HORTSCIENCE 53(2):148-152. 2018. https://doi.org/10.21273/HORTSCI12564-17

A Checklist of *Cercis* (Redbud) Cultivars

David L. Kidwell-Slak

USDA-NRCS, Norman A. Berg National Plant Materials Center, 8791 Beaver Dam Road, Building 509, Beltsville, MD 20705

Margaret R. Pooler¹

Floral and Nursery Plants Research Unit, U.S. National Arboretum, USDA-ARS, 10300 Baltimore Avenue, Building 010A, Beltsville, MD 20705

Additional index words. germplasm, ICNCP, ICRA, woody ornamental plants

The genus Cercis L. (redbud; Fabaceae: Caesalpinioideae: Cercideae) is a morphologically and biogeographically diverse group with seven to thirteen species or subspecies that occur in North America, Europe, and Asia (Chen et al., 2010; Davis et al., 2002; Fritsch et al., 2009; Krüssmann, 1976; Rehder, 1990; USDA-ARS, 2017). Mature plants range in size from small shrubs to large trees, tolerate full sun to shade, and are hardy from USDA Zones 4-9 (Raulston, 1990; Robertson, 1976). In addition to their ecological role as a native North American plant (Cercis canadensis), redbuds are a significant crop for the American nursery industry, valued primarily for their showy early spring bloom, glossy heart-shaped foliage, and adaptability to diverse environmental conditions. According to the 2014 USDA Census of Horticulture Specialties (USDA-NASS, 2015), redbuds are the fifth most valuable deciduous flowering tree crop in the United States, with a total crop value of \$26.7 million, and the seventh most commonly grown flowering deciduous tree in the United States, with nearly a million plants grown annually. According to the 2013 census, redbuds were sold by 1272 wholesale or retail nurseries in 44 U.S. states.

Although redbuds have been cultivated for over a century, their popularity has increased in the past few decades, as evidenced by the number of named cultivars on the market; in 1980, there were 29 named cultivars (Burns and Raulston, 1993), whereas today there are more than 60. Redbuds are now highlighted in several botanic gardens, including the collection at the JC Raulston Arboretum which is a Nationally Accredited Plant Collection of the American Public Gardens Association Plant Collections Network (Weathington, 2009). In addition, over the past several decades, the U.S. National Arboretum (USNA) has amassed a diverse collection of Cercis collected in North America

Received for publication 5 Oct. 2017. Accepted for publication 29 Dec. 2017.

International Registration of Cultivar Names for *Cercis* (redbuds).

¹Corresponding author. E-mail: Margaret.Pooler@ars.usda.gov.

and Asia, as well as representative redbud cultivars sold in the United States, in support of our active breeding program and germplasm collections. The increased popularity of redbuds and the proliferation of named cultivars, combined with our interest in *Cercis* germplasm, prompted us to apply for appointment as the International Cultivar Registration Authority (ICRA) for *Cercis*, which was granted to the USNA in 2013.

The ICRA is a voluntary system of registering plant names to promote the stability of cultivated plant nomenclature by preventing duplication of names and ensuring that names are in accord with the ninth edition of the International Code of Nomenclature for Cultivated Plants (ICNCP) (Brickell et al., 2016). It confers no legal protection over the name or the plant and does not imply distinctiveness, value, or performance of the plants in question. It is simply a mechanism to establish and document plant names.

In addition to compiling data and documenting sources for cultivar names, the ICRA must also establish the plant names through publication to ensure that each name has precedence for its use. The purpose of this checklist, therefore, is to establish the *Cercis* names and provide a resource for botanists, nursery industry professionals, horticulturists, and others interested in this genus.

This checklist is formatted in keeping with the recommendations and style of the ICNCP. Names are listed in alphabetical order. The abbreviated reference for a name is placed in parentheses, followed by a description provided by that source, if available, and other information including source, introducer, etc. The first reference listed is the first publication of the cultivar name. Other publications are ones that we deemed provided practical descriptive information for nursery growers. Full reference information is listed in the Literature Cited section when available. Synonyms are cited at the end of each entry following the "equal" sign. Accepted (valid) cultivar names are designated in bold type and undetermined or unaccepted names are in plain type. A total of eight Cercis taxa are referenced in this checklist: C. canadensis L.; C. canadensis L. var. mexicana (Rose) M. Hopkins; C. canadensis L. var. texensis (S. Watson) M. Hopkins;

Cercis chinensis Bunge; Cercis chingii Chun; Cercis glabra Pamp.; Cercis occidentalis Torr. Ex A. Gray; and Cercis siliquastrum L. (USDA-ARS, 2017). All cultivars are C. canadensis L. unless otherwise indicated. This database is available online at the National Arboretum's website: www.usna.usda.gov, where the most updated version can be found.

