

## SEVEN NEW STATE RECORDS AND FOUR COUNTY RECORDS FOR THE ARKANSAS FERN FLORA

**JAMES H. PECK**

P.O. Box 705  
Cedar Key, Florida 32625  
james.peckck@gmail.com

**BRETT E. SERVISS**

Department of Biological Sciences  
Henderson State University  
Arkadelphia, Arkansas 71999  
servisb@hsu.edu

### ABSTRACT

Seven pteridophyte taxa are reported for the first time as naturalized members of the Arkansas flora: *Arachniodes adiantiformis*, *Asplenium daucifolium*, *Pteris ensiformis* var. *ensiformis*, *Pteris ensiformis* cv. 'evergemiensis', *Selaginella erythropus* var. *erythropus*, *Selaginella erythropus* cv. 'sanguinea', and *Selaginella ludoviciana*. Significant county records are reported for four pteridophyte taxa: *Equisetum arvense*, *Nephrolepis exaltata*, *Psilotum nudum*, and *Salvinia molesta*.

The Arkansas fern flora previously was reported as comprising 123 taxa (species, infraspecific taxa, and hybrids), including 98 native and 25 naturalized taxa (Peck 2011a; Peck 2011b). One additional fern species, *Pellaea wrightiana* (Wright's Cliff-brake), was reported as new to Arkansas in 2013 (Witsell 2013). *Pellaea wrightiana* is native to the western USA and ranges from Arizona, southwestern Utah, and Colorado eastward to west Oklahoma and west Texas, but with long-range disjunctive populations farther east in North Carolina, South Carolina, and Virginia. The Arkansas occurrence of *P. wrightiana* is an isolated and disjunct population in novaculite glades in the Jack Mountains south of Hot Springs (Witsell 2013).

The large number of fern escapes from cultivation documented in Arkansas reflects a state-wide interest in the garden cultivation of native and non-native hardy ferns (Crank & Peck 2011). The present report documents continued efforts to locate and record fern escapes in the vicinity of the cities of Little Rock (Pulaski County) and Hot Springs (Garland County).

Seven more taxa are documented here as occurring in Arkansas. Thus, a total of 131 taxa are now known to comprise the Arkansas fern flora, with 100 native and 31 non-native taxa. Pulaski County, in the center of the state, has a known fern flora of 73 taxa, second greatest in Arkansas behind the 82 from Garland County.

### New state records

***Arachniodes adiantiformis*** (G. Forest) Tindale (Leather Fern, Florist Fern), Dryopteridaceae.

Introduced to USA, native to and widespread in the Australia, South Africa, and New Zealand (Jones 1987) and extensively cultivated in Florida; escaped from cultivation in Arkansas. This species also is known as *Rumohria adiantiformis* (G. Forest) Ching in the horticultural trade.

Voucher specimens. **Arkansas.** Pulaski Co.: Ivesville section of City of Little Rock, along a creek meander with bamboo thicket, clay soils, escaped from cultivation without an obvious source plant nearby, two large clones from spreading rhizomes, 21 Aug 2011, *Peck 2011570, 2011571* (BRIT).

**Asplenium daucifolium** Lam. (Mauritius Spleenwort, Mother Fern), Aspleniaceae.

Introduced to USA, native to Mauritius and Madagascar (Jones 1987; Bailey & Bailey 1976); an escape from cultivation in Arkansas. This species sometimes is sold in the horticultural trade under the name of *Asplenium bulbiferum* G. Forest. Two distinct, naturalized populations are reported from Arkansas.

Voucher specimens. **Arkansas.** Pulaski Co.: Ivesville section of City of Little Rock, creek meander along Arkansas 10, with bamboo thicket, clay soils, and escape from cultivation without obvious source plants nearby, two large clones, spreading by rhizomes, 13 Aug 2011, *Peck 2011540, 2011541* (BRIT); Murray City Park, along wooded bluffs overlooking Arkansas River, with normal spores of fertile species, 16 Jun 2012, *Peck 2012100* (BRIT).

**Pteris ensiformis** Burm. var. **ensiformis** (Slender Brake), Pteridaceae.

Introduced to USA, native to Asia and Australia and widespread in China, India, Japan, Malaysia, Polynesia, and Sri Lanka (Jones 1987; Bailey & Bailey 1976); escaped from cultivation in Arkansas. This species morphologically is similar in appearance to *Pteris cretica* L.

Voucher specimen. **Arkansas.** Pulaski Co.: Ivesville section of City of Little Rock, along Arkansas 10, a creek meander with bamboo thicket, clay soils, an escape from cultivation without obvious source plants nearby, two plants, 3 Aug 2011, *Peck 2011511* (BRIT).

