, Maries, Phelps and Texas (Darigo 2004b), Baxter, AR, Stone, AR; **ST. FRANCOIS MTS.:** Iron. V-408.

***Fossombronia foveolata*** Lindb.

**SPRINGFIELD PLATEAU:** Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Izard, AR (UARK).

***Fossombronia texana*** Lindb.

**SALEM PLATEAU:** Baxter (DUKE); **BOSTON MTS.:** Newton, AR (DUKE). V-402.

***Fossombronia wondraczekii*** (Corda) Dumort.

**ARKANSAS VALLEY:** Logan, AR (Wittlake 1954). V-372.

**PELLIACEAE** H. Klinggr.

**Pellia** Raddi

**Pellia endiviifolia** (Dicks.) Dumort.

**SALEM PLATEAU:** Ste. Genevieve; **BOSTON MTS.:** Crawford, AR, Johnson, AR. V-447.

**Pellia epiphylla** (L.) Coda

**SPRINGFIELD PLATEAU:** Benton, AR (UARK), Cherokee, KS (McGregor 1955), Greene (Schuster, 1992-V); **SALEM PLATEAU:** Bollinger, Crawford, St. Charles and St. Louis (Darigo 2004a), Gasconade and St. Francois (Darigo 2002), Jefferson (Darigo 2008), Ste. Genevieve (Gier 1955); **BOSTON MTS.:** Franklin, AR (UARK), Pope, AR, Washington, AR; **OUACHITA MTS.:** Garland, AR (UARK), Montgomery, AR (UARK); **OZARK HILLS:** Jackson, IL (Hatcher 1952). V-460.

**PALLAVICINIACEAE** Mig.

**Pallavicinia** Gray

**Pallavicinia lyellii** (Hook.) Carruth.

**SPRINGFIELD PLATEAU:** Bollinger (Darigo 2000); **SALEM PLATEAU:** Crawford and Jefferson (Darigo 2008), Baxter, AR (UARK), Greene, AR, Ste. Genevieve, Stoddard (Darigo 2001), Stone, AR (DUKE); **BOSTON MTS.:** Conway, AR (UARK), Garland, AR (UARK), Newton, AR, Pulaski, AR (UARK), Van Buren, AR (Schuster, 1992-V); **ARKANSAS VALLEY:** Conway, AR (Schuster, 1992-V); **ARKANSAS VALLEY:** Franklin, AR.; **OUACHITA MTS.:** Garland, AR (UARK), Hot Spring, AR (Majestyk 2001), Montgomery, AR (UARK), Polk, AR (UARK), Saline, AR (UARK). V-495.

**ANEURACEAE** H. Klinggr.

**Aneura** Dumort.

**Aneura pinguis** (L.) Dum.

**SPRINGFIELD PLATEAU:** Benton, AR (UARK); **SALEM PLATEAU:** Bollinger (Darigo 2004a), Carter, Crawford, Dent, Douglas, Franklin and Ste. Genevieve (Darigo 2004b), Greene, AR (Schuster, 1992-V), Madison, AR (UARK), Shannon, Washington (Darigo 2000); **ST. FRANCOIS MTS.:** Iron (Darigo 2002); **BOSTON MTS.:** Conway, AR (UARK), Newton, AR, Washington, AR (UARK); **OUACHITA MTS.:** Clark, AR (UARK), Garland, AR, Pulaski, AR (UARK). V-555.

**Aneura maxima** (Schiff.) Steph.

**ST. FRANCOIS MTS.:** Madison (Darigo 2004). V-569.

*Riccardia* Gray

*Riccardia chamedryfolia* (With.) Grolle

**OUACHITA MTS.**: Garland, AR, Montgomery, AR, Polk, AR (DUKE). V-645.

*Riccardia latifrons* (Lindb.) Lindb.

**SALEM PLATEAU**: Marion, AR (UARK), Stone, AR (UARK); **BOSTON MTS.**: Crawford, AR (UARK), Franklin, AR (UARK), Johnson, AR (UARK), Washington, AR (UARK); **OUACHITA MTS.**: Garland, AR (UARK), Montgomery, AR (DUKE). V-600.

*Riccardia multifida* (L.) S. F. Gray

**SALEM PLATEAU**: Ste. Genevieve, Carter; **BOSTON MTS.**: Johnson, AR; **OUACHITA MTS.**: Montgomery, AR, Polk, AR. V-618.

*Riccardia palmata* (Hedw.) Carruth.

**SALEM PLATEAU**: Stoddard; **OUACHITA MTS.**: Pulaski, AR (UARK).

**METZGERIACEAE** H. Klinggr.

*Metzgeria* Raddi

*Metzgeria conjugata* Lindb.

**SPRINGFIELD PLATEAU**: Benton, AR (UARK); **SALEM PLATEAU**: Madison, AR (UARK), Ste. Genevieve, Wayne (UMO); **ST. FRANCOIS MTS.**: Reynolds; **BOSTON MTS.**: Newton, AR (UARK), Washington, AR (Schuster, 1992-V); **OUACHITA MTS.**: Polk, AR (DUKE), Pulaski, AR (UARK).

*Metzgeria furcata* (L.) Dum.

**SALEM PLATEAU**: Carter, Stone, AR (Majestyk 2002); **ST. FRANCOIS MTS.**: Madison; **BOSTON MTS.**: Newton, AR, Washington, AR (UARK) Searcy, AR (Wittlake 1954); **ARKANSAS VALLEY**: Leflore, OK, Logan, AR (UARK); **OUACHITA MTS.**: Garland, AR (UARK), McCurtain, OK (Schuster, 1992-V), Montgomery, AR (UARK). V-679.

*Metzgeria myriopoda* Lindb.

**SPRINGFIELD PLATEAU:** Washington, AR (Schuster, 1992-V); **ARKANSAS VALLEY:** Pope, AR (Schuster, 1992-V); **OUACHITA MTS.:** Montgomery, AR (DUKE), Polk, AR (DUKE). V-694.