Checklist of Cercis Cultivars

'Ace of Hearts' (U.S. Plant Patent #17161, 2005): Found, named, and introduced by Paul Woody (Fantz and Woody, 2005): Deciduous, compact, multistemmed tree; 4-m tall and 5-m wide at 8 years; young branches are greenish (RHS 146B-C) becoming dark gray brown to grayish brown (199A, 200B-C), bark is grayish (RHS 197B); leaves are broad ovate-cordate, 4-6.5 cm long and 4-6.3 cm wide, upper surface is dark green (132A, 136A, 139A), smooth-textured, and somewhat shiny, and lower surface is pale with conspicuously reticulate veinlets; flowers light violet (82A-B), calvx reddish-purple (RHS 71B-C).

'Alba' (Raulston, 1990): White-flowered eastern redbud (Burns and Raulston, 1993): Likely multiple clones exist under this name. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Alba' (Burns and Raulston, 1993): *Cercis occidentalis*. White-flowered California redbud. Introduced by Rancho Santa Anna Botanical Garden in Claremont, CA. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Alba' (Burns and Raulston, 1993): *Cercis chinensis*. White-flowered chinese redbud. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Alba' (Burns and Raulston, 1993): Cercis siliquastrum. White-flowered Mediterranean redbud. Sold in Europe. Name registered on 13 June 2016. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

= 'Albida'

'Alley Cat' (Pleasant Run Nursery Catalog, Allentown, NJ, 2016): Variegated eastern redbud with white splashes, reported to be stable and scorch resistant. To 20' tall and 20' wide. Found by Alan Bush in an alley near his home in Kentucky. Introduced by Harald Neubauer of Hidden Hollow Nursery. Name established on 13 June 2016.

'Amethyst Mist' (Hatch, L. 2010. The redbuds: Varieties of the genus *Cercis*. Digital PDF eBook. TCR Press, Raleigh, NC): Leaves emerge white with green speckles, transitioning to green during the season. Plants grown at JC Raulston Arboretum (North Carolina) came from Shadow Nursery, TN. May be the same as 'Mardi Gras'. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= (?) 'Mardi Gras'

'Appalachian Red' (Pleasant Run Nursery Catalog, Allentown, NJ, 2016): Eastern redbud to 20' tall and 20' wide with neon pink flowers. Found by Dr. Max Byrkit in Maryland. This cultivar was originally named 'Appalachia' (Raulston, 1990), but the introducer (Harald Neubauer) and most nursery catalogs and gardens list the plant as 'Appalachian Red' (American Gardener, July/Aug. 2007). Thus, 'Appalachian Red' best preserves existing usage and is the accepted name following provisions of the ICNCP (Art. 29.2). Name established on 13 June 2016.

= 'Appalachia'

'Arborea' (Burns and Raulston, 1993): Cercis chinensis. "Listed in Hortus Third with no information and does not seem to now exist in cultivation. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Avondale' (Burns and Raulston, 1993): Cercis chinensis. More floriferous chinese redbud selected in Avondale, New Zealand. Introduced by Duncan and Davies Nursery in New Zealand. Name established on 13 June 2016.

'Bartlett King' (Hatch, L. 2010. The redbuds: Varieties of the genus *Cercis*. Digital PDF eBook. TCR Press, Raleigh, NC): Eastern redbud with pink flowers and reportedly sterile; originated with Bartlett Tree Laboratories in Charlotte, NC, before 1990. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

'Big John' (Heritage Seedlings & Liners Catalog, 2016–17): Floriferous *C. chinensis* with pink flowers and rounded leaves. Name established on 1 Nov. 2017.

= 'Bubble Gum'

'Bodnant' (Burns and Raulston, 1993): *Cercis siliquastrum* with deep purple flowers. Originally planted in 1876 in Bodnant Garden, Wales. Sold commercially in England. Name established on 11 Oct. 2016.

'Bonita' (Friends of the JC Raulston Newsletter 13(1):8, 2009): *Cercis canadensis* var. *mexicana* with exceptionally glossy leaves and regularly undulate margins. Named by J.C. Raulston but propagation and distribution records uncertain; possibly lost to cultivation. Name not established because cultivar may not have still existed at time of publication (ICNP, Article 27).