**Pteris ensiformis** Burm. cv. '**evergemiensis**' (Silver-lace Brake), Pteridaceae.

Introduced to USA; escaped from cultivation in Arkansas. This cultivar of *P. ensiformis* morphologically is similar in appearance to *Pteris cretica* L. var. *albolineata* Hooker.

Voucher specimen. **Arkansas.** Pulaski Co.: Ivesville section of City of Little Rock, along Arkansas 10, a creek meander with bamboo thicket, clay soils, an escape from cultivation without obvious source plants nearby, two plants, 3 Aug 2011, *Peck 2011510* (BRIT).

**Selaginella erythropus** (Mart.) Spring var. **erythropus** (Red Spikemoss), Selaginellaceae.

Introduced to USA, native to tropical America (Bailey & Bailey 1976); escaped from cultivation in Arkansas.

Voucher specimen. **Arkansas.** Pulaski Co.: Ivesville section of City of Little Rock, along Arkansas 10, a creek meander with bamboo thicket, clay soils, an escape from cultivation without obvious source plants nearby, scattered plants, Sep 2011, *Peck 2011590* (BRIT).

**Selaginella erythropus** (Mart.) Spring cv. '**sanguinea**' (Ruby Red Spikemoss), Selaginellaceae.

Introduced to USA; escaped from cultivation in Arkansas.

Voucher specimen. **Arkansas.** Pulaski Co.: Ivesville section of City of Little Rock, along Arkansas 10, a creek meander with bamboo thicket, clay soils, an escape from cultivation without obvious source plants nearby, scattered plants, Sep 2011, *Peck 2011591* (BRIT).

**Selaginella ludoviciana** (A. Braun) A. Braun (Gulf Spike-moss), Selaginellaceae.

This species is native to the southeastern USA, ranging from Florida to Louisiana (Lellinger 1985).

Voucher specimen. **Arkansas.** Pulaski Co.: Moist spoils adjacent to bald cypress swamp along Arkansas River, upstream of Murray Lock and Dam, scattered plants, N side of river on clay bank with seepage moisture, 6 Jun 2011, *Peck 2012101* (BRIT).

### Significant county records

#### **Equisetum arvense** L. (Field Horsetail), Equisetaceae.

Native to and widespread over much of Canada and USA (Lellinger 1985), including Arkansas. *Equisetum arvense* previously was documented in Arkansas from several northern counties, with Hot Spring County the closest occurrence to the Pulaski County record (Gentry et al. 2013; Peck 2011a).

Voucher specimen. **Arkansas**. Pulaski Co.: Sand spoils along Arkansas River, in forested area along N side of River, above Murray Lock and Dam, scattered plants, 26 Aug 2011, *Peck 2011605* (BRIT).

#### **Nephrolepis exaltata** (L.) Schott (Sword Fern), Lomariopsidaceae, Nephrolepidaceae.

Native to the USA, specifically southern and peninsular Florida (Lellinger 1985) but escaping from cultivation in Arkansas. *Nephrolepis exaltata* previously has been documented in Arkansas only from Jefferson County (Gentry et al. 2013; Peck 2011a). The Pulaski County record is the second documented occurrence outside of cultivation.

Voucher specimen. **Arkansas**. Pulaski Co.: Sand spoils along Arkansas River in forested area on N side of river upstream from Murray Lock and Dam, floodwater debris and wrack zone, one older plant and adjacent juveniles from runners, 16 Jun 2011, *Peck 2012102* (BRIT).

#### **Psilotum nudum** (L.) P. Beauv. (Skeleton Fern, Whisk Fern), Psilotaceae.

Native to southeastern USA, including Arkansas, also disjunct in Arizona (Lellinger 1985) and central and South America. Some urban plants are spread in root balls of shrubs and trees in the horticultural trade in Arkansas. *Psilotum nudum* previously was documented in Arkansas from most southern counties, with Clark County the only county in proximity to the Pulaski County record (Gentry et al. 2013; Peck 2011a).

Voucher specimen. **Arkansas**. Pulaski Co.: Moist spoils adjacent to bald cypress swamp along Arkansas River on N side of river upstream from Murray Lock and Dam, plants on bases of old stumps, 6 Jul 2011, *Peck 2012103* (BRIT).

#### **Salvinia molesta** D.S. Mitchell (Giant Water Spangles), Salviniaceae.

Introduced to USA, native to Argentina and Brazil (Jones 1987); escaping from cultivation in Arkansas and possibly spreading to southern Arkansas from naturalized populations in Louisiana and Texas. *Salvinia molesta* previously has been documented in Arkansas only from Miller and Pulaski counties (Peck 2011a). This second naturalized occurrence from Pulaski County marks only the third Arkansas record.

Voucher specimen. **Arkansas**. Union Co.: Beryl Anthony Lower Ouachita WMA, in the backwater above Lock and Dam 6, 26 Sep 2012, *Peck 2012185* (BRIT, HEND).

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