

New and Interesting Plant Records for the Central United States

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ABSTRACT. — Forty-three vascular plant species are newly reported for Kansas (36 species), Missouri (2), Nebraska (1), Oklahoma (1) and South Dakota (3). Reported new for Kansas are *Acer ginnala*, *A. platanoides*, *Adiantum capillus-veneris*, *Buddleja davidii*, *Carduus pycnocephalus* subsp. *pycnocephalus*, *Carex tetanica*, *C. tetrastachya*, *Cuphea carthagenensis*, *Cyclospermum leptophyllum*, *Cyperus flavescens*, *C. iria*, *C. retrorsus*, *Eleocharis cylindrica*, *Eriogonum flavum* var. *flavum*, *Erysimum cheiranthoides*, *Euonymus europaeus*, *Filipendula rubra*, *Heterotheca camporum* var. *glandulissimum*, *Hydrilla verticillata*, *Lysimachia clethroides*, *Mentzelia reverchonii*, *Neptunia lutea*, *Paulownia tomentosa*, *Pinus nigra*, *Pistacia chinensis*, *Prunus tomentosa*, *Quercus acutissima*, *Q. robur*, *Saccharum ravennae*, *Schoenoplectiella mucronata*, *Steinchisma hians*, *Styphnolobium japonicum*, *Tarenaya hassleriana*, *Torilis nodosa*, *Verbena bonariensis*, and *V. brasiliensis*; reported new for Missouri are *Penstemon calycosus* and *Phyllanthus urinaria* subsp. *urinaria*; reported new for Nebraska is *Celastrus orbiculatus*; reported new for Oklahoma is *Cerastium dubium*; and reported new for South Dakota are *Desmodium canescens*, *Eleocharis geniculata*, and *Helianthus hirsutus*. *Carex crawei* and *Mertensia virginica*, previously known in Kansas only from nineteenth century collections, are both reconfirmed for the state. New reports include 11 species considered native to the state in which they were discovered, and 32 non-natives. Recent additions to the flora of Kansas have included nearly twice as many exotic taxa as natives, with ornamental plants making up approximately half of the introduced species.

INTRODUCTION

Fieldwork and general collecting in the central United States since 2004 has yielded 43 species of vascular plants new for Kansas (36 records), Missouri (2 records), Nebraska (1 record), Oklahoma (1 record), and South Dakota (3 records). Species newly reported here include 11 species native to the state from which they are reported, and 32 non-natives (indicated by an asterisk). Two native species are reconfirmed for Kansas for the first time since they were originally collected in the state. Together, these records are enumerated below. Most specimens were collected as a part of continuing floristic studies of the Great Plains and the Midwest by the staff of the R.L. McGregor Herbarium, University of Kansas. In some instances, we report new occurrences documented by private collectors who have brought their discoveries to our attention. The primary set of voucher specimens is deposited in the R.L. McGregor Herbarium (KANU), University of Kansas, with a few duplicates deposited elsewhere as indicated.

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Including this report, recent publications of new records for Kansas have yielded 105 exotics and 67 native species (Barnard 2006; Freeman et al. 1998, 2003; Singhurst & Holmes 1998, 2005, 2017; Freeman 2000; Morse et al. 2007; Snow 2017, 2018; Singhurst et al. 2018; Haddock & Freeman 2019; Pryer et al. 2019). As the discovery of non-native species continues to outstrip native species, the percent of introduced taxa in the Kansas flora is now approaching 23%. About half of all exotics reported new for Kansas here and in earlier publications are species commonly cultivated for their ornamental value. Included among these are several species that have become invasive in the state, spreading rapidly into new sites; these include *Berberis thunbergii* DC., *Celastrus orbiculatus*, *Elaeagnus umbellata* Thunb., *Euonymus fortunei* (Turcz.) Hand.-Mazz., *E. alatus* (Thunb.) Siebold, *Ligustrum obtusifolium* Siebold & Zucc., and *Pyrus calleryana* Decne. (Freeman et al. 1998, 2003; Morse et al. 2007; Haddock & Freeman 2019; Pryer et al. 2019). Some other species included in previous reports were considered adventive in the state and have not been recollected since their initial discovery. Following the classification system proposed by Nesom (2000), these would be waifs. Fourteen non-native species presented here are also likely to be waifs (13 for Kansas, 1 for Missouri). Pending further field studies to assess their persistence in the flora, they are marked “(W)”.

SPECIES ACCOUNTS

**Acer ginnala* Maxim. (Sapindaceae). Amur maple, native to eastern Asia, is a widely cultivated ornamental shrub or small tree (Rehder 1927, Dirr 1998). It has been documented outside of cultivation at scattered localities in the eastern U.S. and southeastern Canada (Eilers & Roosa 1994, Rhoads & Block 2005, Weakley 2015, Wilhelm & Rericha 2017, USDA, NRCS 2019), including sporadic occurrences in eastern Missouri and Nebraska (Yatskievych 2006, Kaul et al. 2011). Haddock and Freeman (2019) reported the species from Kansas but did not cite vouchers. Here we provide voucher information for amur maple, which has been found at multiple localities in urban woodlots and wetlands.

Voucher specimens: U.S.A. KANSAS: DOUGLAS CO.: Lawrence, University of Kansas Main Campus, behind Grace Pearson Scholarship Hall, 7 Apr 2006, *C.A. Morse 12670*; 2.5 mi S, 3.25 mi W of jct. of US Hwy 59 and US Hwy 40 in Lawrence, along gravel road just E parking area for City of Lawrence off-leash dog area, 38.93°N, 95.329°W, 10 Oct 2008, *C.A. Morse 18068*; Lawrence, University of Kansas Campus West, just NW of intersection of Irving Hill Rd & Crestline Dr, 38.95°N, 95.27°W, 29 Jun 2008. *C.A. Morse 17510*; SE side of Lawrence, Lawrence Prairie Park, 38.93°N, 95.22°W, 9 Oct 2012, *C.A. Morse 23795 & H.S. Morse*; 16 May 2014, *C.A. Morse 24162*; Lawrence, University of Kansas Campus West, just SW of Bridwell Laboratory, 38.95°N, 95.26°W, 10 May 2013, *C.A. Morse 23914*; Lawrence, along Santa Fe RR right of way, just N of Lawrence City Hall and just E of N-bound bridge over Kansas River, 38.97°N, 95.23°W, 12 Apr 2019, *C.A. Morse 26666*. SHAWNEE CO.: Topeka, Warren Nature Area, W end

of wetland, 39.02°N, 95.72°W, 24 May 2011, *J. Hansen 402*; *J. Hansen 403*; 15 Apr 2012, *J. Hansen 463*.

**Acer platanoides* L. (Sapindaceae). Norway maple, native to Europe, has long been a popular shade tree in North America (Rehder 1927, Dirr 1998). There are numerous records of wild-collected plants from the northeastern and northwestern U.S. (Gleason & Cronquist 1991, Rhoads & Block 2005, Lesica 2012, Weakley 2015, Wilhelm & Rericha 2017), and southeastern and western Canada (Scoggan 1978, USDA, NRCS 2019). The species is considered invasive in eastern North America (Webster et al. 2006), but apparently no records exist from the central region of either the U.S. or Canada (see Yatskievych 2006; USDA, NRCS 2019). Haddock and Freeman (2019) reported Norway maple from Kansas but did not cite vouchers. Here we provide voucher information for the species, which has been found in woodlots and weedy, wooded ravines in urban areas. Norway maple is expected in other urban areas in the state.