'Brandywine' (Hatch, 2017): A selection of C. chinensis listed without description by Blue Horizon Nursery. Registered in Open Registration of Cultivars online in 2015. Name not established as it was listed without a description (ICNCP, Article 27.1). 'Bubble Gum' (Hatch, L. 2010. The redbuds: Varieties of the genus Cercis. Digital PDF eBook. TCR Press, Raleigh, NC): Likely an interspecific C. chinensis. Less magenta, more pink flowers than wild-type C. chinensis. Named by John Allen of Shiloh Nursery (Harmony, NC). Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= 'Big John'

'Carnea' (Burns and Raulston, 1993): Cercis siliquastrum with flowers lighter pink than wild-type. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Cascading Hearts' (U.S. Plant Patent #18528, 2008): Discovered in 1997 by Steven Bennett in Thompsons Station, TN; found to be more cold-hardy than 'Traveler' with denser foliage and less sunscald than 'Covey'; grows to 90-cm tall and 110-cm wide after 5 years; leaves 7.2-cm long and 8.4-cm wide; flowers close to light purple (76A) (Pleasant Run Nursery Catalog, 2012): Weeping eastern redbud from Riverbend Nursery in Tennessee.

'Celestial Plum' (National Redbud Collection—North American Plant Collections Consortium Pamphlet, JC Raulston Arboretum, Mar. 2010): Selection of *C. glabra* received at the JC Raulston Arboretum in 2009; selected for blue-green foliage and light plum-purple flowers; listed as a small multistemmed tree. Name not established because pamphlet does not meet conditions of publication (ICNCP, Article 25).

'Claremont' (Burns and Raulston, 1993): Cercis occidentalis. Deep magenta-flowered california redbud. Introduced by Rancho Santa Anna Botanic Garden in Claremont, CA. Name established on 13 June 2016.

'Columbus' (Hatch, L. 2010. The redbuds: Varieties of the genus *Cercis*. Digital PDF eBook. TCR Press, Raleigh, NC): Seed strain of eastern redbud collected near Columbus, WI, that is possibly hardy to USDA Zone 4. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= 'Wisconsin', Wisconsin strain

'Covey' (U.S. Plant Patent #10328, 1998): Grows to 1.5-m tall and 2.5-m wide after 30 years; leaves are 7–10 cm long and 8–12 cm wide; flowers are strong reddish purple (78B) (Werner, 2002): Weeping eastern redbud found in Cornelia Covey's garden in Westfield, NY, in the 1960s; propagated and patented by Tim Brotzman (Madison, OH). It has wild-type flowers and abundant fruit.

- = 'Fantasy Falls'
- = 'Covey' Lavender Twist™

'Crosswicks Red' (Princeton Nurseries Catalog 2006–07): Eastern redbud with flowers more red than the wild type. Grows to 20′–30′ tall and 20′–30′ wide. Name established on 11 Oct. 2016.

'Don Egolf' (Amer. Nurseryman 92 (12):28, 2000): *Cercis chinensis*. Deciduous, slow-growing, compact, multistemmed shrub to 9′ tall and 9.5′ wide at 15 years; heavy, dark green, heart-shaped leaves; prolific, bright rosy mauve flowers in early spring; seedless. Originated from open pollinated seed collected from cultivated plants growing in the urban and suburban districts of Kunming, Yunnan, People's Republic of China. Released in July 2000 by Margaret Pooler and named after renowned USNA plant breeder Donald Egolf. Registered in 2000. Name established on 15 June 2016.

'Dwarf White' (Fantz and Woody, 2005): Small upright tree, 3–4 m tall, with white flowers; (J. Environ. Hort. 27(1):12–16, 2009) (Burns and Raulston, 1993): Whiteflowered eastern redbud with compact habit. Discovered in Illinois. Name established on 15 June 2016.

'Fantasy Falls' (Hatch, L. 2010. The redbuds: Varieties of the genus *Cercis*. Digital PDF eBook. TCR Press, Raleigh, NC): Was a provisional name for 'Covey' Lavender Twist™ and was never officially used.

= 'Covey' Lavender Twist™

'Flame' (J. Environ. Hort. 27(1):12–16, 2009) (Werner, 2002): Double-flowered eastern redbud with 20–25 petals and additional stamens; found in 1902 in Illinois and introduced by Louis Geraldi Nursery (O'Fallon, IL) in 1965. Observed to flower later and to be seedless. Name established on 11 Oct. 2016.

'Floating Clouds' (Hort. Res. 2:15049, 2015): Eastern redbud with white/green leaf variegation (Friends of the JC Raulston Arboretum Newsletter Vol. 10, No. 2, Fall 2006): Variegated eastern redbud with white and green sectoral blotches on leaves; discovered by Don Black (Charlie's Creek Nursery, Iva, SC); reportedly holds variegation longer than **'Silver Cloud'**. Name established on 11 Oct. 2016.

