Lagerstroemia speciosa ‘Big Pink’: An Improved Pink-flowered Queen’s Crape Myrtle

Alan W. Meerow¹ and Tomás Ayala-Silva

USDA-ARS-SHRS, National Clonal Germplasm Repository, 13601 Old Cutler Road, Miami, FL 33158

Brian M. Irish

USDA-ARS-TARS, National Germplasm Repository, 2200 Pedro Albizu-Campos Avenue, Suite 201, Mayaguez, PR 00680

Additional index words. Lythraceae, flowering tree, tropical shrubs, ornamentals, nursery, landscape

Lagerstroemia speciosa (L.) Pers. is one of 30–50 species (Furtado and Montien, 1969) of this Asian genus, from which *L. indica* and its hybrids have become mainstays of horticulture (Cabrera, 2004). Commonly called Pride-of-India, queen’s or giant crape myrtle, *L. speciosa* can attain heights of 20 to 30 m in the wild. It is valued as a timber tree, and a tropical ornamental, with landscape utility limited to USDA Hardiness Zones 10–11 (Everett, 1980; Gilman and Watson, 1993; U.S. Department of Agriculture, 2012). It is native to India and elsewhere in Southeast Asia, but has been introduced into tropical areas all over the world. The flowers, arguably the largest in the genus, are most typically purple, with pink the second most common color. Additional observed variants include light lavender to white. This paper describes a pink-flowered seedling selection of the species that has the largest flowers observed on any clone of the species encountered by the authors.

Origin

In 2005, the first two authors encountered a variable street planting of *L. speciosa* in Mayaguez, PR, that included pink, purple, light lavender, and near white-flowered individual trees. At a later date, open-pollinated seed was collected from one tree of each flower color and grown out at the USDA-ARS Subtropical Horticultural Research Station

(SHRS) in Miami, FL. Six precocious (flowering in just under 1 year from seed) individuals, three purple flowered, two pink, and one light lavender, were established in the field. One of the two pink-flowered seedlings immediately stood out for the fact that the internodes of the paniculate inflorescences were shorter and the flowers themselves were larger than typical. As a result, the flowering display was much showier than that of the typical pink-flowered clones observed in the south Florida landscape. This seedling selection was subsequently propagated vegetatively by cuttings and was established in multiple locations on the SHRS clonal germplasm repository grounds for further evaluation over the past 7 years.

Description

All phenotypic characteristics including size measurements were derived from plants grown in the field for at least 5 years. Color was evaluated with the Royal Horticultural Society (RHS) Color Charts (Royal Horticultural Society, 1995).

Lagerstroemia speciosa ‘Big Pink’ (Fig. 1) is a multistemmed, densely branched, deciduous large shrub to small tree growing 4.5–6.0 m tall in 5 years from a 0.9-m tall liner. The ultimate height of the cv. is not known, but the species is reported to achieve 20–30 m in its natural range. Eighty-five-year-old purple-flowered accessions of the species in the National Germplasm Repository at Miami are ≈15 m tall.

The trunks are light gray colored, RHS Greyed-Green 196A with patches of Greyed-Green 191A. One-year-old stems are green and 5.3–7.0 mm in diameter; 2-year-old stems are RHS Greyed-Purple 187A and 10–12 mm in diameter. Phyllotaxis is opposite, but sometimes appears subopposite or alternate. The leathery, simple, glabrous leaves are 6–8 × 14–22 cm, elliptic, mucronulate at the apex, and irregularly and shallowly undulate at the margins. The short petioles are 6.5–8.5 mm long. The laminae are RHS Green 137A on the adaxial surface, with a prominent RHS Yellow-Green 151D

midrib that is proximally flushed red on younger leaves. Venation is semicraspedodromous and the secondary veins are conspicuous. The abaxial surface is RHS Yellow-Green 46C and also with prominent venation. Inflorescences are terminal panicles that are 17–42 cm long and have 1–2 flowers at the upper nodes and 3–4 flowers at the lower, subtended by a ≈1 mm × 1 cm long lanceolate bract. The surface of the panicle, the closed buds, and the calyx are puberulent. The hypogynous flowers open first from the proximal positions to the distal in each panicle. The flowers are rotate, 6.7–7.6 cm in diameter, borne on 6.8- to 8-mm-long pedicels, each subtended by a minute, and soon scarious, lanceolate bracteole, and emit a faint honey-like fragrance. The flower buds are 9.5–12.3 mm in diameter and are ribbed. The calyx at anthesis is 2.4–3.0 cm wide, consisting of six deltoid, light green spreading sepals, each 7.8–8.8 mm long and 4–4.5 mm wide, acute at their apex, with a light pink (RHS Red-Purple 66C) spot on the adaxial surface, and ribbed along the abaxial margins, fused below into a 12-ribbed, cupule-like structure 11.5–12 mm wide. The corolla consist of six crinkled, crape-like, pink (RHS Red-Purple 66B, aging through 66D to 65D late in anthesis), broadly spatulate, stalked petals, inserted between the sepals, the stalk 4.4–5.4 mm long, white; the petal 3.1–3.4 cm long and 2.4–2.5 cm wide. Up to 100 stamens are clustered around the base of the ovary in fascicles, the entire cluster 1.8–2 cm wide; filaments lax, 0.8–1.2 mm long, mostly light yellowish-green (RHS Yellow-Green 150D), some flushed RHS Red-Purple 66D; anthers yellow, 1.0–1.3 mm long. The fruit are 2 to 3 cm in diameter. The style is 25–27 mm long, ≈0.5 mm thick, light pink with a ≈0.6 mm wide green (RHS Green 136C), capitate stigma. The superior ovary is globose, 3.0–3.3 × 4.4–4.7 mm. The mature fruit is a globose woody dehiscent capsule, 2.5–3.0 cm in diameter, that splits into six valves releasing the brown (RHS Greyed-Orange 164A), flattened, winged seeds.