Voucher specimens: U.S.A. KANSAS: DOUGLAS CO.: Lawrence, E side of University of Kansas Main Campus, weedy woodlots between Battenfeld Scholarship Hall & Lilac Ln on S side of 12 St, just E intersection with Oread Ave, 38.96°N, 95.24°W, 17 Apr 2006, *C.A. Morse 12674*; Lawrence, just SE of intersection of 10th and Indiana streets, weedy woodlot on steep slope along N side of Gertrude Sellars Pearson Residence Hall, 38.96°N, 95.24°W, 10 Aug 2007, *C.A. Morse s.n.*; 24 Apr 2008, *C.A. Morse 16394*; 7 Jun 2008, *C.A. Morse 16394b*; Lawrence, just NE of the Phi Gamma Delta fraternity, along footpath to Kappa Gamma sorority parking lot, 38.96°N, 95.24°W, 9 May 2013, *C.A. Morse 23912*; SE side of Baldwin City, just NE of Oakwood Cemetery, along W side of 3rd St, 38.77°N, 95.18°W, 15 Sep 2016, *C.A. Morse 25212 & L.F. Morse*; Lawrence, along Santa Fe RR right of way, just N of Lawrence City Hall and just E of N-bound bridge over Kansas River, 38.97°N, 95.23°W, 12 Apr 2019, *C.A. Morse 26665*.

Adiantum capillus-veneris L. (Pteridaceae). Common maidenhair fern is scattered throughout much of the southern U.S., mostly outside the Great Plains except for a disjunct population in the Black Hills of South Dakota (Great Plains Flora Association 1977, Brooks 1991). It is relatively widespread in the Ozarks in northern Arkansas, south-central Missouri, and eastern Oklahoma (Paris 1993). A small but thriving population was discovered in the northern Flint Hills of Kansas nearly 300 km north of the nearest known station in Oklahoma.

Voucher specimen: U.S.A. KANSAS: RILEY CO.: Konza Prairie Biological Station, Watershed K2A, rocky spring/seep area below limestone outcrop running into Kings Creek, 39°06.036'N, 96°34.427'W, 22 Jul 2013, *E. Allen, E.G. Towne, & D. Sumerour s.n.* (duplicate at KSC).

**Buddleja davidii* Franch. (Scrophulariaceae). Native to China, orange-eye butterfly bush is widely cultivated in the U.S. and has been reported as escaping from cultivation and occasionally

naturalized throughout the eastern U.S. (Rhoads & Block 2007, Tucker 2000, Yatskievych 2013, Weakley 2015) as well as along the west coast, and British Columbia and Ontario in Canada (Tallent-Halsell & Watt 2009). Orange-eye butterfly bush is considered invasive in some western states (Tallent-Halsell & Watt 2009). It was discovered in Kansas on the Johnson County Community College campus, presumably spreading by seed from cultivated plants. (W)

Voucher specimen: U.S.A. KANSAS: JOHNSON CO.: Overland Park, Johnson County Community College Campus, on N side of General Education Building, near loading dock, 38.92°N, 94.73°W, 29 Sep 2018, *K.J. Morse s.n.*

Carduus pycnocephalus* L. **subsp. pycnocephalus (Asteraceae). Italian thistle is an annual introduced from Europe. It has been reported from roughly a dozen states in the U.S. and is a range pest in much of California (Keil 2006). Italian thistle is reported in Kansas from a small population discovered in the southeast part of the state. (W)

Voucher specimen: U.S.A. KANSAS: MONTGOMERY CO.: ca 2 mi N Dearing, on downstream slope of older dam, 37.09°N, 95.71°W, 19 May 2014, *B. Racy s.n.*

Carex crawei Dewey (Cyperaceae). Crawe's sedge is broadly distributed across southern Canada and the northern U.S., although the species is reported to be uncommon throughout much of its range (Cochrane & Naczi 2002). The species was collected in Kansas by B.B. Smyth in 1897 (Hermann 1936, C.C. Freeman unpublished), but vouchers of Crawe's sedge reported by McGregor (1977) have been redetermined as other species. A recent series of collections from seeps in a tallgrass prairie hay meadow in northeast Kansas reconfirms the presence of this species in the state.

Voucher specimens: U.S.A. KANSAS: ATCHISON CO.: 2 mi E, 1 mi S Arrington, Chautauqua Rd and 222 Rd, 39°27'9.6"N, 95°29'48.0"W, 11 May 2017, *J. Hansen 756*; 14 May 2017, *J. Hansen 759*; 7 Jun 2017, *J. Hansen 777*.

Carex tetanica Schkuhr (Cyperaceae). Rigid sedge occurs widely throughout the northeastern and north-central U.S. and south-central Canada (Rothrock & Reznicek 2002). In the Great Plains, it occurs from southern Nebraska northward into the Canadian prairie provinces (Kaul et al. 2011, Rothrock & Reznicek 2002), where it is usually found in prairie swales and calcareous seeps and fens. The species was documented for the first time in northeast Kansas in a series of small, graminoid-dominated seeps.

Voucher specimen: U.S.A. KANSAS: JACKSON CO.: 4 mi N, 1.5 mi E of jct. of US Hwy 75 & KS Hwy 16 in Holton, 39.52°N, 95.72°W, 27 May 2014, *C.A. Morse 24166* & *F.J. Norman*.

Carex tetrastachya Britton (Cyperaceae). Britton's sedge has been documented from Louisiana, Oklahoma, and Texas (Mastrogiuseppe et al. 2002). A population of scattered plants discovered in a weedy, periodically inundated wetland complex along a floodway in south-central Kansas extends the range of the species approximately 80 km northward.

Voucher specimen: **U.S.A. KANSAS: SEDGWICK CO.:** SW side of Wichita, along E side of Wichita Valley Center Floodway, N of MacArthur Ave overpass (near "Oatville"), 37.62°N, 97.40°W, 18 Jun 2009, C.A. Morse 19176 (duplicate at MICH).

****Celastrus orbiculatus*** Thunb. (Celastraceae). Oriental bittersweet, native to Asia, has been documented from roughly 30 states and provinces in the eastern U.S. and southeastern Canada (USDA, NRCS 2019). The species is considered invasive throughout much of eastern North America (Webster et al. 2006) and is listed as noxious or invasive in seven states (USDA, NRCS 2019). It has been documented in scattered counties in Iowa (Eilers & Roosa 1994), Kansas (Haddock & Freeman 2019, Pryer et al. 2019), and Missouri (Yatskievych 2006). Kaul et al. (2011) anticipated its eventual arrival in Nebraska, which we here confirm.