'Flora-Plena' (Burns and Raulston, 1993): *Cercis siliquastrum* with double flowers;

may no longer be in cultivation. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Forest Pansy' (U.S. Plant Patent #2556, 1965): Leaves 4-6 inches long and 3.5-6 inches wide, leaves emerge glossy pansy purple on the upper surface and lower surface, mature to glossy pansy purple on the upper and lower surface, with prominent veins showing a green coloration, later in the season leaves turn to spinach green, on the upper surface and willow green on the lower surface with fusing of grey light pansy purple, and petioles showing a blending of garnet brown and pansy purple; flowers sparse and appear before leaves in clusters, same size as wildtype-colored rosy magenta; fruit: linearoblong legume 2-3 inches long (color source not given) (Burns and Raulston, 1993): Eastern redbud with purple foliage and wild-type flowers; found at Forest Nursery (McMinnville, TN) in 1947.

'Fructu-Rubra' (Burns and Raulston, 1993): Cercis siliquastrum with fruits redder than wild-type; may no longer be in cultivation. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Genpei' (Wadl et al., 2012): Selection of *C. chinensis*. No description given. Name not established as it was listed without a description (ICNCP, Article 27.1).

'Gold Crown' (Hatch, L. 2010. The redbuds: Varieties of the genus *Cercis*. Digital PDF eBook. TCR Press, Raleigh, NC): Redbud with gold foliage. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

'Gong Fen' (Burns and Raulston, 1993): *Cercis chingii* with unknown characteristics. Name not established as it was listed without a description (ICNCP, Article 27.1).

'Greswan' (U.S. Plant Patent #19654, 2009): Eastern redbud with burgundy foliage; found in a seedling crop in Park Hill (OK) in 2000; produces more new foliage than 'Forest Pansy', lower leaf surface is burgundy, and mature foliage is darker green and more heart-shaped than 'Forest Pansy'; grows to 6–7.6 m tall after 7 years; mature upper leaf surface is dark red (183A) and mature lower leaf surface is dark red (187A); flowers are deep purplish red (71A).

= 'Greswan' Burgundy Hearts™

'Hearts of Gold' (U.S. Plant Patent #17740, 2007): Discovered in the Spring of 2002; appear to be more vigorous and uniformly growing than 'Forest Pansy', 'Appalachia', 'Covey', and 'Tennessee Pink'; grows to 4-m tall and 4-4.5 m wide

after 4 years; new foliage emerges reddish orange (31A), matures to brilliant greenish yellow (151D) in sun and to yellowish green (144A) in shade; flowers reddish purple (78B) (Redbud Resurgence, American Nurseryman, 1 Mar. 2006): Selection of eastern redbud with yellow leaves; discovered by Jon Roethling in Greensboro, NC; more vigorous and larger leaves than most cultivars.

'John Sjo' (Hatch, 2017): Cercis canadensis with pale-pink flowers and lavender striping on young branches. Introduced through Garden Debut[®]. Registered in Open Registration of Cultivars online in 2015. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= 'John Sjo' Cotton Candy™

'JN2' (U.S. Plant Patent #21451, 2010): Selection of eastern redbud with orange-to-yellow foliage with green speckles; reportedly more drought tolerant than 'Hearts of Gold'; new foliage emerges brilliant orange yellow (23B), becoming brilliant greenish yellow (6C), and matures greenish yellow (151D), and eventually moderately yellowish green (139B) with some lighter and darker speckling. Found in 2006 and introduced by Ray Jackson and Cindy Jackson of Belvidere, TN.

= 'JN2' The Rising Sun™

'JN3' (U.S. Plant Patent #22298, 2011): Found as a branch sport of 'JN2' in 2008 by Ray Jackson and Cindy Jackson of Belvidere, TN; foliage appears similar in color to 'JN2', but also has a wavy, rugose, green leaf margin (Pleasant Run Nursery Catalog, 2012): Selection of eastern redbud with bicolored leaves; a sport of 'JN2'; foliage has orange-to-yellow centers with dark green rims; grows to 20' tall and 18' wide.

= 'JN3' Solar Eclipse™

'JN7' (U.S. Plant Patent #25701, 2015): Found by Ray Jackson and Cindy Jackson of Belvidere, TN, in 2007; found to be more upright and vase shaped than **'Greswan'**; branch angles of 45° from vertical, compared with 60° from vertical for 'Greswan'; grows to 6.0–7.5 m tall and 2.8-m wide; leaves 13.6-cm wide and 13.6-cm tall; mature leaves upper surface moderate olive green (137A) and lower surface moderate yellowish green (138B) (Pleasant Run Nursery Catalog, 2016): Selection of eastern redbud with upright vase-shaped habit and wild-type flowers; grows to 30' tall and 15' wide.