**PTILIDIACEAE** H. Klinggr.

***Ptilidium*** Nees

***Ptilidium pulcherrimum*** (G. Web.) Hampe

**SALEM PLATEAU:** Phelps. I-771

**TRICHOCOLEACEAE** Nakai

***Trichocolea*** Dumort.

***Trichocolea tomentella*** (Ehrh.) Dum.

**SPRINGFIELD PLATEAU:** Benton, AR (UARK); **SALEM PLATEAU:** Camden, Carter, Crawford (Darigo 2004a), Dent, Douglas (Darigo 1998), Franklin and Jefferson (Darigo 2008), Howell (F), Marion, AR (UARK), Ste. Genevieve, Shannon, Texas; **ST. FRANCOIS MTS.:** Iron and Reynolds (Darigo 2002); **BOSTON MTS.:** Pope, AR (DUKE); **ARKANSAS VALLEY:** Sebastian, AR (UARK); **OUACHITA MTS.:** Garland, AR, Montgomery, AR (DUKE), Polk, AR (UARK); **OZARK HILLS:** Jackson, IL (SIU). I-787.

**GEOCALYCACEAE** H. Klinggr.

***Chiloscyphus*** Corda

***Chiloscyphus bidentata*** (L.) Engel & Schust.

**SALEM PLATEAU:** Carter, Ste. Genevieve; **BOSTON MTS.:** Crawford, AR, Newton, AR, Searcy, AR. IV-190.

***Chiloscyphus cuspidata*** (Nees) Engel & Schust.

**SPRINGFIELD PLATEAU:** Washington, AR (Schuster, 1980-IV); **SALEM PLATEAU:** Carter, Delaware, OK, Madison, AR, Marion, AR, Shannon (DUKE); **ST. FRANCOIS MTS.:** Reynolds. IV-198.

*Chiloscyphus minor* (Nees) Engel & Schust.

**SPRINGFIELD PLATEAU:** Cherokee, KS (McGregor 1955). IV-225.

*Chiloscyphus pallescens* (Ehrh.) Dumort.

**SALEM PLATEAU:** Bollinger (Darigo 2008), Boone, Camden (Gier 1955), Crawford, Franklin, Gasconade and Jefferson (Darigo 2008), Reynolds (Darigo 2002), Ripley (Darigo 2008), Shannon (Gier 1955), St. Louis, Ste. Genevieve (Darigo 2004a), Stoddard, Warren and Washington (Darigo 2008). IV-258.

*Chiloscyphus polyanthus* var. *rivularis* (Schrad.) Nees

**SALEM PLATEAU:** Franklin (Darigo 2008), Shannon (Gier 1955). IV-254.

*Chiloscyphus profundus* (Ness) Engel & Schust.

**SPRINGFIELD PLATEAU:** Benton, Cherokee, KS (McGregor 1955), Crawford, Gasconade, Jefferson, Warren and Washington (Darigo 2008); **SALEM PLATEAU:** Bollinger (Darigo 1999), Callaway (Darigo 1998), Camden, Carter (DUKE), Douglas (Darigo 2004a), Franklin, Lawrence, AR (Darigo 2004a), Maries (Darigo 2004b), Oregon, Shannon, Sharp, AR (Majestyk 2002), St. Charles (Darigo 2004a), St. Francis, Ste. Genevieve, Stoddard (DUKE), Stone, AR (UARK), Washington, AR (UARK); **BOSTON MTS.:** Faulkner, AR (UARK), Van Buren, AR (UARK); **ARKANSAS VALLEY:** Perry (Darigo 2008); **OUACHITA MTS.:** Garland, AR (UARK), Montgomery, AR (UARK), Polk, AR (UARK), Yell, AR (UARK). IV-215.

**Geocalyx** Nees

*Geocalyx graveolens* (Schrad.) Nees

**SALEM PLATEAU:** Ste. Genevieve; **BOSTON MTS.:** Newton, AR.; **OUACHITA MTS.:** Grant, AR (Majestyk 2001). IV-311.

**PLAGIOCHILACEAE** (Jörg.) Müll. Frib. & Herzog

*Plagiochila* (Dumort.) Dumort.

*Plagiochila acanthophylla* subsp. *ciliigera* (Schust.) Schust.

**SALEM PLATEAU:** Stone, AR (Schuster, 1980-IV). IV-434.

*Plagiochila asplenoides* subsp. *porelloides* (Torrey ex Nees) Schust.

**SPRINGFIELD PLATEAU:** Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Benton, AR (UARK), Douglas (Darigo 2004b), Franklin, Jefferson (Darigo 2004b), Madison, AR (DUKE), Marion, AR (Shuster, 1980-IV), Shannon, Ste. Genevieve, Washington (Darigo 2008); **BOSTON MTS.:** Crawford, AR (DUKE), Franklin, AR (DUKE), Newton, AR (DUKE), Pope, AR (DUKE), Washington, AR (DUKE); **OUACHITA MTS.:** Polk, AR (DUKE), Saline, AR (DUKE). IV-365.

*Plagiochila ludoviciana* Sull.

**ARKANSAS VALLEY:** Sebastian, AR. IV-504.

*Plagiochila undata* Sull.

**BOSTON MTS.:** Franklin, AR (UARK), Newton, AR; **OUACHITA MTS.:** Montgomery, AR (DUKE); **ARKANSAS VALLEY:** Conway, AR (DUKE). IV-526.

## CALYPOGIACEAE (Müll. Frib.) Arnell in Holmberg

*Calypogeia* Raddi

*Calypogeia fissa* subsp. *neogaea* Schust.

**SALEM PLATEAU:** Bollinger, Cedar (Darigo 2008), Dent (Darigo 2002), Franklin (Darigo 2004a), Jefferson (Darigo 2008), Maries (Darigo 2004a), Shannon, Ste. Genevieve, Stoddard (Darigo 2008), Stone; **ST. FRANCOIS MTS.:** Iron (Darigo 2002); **BOSTON MTS.:** Newton, AR, Scott, AR. II-169.

*Calypogeia muelleriana* (Schiffn.) K. Müll.

**OUACHITA MTS.:** Grant, AR (Majestyk 2001), Polk, AR (DUKE). II-175.

*Calypogeia sullivanii* Aust.

**SALEM PLATEAU:** Ste. Genevieve; **BOSTON MTS.:** Franklin, AR (UARK); **OUACHITA MTS.:** Hempstead, AR (UARK), Montgomery, AR (UARK), Polk, AR. II-117.

*Calypogeia trichomanis* (L.) Corda

**SPRINGFIELD PLATEAU:** St. Clair; **SALEM PLATEAU:** Izard, AR (UARK), Jefferson, Madison, AR (UARK); **BOSTON MTS.:** Faulkner, AR (UARK), Van Buren, AR (UARK), Washington, AR (UARK); **OUACHITA MTS.:** Polk, AR (UARK); **OZARK HILLS:** Union, IL. II-149.