Voucher specimens: **U.S.A. NEBRASKA: NEMAHA CO.:** ca 3.75 mi N, 1 mi E of Barada, Indian Cave State Park, along road just S and W of St. Deroin townsite, 40.27°N, 95.56°W, 20 Sep 2015, C.A. Morse 24835 et al. **RICHARDSON CO.:** 3 mi N, 0.25 mi E of Barada, Indian Cave State Park, tent camping area along E side of NE Hwy 64F just N of turnoff to Ash Grove and Hackberry Hollow campgrounds, 40.26°N, 95.57°W, 20 Sep 2015, C.A. Morse 24831 et al.

****Cerastium dubium*** (Bastard) Guépin (Caryophyllaceae). Doubtful chickweed is an introduced annual, native to southern Europe and Asia, that has been documented in widely scattered sites in nearly a dozen states in the U.S. since it was first collected in 1966 (Morton 2005, Turner & Davidse 2017). The only report from the Great Plains is from Labette County, Kansas (Morse et al. 2007). The first Oklahoma record of this species comes from a single population discovered in disturbed soil of a parking area, where plants were locally abundant.

Voucher specimen: **U.S.A. OKLAHOMA: KAY CO.:** Ponca City, W side of town, 101 Rodeo Arena, SW of intersection of Prospect & Ash, 36.74°N, 97.09°W, 1 May 2013, C.C. Freeman 24465.

****Cuphea carthagenensis*** (Jacq.) J.F. Macbr. (Lythraceae). Native to South America, Colombian waxweed is widely established throughout the southeast coastal plain of the U.S., as well as in Mexico and the Pacific Islands (Graham 1975). The species was first documented in the U.S. in 1923 in North Carolina; it has become increasingly common since about 1950 (Graham 1975). It was discovered in Kansas in cultivated beds on the University of Kansas campus, presumably a contaminant in bedding plants or mulch. (W)

Voucher specimen: **U.S.A. KANSAS**: DOUGLAS CO.: Lawrence, University of Kansas Main Campus, just W of plaza between Integrated Science Building and Burge Union, 38.96°N, 95.26°W, 27 Jul 2018, 26 Sep 2019, *C.A. Morse 27049*.

**Cyclosporum leptophyllum* (Pers.) Sprague *ex* Britton & P. Wilson (Apiaceae). Native to South America, marsh parsley is a widely distributed weed throughout the southern U.S. and in temperate and tropical areas worldwide (She & Watson 2005, USDA, NRCS 2019). The first Kansas record of this species comes from a population discovered in disturbed soil of a weedy planting. (W)

Voucher specimen: **U.S.A. KANSAS**: JOHNSON CO.: Overland Park, Johnson County Community College Campus, NE part of campus, 38.92°N, 94.73°W, 10 Jul 2019, *C.A. Morse 26840 & H.S. Morse*.

**Cyperus flavescens* L. (Cyperaceae). Yellow flatsedge is broadly distributed throughout the eastern U.S. and southeast Canada, and is also known from California and the West Indies, as well as South America, Africa, and Eurasia (Tucker et al. 2002). The species has been reported in previous publications on the flora of Kansas (Smyth 1898, Great Plains Flora Association 1977, McGregor 1977) based on misidentified specimens of *Cyperus bipartitus* Torr. (Kolstad 1991; C.C. Freeman unpublished data; R.F. Naczi pers. comm.). Yellow flatsedge was again reported for Kansas by Tucker et al. (2002); however, as no verified specimens appeared to exist, we conclude that this attribution was also based on erroneous early publications. A large population of *C. flavescens* was recently discovered in northeast Kansas, where it appears to have been introduced as a seed contaminant in turf grass. Although native in the U.S., the Kansas occurrence is clearly a recent introduction and the species is therefore considered non-native in the state.

Voucher specimen: **U.S.A. KANSAS**: DOUGLAS CO.: Lawrence, along S side of bike-hike trail, just W of S end of Naismith Valley Park, 38.93°N, 95.25°W, 4 Oct 2019, *C.A. Morse 27056*.

**Cyperus iria* L. (Cyperaceae). Ricefield flatsedge has been reported from a number of states in the eastern U.S. and California (Tucker et al. 2002). Native to tropical Asia, the species appears to be well established in the lower Mississippi River drainage and along the Gulf and Atlantic coasts northward to southern New England (Tucker 1987, Tucker et al. 2002). It was first discovered in Kansas growing in grass-permeable paving installed at an urban nature center, and subsequently has appeared in cultivated beds around the University of Kansas campus, growing with a variety of graminoids and weedy annuals. Where observed, the species has persisted through at least two growing seasons and spreads readily by seed.

Voucher specimens: **U.S.A. KANSAS**: DOUGLAS CO.: Lawrence, University of Kansas Main Campus, just W of plaza between Integrated Science Building and Burge Union, 38.96°N, 95.26°W, 27 Jul 2018, *C.A. Morse 26371*; 24 Sep 2018,

C.A. Morse 26371A; 26 Sep 2019, *C.A. Morse 27053*; SE side of Lawrence. Lawrence Prairie Park, 38.93°N, 95.22°W, 24 Aug 2013, *C.A. Morse 23972 et al.*; 25 Oct 2019, *C.A. Morse 23975b*; Lawrence, University of Kansas West Campus, SW end of Crowell Ave between Bridwell Laboratory and Foley Center, 38.94°N, 95.26°W, 9 Sep 2019, *C.C. Freeman 27625*.

**Cyperus retrorsus* Champ. (Cyperaceae). Pine barren flatsedge is broadly distributed throughout the southeastern U.S. It occurs northward to New York and west to Oklahoma and Texas (Tucker et al. 2002). It was discovered in Kansas in cultivated beds on the University of Kansas campus, presumably a contaminant in bedding plants or mulch. (W)

Voucher specimen: U.S.A. KANSAS: DOUGLAS CO.: Lawrence, University of Kansas Main Campus, just W of plaza between Integrated Science Building and Burge Union, 38.96°N, 95.26°W, 27 Jul 2018, 26 Sep 2019, *C.A. Morse 27055*.

Desmodium canescens (L.) DC. (Fabaceae). Hoary tick-clover occurs in forest, prairies, meadows, and roadsides throughout the eastern U.S. and southeastern Canada (Isley 1998). It is relatively common in the southeastern Great Plains, occurring northward along the Missouri River and its immediate tributaries in northeast Nebraska and northwest Iowa (Great Plains Flora Association 1977, Kaul et al. 2011). A collection from Clay County near the southeast corner of South Dakota confirms the occurrence of hoary tick-clover in that state.

Voucher specimen: U.S.A. SOUTH DAKOTA: CLAY CO.: 1 mi S, Hwy 19, North Alabama Bend, 42°46'7.3"N, 96°57'42.9"W, 27 Aug 2015, *J. Hansen 617*.

Eleocharis cylindrica Buckley (Cyperaceae). Based on herbarium records, cylinder spikerush is exceedingly rare in North America, having been documented from a handful of sites in Texas (Turner et al. 2003b); it also occurs in Argentina and Paraguay (Smith et al. 2002). A population of cylinder spikerush was discovered in a saline wetland complex in southern Kansas, where it was locally abundant in wet depressions.