= 'JN7' Summer's Tower™

'JN16' (U.S. Plant Patent #28627, 2017): Originated from the cross 'Ruby Falls' × 'JN2' made in 2012, found to be less pendulous than 'Ruby Falls' and more compact and longer leaf color retention

than 'Ruby Falls', 'JN2', and 'Forest Pansy', mature leaves upper surface close to deep reddish purple (N77A), veins close to dark green (132A) and lower surface close to moderate yellowish green (138B) and moderate purplish red (59C), flowers vivid reddish purple (N74B).

'Kay's Early Hope' (Pell and Nial, 2013): A selection of *C. chinensis* found as a chance seedling of wild-collected plant material at the JC Raulston Arboretum in 2007; multistemmed large shrub or small tree growing to 5-m tall and 3.5-m wide after 10 years; flowers very early (February or early March in North Carolina) and for up to 8 weeks. Named for the late Kate Yow, head women's basketball coach at North Carolina State University. Name established on 11 Oct. 2016.

'Little Woody' (U.S. Plant Patent #15854, 2005): Found, named, and introduced by Paul Woody (Fantz and Woody, 2005): Deciduous, compact, multistemmed tree, 3.3-m tall and 3-m wide at 8 years; young branches are greenish (RHS 146A and 147B) becoming dark gray brown to brown (201A), bark is grayish (197A); leaves are broadly ovate-cordate, 4–6 cm long and 4–7 cm wide, entire and slightly turned downward at the margin, upper surface is dark green (132A), bullate-rugose, and lower surface is pale with conspicuously reticulate veinlets; flowers purplish (81B-C) and calyx (71B-C).

'Mardi Gras' (Shadow Nursery Catalog, Winchester, TN, 2016): Leaves open white with new growth, a delicate pink. Slow growing. Name established on 13 June 2016.

= (?) 'Amethyst Mist'

'Merlot' (U.S. Plant Patent #22297, 2011) (Werner and Snelling, 2010): Purple-leaved redbud derived from an F₂ population of 'Texas White' × 'Forest Pansy'; hybridized initially in 1999 by Dennis Werner and Layne Snelling at North Carolina State University, selected in 2004 and released in 2009; leaves are 12.8-cm long and 13.1-cm wide, the upper surface of emerging leaves is deep reddish purple (N77A) and the lower leaf surface is dark red (59A); mature-to-moderate olive green (137A); flowers light purple (N78C); upright growth and heat tolerance superior to 'Forest Pansy'.

'Minrouge3' (Hatch, 2017): A selection of *C. canadensis* with leaves bright purplish red compared with purple as in 'Forest Pansy'. Introduced by Minier Nurseries, Anjou, France. Registered in Open Registration of Cultivars online in 2017. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= 'Minrouge3' Red Force®

'Morton' (In Praise of Noble Trees, Michael Dirr, ASLA Lecture, 12–13 Sept. 2010):

Selection of eastern redbud with deep lavender-pink flowers, selected for purple-black fruit; grows to 15'-25' tall and 15'-20' wide. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= 'Morton' Joy's Pride™

'Nana' (Burns and Raulston, 1993): *Cercis chinensis* that grows 3'-4' tall. Name established on 13 Oct. 2016.

'NC2007-8' (Pleasant Run Nursery Catalog, 2016): Weeping selection of eastern redbud with variegated leaves; resulted from the hybrid of 'Covey' × 'Silver Cloud' by Dennis Werner and Layne Snelling at North Carolina State University; grows 8' tall and 6' wide.

= 'Whitewater'

'NC2008-1' (Pleasant Run Nursery Catalog, 2016): Selection of eastern redbud with double flowers and glossy leaves; resulting from cross of 'Flame' × 'Oklahoma' by Dennis Werner (North Carolina State University) and Alex Neubauer (Hidden Hollow Nursery, Belvidere, TN); flowers were larger and darker pink to purple than 'Flame'; sterile; glossy leaves.

- 'Pink Pom Poms'

'NC-3' (Werner, 2002): Cercis canadensis var. mexicana with pubescent stems and leaves and purple fruit that persist; selected by J.C. Raulston, but not officially released. 'NCCC1' (U.S. Plant Patent #27712, 2017) (Pleasant Run Nursery Catalog, 2016): Eastern redbud with variegated tricolor leaves showing purple, pink, and white margins; leaves mature to bronze green; grows to 30' tall and 25' wide; developed in a partnership between the North Carolina State University and North Carolina nurserymen.