**LEPIDOZIACEAE** Limpr.

***Bazzania*** Gray

***Bazzania trilobata*** (L.) S. Gray

**SPRINGFIELD PLATEAU:** Dade; **SALEM PLATEAU:** Ste. Genevieve, Madison, AR. II-83.

***Kurzia*** G. Martins

***Kurzia setacea*** (Web.) Grolle

**BOSTON MTS.:** Newton, AR. II-57.

***Kurzia sylvatica*** (Evans) Grolle

**SALEM PLATEAU:** Ste. Genevieve. II-49.

***Telaranea*** Spruce ex Schiffn.

***Telaranea nematodes*** (Gott. ex Aust.) M. A. Howe

**BOSTON MTS.:** Franklin, AR (UARK). II-35.

**CEPHALOZIACEAE** Mig.

***Cephalozia*** (Dumort.) Dumort.

***Cephalozia bicuspidata*** (L.) Dumort.

**OZARK HILLS:** Jackson, IL (Hatcher 1952). III-709.

***Cephalozia lunulifolia*** (Dum.) Dum.

**SALEM PLATEAU:** Jefferson (Darigo 2008), Ste. Genevieve; **BOSTON MTS.:** Newton, AR. III-783.

***Nowellia*** Mitt.

***Nowellia curvifolia*** (Dicks.) Mitt.

**SALEM PLATEAU:** Carter, Shannon (UMO), Ste. Genevieve; **BOSTON MTS.:** Johnson, AR, Newton, AR; **OUACHITA MTS.:** Polk, AR (DUKE). III-817.

*Odontoschisma* (Dumort.) Dumort.

*Odontoschisma denudatum* (Nees ex Mart.) Dum.

**SALEM PLATEAU:** Madison, AR; **BOSTON MTS.:** Newton, AR; **OUACHITA MTS.:** Saline, AR. III-835.

*Odontoschisma prostratum* (Sw.) Trev.

**SALEM PLATEAU:** Baxter, AR, Jefferson (Darigo 2008), Ste. Genevieve, Stoddard (Darigo 2001), Stone, AR; **BOSTON MTS.:** Conway, AR, Franklin, AR, Newton, AR. III-862.

## **CEPHALOZIELLACEAE** Douin

*Cephaloziella* (Spruce) Schiffn.

*Cephaloziella byssacea* (Roth) Warnst.

**SALEM PLATEAU:** Franklin, Ste. Genevieve, Stone, AR; **BOSTON MTS.:** Conway, AR. IV-85.

*Cephaloziella hyalina* Douin

**SALEM PLATEAU:** Stone, AR (Schuster 1980-IV); **BOSTON MTS.:** Newton, AR. IV-49.

*Cephaloziella rubella* (Nees) Warnst.

**SPRINGFIELD PLATEAU:** Barry, Newton, Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Franklin (Darigo 2008), Shannon, Taney (Darigo 2008). IV-112.

## **JUNGERMANNIACEAE** Rchb.

*Gymnocolea* (Dumort.) Dumort.

*Gymnocolea inflata* (Huds.) Dum.

**OUACHITA MTS.:** Polk, AR. II-786.

*Jamesoniella* (Spruce) F. Lees

*Jamesoniella autumnalis* (DC.) Steph.

**SPRINGFIELD PLATEAU:** Polk; **SALEM PLATEAU:** Franklin (Darigo 2000), Jackson, IL (Darigo 2000), Jefferson (Darigo 2008), Shannon, Ste. Genevieve, Washington (Darigo 1999); **OUACHITA MTS.:** Hot Springs, AR, Montgomery, AR. II-818.

*Jungermannia* L.

*Jungermannia crenuliformis* Aust.

**SPRINGFIELD PLATEAU:** Dade; **SALEM PLATEAU:** Jefferson (Darigo 2008); **BOSTON MTS.:** Franklin, AR (DUKE), Newton, AR, Washington, AR; **OUACHITA MTS.:** Polk, AR. II-986.

*Jungermannia hyalina* Lyell

**ARKANSAS VALLEY:** Pope, AR; **OUACHITA MTS.:** Hot Springs, AR. II-993.

*Jungermannia leiantha* Grolle

**OUACHITA MTS.:** Montgomery, AR (DUKE), Scott, AR. II-837.

*Jungermannia pumila* (With.) K. Müll.

**SPRINGFIELD PLATEAU:** St. Clair. II-907.

*Lophozia* (Dumont.) Dumort.

*Lophozia badensis* (Gott. ex Rabenh.) Schiffn.

**SPRINGFIELD PLATEAU:** Washington, AR; **ST. FRANCOIS MTS.:** Reynolds. II-408.

*Lophozia incisa* (Schrad.) Dumort.

**SALEM PLATEAU:** Ste. Genevieve (Atwood 2011). II-441.

*Nardia* Gray

*Nardia lescurii* (Aust.) Underw.

**SALEM PLATEAU:** Ste. Genevieve. II-877.

**GYMNOMITRIACEAE** H. Klinggr.

*Marsupella* Dumort.

*Marsupella placelata* (Gies.) Dumort.

**SALEM PLATEAU:** St. Francois (Darigo 2002). III-52.

**SCAPANIACEAE** Mig.

*Diplophyllum* (Dumort.) Dumort.

*Diplophyllum apiculatum* (Evans) Steph.

**SPRINGFIELD PLATEAU:** Delaware, OK (Little 1936a); **SALEM PLATEAU:** Jefferson (Darigo 2008), Ste. Genevieve; **BOSTON MTS.:** Washington, AR (UARK), Franklin, AR (UARK). III-206.

*Scapania* (Dumort.) Dumort.

*Scapania nemorea* (L.) Grolle

**SPRINGFIELD PLATEAU:** Barry, Carroll, AR (UARK), Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Bollinger (Darigo 2000), Camden, Izard, AR (UARK), Jefferson, Madison and Phelps (Darigo 2004a), Shannon (UMO), Stone, AR (DUKE), Franklin, AR (UARK), Johnson, AR (UARK), Newton, AR, Pope, AR (DUKE), Van Buren, AR (UARK), Washington (Darigo 2008), Washington, AR (DUKE); **BOSTON MTS.:** Cherokee, OK (Darigo 2004a); **ARKANSAS VALLEY:** Faulkner, AR (UARK), **OUACHITA MTS.:** Clark, AR (UARK), Garland, AR (UARK), Hot Springs, AR, McCurtain, OK (Darigo 1998), Scott, AR. III-577.

*Scapania undulata* (L.) Dum.