Voucher specimen: U.S.A. KANSAS: SUMNER CO.: 6.5 mi S, 4.25 mi E of Dalton, Slate Creek Wildlife Area, SE part along N side of E 80th St, 37.17°N, 97.20°W, 11 Jun 2008, *C.A. Morse 17396* (duplicate at WIS).

Eleocharis geniculata (L.) Roem. & Schult. (Cyperaceae). Canada spikerush occurs primarily in the southern U.S. from California east to South Carolina, but is also disjunct in counties around the Great Lakes, and in Ontario and British Columbia, Canada (Voss 1972, Argus & White 1982, Swink & Wilhelm 1994, Smith et al. 2002). It is rare in the southern Great Plains, with populations documented in northeastern Texas, central Oklahoma, south-central Kansas (USDA, NRCS 2019), and one occurrence in Merrick County, Nebraska (Kaul et al. 2011). A collection from extreme

southeastern South Dakota extends the documented range in the central U.S. northeastward by approximately 200 km.

Voucher specimen: **U.S.A. SOUTH DAKOTA**: CLAY CO.: Vermillion, 1 mi S, Hwy 19, North Alabama Bend, along shore of the Missouri River, 42°45'35.6"N, 96°58'3.4"W, 8 Sep 2015, *J. Hansen 631*.

Eriogonum flavum Nutt. **var. *flavum*** (Polygonaceae). Alpine golden wild-buckwheat is broadly distributed through the western Great Plains and parts of the central Rocky Mountains in shortgrass prairie, sagebrush steppe, and lower montane woodlands from Colorado north into the prairie provinces of Canada (Reveal 2005). The species is well documented in central Colorado and Nebraska panhandle (Ackerfield 2015, Kaul et al. 2011). A single collection from Kansas near the Colorado border extends the range of alpine golden wild-buckwheat approximately 130 km southeast, where it was found in mixed-grass prairie uplands above the Arikaree River.

Voucher specimen: **U.S.A. KANSAS**: CHEYENNE CO.: 26.6 air km NW of Saint Francis, Devils Gap along Cheyenne County Rd 2, 39.94°N, 102.03°W, 13 Aug 2016, *V. Smith 9*.

****Erysimum cheiranthoides*** L. (Brassicaceae). Wormseed wallflower is an annual with a circumboreal distribution, ranging widely through Canada and the U.S. (USDA, NRCS 2019). The species is well documented in the northern Great Plains as far south as central Nebraska (Great Plains Flora Association 1977, Barker 1991, Kaul et al. 2011), but is uncommon in Iowa and known from a few scattered occurrences in Missouri (Eilers & Roosa 1994, Yatskievych 2006). The first Kansas record of this species comes from a small population found at the edge of a woodland. (W)

Voucher specimen: **U.S.A. KANSAS**: JACKSON CO.: 2 mi SW of Larkinburg, 39.45°N, 95.62°W, 11 Jun 2012, *J. Hansen 482*.

****Euonymus europaeus*** L. (Celastraceae). European spindle tree is occasionally planted as an ornamental shrub or small tree in parts of the U.S. and Canada (Rehder 1927, Dirr 1998). It establishes outside of cultivation, especially in urban woodlots, second-growth forests, and along stream and river floodplains, and has been reported as naturalized throughout the eastern U.S. and southeast Canada, as well as in Utah (Gleason & Cronquist 1991, Ma & Levin 2016). Haddock and Freeman (2019) reported European spindle tree from Kansas but did not cite vouchers, which we cite here. The Kansas population is well-established and associated with *Euonymus alatus*, *E. fortunei*, *Lonicera maackii* (Rupr.) Herder, and *L. japonica* Thunb.

Voucher specimens: **U.S.A. KANSAS**: DOUGLAS CO.: Lawrence, City of Lawrence Brook Creek Park, just NE of 1200 block of Prospect Ave, 38.96°N, 95.22°W, 17 May 2008, *C.A. Morse 16487*; 12 Oct 2008, *C.A. Morse 18070 & K*.

Logan; 10 Oct 2012, C.A. Morse 23800 & H.S. Morse; 21 Oct 2015, C.A. Morse s.n.; 20 Nov 2019, C.A. Morse 27059.

Filipendula rubra (Hill) B.L. Rob. (Rosaceae). Queen-of-the-prairie is an herbaceous perennial native to the northeast U.S. and southeast Canada (Gleason & Cronquist 1991) and a popular ornamental outside its native range. The species is known from fens in southern Missouri and eastern Iowa (Eilers & Roosa 1994, Yatskievych 2013), where it is reported to be rare. A collection from a degraded fen in northeast Kansas extends the range of this species approximately 220 km northwest from the nearest populations in Missouri.

Voucher specimen: U.S.A. KANSAS: ATCHISON CO.: 1.5 mi S Muscotah, Muscotah Marsh, 39°31'40.9"N, 95°30'59.1"W, 29 Jul 2016, *J. Hansen 683.*

Helianthus hirsutus Raf. (Asteraceae). Hairy sunflower occurs widely in the eastern U.S. and southeastern Canada (Schilling 2006). It is a common species in mesic to xeric woodlands and forests along the eastern edge of the Great Plains in western Minnesota, western Iowa, and eastern Nebraska, Kansas, and Oklahoma (Great Plains Flora Association 1977, Barkley 1991). It was heretofore unknown in South Dakota, although it has been documented in multiple counties in western Iowa and eastern Nebraska (Great Plains Flora Association 1977, Kaul et al. 2011). We report here the first record of *Helianthus hirsutus* from South Dakota.

Voucher specimen: U.S.A. SOUTH DAKOTA: LINCOLN CO.: Fairview, 4 mi W, Newton Hills State Park, 43.22°N, 96.57°W, 23 Aug 2012, *J. Hansen 501.*

****Heterotheca camporum*** (Greene) Shinnars var. ***glandulissimum*** Semple (Asteraceae). Lemon-yellow false golden-aster is found in a wide variety of open and wooded habitats, including disturbed fields and roadsides, in the east-central United States (Semple 1996). Populations were known only from Illinois, western Indiana, and eastern Missouri prior to 1925, but the species has undergone a significant range expansion in the past 100 years, especially in the eastern U.S. (Semple 1983, 1996). A collection from extreme eastern Kansas, presumably introduced, is the westernmost station for the species.

Voucher specimen: U.S.A. KANSAS: JOHNSON CO.: Spring Hill, W side of large lake at Rockwood Falls Estates, 191st and Flint, 38.78°N, 94.72°W, 16 Nov 2011, *J. Hansen 631.*

****Hydrilla verticillata*** (L.f.) Royle (Hydrocharitaceae). Native to the Old World, waterthyme is a federally listed noxious weed in the U.S. now reported from a number of states in the northeast, southeast, and along the west coast (Haynes 2000, USDA, NRCS 2019). The first Kansas record of this species comes from a population in a pond in the northeast part of the state. Efforts to eradicate waterthyme at that site are ongoing (Scott Marsh, pers. comm.). (W)

Voucher specimens: **U.S.A. KANSAS**: JOHNSON CO.: Olathe, 151st St and Mullen St, Black Bob Pond, 38.86°N, 94.75°W, 4 Sep 2008, *L. Ramonda s.n.*; 7 Sep 2008, *J. Vogel s.n.*

**Lysimachia clethroides* Duby (Primulaceae). Native to eastern Asia, gooseneck loosestrife is a perennial herb grown as a garden ornamental (Cholewa 2009). Plants growing outside of cultivation have been reported from a dozen states in the eastern U.S. and the province of Quebec, Canada (Cholewa 2009). Two localized colonies were discovered in a county park in northeast Kansas in areas with no evidence of dwellings or cultivation.

