Oklahoma Vascular Plants: Additions and Distributional Comments.

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Seven species of vascular plants are added to the flora of Oklahoma: *Dioscorea oppositifolia, Lythrum salicaria, Momordica balsamina, Polygonum cuspidatum, Pyrus calleryana, Senecio vulgaris,* and *Verbena rigida.* These species are either weedy invaders or escaped ornamentals. The re-collection of *Epilobium coloratum,* a native, and *Mazus japonicus* and *Scutellaria cardiophylla* is noted. The spread of two additional exotics, *Fatoua villosa* and *Ligustrum sinense,* is discussed.

INTRODUCTION

Botanical field work in Oklahoma is documenting an increase in the number of species of vascular plants known to occur in the state. Taylor and Taylor (*1*) cited the discovery of 312 new taxa since Waterfall's list (*2*) was published in 1969. An additional seven new species, either weedy invaders or escaped ornamentals which are becoming established as part of the state's flora, are reported here. Taylor and Taylor's reported increase of 12.3% is similar to that of other states. The Flora of North America (*3*) reported the percentage of invading foreign species for 16 states as varying from 36% (New York) to 7% (Arizona). The widespread invasion of native floras by foreign species can be expected to continue. The objectives of this report are to document the seven new species, comment on the recollection of three previously reported exotics, including one collected once almost 60 years ago and thought to no longer exist in the state, and the spread of two non-native taxa.

HERBARIA

In the listing below, the Herbarium at a particular institution is indicated as follows:

DUR	Southeastern Oklahoma State University, Durant.
OCLA	University of Science and Arts of Oklahoma, Chickasha.
OKL	University of Oklahoma, Norman.
OKLA	Oklahoma State University, Stillwater.
TUL	University of Tulsa, Tulsa.

NEW SPECIES

Dioscorea oppositifolia L. (*Dioscoria batatas* Decne.) Chinese Yam (Dioscoriaceae) Chinese yam is an herbaceous, perennial, twining vine, planted as an ornamental, escaping into fence rows, waste places, thickets and woods in the state. A native of Asia, it has been reported in Kansas (*4*).

McCurtain County: Mountain Fork River, 8.4 miles northeast of Smithville, 20 August 1981, Magrath, 12033 (OCLA); 20 August 1995, Magrath, Lavallee and Woods, 19219 (OCLA)
Grady County: 821 S. 17th St., Chickasha, 16 August 1995, Magrath and Couch, 19200 (OCLA)
Cherokee County: 7 miles east of Peggs, Lucky School site, 30 September 1995, Magrath, Buck, Norman, Macklin, Taylor, et al., 19267 (OCLA)

Lythrum salicaria L. Spiked or Purple Loosestrife (Lythraceae). An herbaceous perennial introduced from Europe (*5*) it is escaping and becoming established in wet meadows, marshes, river floodplains and along the edges of lakes and rivers. The species is aggressive and is choking out native vegetation. A morphologically complex taxon, *Lythrum salicaria* is divided into numerous minor forms.

Oklahoma County: May Ave. overpass south of I-240, Oklahoma City, 6 July 1993, Folley, 947 (OKL)

Other: The species has been reported, although not documented in Norman, Cleveland County, by Folley and at the Oxley Nature Center, Tulsa County, by Buck.

Momordica balsamina L. Balsam-apple (Cucurbitaceae). Balsam-apple is an herbaceous, annual, vine that climbs via tendrils. Native to Africa and Asia (*6*), it was introduced into the western hemisphere as an ornamental and for its edible fruits. Correll and Johnston (*7*) reported that it had escaped and become part of the flora of Texas and Louisiana.

Garvin County: Table Top Mountains, 20 miles south of Pauls Valley, 23 October 1987, Collector; Phil Bowers, recorded as Magrath, 17265 (OCLA)

Polygonum cuspidatum Seib. and Zucc. Japanese Knotweed (Polygonaceae). Japanese knotweed is a rhizomatous, herbaceous perennial native to Japan (*5*). Initially introduced as an ornamental, it has escaped into neglected sites and waste places across much of North America. Bailey (*6*) indicated the species is hardy in northern states.

Cherokee County: 7 miles east of Peggs, Lucky School site, 30 September 1995, Magrath, Taylor, Buck, Norman, Macklin, et al., 19265 (OCLA); Buck, 6352 (TUL)

Pyrus calleryana Decne. Callery Pear, Bradford Pear (Rosaceae). Bradford pear is probably the most popular woody landscaping plant in Oklahoma in recent years. It is Chinese in origin (*6*) and of significant value to the horticultural industry. *Pyrus* is a polymorphic genus with identification of its species made troublesome by widespread hybridization and grafting. A population at an abandoned nursery near Durant is invading adjacent grasslands and roadsides. This suggests that the species is becoming independently established in the state.

Bryan County: U.S. Highway 70 near Kiamichi railroad crossing, west edge of Durant, 17 October 1995, Taylor, 36274, (DUR); U.S. Highway 70. 3.3 miles west of Durant, 17 October 1995, Taylor, 36275 (DUR)

Senecio vulgaris L. Groundsel (Asteraceae). *Senecio vulgaris* is an herbaceous annual and native to Eurasia (*4*). It has become naturalized over much of the U.S., primarily in well-watered, rich soils of roadsides, fields, and waste places (*8*).

