

# 'Arapaho' and 'Cheyenne' *Lagerstroemia*

Margaret R. Pooler

United States Department of Agriculture, Agricultural Research Service, United States National Arboretum, Floral and Nursery Plants Research Unit, 3501 New York Avenue, NE, Washington, DC 20002

**Additional index words.** crapemyrtle, crape myrtle, crepe myrtle, *Erysiphe lagerstroemiae*, *Lagerstroemia indica* L., *Lagerstroemia fauriei* Koehne, *Lagerstroemia limii* Merr., Lythraceae, ornamental plant breeding, plant introduction, powdery mildew

The crape myrtle has become a mainstay in mild-climate landscapes because of its ease of production and cultivation, long-lasting mid-summer bloom, range of plant habits from miniature potted plant to large tree, striking exfoliating bark on smooth multi-stemmed trunks, outstanding fall foliage coloration, and diversity of landscape uses. Crape myrtles have been cultivated for many centuries in southeast Asia, where the genus *Lagerstroemia* L. is endemic, and were introduced to Europe in the mid-1600s. They were planted in Kew Gardens in England in the mid-1700s, and were introduced to the southeastern U.S. soon afterward (Egolf and Andrick, 1978). It is thought that George Washington helped to import seeds of *L. indica* for planting at Mt. Vernon (Egolf and Andrick, 1978), although there are no records of surviving crape myrtle plants at the estate from that time. Distribution of crape myrtle by commercial nurseries on the east and west coasts of the U.S. ensured that this plant had become a fairly common landscape plant in USDA hardiness zones 7 and warmer (USDA, 1990) by the early 1900s.

The crape myrtle breeding program at the U.S. National Arboretum, begun in the early 1960s by the late Donald Egolf, has resulted in the introduction of 29 crape myrtle cultivars, including 22 hybrids of *L. indica* L. × *L. fauriei* Koehne that are extremely tolerant of powdery mildew (*Erysiphe lagerstroemiae* E. West). Some of these introductions have become industry standards in the United States and abroad (Byers, 1997), ranging in growth habit from dwarf [e.g., 'Chickasaw' and 'Pocomoke' (Pooler and Dix, 1999)] to tree [e.g., 'Natchez' (Egolf, 1981)] forms.

Reported here are two new *Lagerstroemia* cultivars released from the National Arboretum in 2003 that are characterized by bright red inflorescences and powdery mildew-resistant foliage. These cultivars are the first introductions that incorporate the lesser-known species *L. limii* Merr. into U.S.-grown cultivars. Endemic to China, *L. limii* is a shrub or small tree with pubescent leaves and ridged flower buds. It is grouped in section *Adambea*, subsection *Microcarpidium*, whereas the better known *L. indica* is in section *Sibia* (Furtado and Montien, 1969). Incorporation of this germplasm into these new cultivars broadens the genetic base of cultivated crape myrtle.

## Origin

Both 'Arapaho' and 'Cheyenne' were selected in 1996 from seedlings originating from controlled hybridizations made in 1989 ('Arapaho') and 1990 ('Cheyenne') by Don Egolf. The parents used in these hybridizations resulted from crosses made in 1986 that used *L. limii* in an attempt to broaden the genetic base, and specifically the flower color palette, of cultivated crape myrtle. The pedigree of these cultivars, illustrated in Fig. 1, indicates the close genetic relationship between the two cultivars as well as the diversity of germplasm contributing to these selections. In the pedigree, plants 260, 5, and 651 are *L. indica* accessions, while 'Tuscarora' is a hybrid *L. indica* × *L. fauriei* from the National Arboretum. Plant 757 is *L. limii*, received at the National Arboretum in 1980 as seed from the Shanghai Botanic Garden, Shanghai, China (NA46513). Crosses leading to 'Arapaho' and 'Cheyenne' were made in 1960, 1968, 1979, 1986, 1989, and (for 'Cheyenne' only) 1990. These two cultivars have been evaluated by cooperators in Alabama, Arkansas, California, Florida, Georgia, Mississippi, New Jersey, North Carolina, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, and Virginia.

The cultivar names 'Arapaho' and 'Cheyenne' were registered in 2003 with the U.S. National Arboretum, the International Registration Authority for *Lagerstroemia*, in accordance with the *International Code of Nomenclature for Cultivated Plants*—1995 (Brickell, 1995). As with previous crape myrtle introductions from the U.S. National Arboretum, these cultivars were named after Native American tribes.

## Description

*Lagerstroemia (indica × fauriei × limii)* 'Arapaho', NA68972, PI633034, is a deciduous, upright, multi-stemmed tree or shrub with a broad, vase-shaped habit that has grown 7 meters high and 3.5 meters wide after 16 years of growth in Washington, D.C. (USDA Hardiness Zone 7b; USDA, 1990; Fig. 2). The gray-brown bark [Royal Horticultural Society (RHS) 199D (Royal Horticultural Society, 1986), Munsell 10YR 6/4 (Munsell, 1990)] exfoliates to a light tan-brown (RHS 165C, Munsell 7.5YR 6/6). Mature leaves are glossy dark green (RHS 147A; Munsell 7.5GY 2/4), 6 to 7 cm long and 3 to 4 cm wide, elliptic to obovate, and acute at the apex. Flower panicles are 17 cm long and 10 cm wide, with loosely-spaced dark magenta to red flowers (RHS 60B; Munsell 10RP 3/10).