Voucher specimens: **U.S.A. KANSAS**: JOHNSON CO.: Lenexa, W side of town in Shawnee Mission Park, SW side ca 1.5 mi WSW of Johnson County Parks and Recreation District Headquarters, due N of dog exercise area, oak-hickory forest on S side of Shawnee Mission Lake and South Shore Lake Trail, 38.98°N, 94.80°W, 21 Oct 2010, *C.C. Freeman 23976*; Lenexa, W side of town in Shawnee Mission Park, SW side ca 1 mi WSW of Johnson County Parks and Recreation District Headquarters, oak-hickory forest on N- and NE-facing slopes along South Shore Lake Trail above creek, 38.98°N, 94.79°W, 26 Oct 2010, *C.C. Freeman 23984*.

Mentzelia reverchonii (Urb. & Gilg) H.J. Thomps. & Zavort. (Loasaceae). Reverchon's mentzelia occurs in southeastern Colorado, eastern New Mexico, central and western Texas, and northern Mexico (Turner et al. 2003a, Allred & Ivey 2012, Ackerfield 2015, Schenk & Hufford 2016). It also has been reported from southwestern Oklahoma (Kaul 1991). McGregor et al. (1976), citing the lack of specimen evidence, excluded it from the Kansas flora. A small population in far west-central Kansas confirms its occurrence in the state.

Voucher specimen: **U.S.A. KANSAS**: LOGAN CO.: ca 10 mi SSW of Russell Springs, diverse High Plains sand prairie on W- and NW-facing upper slope of canyon rim, Ogallala Formation, 38.78°N, 101.25°W, 4 Sep 2015, *V. Smith s.n.*

Mertensia virginica (L.) Pers. ex Link (Boraginaceae). Widely distributed through northeastern North America (Gleason & Cronquist 1991), Virginia bluebells was reported by Carruth (1880) for Kansas, based on material sent to him from the town of Paola in Miami County, by J.H. Oyster. The species was collected at least twice more by Oyster in the 1880s (Williams 1927). The absence of subsequent observations led McGregor (1977) to postulate that *M. virginica* had been extirpated from the state. The presence of Virginia bluebells in Kansas is reconfirmed, based on collections from two large populations discovered in rich hardwood forests in the flood plains of North Sugar Creek and Middle Creek in southeastern Miami County.

Voucher specimens: **U.S.A. KANSAS**: MIAMI CO.: 0.5–1 mi N, 2.5 mi E Jingo, North La Cygne State Fishing Lake and Wildlife Area, 38.42°N, 94.65°W, 17 May

2005, Morse 11269 & Salisbury; 26 May 2005, Morse 11288; 3 Apr 2006, Roth & Salisbury s.n.; ca. 1.6 mi S, 2 mi W of New Lancaster, just SE of the intersection of Somerset Rd and 379th St, 38.44°N, 94.77°W, 23 Apr 2018, G. Tegtmeier s.n.; 16 Apr 2019, G. Tegtmeier & M. Kowalski s.n.; 23 Apr 2019, C.A. Morse 26671 et al.

**Neptunia lutea* (Leavenw.) Benth. (Fabaceae). Yellow puff is a perennial herb native to the south-central U.S., with occurrences in Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, and Texas (Isley 1998). The first Kansas record of this species comes from a native prairie in Saline County, roughly 300 km north of the nearest population in north-central Oklahoma. There is no evidence that the species was purposely introduced at the site (Kenneth Warren, pers. comm.), but the fact that the prairie is part of an active research site, where perennial agriculture is studied, and the large range disjunction suggest the species was introduced. (W)

Voucher specimen: U.S.A. KANSAS: SALINE CO.: Salina, East Water Well Rd 1.5 mi E of jct. of East Water Well Rd and South Ohio St, The Land Institute, 38.46°N, 97.34°W, 21 Jun 2006, K. Warren s.n..

**Paulownia tomentosa* (Thunb.) Steud. (Paulowniaceae). Native to eastern Asia, princess tree is a widely cultivated ornamental that has been introduced throughout much of the eastern U.S. and in Washington (Rehder 1927, Correll & Johnston 1970, Gleason & Cronquist 1991, Rhodes & Block 2007, Yatskievych 2013, Weakley 2015, USDA, NRCS 2019). A single, small, fertile population on a steep slope along the Missouri River in northeast Kansas establishes the presence of princess tree in the state.

Voucher specimen: U.S.A. KANSAS: ATCHISON CO.: Atchison, E side of town along River Road, 850 m NNE of intersection with Atchison St, 39.57°N, 95.11°W, 22 Jul 2018, C.C. Freeman 27265 & J.A. Freeman.

Penstemon calycosus Small (Plantaginaceae). Long-sepal beardtongue is a native perennial found in woodlands, meadows, bluffs, and clearings on rocky slopes. Populations are concentrated in the Ohio River drainage, east of the Mississippi River, with populations in New England possibly the result of introductions (Pennell 1935). Steyermark (1977) excluded *P. calycosus* from the Missouri flora based on misidentified specimens of *P. digitalis*. Freeman (2019) included Missouri in the species' range based on a series of collections from two southeastern counties along the Missouri River. Vouchers from those populations are cited here.

Voucher specimens: U.S.A. MISSOURI: CAPE GIRARDEAU CO.: 7.2 air km SSW Neelys along Girardeau County Road V, 37.44°N, 89.51°W, 10 Jun 2016, C.C. Freeman 25910; 5.7 air km W Jackson along MO 72, 37.38°N, 89.72°W, 11 Jun 2016, C.C. Freeman 25911. PERRY CO.: 1.6 air km S McBride along MO 51, ca 30 m S of jct. with Perry County Road 210, 37.82°N, 89.84°W, 10 Jun 2016,

C.C. Freeman 25904; 3.1 mi air km SW Frohna along Perry County Road A, 37.92°N, 89.65°W, 10 Jun 2016, C.C. Freeman 25908.

**Phyllanthus urinaria* L. subsp. *urinaria* (Phyllanthaceae). A diminutive annual native to Asia, chamber bitter is a weed in tropical regions around the world (Webster 1970), which was first observed in the U.S. in 1944. The species now occurs primarily in states along the Gulf of Mexico and has been documented in the southern Mississippi River drainage northward to Jackson County, Illinois (Mohlenbrock 1986). The species was reported for Kansas by Freeman et al. (2003), and here we report it for the first time from Missouri, where it was discovered growing in mulch in an urban parking lot in St. Louis. (W)

Voucher specimen: U.S.A. MISSOURI: ST. LOUIS CO.: St. Louis, S part of city near parking lot at NW corner of Shaw Blvd and South Vandeventer Ave, N of the Monsanto Building (Missouri Botanical Garden), 38.62°N, 90.26°W, 11 Oct 2014, C.C. Freeman 25357 & R.K. Rabeler.