= 'NCCC1' Carolina Sweetheart™

'Northern Strain' [A.F. Fulcher and S.A. White (eds.). 2012. IPM for select deciduous trees in Southeastern US nursery production]: Selection of eastern redbud with increased cold hardiness; grows to 25' tall and 30' wide; selected by the University of Minnesota. Name not established because the ICNCP prohibits the use of "strain" in a cultivar name, unless published before 1996 (ICNCP, Article 21.17).

= Northland Strain, MN Strain

'Oklahoma' (Burns and Raulston, 1993): Cercis canadensis spp. texensis with darker magenta-purple flowers and glossy leaves; found in the Arbuckle mountains of Oklahoma and introduced by Warren & Son Nursery (Oklahoma City, OK) in 1964. Name established on 13 Oct. 2016. 'Pauline Lily' (Hidden Hollow Nursery Catalog, 2011): A West Virginia introduction with pale pink flowers (Werner,

2002): Selection of eastern redbud with very pale pink flowers; found in West Virginia and named after wife of discoverer; reportedly flowers later than species; introduced by Harald Neubauer (Hidden Hollow Nursery, Belvidere, TN). Name established on 13 Oct. 2016.

'Penduliflora' (Burns and Raulston, 1993): Selection of *C. siliquastrum* with drooping flowers and long pedicels; may no longer be in cultivation. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Pinkbud' (Raulston, 1990): Eastern redbud with pure pink flowers; found on Kansas City estate. Name established on 13 Oct. 2016.

'Pink Heartbreaker' (U.S. Plant Patent #23043, 2012): Discovered in a cultivated area at Leesport, PA, found to be weeping and grow more vigorously than 'Covey' and 'Cascading Hearts' to 2.59 m after 3 years, mature leaves—upper surface green (137C) and lower surface lighter green (139C) (Dirr, M. 2010. In praise of noble trees. ASLA Lecture, 12–13 Sept. 2010): A weeping selection of eastern redbud that is vigorous and has pink flowers; introduced in 2010.

'Pink Pom Poms' (U.S. Plant Patent #27630, 2017): Derived from seed collected from 'Flame' thought to be fertilized by 'Oklahoma', has glossy green leaves [upper surface green (137A) and lower surface green (138A)], purple-violet double flowers (N80A), and thought to be essentially sterile due to lack of observed fruit. Name registered 22 Nov. 2017.

= 'NC2008-1'

'Pink Trim' (Descriptions of 51 NDSU Woody Plant Introductions, Todd West, 2011): Selection of eastern redbud with increased cold hardiness; grows to 20' tall; green leathery leaves better than wild-type; attractive pink flowers and fruit set reduced from wild-type; collaboratively released by North Dakota State University and Greg Morgenson, former manager at Lincoln-Oakes Nurseries (Bismarck, ND) in 2009. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= 'Pink Trim' Northern Herald™

'Plena' (Raulston, 1990): Eastern redbud with semidouble flowers; probably different from 'Flame'; originated before 1894. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Pubescens' (Raulston, 1990): Eastern redbud with pubescence on the underside of leaves. Name not established as it does not meet the provisions of the ICNCP,

Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Reznicek' (https://jcra.ncsu.edu/resources/photographs/plants-results.php?serial = 127219): *Cercis chinensis* listed without description. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25). 'Rosea' (Raulston, 1990): Eastern redbud listed in Hortus Third without additional information. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Royal White' (Dirr, 1998) A selection of Eastern redbud with white flowers; found in the wild at Parent Bluffs, IL, and selected by Dr. J.C. McDaniel, University of Illinois. Originally named 'Royal' (Raulston, 1990), but not currently found in commerce or cultivation by that name. Thus, 'Royal White' best preserves existing usage and is the accepted name following provisions of the ICNCP (Art. 29.2). Name established on 13 Oct. 2016.

= 'Royal White'

'Rubra' (Raulston, 1990): Cercis siliquastrum from England; specimen on display at Wisley Gardens. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Ruby Falls' (U.S. Plant Patent #22097, 2011) (Werner and Snelling, 2010): Purple-leaved weeping hybrid redbud derived from an F2 population of 'Covey' × 'Forest Pansy'; hybridized in 2002 and selected in 2006 by Dennis Werner and Layne Snelling at North Carolina State University; leaves are 8.8-cm long and 10.1-cm wide; upper surface of emerging leaves is deep reddish purple (N77A) and lower leaf surface is dark red (59A); mature-to-moderate olive green (137A); flowers strong reddish purple (78B); lateral branching superior to 'Covey'.

'Rubye Atkinson' (Raulston, 1990): Eastern redbud with pure pink flowers. Name established on 13 Oct. 2106.