The cultivar name Big Pink alludes to both the large flower size and overall showiness of the cultivar. Registration of the cv. with the International Cultivar Registration Authority for *Lagerstroemia* [National Arbo-retum (NA)] is in progress. Voucher material will be deposited in the herbarium of NA.

Cultural Notes

Lagerstroemia speciosa ‘Big Pink’ is readily propagated from softwood, semiripened, and hardwood cuttings throughout the year. Softwood cuttings from actively growing plants treated with a 5-s basal end dip in 1000 ppm indolebutyric acid (IBA) in 50% EtOH root within 4 to 6 weeks when placed under intermittent mist. Semiripened and hardwood cuttings benefit from a higher rate of IBA (2500 ppm) and take slightly longer to root (6 to 8 weeks).

Plants have been successfully container-grown in five parts aged pine bark: four coconut coir dust: one coarse sand (by volume),

Received for publication 7 Aug. 2015. Accepted for publication 26 Aug. 2015.

Mention of a trademark, proprietary product, or vendor does not constitute a guarantee or warranty of the product by the U.S. Department of Agriculture and does not imply its approval to the exclusion of other products or vendors that may be suitable. The cost of publishing this article was defrayed in part by the payment of page charges. Under postal regulations, this article therefore must be hereby marked advertisement solely to indicate this fact.

¹Corresponding author. E-mail: alan.meerow@ars.usda.gov.

Fig. 1. *Lagerstroemia speciosa* 'Big Pink'. (A) Eight-year-old plant in the National Germplasm Repository, Miami, FL. (B) Intermediate close-up of stems and inflorescences. (C) Close-up of panicle. (D) Close-up of flower.

amended with $5.0 \text{ kg} \cdot \text{m}^{-3}$ 17N-2.3P-10K Nutricote (Florikan, Sarasota, FL), $4.2 \text{ kg} \cdot \text{m}^{-3}$ dolomite, and $1.2 \text{ kg} \cdot \text{m}^{-3}$ Micromax (Scott's, Milpitas, CA). Rooted cuttings are placed directly into 10-cm containers and then into 20-cm containers 1–2 months later. The plants grow rapidly when young and would be salable in 20-cm containers 6 to 8 months after rooted cuttings are potted. The cultivar will flower in this size container. Trial blocks were situated in the ground at the SHRS from plants established in 20-cm containers in Oct. 2005, Apr. 2007, and again in Mar. 2009 in crushed limestone and sand fill substrate similar to

urban residential lots in much of south Florida, amended with 8.0 cm of 10-year-old compost from vegetative solid waste, incorporated into the top 15 cm of the site substrate.

In the landscape, *L. speciosa* 'Big Pink' should be situated in full sun, on well-drained soils. It grows best on slightly acidic soils (pH = 6.5), exhibiting iron and magnesium chlorosis on substrates with pH > 7.5. After establishment, the plant is slightly drought tolerant, requiring supplementary irrigation during prolonged periods of no precipitation. After leaves fall in winter, the trees are more drought resistant. Nutritional requirements

are moderate; fertilization 3–4 times per year is recommended on soils of poor fertility, particularly during the first years in the ground; frequency may be reduced to twice annually after establishment. Plants at the Repository on alkaline soils received a commercial landscape formulation (8N-4P₂O₅-8K₂O) for lower pH-demanding plants. Plants situated on lower lying sedge peat or marl pockets performed well with a standard commercial formulation (13N-3P₂O₅-13K₂O) for tropical landscape plants in south Florida. Plants can be cut back in late winter if desired. No pest or disease problems have been observed in 10 years of cultivation history in Miami. Flowering occurs from early spring (March) through the summer months in south Florida. New flower stems may continue to appear as late as October. Leaves redden irregularly in the autumn, with most of them abscising by January. The plant is best used as a specimen shrub or tree, either singly or in a cohesive street planting. Young plants require training to a single central leader to develop an arborescent canopy.

Availability

Material of *L. speciosa* 'Big Pink' is available for research and further evaluation purposes by request through the USDA-ARS National Plant Germplasm System (<http://www.ars-grin.gov/npgs/>) as accession PI 675009.

Literature Cited

- Cabrera, R.I. 2004. Evaluating and promoting the cosmopolitan and multipurpose *Lagerstroemia*. Acta Hort. 630:177–184.
- Everett, T.H. 1980. Living trees of the world. Doubleday and Co., Inc. New York, NY. p. 315.
- Furtado, C.X. and S. Montien. 1969. A revision of *Lagerstroemia* L. (Lythraceae). Gard. Bull. Straits Settlement. (Singapore) 24:185–335.
- Gilman, E.F. and D.G. Watson. 1993. *Lagerstroemia speciosa*, Queens crape-myrtle Florida Cooperative Extension Service Factsheet ST-340. University of Florida. p. 3.
- Royal Horticultural Society. 1995. RHS color chart. 3rd ed. Royal Horticultural Society, London, UK.
- U.S. Department of Agriculture. 2012. Plant hardiness zone map. Agricultural Research Service, U.S. Department of Agriculture. 14 Aug. 2015. <<http://planthardiness.ars.usda.gov>>.