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# ‘Tangyun’: A New *Prunus pseudocerasus* Cultivar

**Wenyi Fu, Xiangui Yi, Siyu Qian, Xinglin Zeng, and Yingke Yun**

*Co-Innovation Center for the Sustainable Forestry in Southern China, College of Biology and the Environment, Nanjing Forestry University, No. 159 Longpan Road, Nanjing 210037, China*

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*Prunus pseudocerasus*, native to China with more than 3000 years of cultivation history, is known for its early flowering and is called “the messenger tree of spring.” It usually grows on sunny slopes or ditch sides at elevations of 300 to 600 m and can reach 3 to 8 m in height (Li and Bruce 2003). The inflorescences of *P. pseudocerasus* are umbellate, consisting of three to four densely clustered, highly fragrant flowers, whereas its fruit has both edible and medicinal value (Wang 2014). Although *P. pseudocerasus* has been used extensively in breeding programs for developing edible cultivars (Ma et al. 2023) and rootstock improvement (Duan et al. 2019), less effort has been directed toward developing ornamental cultivars. Currently, the main landscape cultivar is *Prunus* ‘Introrsa’ (Iwatsuki et al. 2001), considered a hybrid of *P. pseudocerasus* and *Prunus campanulata*.

Recently, a new cultivar of *P. pseudocerasus* named ‘Tangyun’ has been developed by Nanjing Forestry University in China. This cultivar features sumptuous blossoms and a spreading, full-bodied form, mirroring the Tang Dynasty (618–907 AD) aesthetic ideals that celebrated voluptuous beauty. The cultivar, derived from a mutation of *P. pseudocerasus*, was authorized by the National Forestry and Grassland Administration of China (no. 20230318) in 2023. ‘Tangyun’ features a spreading form covered in dense clusters of fragrant, pink–white flowers. With its outstanding adaptability to drought, cold, and barren soil, this cultivar makes a perfect choice for early-season landscaping.

## Origin

This cultivar originated from a natural bud sport mutant of *P. pseudocerasus*. In 2015, Chuzhou Zhongying Ecological Agricultural Science and Technology Co. in Chuzhou, Anhui Province, China, collected a batch of seeds of *P. pseudocerasus* from Jinzhai County, Anhui Province, China. The seeds obtained were preserved in sand and stored subsequently in refrigerated conditions. In Spring 2016, these seeds were propagated at the nursery base in Machang Town, Quanjiao County, Chuzhou City, Anhui Province, China (lat. 32.08°N, long. 118.81°E; elevation, 37 m above sea level). During Spring 2018, the mutant individual was initially identified in the nursery base because of its distinctive flower color, and scions from this mutant were grafted onto 1-year-old *P. pseudocerasus* seedling rootstocks that autumn. From 2018 to 2020, the grafted plants exhibited consistent and stable traits during consecutive evaluations.

## Description

Morphological observations were made and data collection was undertaken on ‘Tangyun’, its source materials, *P. pseudocerasus*, and the popular hybrid cultivar Introrsa. The differences in morphological characteristics are shown in Table 1. In Spring 2018, 90 plants (30 replicates of each of the three varieties: ‘Tangyun’, *P. pseudocerasus*, and ‘Introsa’) were planted at the nursery base in Machang Town, Quanjiao County, Chuzhou City, Anhui Province, China. All plants had the same water and fertilizer management. Ten plants of each variant were selected randomly in three replicates to determine morphological traits. Statistical analysis was performed using SPSS version 27.0 (SPSS Inc., Chicago, IL, USA). All colors refer to the Royal Horticultural Society’s (RHS) color chart (Royal Horticultural Society 2015).

*Habit and branching.* ‘Tangyun’ is a small deciduous tree with a stable height of 3 to 4 m, whereas *P. pseudocerasus* typically grows to 2 to 6 m, with greater height variation. The tree structure exhibits a spreading growth habit (Fig. 1A). The bark exhibits gray–brown coloration (RHS 197A) with moderate lenticel density. Distinct aerial roots are observable along the trunk (Fig. 1B). The branchlets display glabrous epidermis and gray–brown coloration (RHS 197B) (Fig. 1C), demonstrating intermediate branching potential.

