‘Jinhuang’ Yellow-leaf Crape Myrtle

Shu'an Wang

Southern Modern Forestry Collaborative Innovation Center/College of Biology and the Environment, Nanjing Forestry University, Nanjing 210037, China; and Institute of Botany, Jiangsu Province and Chinese Academy of Sciences, Nanjing 210014, China

Rutong Yang, Peng Wang, Qing Wang, Linfang Li, and Ya Li¹

Institute of Botany, Jiangsu Province and Chinese Academy of Sciences, Nanjing 210014, China

Zengfang Yin¹

Southern Modern Forestry Collaborative Innovation Center/College of Biology and the Environment, Nanjing Forestry University, Nanjing 210037, China

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Crape myrtle (*Lagerstroemia indica*), a member of the family Lythraceae, originated in China and historical records of its cultivation in the country date back to 1700 years ago, well before its cultivation in other areas in the world (Zhang, 1991). Known for its long-lasting flowers in midsummer, wide range of flower colors (white, red, purple, pink, and their combined variants), extensive diversity of growth habits (miniature shrub to large tree), and appealing barks (cinnamon colored to gray colored), *L. indica* is a key parent for crape myrtle breeding (Cabrera, 2002). Many crape myrtle cultivars are now widely used in Chinese landscaping (Min et al., 2008). In the past 50 years, most breeding efforts have focused on resistance to diseases and in combinations with other desirable horticultural traits (Pooler, 2006; Pooler and Dix, 1999). Many cultivars are available in a broad range of growth habits to service various landscape objectives (Egolf, 1986, 1990; Knox, 2000). In recent years, five dark leaf crape myrtle cultivars (e.g., Ebony Embers, Ebony Fire, Ebony Flame, Ebony Glow, and Ebony and Ivory) have been bred (Pounders et al., 2013). Although a large number of new crape myrtle cultivars have been released through breeding and selection efforts since the 1960s, no yellow leaf crape myrtle cultivars are available. Here, we report a new yellow leaf crape myrtle cultivar named as Jinhuang.

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Shu'an Wang and Rutong Yang have contributed equally to this work.

¹Corresponding author. E-mail: yalicnbg@163.com or zfyin@njfu.edu.cn.

Origin

In 2003, a natural yellow leaf bud mutant of the *L. indica* cultivar Fenjing was found at the Institute of Botany, Jiangsu Province and Chinese Academy of Sciences, China (CNBG). The mutant was isolated and reproduced using hardwood cuttings. A total of 12 plants of the mutant were continuously evaluated in the nursery of CNBG during 2004 through 2012. We found that leaf color of all clones was stable over the past 8 years. The cultivar Jinhuang was authorized by the state forestry administration of the People's Republic of China in 2014.

Description

Lagerstroemia indica ‘Jinhuang’ is a deciduous, semidwarf shrub that has grown 1.7 m high and 1.8 m wide at the 11th year (Fig. 1). Leaf color is yellow (25A, Royal Hort. Soc., 2001) in spring, yellow yellow (1A) in summer. Leaves are 3.3 to 5.5 cm long, and 2.2 to 3.7 cm wide, with a 2- to 4-mm-long petiole. The young shoots are red-purple (60A). The young branches are grey-brown (166D) and turn to light grey (166C) when they are older. Plants bloom during mid-July through September. Flower panicles are 9 to 18 cm long, 7.5 to 17 cm wide, with 15 to 60 bright pink (N57C), 3.8- to 4.5-cm-diameter flowers (Fig. 2). Petals are deep pink (N57B), 12 to 15 mm long, 8 to 10 mm wide, and clawed with slight crinkled. ‘Jinhuang’ is suitable for gardens, landscapes in restricted spaces, and container plants for patios or paved public areas due to its dwarf plant habit and leaf color.

Culture

‘Jinhuang’ is adapted to accepted cultural practices for *L. indica* and its cultivars, which thrive in diverse soil and climatic conditions. They grow and flower best in half sun with adequate moisture and balanced fertility. Plants are amenable to pruning and can be maintained

as smaller shrubs. The cultivar is propagated by hardwood stem cuttings treated with 800 ppm indole butyric acid under intermittent misting systems in the early spring. ‘Jinhuang’ can be grafted successfully on *L. indica* or *Lagerstroemia fauriei* in the early spring.

Comparative Data

Performance in the field. ‘Jinhuang’ and the control cultivar Fenjing were grown in the nursery of CNBG in 2014. The experiment was arranged into a completely randomized design with three replications and five cutting grown plants per replication. Phenotypic traits of plants were measured in July. The Dunnett's test of data was analyzed by IBM SPSS Statistics 19.

Leaf color of ‘Jinhuang’ was yellow (25A) in spring, and yellow (1A) in summer (Fig. 3). Leaf color of the control cultivar Fenjing was green (140C) in spring, and dark green (131A) in summer (Fig. 3). Branche number of ‘Jinhuang’ was significantly more than ‘Fenjing’ (Table 1). However, plant height and ground diameter of ‘Jinhuang’ were decidedly less than ‘Fenjing’ (Table 1). Petal length, petal width, and claw length of ‘Jinhuang’ were slightly less than ‘Fenjing’ (Table 1).

Availability

Additional information on ‘Jinhuang’ is available on written request to the corresponding author, Dr. Ya Li, CNBG (yalicnbg@163.com).

Fig. 1. Eight-year-old cutting grown plants of ‘Jinhuang’ crape myrtle.

Fig. 2. Flowers of ‘Jinhuang’ crape myrtle.

Fig. 3. (A) Spring and (B) summer leaf color of 'Jinhuang' (L) and 'Fenjing' (R) crape myrtles.

Table 1. Phenotypic trait of 'Jinhuang' and 'Fenjing'.

Trait	'Fenjing'	'Jinhuang'
Plant height	72.8767 ± 3.01	30.67 ± 4.76**
Branche number	11.33 ± 2.94	17.67 ± 2.73**
Ground diameter ^z	1.05 ± 0.11	0.60 ± 0.07**
Crown diameter	4.22 ± 0.16	4.14 ± 0.11
Petal length	1.80 ± 0.13	1.79 ± 0.02
Petal width	1.81 ± 0.02	1.80 ± 0.01
Claw length	0.89 ± 0.01	0.88 ± 0.01

**Significance level was $P < 0.01$ by Dunnett's test.

^zMeasured stem at 5 cm above the ground.

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