*Lagerstroemia (indica × fauriei × limii)* 'Cheyenne', NA68973, PI633035, is a deciduous, rounded, multi-stemmed shrub that has grown 3.0 m high and 3.0 m wide after 15 years of growth in Washington, D.C. (Fig. 3). Smooth gray-brown exfoliating bark (RHS 199D, Munsell 10YR 6/4) reveals medium brown trunks (RHS 177D, Munsell 5YR 6/4). Leaves are glossy dark green (RHS 147A; Munsell 7.5GY 2/4), rounded, 4 to 5 cm long and 3 cm wide and slightly acute at the apex. Flower panicles are 15 cm long and 10 cm wide, dense, with flower color identical to that of 'Arapaho'. Interestingly, when growing in the field, the flower color of 'Cheyenne' is perceived to be deeper red than that of 'Arapaho'; however, when flowers are compared side-by-side, the flower colors of the two cultivars are indistinguishable.

## Culture

Both 'Arapaho' and 'Cheyenne' are adaptable to the same cultural conditions as other crape myrtle cultivars, and will grow well in a wide range of soil and climatic conditions. They grow and flower best, however, in full sun with a heavy loam to clay soil with pH 5.5 to 6.5. Both are reliably top hardy to USDA Hardiness Zone 7b and root hardy to Zone 6. Because crape myrtles bloom on the current season's growth, these cultivars, especially 'Cheyenne' with its more shrubby habit, can be treated as perennials in colder climates. Like other hybrid crape myrtles released from the National Arboretum, the foliage and flowers of these two cultivars are extremely tolerant of powdery mildew and require no fungicidal spray.

'Arapaho' and 'Cheyenne' can be propagated from softwood, hardwood, or root cuttings, with best results achieved using softwood cuttings from vigorously growing shoots rooted under intermittent mist. Plants are suitable for either field or container production, and will usually produce flowers the first summer after propagation, but do not usually bloom profusely until after 2 to 3 years of growth. The bark begins to exfoliate after 3 to 5 years of growth.

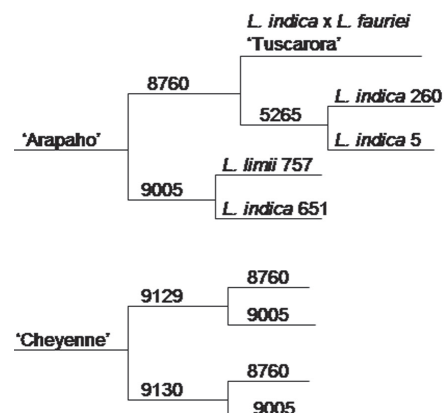


Fig. 1. Pedigrees of 'Arapaho' and 'Cheyenne' crape myrtle. Plants 260, 5, and 651 are *L. indica* accessions, while 'Tuscarora' is a hybrid *L. indica* × *L. fauriei* from the National Arboretum. Plant 757 is *L. limii*, received at the National Arboretum in 1980 as seed from the Shanghai Botanic Garden in China (NA46513).



Fig. 2. 'Arapaho' crape myrtle after 16 years of growth.



Fig. 3. 'Cheyenne' crape myrtle after 15 years of growth.

### Outstanding Characteristics and Uses

'Arapaho' and 'Cheyenne' are the first crape myrtle cultivars that incorporate three species, *L. indica*, *L. fauriei*, and *L. limii*, into a cultivar, and therefore serve to broaden the genetic base of cultivated *Lagerstroemia*. Both cultivars were selected for their bright red summer bloom combined with dark green, powdery mildew resistant foliage. The upright, tree-type habit of 'Arapaho' makes it well suited for use as a specimen plant, as a street or highway tree, or in mass plantings in public parks. The rounded, compact, multi-stemmed habit of 'Cheyenne' makes it suitable for use as a specimen plant or in mass plantings and also in a shrub border or informal hedge.

### Availability

Like all other crape myrtles released from the National Arboretum, 'Arapaho' and 'Cheyenne' are not patented, so may be propagated and sold freely. Stock increase of these plants by cooperating wholesale nurseries was initiated in 2002 and plants will be available from a limited number of wholesale and mail-order companies by Spring 2006. The National Arboretum does not have stock of these plants available for general distribution.

### Literature cited

- Brickell, C.D. 1995. International code of nomenclature for cultivated plants—1995. Intl. Comm. Nomenclature of Cultivated Plants, Wimborne, U.K.
- Byers, Jr., M.D. 1997. Crape myrtle—A grower's thoughts. Owl Bay Publ., Auburn, Ala.
- Egolf, D.R. 1981. 'Muskogee' and 'Natchez' *Lagerstroemia*.

- gerstroemia*. HortScience 16:576.
- Egolf, D.R. and A.O. Andrick. 1978. The *Lagerstroemia* handbook/checklist. Amer. Assn. Bot. Gardens Arborea, Inc, Wilmington, Del.
- Furtado, C.X. and S. Montien. 1969. A revision of *Lagerstroemia* L. (Lythraceae). Gard. Bul. Straits Settlement. (Singapore) 24:185–335.
- Munsell Color (Firm) 1998. Munsell book of color: removable samples in two binders (glossy collection). 2 vols. Macbeth division of Kollmorgen Instruments, New Windsor, N.Y.
- Pooler, M.R. and R. Dix. 1999. 'Chickasaw', 'Kiowa', and 'Pocomoke' *Lagerstroemia*. HortScience 34:361–363.
- Royal Horticultural Society and Flower Council of Holland. 1986. RHS colour chart. RHS, London.
- U.S. Department of Agriculture. 1990. Plant hardiness zone map. USDA Misc. Publ. 1475.