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Kevin Parris: A New Hybrid Cultivar of *Magnolia*

Wenqian Zhang
College of Economics and Management, Changsha University, Changsha, Hunan 410004, China; College of Landscape Architecture, Central South University of Forestry & Technology, Changsha, Hunan 410004, China; and Hunan Big Data Engineering Technology Research Center of Natural Protected Areas Landscape Resources, Changsha, Hunan 410004, China

Shouyun Shen
College of Landscape Architecture, Central South University of Forestry & Technology, Changsha, Hunan 410004, China; and Hunan Big Data Engineering Technology Research Center of Natural Protected Areas Landscape Resources, Changsha, Hunan 410004, China

Donglin Zhang
Department of Horticulture, University of Georgia, Athens, GA 30602, USA

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Magnolia, a genus of important ornamental plants in Magnoliaceae (*Magnolia* family), has been widely cultivated around the world as specimen trees and flowering plants. Some shrubby cultivars are particularly popular for small gardens or container gardening (Gardenia 2024). *Magnolia sieboldii* K. Koch, also known as oyama *Magnolia*, is a deciduous shrub or small tree native to East Asia, including China, Japan, and Korea, thriving in US Department of Agriculture (USDA) hardiness zones 6 to 8. It typically grows between 5 and 10 m in height and is renowned for its nodding fragrant white, cup-shaped flowers with crimson stamens that bloom simultaneously with leaf emergence from May to June (eFloras 2020). This species is widely cultivated as an ornamental shrub or small tree in gardens for its elegant appearance and pure white flowers (Dirr 2010). It is also used for medicinal purposes and timber.

Meanwhile, *Magnolia insignis* Wall. [*Manglietia insignis* (Wall.) Blume], also known as red lotus tree (Fig. 1B), is an evergreen or semideciduous tree native to Nepal, Assam, southern China, Myanmar, Thailand, and Vietnam in USDA hardiness zones 7 to 9. *M. insignis* is an evergreen tree up to 30 m in height, with a trunk ≈40 to 100 cm in diameter at breast height, upright rounded form, young shoots gray-pubescence, the flowers of which are pink to rose at the apex of tepals.

Breeding new hybrid *Magnolia* cultivars with novel flower colors is essential to introduce rare and desirable traits, thereby enhancing the diversity of *Magnolia* species. China is renowned as the "Kingdom of *Magnolia*," being home to a wide variety of *Magnolia* species and a modern hub for their cultivation (Dirr 2010). Using the ornamental traits of *Magnolia*, horticulturists have developed numerous new cultivars through hybridization. Among these, noteworthy introductions include 'Yunrui' (Xu et al. 2014), 'Mengyuan' (Shao et al. 2015), and 'Lilac Marble' (Zhang et al. 2023). 'Kevin Parris' is a new *Magnolia* cultivar that was selected from a seedling population of *Magnolia sieboldii* × *Magnolia insignis*. This new cultivar, hybridized by Dr. Kevin Parris, is considered an intergeneric hybrid if *Magnolia* and *Manglietia* are treated as separate genera. The most distinctive feature of 'Kevin Parris' compared with its parents is the purplish pink color of the perianth. The plant is a deciduous small tree with fragrant flowers and outstanding landscape performance (Fig. 1A and C).

Origin

In May 2014, a cross between *M. sieboldii* 'Colossus' × *M. insignis* 'Anita Figlar' was conducted by Dr. Kevin Parris. Freshly dehiscing stamens were harvested from *M. insignis* 'Anita Figlar' in the garden of Richard and Anita Figlar (Pickens, SC, USA). In mid-Sep 2014, fruit development was monitored and harvested at the earliest indication of follicle dehiscence and dried at room temperature (22 °C) for 1 to 2 d until most seeds were visibly exposed. In mid-October, seeds were placed in 5.1 cm × 7.6 cm resealable plastic bags with 2 g of slightly moist, finely milled sphagnum peatmoss and stored in a cooler at 4 °C. In Jan 2015, the bags with seeds were opened, moved out, and placed to a greenhouse bench at Spartanburg Community College, Spartanburg, SC, USA, on intermittent bottom heat of 15.5 to 26.7 °C. Roots and hypocotyls emerged in 3 to 4 weeks in the opened bags, which were transplanted in mid-February. One week after transplanting the seedlings into 4-inch-square containers with peat-based medium, seedlings were watered using a 4–12–4 liquid fertilizer at concentration of 10 mL/L (Miracle-Gro® Quick Start®; Scotts Miracle-Gro, Marysville, OH, USA). Seedlings were top-dressed with 14 g of granular organic fertilizer with