**SALEM PLATEAU:** Franklin (Darigo 2008), Texas (Darigo 2004a); **OUACHITA MTS.:** Hot Spring, AR (Majestyk 2002), Pulaski, AR. III-549.

**PORELLACEAE** Cavers

*Porella* L.

***Porella pinnata* L.**

**SPRINGFIELD PLATEAU:** Barry, Benton, AR (UARK), Cedar (US), Hickory, Jasper, Newton (US), Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Camden (UMO), Carter (DUKE), Crawford, Dallas, Douglas (Darigo 2004b), Franklin (UMO), Fulton, AR (UARK), Gasconade (Darigo 2008), Laclede, Madison, AR (UARK), Marion, AR (Majestyk 2002), Ozark, Perry and Scott (Darigo 2008), Shannon, St. Francois (Darigo 2002), Stone, AR (DUKE), Ripley, Taney (Darigo 2008), Texas, Washington (Darigo 2002); **ST. FRANCOIS MTS.:** Iron (Darigo 2001), Madison (UMO), Wayne (Schuster 1980-IV); **BOSTON MTS.:** Independence, AR (UARK), Johnson, AR (UARK), Newton, AR (UARK), Washington, AR (DUKE); **ARKANSAS VALLEY:** Conway, AR (DUKE), Faulkner, AR (UARK), Franklin, AR (UARK); **OUACHITA MTS.:** Garland, AR (UARK), Hot Springs, AR, Montgomery, AR (UARK), Polk, AR (DUKE), Saline, AR (DUKE), Scott, AR (UARK), Sevier, AR (Majestyk 2002). IV-672.

***Porella platyphylla* (L.) Pfeiff.**

**SPRINGFIELD PLATEAU:** Barry, Cedar (US), Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Boone, AR, Butler, Callaway (Darigo 2004a), Camden, Carter, Franklin (Darigo 2004a), Hickory, Izard, AR (UARK), Madison (Darigo 2002), Oregon, Ozark, Phelps, Scott (Darigo 2008), Shannon (DUKE), Sharp, AR (UARK), Cherokee, OK (Darigo 2004a), St. Charles (Darigo 2004a), St. Louis (Schuster, 1980-IV), Ste. Genevieve, Stoddard (DUKE), Stone, AR (Darigo 2004a), Warren (Darigo 2008), Washington (Darigo 1999); **ST. FRANCOIS MTS.:** Iron (Darigo 2002), Madison, AR, Iron; **BOSTON MTS.:** Conway, AR (DUKE), Faulkner, AR (UARK), Newton, AR (UARK), Washington, AR (UARK); **ARKANSAS VALLEY:** Crawford, AR; **OUACHITA MTS.:** Garland, AR (UARK), Hot Spring (Majestyk 2002), Montgomery, AR, Polk, AR. IV-699.

**JUBULACEAE** H. Klinggr.

***Frullania*** Raddi

***Frullania brittoniae*** Evans

**SPRINGFIELD PLATEAU:** Barry, Cherokee, KS (McGregor 1955); **SALEM PLATEAU:** Crawford, Laclede and Lawrence(Darigo 2008), Madison (Darigo 1999); Marion, AR (Schuster 1992-V), Miller and Perry (Darigo 2008), Sharp, AR (Majestyk 2002), St. Charles (Darigo 2001), Ste. Genevieve, Stone, AR (DUKE), Warren (Darigo 2008); **ST. FRANCOIS MTS.:** Madison (UMO); **BOSTON MTS.:** Franklin, AR (Duke), Newton, AR (DUKE), Washington, AR (Schuster 1992-V), **ARKANSAS VALLEY:** Yell, AR (Majestyk 2002); **OUACHITA MTS.:** Grant and Hot Spring (Majestyk 2001) . V-157.

***Frullania eboracensis*** Gott.

**SPRINGFIELD PLATEAU**: Barry, Cedar (US), Newton, Cherokee, KS (McGregor 1955); **SALEM PLATEAU**: Baxter, AR, Camden, Carter, Franklin and Jefferson (Darigo 2004b), Independence, AR, Maries (Darigo 2004a), Montgomery (Darigo 1998), Ozark and St. Francois (Darigo 2004a), Ste. Genevieve, Shannon; **BOSTON MTS.**: Faulkner, AR (UARK), Newton, AR, Van Buren, AR (UARK), Washington, AR (UARK); **ARKANSAS VALLEY**: Sebastian, AR; **OUACHITA MTS.**: Hot Spring, AR (Majestyk 2001). V-132.

*Frullania eboracensis* subsp. *virginica* (G.) Schust.

**SALEM PLATEAU**: Marion, AR (Schuster 1992-V). V-147

*Frullania ericoides* (Nees) Mont.

**SPRINGFIELD PLATEAU**: Barry, Cedar (US); **SALEM PLATEAU**: Baxter, AR (UARK), Carter (DUKE), Izard, AR (UARK), Marion, AR (Schuster, 1992-V), Ste. Genevieve, Shannon, Carter, Sharp, AR (UARK), Stone, AR (DUKE), Texas; **BOSTON MTS.**: Cleburne, AR, Crawford, AR, Johnson, AR, Newton, AR (Schuster, 1992-V), Washington, AR (Schuster, 1992-V), Searcy, AR (UARK), Wayne (Darigo 2001); **ARKANSAS VALLEY**: Perry, AR (UARK), Latimer, OK; **OUACHITA MTS.**: Garland, AR (UARK), Hempstead, AR (UARK), Hot Spring, AR (Majestyk 2001), Montgomery, AR (UARK), Polk, AR (DUKE), Scott, AR (UARK), Yell, AR (UARK). V-228.

*Frullania inflata* Gott.

**SPRINGFIELD PLATEAU**: Barry, Cedar (US), Cherokee, KS (McGregor 1955); **SALEM PLATEAU**: Boone, AR, Camden, Carter, Cherokee, OK (Darigo 2004a), Crawford and Douglas (Darigo 2004a), Franklin (Darigo 1998), Howell, Madison, Moniteau and Texas (Darigo 2004a), St. Francois (Darigo 2008), Ste. Genevieve, Shannon, St. Charles (Darigo 1999), Warren and Washington (Darigo 2008); **BOSTON MTS.**: Newton, AR; **ARKANSAS VALLEY**: Perry (Darigo 2008), Sequoyah, OK; **OUACHITA MTS.**: Scott, AR (DUKE). V-203.

*Frullania kunzei* Lehm. et Lindenb.