Grady County: USAO campus, Chickasha, 16 April 1993, Magrath, 18924 (OCLA)

Oklahoma County: Goodman's Nursery, 1 mile west I-35 on Britton Road, Oklahoma City, 18 May 1993, Magrath and Shafer, 18950 (OCLA)

Tulsa County: Woodward Park, Tulsa, 7 May 1995, Magrath, Prince and Archer, 19110 (OCLA)

Comanche County: Adventive in flower beds, Victory and Liberty Avenues, Lawton, 15 October 1995, Magrath, 19286 (OCLA)

Verbena rigida. Spreng. Tuber Vervain (Verbenaceae). Tuber vervain is an herbaceous perennial native to Brazil and Paraguay. Reported as an adventive member of the east Texas flora by Correll and Johnston (*7*), it has now been collected in Oklahoma.

Choctaw County: North side Hugo Lake, May 1994, Carpenter, S.N. (DUR)

Re-collected Species

Epilobium coloratum Biehler Willow-herb (Onagraceae). In Oklahoma, *Epilobium coloratum* is near the western edge of its range. Waterfall (*2*) stated that it was "...found once in Caddo Canyons" and based his comment on a 1938 collection by E.L. Little, Jr., 3996 (OKL) (*9*). The species is said to be infrequent to locally common (*4*) within its range and any documentation of its presence in Oklahoma is of interest.

Cleveland County: Swamp, 15100 Etowah Road, 2 October 1993, Folley, 1105 (OKL)

Mazus japonicus Kuntze (Scrophulariaceae). Magrath and Taylor (*10*) first reported this Australasian exotic in Oklahoma from a 1978 collection in Idabel, McCurtain County. Recent re-collection of the species indicates it is spreading and becoming established.

Tulsa County: 1331 E. 61 St., Tulsa, 1 May 1993, Tesmer, S.N. (TUL); 1623 S. Delaware Pl., Tulsa, 8 May 1995, Buck,

Scutellaria cardiophylla Engelm. and Gray Heartleaf Skullcap (Lamiaceae). Correll and Johnston (*7*) reported this species in east Texas, Arkansas and western Louisiana. Its only other mention in regional floras is in Smith's treatment of the plants of Arkansas (*11*), but without any distribution information.

Grady County: One block west U.S. Highway 81 on Country Club Road, Chickasha, 29 October 1994, Magrath, 19087 (OCLA)

Atoka County: The Nature Conservancy site at Boehler Seeps and Sandhills, 4 August 1995, Carpenter, S.N. (OKL)

Spreading Exotics

Fatuoa villosa (Thunb.) Nakai (Moraceae). This species was initially reported in McCurtain County by Taylor and Taylor in 1981 (*12*). *Fatoua* is found as a weed under greenhouse benches in eastern Oklahoma and has been collected in Bryan and Tulsa Counties. It has become a nuisance and reportedly is controlled with herbicides.

Grady County: 416 S. 13th St., Chickasha, 20 October 1986, Magrath, 16787 (OCLA); USAO Campus, Chickasha, 26 September 1995, Magrath and Couch, 19226 (OCLA)

Muskogee County: Muskogee, 2 October 1987, Magrath and Norman, 17213 (OCLA)

Oklahoma County: Will Rogers Garden Center, Oklahoma City, 11 October 1987, Magrath and Bowers, 17268 (OCLA)

Bryan County: Rhodes Greenhouse, 3 miles east of Durant, 10 December 1993, Taylor, 36151 (DUR)

Tulsa County: Stringer Nursery, 7203 E. 41 St., Tulsa, 24 April 1995, Buck 3262 (TUL); Juniper Hill Greenhouse, 9740 E. 121 St., 5 March 1996, Buck, 6363 (TUL); Tulsa Greenhouse, 2740 E. 21 St., Tulsa, 19 March 1996, Buck, 6364 (TUL).

Ligustrum sinense, Lour. Privet Hedge, Chinese Privet (Oleaceae). This species, a woody shrub native to China, is now a widespread and popular ornamental hedge plant in the U.S. (*7*). It persists along fence rows, abandoned home sites and waste places. It also has spread into moist forests and is apparently becoming an important member of the understory vegetation. Because it is evergreen, its presence is evident in mild winters.

Bryan County: Between Chuckwa Creek and Southeastern Oklahoma State University campus, Durant, 18 July 1972, Miller, 103 (DUR)

Atoka County: 4.75 miles north of Farris, 29 May 1979, J. Taylor, 27543 (DUR)

McCurtain County: Mitchell Forest, Oklahoma Forest Division, 2 miles north of Broken Bow, 31 October 1980, Little, 36373 (TUL); 19 November 1981, Little, 37201 (DUR).

Cherokee County: Sequoyah State Park, 6 miles west of Hulbert, 26 April 1981, Little, 36650 (DUR)

Caddo County: Red Rock State Park, one mile south of Hinton, 30 April 1983, Little, 37773 (TUL); Fort Cobb State Park, five miles north of Fort Cobb, 8 May 1983, Little, 37928 (TUL)

Choctaw County: Salt Creek, Hugo Lake, 31 October 1992, B. Carpenter, 19 (DUR)

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