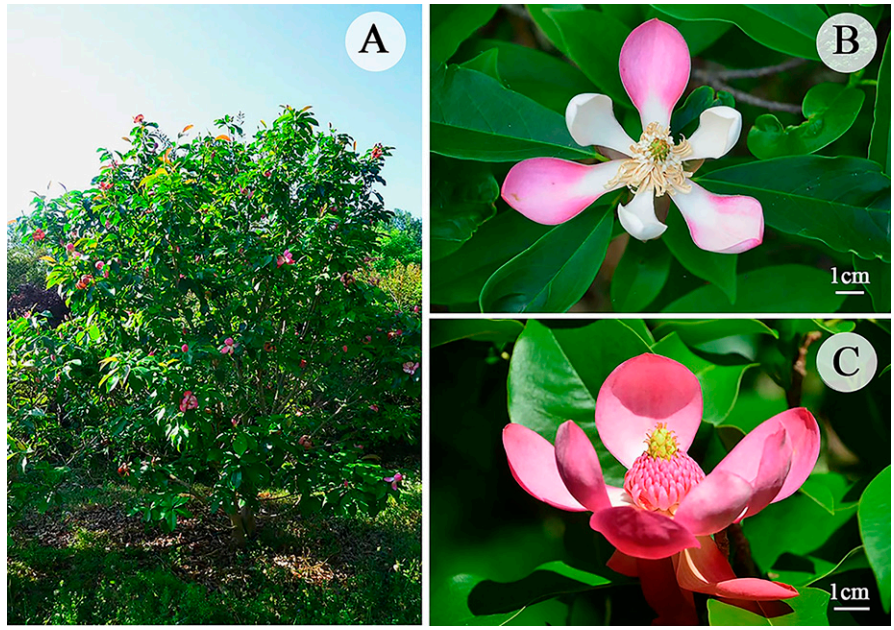

Fig. 1. Habit and blossoms of the hybrid cultivar *Magnolia* 'Kevin Parris'. (**A**) Oval-shaped growth habit and loaded flowers, 3.2 m in height, taken on 8 May 2024. (**B**) Outer tepals and inner tepals of *Magnolia insignis* (as a comparison). (**C**) Fully bloomed flower.

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D.Z. is the corresponding author. E-mail: donglin@uga.edu.

Table 1. Distinctive foliage and flower characteristics of *Magnolia sieboldii* (maternal) and *M. insignis* (paternal) compared with their hybrid, 'Kevin Parris'.

Taxa	*M. sieboldii*	'Kevin Parris'	*M. insignis*
Habit	Shrub or small tree	Small tree	Tree
Bloom duration	April to June	May to June	May to June
Feeling	Papery	Thick, papery	Leathery
Petiole length (cm)	1.8	1.1	0.6
Leaf blade length (cm)	17.5	16.4	11.8
Leaf blade width (cm)	7.3	7.4	4.6
Corolla shape	Shallow cup	Deep cup	Deep cup
Peduncle length (cm)	2.7	5.49	6.7
Stamen color	Pale yellow	Deep purplish pink	Strong purplish red
Tepal color	White	Purplish pink	Red to white
Tepal shape	Oblong-obovate to obovate	Obovate-oblong	Oblong-obovate

mycorrhizae (Bio-tone® Starter Plus 4–3–3; Espoma Company, Millville, NJ, USA). Containers were cultured on raised benches in a greenhouse with air temperature ranging from 13 to 32 °C and soil temperature ranging from 20 to 27 °C. After 8 weeks of growth in the mass-planted containers, seedlings were transplanted to individual 3.8-L containers with the same medium, water, and nutrient regimen as described earlier. They were maintained in a 50% shade structure through Fall 2015 and overwintered through mid-Apr 2016 in polyethylene coldframe before being transferred to University of Georgia in May 2016. Continuing through 2016 to 2024, 'Kevin Parris' was evaluated yearly. The plant grew well and fully adapted to the local climate in the Horticulture Farm (Watkinsville, GA, USA), consistently demonstrated a stable and unchanging phenotype (see description), and free of serious pests and diseases.