'Sanderson' (http://home.earthlink.net/~madronenursery/Trees/mex_redbud.html): A selection of *C. canadensis* var. *mexicana* with grey-green pubescent leaves with undulate margins. Introduced by Madrone Nursery, San Marcos, TX, in 1990 and occasionally found in botanical collections. Accessed on 9 Sept. 2017. Name not established as electronic publication does not meet the conditions of publication (ICNP, Article 25).

= 'Sanderson Selection'

'Shibamichi Red' (National Redbud Collection—North American Plant Collections Consortium Pamphlet, JC Raulston Arboretum, Mar. 2010): *Cercis chinensis* with deep pinkred flowers. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

'Shirobana' (Redbud Resurgence, American Nurseryman, 1 Mar. 2006): *Cercis chinensis* with white flowers; grows to 12′–15′ tall and 6′ wide. Name established on 13 Oct. 2016.

'Silver Cloud' (Burns and Raulston, 1993):Eastern redbud with variegated leaves; introduced in 1964 by Yew-Dell Nursery (Crestwood, KY). Name established on 14 Oct. 2016.

'Sinensis' (Burns and Raulston, 1993): *Cercis siliquastrum* that is more vigorous than the wild-type; may no longer be in cultivation. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Spring Snow' (Hatch, 2017): A precocious white-flowered selection of *C. chinensis* listed by Wairere Nursery. Registered in Open Registration of Cultivars online in 2015. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25). 'Sterilis' (Burns and Raulston, 1993): *Cercis siliquastrum* that is infertile; may no longer be in cultivation. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Tennessee Pink' (Hidden Hollow Nursery Catalog, 2011): Hidden Hollow selection with true pink flower and vigorous growth (Werner, 2002): A selection of eastern redbud with pink flowers; found and introduced by Harald Neubauer of Hidden Hollow Nursery (Belvidere, TN). Name established on 14 Oct. 2016.

'Texas White' (Werner and Snelling, 2010): *Cercis canadensis* var. *texensis* with white flowers that was released by Germany Nursery in Fort Worth, TX, in the 1960s. Name established on 12 Oct. 2016.

= 'Oklahoma Whitebud'

'Tom Thumb' (A.F. Fulcher and S.A. White (eds.). 2012. IPM for select deciduous trees in Southeastern US nursery production): An upright, spreading eastern redbud with leaves smaller than the wild-type. Name established on 14 Oct. 2016.

'Traveler' (U.S. Plant Patent #8640, 1994): Leaves are 2–3.5 cm long and 2–3.5 cm wide; flowers purplish pink (Werner, 2002): Weeping *C. canadensis* spp. *texensis* with glossy leaves; possibly sterile and no functional pollen has been found on the plant; discovered as a seedling by Dan Hosage, Jr. of Madrone Nursery (San Marcos, TX).

'Variegata' (Burns and Raulston, 1993): A selection of *C. siliquastrum* with variegated leaves; may no longer be in cultivation. Name not established as it does not meet the provisions of the ICNCP, Article 21.11, stating that a name that is entirely in Latin cannot be established after 1 Jan. 1959.

'Vanilla Twist' (U.S. Plant Patent #22744, 2012): Grows to 2.3-m tall and 1.5-m wide after 5 years; leaves 13-cm long and 15-cm wide, emerge strong yellowish green (144B) and senesce yellow (153D to 7A); flowers strong reddish purple (N78B) (Pleasant Run Nursery Catalog, 2016): Weeping white-flowered eastern redbud derived from the cross **'Royal'** × **'Covey'**; white flowers; hybridized and introduced by Tim Brotzman (Madison, OH).

'Wavecrest' (http://blog.plantdelights.com/redbud-love/): A purported hybrid between *C. canadensis* and *C. chinensis* with winterhardiness to -12 °F. Accessed 15 Dec. 2017. Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

'Whitewater' (U.S. Plant Patent #23998, 2013): Originated from F2 cross of 'Covey' × 'Silver Cloud' originally made in 1999 with additional crosses in 2005 and selection in 2007; grows to 1.27-m tall and 0.92-m wide after 3 years; leaves 11.5-cm long and 11.5-cm wide; upper leaf surface emerges with white sectors colored yellowish white (NN155D) and green sectors colored brilliant bluish green (128B); upper leaves mature with white sectors colored light yellowish green (150D) and green sectors dark yellowish green (139A); flowers pale purplish pink (62D) (Pleasant Run Nursery Catalog, 2016): Weeping selection of eastern redbud with variegated leaves; resulted from hybrid of 'Covey' × 'Silver Cloud' by Dennis Werner and Layne Snelling at North Carolina State University; grows 8' tall and 6' wide.