**Pinus nigra* Arnold (Pinaceae). Austrian pine is widely cultivated throughout the eastern U.S. (Rehder 1927, Dirr 1998). In the Great Plains, it is commonly planted along roadsides and in shelterbelts. Austrian pine has naturalized in St. Louis County, Missouri (Yatskievych 1999), and there are sporadic reports of it occurring spontaneously elsewhere in the eastern U.S. and southern Canada (Catling 2005, Kral 1993, Swink & Wilhelm 1994, Weakley 2015, USDA, NRCS 2019), although the species has not been observed to escape cultivation in Nebraska (Kaul et al. 2011). Haddock and Freeman (2019) reported Austrian pine from Kansas without citing vouchers. Here we cite voucher for populations in three counties, where it is spreading by seed from cultivation.

Voucher specimens: U.S.A. KANSAS: DOUGLAS CO.: 1 mi N, 2 mi W of Stull, along N 1700 Rd, just W of intersection with E50 Rd, 38.99°N, 95.49°W, 6 Mar 2019, C.A. Morse 26623. ELLSWORTH CO.: ca 5 mi S, 2 mi E of Carneiro, Kanopolis State Park, Horsethief Area, Horsethief Rd, just S of sharp turn W to Buffalo Track Canyon Nature Trail Head, 38.66°N, 97.99°W, 24 Mar 2018, C.A. Morse 26241 et al.; ca 9 mi S, 2.5 mi E of Carneiro, Kanopolis State Park, Langley Point area, just W of boat ramp, 38.61°N, 97.98°W, 24 Mar 2018, C.A. Morse 26258 et al. JOHNSON CO.: 2 mi W of Clearview City, along S side of E-bound KS Hwy 10, just W of Evening Star Rd exit, at mile marker 14, 38.94°N, 95.05°W, 9 Sep 2016, C.A. Morse 25203.

**Pistacia chinensis* Bunge (Anacardiaceae). Native to eastern Asia, Chinese pistache is an urban shade tree widely planted through the southern U.S. and popular for its colorful fall foliage (Rehder 1927, Dirr 1998). It has been documented from scattered localities in Alabama, Arizona, Arkansas, California, Georgia, Mississippi, North Carolina, Oklahoma, and Texas (Krings 2011, USDA, NRCS 2019). Nesom (2009) included Chinese pistache on his watch list of non-native Texas plants. Also grown as a shade tree in south-central Kansas, Chinese pistache has been documented

establishing outside of cultivation in sandy, second-growth forests, hedgerows, and woodlots in the city of Wichita, Kansas. It was reported from Kansas by Haddock and Freeman (2019) but without voucher information. We here provide that information.

Voucher specimens: **U.S.A. KANSAS: SEDGWICK CO.:** Wichita, Sim Memorial Park, along W Sim Park Dr, just W of Botanica, 37.70°N, 97.37°W, 27 Oct 2012, *C.A. Morse 23827 & H.S. Morse*; Wichita, SE side of town, ca 300 m NW of jct. North Rock Rd and East Pawnee St, 37.66°N, 97.25°W, 8 Sep 2018, *C.C. Freeman 27315 & J.A. Freeman*; Wichita, NE side of town, ca 80 m SW of jct. Gouverneur St and East 29th St North, 37.73°N, 97.25°W, 8 Sep 2018, *C.C. Freeman 27321 & J.A. Freeman*.

**Prunus tomentosa* Thunb. (Rosaceae). Nanking cherry, a shrub native to eastern Asia, is widely cultivated as an ornamental and for its edible fruit (Rehder 1927, Dirr 1998); the fruits are reportedly readily consumed by birds (Kaul et al. 2011). The species is occasionally reported as an escape and has been documented from a handful of states in the northern U.S. and the provinces of Ontario and Saskatchewan, Canada (Rhoads & Block 2007, Kaul et al. 2011, Weakley 2015, Wilhelm & Rericha 2017, USDA, NRCS 2019). The first Kansas records of this species come from a disturbed oak-hickory forest and urban woodlots, where plants apparently established from seeds dispersed from nearby planted shrubs. (W)

Voucher specimens: **U.S.A. KANSAS: DOUGLAS CO.:** Lawrence, University of Kansas Main Campus, behind Grace Pearson Scholarship Hall, 38.95°N, 95.24°W, 23 May 2004, *C.A. Morse 10516*; 7 Apr 2006, *C.A. Morse 12669*; 10 Apr 2008, *C.A. Morse s.n.*; 9 Jun 2008, *C.A. Morse s.n.*; Lawrence, SW corner of intersection of 13th and Louisiana streets, 38.96°N, 95.24°W, 5 Nov 2008, *C.A. Morse 18134*; Lawrence, ca 1 mi W of town, Overlook Park on N side of Clinton Reservoir, 38.94°N, 95.34°W, 31 Mar 2018, *C.C. Freeman 26869 & J.A. Freeman*.

**Quercus acutissima* Carruthers (Fagaceae). Native to eastern Asia, sawtooth oak is widely planted in the eastern U.S. as a shade tree and wildlife food source (Dirr 1998, Whittimore 2004). Whittimore (2004) reported plants growing outside of cultivation in seven states and the District of Columbia. Wild plants of sawtooth oak were recently discovered in disturbed areas and second growth forests in eastern Kansas where they apparently established from acorns dispersed from nearby planted trees. Haddock and Freeman (2019) reported sawtooth oak from Kansas without voucher citations, which we provide here.

Voucher specimens: **U.S.A. KANSAS: DOUGLAS CO.:** Lawrence, SE side, Lawrence Prairie Park, 38.93°N, 95.21–95.22°W, 20 Oct 2012, *C.A. Morse 23804, K.J. Morse & H.S. Morse*; Lawrence, parking area on E side of Lawrence Union Pacific Depot, 38.98°N, 95.23°W, 7 Jun 2014, *C.A. Morse 24179*.

**Quercus robur* L. (Fagaceae). English oak is among the most widely planted oaks in temperate and subtropical regions of the world (Nixon & Muller 1997). Plants growing outside of cultivation have been reported in the northeastern and northwestern U.S., and in southeastern and southwestern Canada (Nixon & Muller 1997), as well as in the Chicago region (Wilhelm & Rericha 2017). English oak has been found growing in weedy woodlots and plantings in eastern Kansas, where it has spread from nearby cultivated individuals. It was reported for Kansas by Haddock and Freeman (2019) without voucher citations, which we provide here.

Voucher specimens: U.S.A. KANSAS: DOUGLAS CO.: Lawrence, parking lot complex in 800 block between Massachusetts and Vermont streets, 38.97°N, 95.24°W, 13 Sep 2007, *C.A. Morse s.n.*; Lawrence, University of Kansas Campus West: just S of SW corner of Bob Billings Pkwy and Crestline Dr., 38.96°N, 95.27°W, 5 Aug 2010, *C.A. Morse 21491*.