**SPRINGFIELD PLATEAU**: Cherokee, KS (McGregor 1955); **SALEM PLATEAU**: Douglas; **BOSTON MTS.**: Cleburne, AR, Newton, AR, Washington, AR; **OUACHITA MTS.**: Hot Spring (Majestyk 2001), Perry, AR. V-91.

*Frullania riparia* Hampe ex Lehm.

**SPRINGFIELD PLATEAU**: Barry (DUKE), Christian, Cherokee, KS (McGregor 1955); **SALEM PLATEAU**: Camden; Carter; Cole, Crawford, Izard, AR (Majestyk 2002), Jefferson, Oregon and Scott (Darigo 2008), Ste. Genevieve, Shannon; Stone, AR (DUKE), Warren and Washington (Darigo 2008); **BOSTON MTS.**: Newton, AR, Washington, AR (Schuster, 1992-V). V-176.

*Frullania tamarisci* (L.) Dumort. subsp. *tamarisci*

**OUACHITA MTS.**: Montgomery, AR. V-55

*Frullania tamarisi* subsp. *asagrayana* (Mont.) Hatt.

**SPRINGFIELD PLATEAU**: Washington, AR (UARK); **BOSTON MTS.**: Franklin, AR (UARK), Newton, AR (UARK); **ARKANSAS VALLEY**: Logan, AR; **OUACHITA MTS.**: McCurtain, OK, Montgomery, AR (UARK), Polk, AR (UARK); **ARKANSAS VALLEY**: Logan, AR (UARK). V-60.

**Jubula** Dumort.

*Jubula pennsylvanica*

**SALEM PLATEAU**: Cape Girardeau (Darigo 2008). V-275.

## **LEJEUNEACEAE** Casares-Gil

*Cololejeunea* (Spruce) Schiffn.

*Cololejeunea biddlecomiae* (Aust.) Evans

**SPRINGFIELD PLATEAU**: Christian; **SALEM PLATEAU**: Crawford (Darigo 2008), Dallas, Franklin (Darigo 2008), Madison, AR (UARK), Marion, AR (Schuster 1980-IV), Moniteau (Darigo 2004a), Shannon, Sharp, AR (Majestyk 2002), St. Charles (Darigo 2008), Ste. Genevieve, St. Louis (Darigo 2008), Taney, Washington and Webster (Darigo 2008); **BOSTON MTS.**: Independence, AR, Newton, AR, Washington, AR; **ARKANSAS VALLEY**: Franklin, AR (UARK). IV-1262.

*Lejeunea* Lib.

*Lejeunea flava* (Sw.) Nees

**OUACHITA MTS.**: Montgomery, AR (DUKE). IV-958.

*Lejeunea laetevirens* Nees et Mont.

**BOSTON MTS.**: Johnson, AR; **OUACHITA MTS.**: Montgomery, AR (DUKE). IV-1093.

*Lejeunea lamacerina* subsp. *gemianta* Schust.

**BOSTON MTS.**: Newton, AR. IV-972.

*Leucolejeunea* A. Evans

*Leucolejeunea clypeata* (Schwein.) Evans

**SPRINGFIELD PLATEAU:** Benton, AR (UARK), Carroll, AR; **SALEM PLATEAU:** Baxter, AR (UARK), Jefferson (Darigo 2008), Madison, AR (UARK), Marion, AR (UARK), Shannon, Sharp, AR (Majestyk 2002), Ste. Genevieve, Wayne (UMO); **BOSTON MTS.:** Franklin, AR (UARK), Newton, AR (UARK), Pope, AR, Washington, AR (UARK); **ARKANSAS VALLEY:** Conway, AR (DUKE), Johnson, AR (UARK); **OUACHITA MTS.:** Garland, AR (UARK), Hempstead, AR (UARK), Montgomery, AR (DUKE), McCurtain, OK, Polk, AR (UARK), Scott, AR. IV-820.

*Leucolejeunea unciloba* (Lindenb.) Evans

**SALEM PLATEAU:** Oregon; **OUACHITA MTS.:** Montgomery, AR, Polk, AR (DUKE). IV-828.

*Rectolejeunea* A. Evans

*Rectolejeunea maxonii* Evans

**SALEM PLATEAU:** Carter; **OUACHITA MTS.:** Montgomery, AR (Schuster 1980-IV). IV-1131.

**RADULACEAE** (Dumort.) Müll. Frib.

*Radula* Dumort.

*Radula complanata* (L.) Dum.

**SPRINGFIELD PLATEAU:** McDonald (Darigo 2002); **SALEM PLATEAU:** Barry, Callaway (Darigo 2004), Carter (Gier 1955), Franklin (Darigo 2008), Howell (Darigo 2004), Jefferson (Darigo 2008), Ozark (Darigo 2004), Shannon (Gier 1955), Sharp, AR (Majestyk 2002), Ste. Genevieve, Stone, AR (DUKE), Taney and Warren (Darigo 2008), Washington (Darigo 2004); **BOSTON MTS.:** Conway, AR (DUKE), Johnson, AR, Washington, AR, **OUACHITA MTS.:** Polk, AR. IV-600.

*Radula mollis* Lindenb. et Gott.

**SALEM PLATEAU:** Baxter, AR (UARK), Johnson, AR (UARK), Marion, AR (Schuster 1980-IV); **BOSTON MTS.:** Searcy, AR; **OUACHITA MTS.:** Montgomery, AR (DUKE), Perry, AR. IV-615.

*Radula obconica* Sull.

**SALEM PLATEAU:** Carter; Douglas and Jefferson (Darigo 2004b), Marion, AR (Schuster 1980-IV), Shannon (Darigo 2004a), Ste. Genevieve; **BOSTON MTS.:** Crawford, AR (DUKE), Newton, AR, Washington, AR (UARK); **OUACHITA MTS.:** Montgomery, AR (DUKE), Polk, AR (DUKE). IV-628.

**ANTHOCEROTOPHYTA** Rothm. Ex Stotl. & Crand.-Stotl.

**ANTHOCEROTPSIDA** Jancz ex Stotl. & Crand.-Stotl.

**ANTHOCEROTACEAE** Dumort.

*Anthoceros* L.

*Anthoceros agrestis* Paton

**SPRINGFIELD PLATEAU:** Cherokee, KS; Washington, AR; **SALEM PLATEAU:** Stone, AR; **BOSTON MTS.:** Faulkner and Searcy, AR; **OUACHITA MTS.:** Howard and Polk, AR. V-797-801.

*Anthoceros punctatus* L.