Description

'Kevin Parris' is a deciduous small tree with thick, papery foliage. Its most distinct ornamental characteristic is the gradient of tepal color, ranging from strong purplish-pink (RHS Color Chart 67D) on the outer tepals to moderate purplish-pink (RHS 70D) on the inner tepals (Royal Horticultural Society 2015). The average floral diameter is 10.48 cm. The flower features a deep, cup-shaped corolla with evenly arranged purplish-pink tepals, significantly enhancing its visual appeal. The specific traits that distinguish 'Kevin Parris' are detailed in the following subsections.

Habit. 'Kevin Parris' exemplifies the lasting allure of a small tree, distinguished by its well-formed oval canopy and V-shaped growth habit. The tree reaches a height of 1.86 m by its third year after planting and 3.2 m by its eighth year. Its north–south canopy width is 2.49 m, and the east–west width is 2.59 m. The branches exhibit a light green color (Fig. 1A).

Foliage. The foliage is thickly papery, with a texture that falls between leathery and papery. The leaves are obovate to broadly obovate, with an acuminate to caudate apex, gradually tapering from the lower two-thirds toward the base. The leaf margins are entire and exhibit a subtle undulate pattern. 'Kevin Parris' leaves have an average length of 15.48 cm and an average width of 6.88 cm. The petioles have an average length of 1.97 cm, and the stipular scars measure 0.84 cm in length, indicating that the stipules are united with the petioles for less than half of their length (Supplemental Fig. 1B and D).

Flower. 'Kevin Parris' is characterized by an abundant display of flowers, often adorning distinct nodes along each stem. Each blossom consists of a corolla with 6 to 12 tepals, forming a deep cup-shaped structure (Table 1, Fig. 1C). The blooming period extends from early May to mid-June in Watkinsville, GA, USA.

Both the outer and inner tepals exhibit an obovate-elliptic shape. The outer tepals measure 5.0 to 5.1 cm in length and 3.0 to 3.1 cm in width, with a white base of 1.6 to 1.8 cm in length. In contrast, the inner tepals are 4.3 cm long and 2.2 cm wide, with a white base measuring 1.7 cm in length (Supplemental Fig. 1C). The outer surface of the tepals displays a strong purplish-red color (RHS 63B), and the inner surface is a strong purplish-pink (RHS 62A). Both the outer and inner tepal bases are white (RHS NN155B) (Fig. 1B and C).

Notable features include stamens with a deep purplish-pink coloration (RHS 68A) and an average floral diameter of 5.49 cm (Supplemental Fig. 1A).

Fruit. Since the hybrid first flowered in 2019, no mature fruit has been observed. It is possible that the hybrid is sterile, as no seeds have been collected.

Propagation

Semihardwood stem cuttings were collected on 3 Jun 2021 and treated with Hormodin® 3 (OHP Inc., Mainland, PA, USA), resulting in a rooting rate of more than 93% with high-quality roots by 2 Sep 2021. In contrast, cuttings taken on 23 Jul 2021, exhibited a significantly lower rooting rate of only 16%, with poor root quality. On 2 Jun 2022, semihardwood cuttings were collected again and treated similarly, yielding a rooting rate of 66% with good-quality roots (Zou et al. 2022). On the basis of these observations, we recommend collecting semihardwood cuttings in early June and treating them with 8000 $mg \cdot L^{-1}$ indolebutyric acid rooting hormone. Additionally, rooted liners should be placed under an extended photoperiod of 12 h or more to encourage new flush growth; otherwise, overwinter survival rates will be significantly reduced.

Availability

Please note that 'Kevin Parris' is currently available for restricted test agreement only. Please contact the corresponding author, Dr. Donglin Zhang, for details.

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