**Saccharum ravennae* (L.) L. (= *Erianthus ravennae* (L.) Beauv.) (Poaceae). Ravenna grass, a perennial ornamental native to the Mediterranean region and western Asia, was reported by McGregor et al. (1976) as a non-naturalized alien rarely escaping cultivation in Kansas. The species was known at that time from collections made in Harvey and Wyandotte counties (both 1975). Ravenna grass was not considered an established part of the Great Plains flora by Sutherland (1991) and was considered only a casual escape in North America by Webster (2003). However, the species has been reported as escaped or established in at least 22 states and the District of Columbia (Vincent & Gardner 2016), including Missouri, where Yatskievych (1999) suggested it is likely under-represented in collections, and Oklahoma, where it has become well established along riparian corridors (Burgess & Hoagland 2006). Ravenna grass is considered potentially invasive, invasive, or a noxious weed in several states, including Texas (Singhurst et al. 2010, Vincent & Gardner 2016). During the past four decades, *S. ravennae* has also become well established in the Kansas flora.

Voucher specimens: U.S.A. KANSAS: ANDERSON CO.: 0.5 mi N, 0.5 mi W of Garnett, just N of KS 31, 26 Aug 1998, *C.C. Freeman 11805 & P. Liechti*. DOUGLAS CO.:

Lawrence, W side of town, vacant lot ca 40 m SW of intersection of Research Park Road and Research Parkway along S side of Research Parkway, 38.96°N, 95.31°W, 2 Sep 2013, *C.C. Freeman 24824 & J.A. Freeman*; Lawrence, 7.3 km W along E 900 Road, due N of the Clinton Reservoir Dam, 38.94°N, 95.33°W, 2 Sep 2013, *C.C. Freeman 24825 & J.A. Freeman*; Lecompton, E side of town, 39.30°N, 95.39°W, 11 Sep 2014, *C.C. Freeman 25249*. GEARY CO.:

Junction City, SW side of town immediately W of jct. of I-25 & US 77, 25 Aug 1998, *C.C. Freeman 11803 & P. Liechti*; Junction City, N edge of town, Fort Riley Military Reservation, Training Unit 25, Riverwalk Trail, 39°02'51", 96°50'00", 19 Sep 2002, *C.C. Freeman 19508*. HARVEY CO.:

2 mi NE Newton, 1 Sep 1975, *S. Stephens 87839*; E edge of Newton, 10 Oct 1975, *R.L. McGregor 28732*. JOHNSON CO.:

1.5 mi S, 5 mi E DeSoto, Cedar Creek Parkway, N of KS 10,

38.95°N, 94.88°W, 27 Sep 2006, *C.C. Freeman 21948*; Overland Park, Indian Creek Bike and Hike Trail, between intersection of W 115th St and Indian Creek Pkwy (on N) and intersection of Bluejacket and Indian Creek Pkwy (on S), 38.92°N, 94.71°W, *C.A. Morse 24043 et al.*; Olathe, NW side of town, Ernie Miller Nature Center along KS 7, 38.89°N, 94.84°W, 24 Sep 2014, *C.C. Freeman 25273*. NEOSHO CO.: ca 3+ mi SE of St. Paul, Mission Twp, 23 Aug 1998, *W.W. Holland 9498*; 5 mi S, 2 mi W, 0.25 mi S of Erie, Centerville Twp, 25 Sep 2000, *W.W. Holland 9992*. SHAWNEE CO.: Topeka, Big Shunga Park, W side, 39°01'02.2"N, 95°43'12.1"W, 18 Nov 2010, *J. Hansen 388*. WYANDOTTE CO.: 0.5 mi E of Turner exit on I-70, 13 Oct 1975, *R.E. Brooks 11862*.

****Schoenoplectiella mucronata* (L.) J. Jung & H. K. Choi (= *Schoenoplectus mucronatus* (L.) Palla)** (Cyperaceae). Bog bulrush is an economically important weed of rice fields in California; it also has been documented from widely scattered sites in the Pacific Northwest, Midwest, Mid-Atlantic, and New England (Smith 2002, Lamont et al. 2011). Initially discovered in Kansas in 2012, *S. mucronata* is now known from six counties in the northeast part of the state. Typically it is found growing along the muddy margins of impoundments, usually occurring with various species of *Carex*, *Eleocharis*, *Juncus*, and *Schoenoplectus*.

Voucher specimens: **U.S.A. KANSAS**: DOUGLAS CO.: SE edge of Lawrence, Baker Wetlands, N end of restoration site, S of 31st St and W of Louisiana St, 38.92°N, 95.24°W, elev 820 ft, 2 Aug 2012, *M. Piva & R. Boyd s.n.* (duplicate at Hb. Baker University); SE edge of Lawrence, Baker University Wetlands, N edge of Ibis Swale, along S side of N 1250 Rd, 38.92°N, 95.22°W, 26 Oct 2019, *C.A. Morse 27058*. JACKSON CO.: Holton, 5.5 air km SW, small farm pond along upper reaches of Bills Creek, 39.43°N, 95.78°W, 2 Aug 2016, *C.C. Freeman 26142*; Holton, 9.2 air km NNW, farm pond in native rangeland along upper reaches of tributary to Straight Creek, 39.54°N, 95.78°W, 2 Aug 2016, *C.C. Freeman 26157*. JEFFERSON CO.: ca 1.5 mi S, 7.5 mi E of Williamstown, University of Kansas Ecological Reserves: Nelson Environmental Study Area and Rockefeller Experimental Tract: unit 5031 (including adjoining portions of units 5030 and 5502), artificial ponds down slope from (S of) the Armitage Education Center, 39.05°N, 95.19°W, 20 Jun 2012, *C.A. Morse 23767*; ca 1.25 mi S, 7.75 mi E of Williamstown, University of Kansas Ecological Reserves, Nelson Environmental Study Area and Rockefeller Experimental Tract: unit 5501, NE arm of Storage 4 pond, 39.05°N, 95.19°W, 22 Jun 2012, *C.A. Morse 23769*. JOHNSON CO.: just W of De Soto, Johnson County Park & Recreation District Lexington Lake Park, along W side of Lexington Lake, 38.97°N, 95.01°W, 21 Aug 2018, *C.A. Morse 26403 & P. Showalter*. LEAVENWORTH CO.: ca 1 mi S, 8 mi E of Williamstown, University of Kansas Ecological Reserves: Nelson Environmental Study Area and Rockefeller Experimental Tract: unit 7020, Frank B. Cross Reservoir, 39.05°N, 95.18°W, 22 Jun 2012, *C.A. Morse 23771*.

POTTAWATOMIE CO.: 1 mi W Belvue, Camp Creek Road Wetland, W side of the road, 39°12'45.1"N, 96°12'12.2"W, 16 Sep 2017, *J. Hansen* 830; 1 mi E St. Marys, St. Marys Wetland, S side of Hwy 24, 39°10'48"N, 96°2'9.8"W, 16 Sep 2017, *J. Hansen* 838.