**SALEM PLATEAU:** Franklin and Howell (Darigo 2004a), Stone, AR (UARK), St. Francois, Cherokee, KS (McGregor 1955); **BOSTON MTS.:** Faulkner, AR (UARK), Searcy, AR (UARK), Van Buren, AR, Washington, AR (UARK). VI-791.

*Sphaerosporoceros* Hässel

*Sphaerosporoceros adscendens* (Lehm. & Lindenb.) Hässel

**ARKANSAS VALLEY:** Scott, AR (UARK). VI-820.

**NOTOTHYLDACEAE** (Milde) Müll. Frib. Ex Prosk.

*Notothylas* Sull.

*Notothylas orbicularis* (Schwein.) Sull.

**SPRINGFIELD PLATEAU:** Cherokee, KS (McGregor 1955). VI-847.

*Phaeoceros* Prosk.

*Phaeoceros carolinianus* (Michx.) Prosk.

**SPRINGFIELD PLATEAU:** Lawrence (Darigo 2008); **SALEM PLATEAU:** Bollinger (Darigo 2004a), Boone, Franklin (Darigo 2004a), Izard, AR (UARK), Jefferson, Madison and Maries (Darigo 2004a), Marion, Sharp, AR (UARK), Ste. Genevieve (Darigo 2008), St. Francois and Washington (Darigo 2004a); **BOSTON MTS.:** Faulkner, AR (UARK), Newton, AR (UARK), Washington, AR (UARK); **ARKANSAS VALLEY:** Conway, AR (UARK), Franklin, AR (UARK), Johnson, AR (UARK), Logan, AR (UARK), Sebastian, AR (UARK); **OUACHITA MTS.:** Clark, AR (UARK), Dallas, AR (UARK), Garland, AR (UARK), Grant, AR (UARK), Montgomery, AR (UARK), St. Francis, AR (UARK); **PRAIRIE:** Vernon. VI-751.

*Phaeoceros mohrii* (Aust.) Hässel

**OUACHITA MTS.:** Montgomery, AR. VI-771.

*Phaeoceros oreganus* (Aust.) Hässel

**SALEM PLATEAU:** Howell. Not described in Schuster.

## Synonyms Names

*Anthoceros adscendens* Lehm. et Lindenb. = *Sphaerosporoceros adscendens*  
*Anthoceros crispulus* (Mont.) Douin = *Anthoceros punctatus*  
*Anthoceros carolinianus* Michx. = *Phaeoceros carolinianus*  
*Calypogeia arguta* auct. amer. = *Calypogeia sullivantii*  
*Calypogeia arguta* var. *sullivantii* (Aust.) Frye et Clark = *Calypogeia sullivantii*  
*Calypogeia cyanophora* Schust. = *Calypogeia trichomanis*  
*Calypogeia trichomanis* auct. pl. = *Calypogeia muelleriana*  
*Cephalozia media* Lindb. = *Cephalozia lunulifolia*  
*Cephaloziella myriantha* (Lindb.) Schiffn. = *Cephaloziella rubella*  
*Cephaloziella pulchella* (C. Jens.) Douin = *Cephaloziella rubella*  
*Chiloscyphus rivularis* (Schrad.) Loeske = *Chiloscyphus polyanthos* var. *rivularis*  
*Cololejeunea calcarea* Spruce = *Cololejeunea biddlecomiae*  
*Fossombronia dumortieri* (Hüb. et Genth.) Lindb. = *Fossombronia foveolata*  
*Frullania asagrayana* Mont. = *Frullania tamarisi* subsp. *asagrayana*  
*Frullania wrightii* Aust. = *Frullania riparia*  
*Grimaldia barbifrons* Bisch. = *Mannia fragrans*  
*Jungermannia lanceolata* auct. pl. = *Jungermannia leiantha*  
*Jungermannia pumila* var. *rivularis* (Schiffn.) Frye et Clark = *Jungermannia pumila*  
*Kurzia makinoana* (Steph.) Grolle = *Kurzia sylvatica*  
*Leiocolea badensis* (Gott. ex Rabenh.) Joerg. = *Lophozia badensis*

*Lepidozia setacea* (Web.) Mitt. = *Kurzia setacea*  
*Lepidozia sylvatica* Evans = *Kurzia sylvatica*  
*Lejeunea echinata* (Hook.) Tayl. = *Cololejeuena biddlecomiae*  
*Lophocolea bidentata* (L.) Dum. = *Chiloscyphus bidentata*  
*Lophocolea cuspidata* (Nees) Limpr. = *Chiloscyphus cuspidata*  
*Lophocolea minor* Nees = *Chiloscyphus minor*  
*Lophocolea heterophylla* (Schrad.) Dum. = *Chiloscyphus profundus*  
*Lophocolea biscuspidata* Nees = *Chiloscyphus cuspidata*  
*Lophocolea macounii* Aust. = *Chiloscyphus profundus*  
*Lophocolea austini* Lindb. = *Chiloscyphus profundus*  
*Microlejeunea laetevirens* (Nees et Mont.) Evans = *Lejeunea laetevirens*  
*Microlejeunea ulicina* (Tayl.) Evans = *Lejeunea ulicina*  
*Microlepidozia setacea* (Web.) Joerg. = *Kurzia setacea*  
*Microlepidozia sylvatica* (Evans) Joerg. = *Kurzia sylvatica*  
*Odontoschisma sphagni* auct. amer. p.p. = *Odontoschisma denudatum*  
*Odontoschisma sphagni* auct. amer. p. p. = *Odontoschisma prostratum*  
*Oxymitra paleacea* Bisch. = *Oxymitra incrassata*  
*Pellia borealis* Lorbeer = *Pellia epiphylla*  
*Pellia fabbroniana* Raddi = *Pellia endiviifolia*  
*Plagiochila japonica* subsp. *ciliigera* Schust. = *Plagiochila acanthophylla* subsp. *ciliigera* (Schust.) Schust.  
*Plectocolea crenuliformis* (Aust.) Mitt. = *Jungermannia crenuliformis*  
*Plectocolea hyalina* (Lyell) Mitt. = *Jungermannia hyalina*  
*Porella wataugensis* (Sull.) Underw. = *Porella pinnata*  
*Radula andicola* Steph. = *Radula mollis*  
*Radula hallii* Aust. = *Radula complanata*  
*Riccardia pinguis* (L.) S. Gray = *Aneura pinguis*  
*Riccardia sinuata* (Dicks.) Trev. = *R. chamedryfolia*  
*Riccia arvensis* Aust. = *Riccia bifurca*  
*Riccia duplex* Lorbeer = *Riccia canaliculata*  
*Riccia sullivantii* Aust. = *Riccia huebeneriana* subsp. *sullivantii*  
*Solenostoma crenuliformis* (Aust.) Steph. = *Jungermannia crenuliformis*  
*Solenostoma hyalinum* (Lyell) Mitt. = *Jungermannia hyalina*  
*Solenostoma ontariensis* Schust. = *Jungermannia hyalina*  
*Solenostoma pumilum* (With.) K. Müll. = *Jungermannia pumila*  
*Solenostoma pumilum* subsp. *anomalum* Schust. et Damsh. = *Jungermannia pumila*  
*Sphaerocarpus terrestris* Bisch = *Sphaerocarpus texanus*