= 'NC2007-8'

'Wisconsin' (Hatch, L. 2010. The redbuds: Varieties of the genus *Cercis*. Digital PDF eBook. TCR Press, Raleigh, NC). Name not established because electronic publication does not meet conditions of publication (ICNCP, Article 25).

= 'Columbus'

'Wither's Pink Charm' (Burns and Raulston, 1993): Eastern redbud with pink flowers; found by D.D. Wither around 1930 in Virginia. Name established on 14 Oct. 2016.

Literature Cited

Brickell, C.D., C. Alexander, J.J. Cubey, J.C. David, M.H.A. Hoffman, A.C. Leslie, V. Malecot, and X. Jin. 2016. International code of nomenclature for cultivated plants (ICNCP). 9th ed. Scripta horticulturae. Vol. 18.

- Burns, S. and J.C. Raulston. 1993. An updated checklist of existing *Cercis* taxa. Proc. SNA Res. Conf. 38:342–345.
- Chen, D., D. Zhang, S.S. Larsen, and M.A. Vincent. 2010. *Cercis*. In: Z.Y. Wu, P.H. Raven, and D.Y. Hong (eds.). Flora of China. Vol. 10. 24 Jan. 2018. http://flora.huh.harvard.edu/china/mss/volume10/FOC_10_Cercideae.pdf>.
- Davis, C.D., P.W. Fritsch, J. Li, and M.J. Donoghue. 2002. Phylogeny and biogeography of *Cercis* (Fabaceae): Evidence from nuclear ribosomal ITS and chloroplast *ndhF* sequence data. Syst. Bot. 27:289–302.

Dirr, M.A. 1998. Manual of woody landscape plants: Their identification, ornamental characteristics, culture, propagation, and uses. 5th ed. Stipes Publishing, Champaign, IL.

Fantz, P.R. and P. Woody. 2005. 'Ace of Hearts' and 'Little Woody' redbuds. HortScience 40:2209–2210.

Fritsch, P.W., K.W. Larson, and A.M. Schiller. 2009. Taxonomic implications of morphological variation in *Cercis canadensis* (Fabaceae) from Mexico and adjacent parts of Texas. Syst. Bot. 34:510–520.

Fulcher, A.F. and S.A. White (eds.). 2012. IPM for select deciduous trees in southeastern US nursery production. Southern Nursery IPM working group, Knoxville, TN. 24 Jan. 2018. https://wiki.bugwood.org/IPM_book.

Hatch, L.C. 2010. The redbuds: Varieties of the genus *Cercis*. Digital PDF eBook. 24 Jan. 2018. ">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books.google.com/books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books/about/The_Redbuds.html?id=W1wzBgAAQBAJ>">https://books/about/The_Redbud

Hatch, L.C. 2017. International register of ornamental plant cultivars: Woody genera A to Z. Digital PDF eBook. 24 Jan. 2018. https://books.google.com/books/about/International_Register_of_Ornamental_Pla.html?id=blknDgAAQBAJ.

Krüssmann, G. 1976. Manual of cultivated broadleaved trees and shrubs. Vol. I, A–D. Timber Press, Beaverton, OR.

Pell, S. and D. Nial. 2013. International registration of cultivar names for unassigned woody genera January 2010–February 2013. HortScience 48:404.

Raulston, J.C. 1990. Redbud. Amer. Nurseryman 171(5):39–51.

Rehder, A. 1990. Manual of cultivated trees and shrubs. 2nd ed. Dioscorides Press, Portland, OP

Robertson, K.R. 1976. *Cercis*: The redbuds. Arnoldia 36(2):37–49.

USDA-ARS. 2017. Germplasm Resources Information Network. 24 Jan. 2018. http://www.ars-grin.gov/>.

USDA-NASS. 2015. Census of horticultural specialties (2014). 24 Jan. 2018. https://www.agcensus.usda.gov/Publications/2012/Online_Resources/Census_of_Horticulture_Specialties/HORTIC.pdf>.

Wadl, P.A., R.N. Trigiano, D. Werner, M. Pooler, and T. Rinehart. 2012. Simple sequence repeat markers from *Cercis canadensis* show wide cross-species transfer and use in genetic studies. J. Amer. Soc. Hort. Sci. 137:189–201.

Werner, D. 2002. Breeding efforts in *Cercis* at North Carolina State University. Proceedings of Landscape Plant Symposium: Plant Development and Utilization. 24 Jan. 2018. https://www.ces.ncsu.edu/fletcher/programs/nursery/metria/metria12/index.html.

Werner, D. and L. Snelling. 2010. 'Ruby Falls' and 'Merlot' redbuds. HortScience 45:146–147.

Weathington, M. 2009. The *Cercis* collection at the JC Raulston Arboretum. Public Garden 24(1): 38–39.