**Steinchisma hians* (Elliott) Nash (Poaceae). Gaping grass is a native perennial found in open, mesic to hydric sites throughout much of the southeastern U.S., approaching the Kansas border in northwestern Arkansas and northeastern Oklahoma (Freckmann & Lelong 2003). A population was discovered in extreme southeastern Kansas in an open field at a wetland restoration site. The collectors speculated that the occurrence likely resulted from an accidental introduction via the seed mix used for the restoration. (W)

Voucher specimens: **U.S.A. KANSAS**: CHEROKEE CO.: from Chetopa, ca 3 mi E on Hwy 166, 1 mi N and 0.5 mi E, and N of country road, SW Greenlawn Rd, 37.05°N, 95.02°W, 15 Jun 2016, *K. Kindscher* 4316 *et al.*; 27 Jul 2016, *H. Loring* 6356 & *A. Isenburg*; 20 Sep 2016, *K. Kindscher* 4351 & *A. Isenburg*.

**Styphnolobium japonicum* (L.) Schott (Fabaceae). Japanese pagoda tree is native to China and is a popular shade and ornamental tree in Europe (Ball 1968) and North America (Rehder 1927, Dirr 1998). The species has been cultivated in eastern Kansas since at least 1915 (KANU 160170). Though described by Isley (1998) as only "slightly escaped," it has been documented outside of cultivation in Maryland, New York, North Carolina, Ohio, Pennsylvania, and Virginia (Rhoads & Block 2007, Weakley 2015, USDA, NRCS 2019). Japanese pagoda tree was reported from Kansas by Haddock and Freeman (2019) without voucher citations. Here we provide voucher information for the species, which appears to spread readily in urban woodlots from seeds dispersed from nearby cultivated trees.

Voucher specimens: **U.S.A. KANSAS**. DOUGLAS CO.: Lawrence, just S of intersection of 15th St and Learnard Ave, 38.96°N, 95.23°W, 23 Oct 2012, *C.A. Morse* 23814 & *H.S. Morse*; Lawrence, SE corner of intersection of 19th and Iowa streets, 38.95°N, 95.26°W, 10 May 2013, *C.A. Morse* 23913; Lawrence, University of Kansas Campus, just NW of intersection of 15th St and Naismith Dr, 38.96°N, 95.25°W, 12 Jul 2013, *C.A. Morse s.n.*; Lawrence, University of Kansas Campus, behind Bailey Hall, along N side of Poplar Lane, 38.96°N, 95.25°W, 1 Aug 2014, *C.A. Morse* 23979b; 4 Sep 2013, *C.A. Morse* 23979; Lawrence, parking lot at N end of New York St, just E of former Riverfront Outlet Mall building, 38.97°N, 95.23°W, 5 Oct 2013, *C.A. Morse* 24044 & *H.S. Morse*; Lawrence, NE corner of intersection of 5th and Indiana streets, 38.97°N, 95.24°W, 08 Aug 2016, *C.A. Morse* 25198 & *H.S. Morse*; Lawrence, University of Kansas West Campus, just NE of Lied Center of Kansas, 38.96°N, 95.26°W, 12 Jun 2018, *C.A. Morse s.n.* SALINE CO.: N side of Salina, Thomas Park, along W side of N 9th St, 38.87°N, 97.61°W, 11 Oct 2014, *C.A. Morse* 24331 *et al.*

**Tarenaya hassleriana* (Chodat) Iltis (Cleomaceae). Pink-queen, native to South America, is a showy, widely cultivated, ornamental annual that occasionally escapes and naturalizes (Tucker & Iltis 2010). It has been documented in most states east of the Great Plains and in the province of Quebec, Canada (Tucker & Iltis 2010). McGregor et al. (1976) reported it (under the misapplied name *Cleome houtteana* Schltld.) as a non-naturalized alien that was infrequently cultivated in Kansas and known from collections from Wilson (1896) and Cowley (1972) counties, but it is not clear from the label data if those collections were from cultivated or escaped plants. The species' popularity as an ornamental has increased in Kansas over the past four decades. Several recent collections from definitively escaped plants suggest that pink-queen might be encountered outside of cultivation with increasing frequency in Kansas. (W)

Voucher specimens: U.S.A. KANSAS: DOUGLAS CO.: Lawrence, University of Kansas Campus West, weedy fescue meadow along two-track, 38°56'49"N, 95°16'05"W, 14 Jul 2002, *C.A. Morse 8525*; Lawrence, SW side of town on N side of Clinton Parkway, ca 100 m WNW of intersection with Atchison Avenue, weedy bank along unnamed tributary to Yankee Tank Creek, 38.94°N, 95.27°W, 4 Sep 2016, *C.C. Freeman 26314 & J.A. Freeman*; Lawrence, 2006 Learnard Ave, 38.95°N, 95.23°W, 25 Oct 2019, *C.A. Morse 27057*.

**Torilis nodosa* (L.) Gaertn. (Apiaceae). Knotted hedge-parsley is a weedy, introduced annual native to Eurasia. It has been reported from scattered localities in 18 states in the U.S. (USDA, NRCS 2019). Heretofore, the only occurrence reported from the Great Plains is from Custer County, Oklahoma (USDA, NRCS 2019). Knotted hedge-parsley recently was discovered at two sites in south-central Kansas, where it was locally abundant.

Voucher specimens: U.S.A. KANSAS: HARVEY CO.: Newton, NE side of town at S edge of Centennial Park, 38.06°N, 97.34°W, 18 May 2019, *C.C. Freeman 27516 & J.A. Freeman*; 25 May 2019, *C.C. Freeman 27529 & J.A. Freeman*; Newton, E side of town at Chisholm Middle School, N of E 1st St and E of N Blaine St, 38.04°N, 97.33°W, 25 May 2019, *C.C. Freeman 27550 & J.A. Freeman*.

**Verbena bonariensis* L. (Verbenaceae). Purpletop vervain is a popular ornamental annual native to South America. It has been reported as established outside of cultivation in at least 10 states in the U.S. (Nesom 2010). It was discovered in Kansas on the Johnson County Community College campus presumably spreading by seed from cultivated plants. (W)

Voucher specimen: U.S.A. KANSAS: JOHNSON CO.: Overland Park, Johnson County Community College Campus, on NE side of Hiersteiner Child Development Center, 39.92°N, 94.73°W, 11 Sep 2014, *C.A. Morse 24249 & H.S. Morse*.

**Verbena brasiliensis* Vell. (Verbenaceae). Brazilian vervain is an annual or short-lived perennial native to South America. It is grown widely as a garden ornamental and has been documented as escaped from cultivation in 16 states (Nesom 2010). Brazilian vervain is reported from Kansas based on a collection from a wetland in the northeast part of the state. (W)

Voucher specimen: U.S.A. KANSAS: DOUGLAS CO.: Baker Wetlands, Tract A, N end under powerline close to Grid Pt L-2, 39.93°N, 95.24°W, 15 Aug 2017, R.L. Boyd s.n. (duplicate at Hb. Baker University).

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