## LITERATURE CITED

- Redfearn, P. L., Jr. 1983. Mosses of the Interior Highlands of North America. 2<sup>nd</sup> Printing. Annals of the Missouri Botanical Garden 59: 1-104.
- McGregor, R. L. 1955. Taxonomy and Ecology of Kansas Hepaticae. The University of Kansas Science Bulletin 37: 55-141.

## ADDITIONAL LITERATURE ON THE LIVERWORTS AND HORNWORTS OF THE INTERIOR HIGHLANDS OF NORTH AMERICA

- Atwood, J. J. *Lophozia incisa* new to Missouri and the Interior Highlands. *Evansia* 28: 72-73.
- Branner, J. C. & F. V. Coville. 1891. A list of plants of Arkansas. Annual Report of 1888. Ark. Geol. Surv. 4: 155-242.
- Bird, C. D. 1960. Bryophytes of Oklahoma. Privately published by the author.
- Braun, E. L. 1950. Deciduous forest of Eastern North America. The Blakiston Co., Philadelphia.
- Conard, H. S. 1946. The foray of 1946-St. Louis, MO. *The Bryologist* 49: 96-98.
- Coulter, S. M. 1904. An ecological comparison of some typical swamp areas. 15<sup>th</sup> Ann. Rep. Missouri Bot. Gard. 38-40.
- Darigo, C. E. 1998. Bryophytes from states of Arkansas, Missouri, Oklahoma and the Interior Highlands of North America, *Fontinalis sphagnifolia*, *Fontinalis welchiana*, and *Weissia sharpie* new to Oklahoma, and other new county records.
- \_\_\_\_\_. 1999. Bryophyte records from Arkansas, Missouri, and Oklahoma. *Evansia* 16: 61-67.
- \_\_\_\_\_. 2000. Bryophytes from states of Illinois, Missouri, and Oklahoma: new county records. *Evansia* 17: 56-60.
- \_\_\_\_\_. 2001. Bryophytes of the Interior Highlands of North America: *Ephemerum serratum* and *Phaeoceros oreganus* new to the Interior Highlands and Missouri, *Grimmia longirostris* new to Oklahoma, plus other county records. *Evansia*: 18: 53-57.
- \_\_\_\_\_. 2002. Bryophytes of the Interior Highlands of North America: New Missouri and Illinois county records. *Evansia* 19: 162-167.
- \_\_\_\_\_. 2004. *Aneura maxima* (Hepaticae: Aneuraceae) and *Marchantia aquatica* Hepaticae: Marchantiaceae) New to Missouri and Interior Highlands of North America.
- \_\_\_\_\_. 2004a. Bryophytes of the Interior Highlands of North America: new Arkansas, Missouri And Oklahoma county records and key for *Schistidium* in Missouri.
- \_\_\_\_\_. 2008. *Acaulon muticum* var. *muticum* (Musci: Pottiaceae) new to Missouri and new Missouri liverwort and hornwort county records.
- Drew, W. B. 1940. Studies on the bryophytes of Missouri I. Boone County. *The Bryologist* 43: 4-12.

- Ellison, M. L. 1963. Some additions to the hepatics of Missouri. *The Bryologist* 65: 285-286.
- Engel, J. J. and R. M. Schuster. 1984. An overview and evaluation of the genera of Geocalycaceae subfamily Lophocoleoideae (Hepaticae). *Nova Hedwigia* 39: 385-463.
- Evans, A. W. 1920. The North American species of *Asterella*. *Contr. U. S. Nat. Herb.* 20: 247-312.
- Frye, T. C. & L. Clark. 1937-1947. Hepaticae of North America. *Univ. Wash. Publ. Biol.* 6: 1-162; 925-1018.
- Fulford, M. 1936. The genus *Bazzania* in the United States. *Amer. Mid. Nat.* 17: 385-424.
- Gier, L. J. 1955. Missouri bryophytes. *Trans. Kansas Acad. Sci.* 58: 24-49.
- Hague, S. M. 1937. Illinois liverworts. *Trans. Ill. Acad. Sci.* 30: 118-124.
- Hässel, De Menéndez, G. G. 1989. Las Especies de Phaeoceros (Anthocerotophyta) de América del Norte, Sud y Central: la ornamentación de sus exporas y taxonomía. *Candollea* 44: 715-739.
- Hatcher, R. E. 1952. Some bryophytes of southern Illinois. *The Bryologist* 55: 223-227.
- He, S., B. Allen & P. L. Redfearn, Jr. 1986. New records for bryophytes of the Interior Highlands of North America. *Evansia*: 3: 31-32.
- Jacobs, D. L. 1951. Ricciaceae of Arkansas. *The Bryologist* 51: 274-278.
- Lesquereux, L. 1860. Botanical and paleontological report on the geological survey of Arkansas. *Geol. Survey of Arkansas* 2: 295-399.
- Little, E. L. 1936. The bryophytes of Muskogee County, Oklahoma. *The Bryologist* 39: 8-16.
- Little, E. L. 1936a. The liverworts of Oklahoma. *The Bryologist* 39: 25-34.
- Majestyk, P. 2001. Bryophyte records for Arkansas. *Evansia* 18: 27-30.
- Majestyk, P. 2002. Bryophyte records for Arkansas III. *Evansia* 19: 74-77.
- McGregor, R. L. 1960. A new species of Riccia from the Ozarks. *The Bryologist* 63: 30-31.
- Moore, J.E. and E. B. Wittlake. 1983. Systematic checklist of the Arkansas hornworts and Liverworts. Unpublished Checklist, University of Central Arkansas.

Proskauer, J. 1962. Notes on the Hepaticae. IV. On *Pellia endiviaefolia* and the current state of the genus *Pellia*. *The Bryologist* 65: 213-321.

Redfearn, P. L., Jr. 1960. Bryophytes of Southwest Missouri. III. Additions to the flora. *The Bryologist* 63: 110-111.

\_\_\_\_\_. 1961. Bryophytes of Southwest Missouri IV. Additions to the flora. *The Bryologist* 64: 266-267.

\_\_\_\_\_. 1962. Bryophytes of Southwest Missouri VI-VII. *The Bryologist* 65: 63-65.

\_\_\_\_\_. 1963. Bryophytes of Southwest Missouri VIII. Additions to the flora. *The Bryologist* 66: 27.

\_\_\_\_\_. 1964. Bryophytes of Arkansas I. Species of "Lost Valley" and adjacent regions. *The Bryologist* 67: 196-201.

\_\_\_\_\_. 1964a. Bryophytes of Missouri IX. Additions to the flora. *The Bryologist* 67: 201-203.

\_\_\_\_\_. 1966. Bryophytes from the Interior Highlands of North America XI. Additions to the Flora. *The Bryologist* 69: 504-508.

\_\_\_\_\_. 1968. Bryophytes from the Interior Highlands XIII. Additions to the flora. *The Bryologist* 71: 356-357.

\_\_\_\_\_. 1970. Bryophytes of the Interior Highlands XV. Additions to the flora. *The Bryologist* 73: 716-717.

\_\_\_\_\_. 1979. Bryophytes of the Interior Highlands of North America XVI. Species of the Ozark National Forest, Sylamore Division, and adjacent areas in Stone County, Arkansas. *The Bryologist* 82: 483-486.

\_\_\_\_\_. 1981. Bryophytes in springs and spring branches of Missouri. *Trans. Missouri Acad. Sci.* 15: 5-19.

Schuette, S. & E. Johnson. 2010. *Sphaerocarpos michelii* Bellardi (Sphaerocarpaceae) new In Illinois. *Evansia* 27: 35-35.

Schuster, R. M. 1969. The Hepaticae and Anthocerotae of North America. Vol. II. Columbia University Press, N. Y.

\_\_\_\_\_. 1974. The Hepaticae and Anthocerotae of North America. Vol. III. Columbia University Press, N.Y.

- \_\_\_\_\_. 1980. The Hepaticae and Anthocerotae of North America. Vol. IV. Columbia University Press, N.Y.
- \_\_\_\_\_. 1992. The Hepaticae and Anthocerotae of North America. Vols. V & VI. Field Museum of Natural History, Chicago.
- Sharp, A. J. 1929. Bryophytes of eastern Oklahoma. Proc. Okla. Acad. Sci. 6: 35-38.
- \_\_\_\_\_. 1930. Bryophytes of Southeastern Oklahoma I. A preliminary list with notes. The Bryologist 33: 45-55.
- Skorepa, A. C. 1968. Liverworts from southern Illinois. The Bryologist 84: 365-367.
- Smith, T. E. 2001. Highlights of Missouri field botany (1999-2000). Missouriensis 22: 16-21.
- \_\_\_\_\_. & Timme, S.L. *Oxymitra incrassata* (Brot.) Sergio & Sim-Sim (Oxymitraceae) New to Missouri.
- Stotler, R. E. and D. H. Vitt. 1975. Additions to the hepatic flora of the Pickle Springs area of southeastern Missouri. The Bryologist 72: 176-178.
- \_\_\_\_\_. and Crandall-Stotler. 1977. A checklist of the liverworts and hornworts of North America. The Bryologist 80: 405-428.
- Thomas, P. E. 1974. Hepaticae of the Interior Highlands of North America. Unpublished MS Thesis, Southwest Missouri State University, Springfield.
- \_\_\_\_\_. & P. L. Redfearn, Jr. 1976. Bryophytes of the Interior Highlands XVI. New distributional records for Arkansas and Missouri. The Bryologist 79: 100-101.
- Thomson, J. W. 1960. The 1960 foray of the American Bryological Society in Oklahoma. The Bryologist 64: 252-255.
- Thompson, R. H. 1948. *Sphaerocarpos michelii* Bellardi in the United States. The Bryologist 64: 252-255.
- Timme, S. L. 1987. Distribution of bryophytes in selected western Missouri and western Arkansas prairies. Pgs. 61-64. In G. Clamby (ed.). Proc. Of the Ninth North American Prairie Conference, Tri-City Colleges, Moorhead, MN.
- \_\_\_\_\_. 1991. Hepatics collected at the Eighth Midwest Bryological & Lichenological Foray. Evansia 8: 48-50.

- \_\_\_\_\_. & P. L. Redfearn, Jr. 1997. Checklist of the liverworts and hornworts of the Interior Highlands of North America in Arkansas, Illinois, Missouri and Oklahoma. *Evansia* 14: 89-105.
- Underwood, L. M. 1894. Notes on our Hepaticae-II. The genus *Riccia*. *Bot. Gaz.* 19: 273-278.
- \_\_\_\_\_. 1895. Notes on our Hepaticae-III. The distribution of North American Marchantiaceae. *Bot. Gaz.* 20: 59-71.
- Vitt, D. H. 1967. The Hepaticae of the Pickle Springs area, southeastern Missouri. *The Bryologist* 70: 440.
- \_\_\_\_\_. & D. G. Horton. 1990. Rich fen bryophytes in Missouri: Ecological comments and three state records. *The Bryologist* 93: 62-65.
- Wickman, M. M. 1922. Identification of *Anthoceros* in the Oklahoma cryptogamic flora. *Proc. Okla. Acad. Sci.* 2: 19-20.
- Wittlake, E. B. 1950. Preliminary report on Arkansas bryophytes. *Proc. Arkansas Acad. Sci.* 3: 35-37.
- \_\_\_\_\_. 1950a. The bryophytes of Spy Rock Hollow. *Proc. Arkansas Acad. Sci.* 3: 39-40.
- \_\_\_\_\_. 1951. Preliminary report on the Hepaticae of Arkansas. *Proc. Arkansas Acad. Sci.* 4: 65-68.
- \_\_\_\_\_. 1954. The Hepaticae of Arkansas I. *The Bryologist* 57: 7-18.
- \_\_\_\_\_. 1955. *Riccia canaliculata* Hoff. In Arkansas. *Amer. Midl. Nat.* 54: 250-252.
- Wolf, J. and E. Hall. 1878. A list of mosses, liverworts and lichens of Illinois. *Bull. Ill. St. Lab. Nat. Hist.* 1: 1-63.