*Leaves.* The leaf length (68.12 mm) and leaf width (35.53 mm) of ‘Tangyun’ show no significant difference compared with *P. pseudocerasus* (length, 69.24 mm; width, 36.93 mm), but are significantly smaller than ‘Introrsa’ (length, 86.87 mm; width, 46.31 mm). Juvenile leaves exhibit yellowish green coloration (RHS 146C), whereas mature leaves display a green

Table 1. Comparison of morphological characters of *Prunus pseudocerasus* ‘Tangyun’, *P. pseudocerasus*, and *Prunus* ‘Introrsa’.

| Characteristic | *P. pseudocerasus* ‘Tangyun’ | *P. pseudocerasus* | *Prunus* ‘Introrsa’ |
|---|---|---|---|
| Leaf length (mm) | 68.12 ± 1.27 b[i] | 69.24 ± 0.94 b | 86.87 ± 1.06 a |
| Leaf width (mm) | 35.53 ± 0.68 b | 36.93 ± 0.59 b | 46.31 ± 0.60 a |
| Hair on pedicel and calyx tube | Glabrous | Pilose | Glabrous |
| Corolla diam (mm) | 26.96 ± 0.33 b | 25.50 ± 0.35 c | 30.56 ± 0.36 a |
| Petal color | Pinkish white, RHS 73C, RHS155C | Nearly white, RHS 155C | Pink, RHS 73B |
| Fruit | Red drupes | Red drupes | No drupe |

[i] Different letters in the same row indicate significant differences for the same characteristic among *P. pseudocerasus* ‘Tangyun’, *P. pseudocerasus*, and *Prunus* ‘Introrsa’ based on analysis of variance by one-tailed *t* test ($P < 0.05$).
RHS = Royal Horticultural Society.


Fig. 1. Habit and branching of ‘Tangyun’. (**A**) The tree structure. (**B**) Aerial roots on the trunk. (**C**) One-year-old branches.

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X.Y. is the corresponding author. E-mail: yixiangui@njfu.edu.cn.

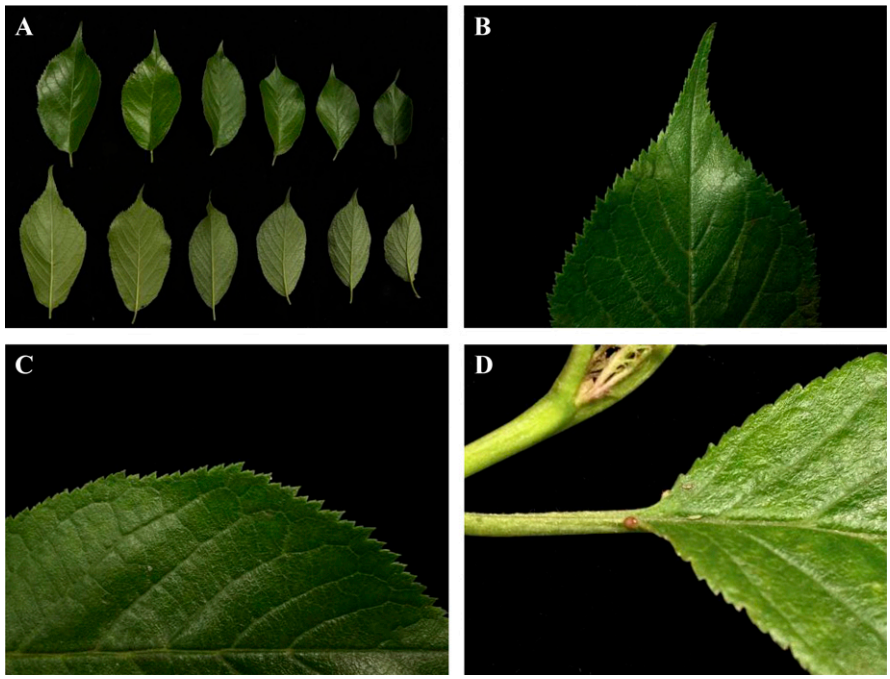


Fig. 2. The foliar morphological characteristics of 'Tangyun' cultivated in Anhui Province, China, in Apr 2018. (**A**) Adaxial and abaxial views of adult leaves in April. (**B**) An acuminate apex of leaves in April. (**C**) The leaf margins feature obtuse-duplicate serrations in April. (**D**) The glands at the base of the leaf blades in April.

adaxial surface (RHS 137A) and green abaxial surface (RHS 137C) (Fig. 2A). Leaves are ovate with acuminate apices (Fig. 2B) and cuneate bases. The leaf margins feature obtuse-duplicate serrations (Fig. 2C). Both leaf margins and linear stipules bear glandular structures. The petioles are moderately long, showing purplish red pigmentation (RHS 183D) with glandular appendages (Fig. 2D).

*Flowering.* 'Tangyun' is a tree that blooms before the leaves start to grow. The inflorescences are umbellate, with four to five flowers per cluster. The pedicels and campanulate calyx tubes are green (RHS 138B), whereas the ovate-triangular sepals spread flat and are reddish brown (RHS 183D), all being glabrous (Fig. 3A). The flower diameter of 'Tangyun' (26.96 mm) is significantly smaller than that of 'Introrsa' (30.56 mm), but larger than that of *P. pseudocerasus* (25.50 mm) (Fig. 3B). The petals of 'Tangyun' exhibit a white base (RHS 155C) with light-pink margins (RHS 73C) (Fig. 3C) and emit a strong floral fragrance. In comparison, *P. pseudocerasus* displays near-white petals (RHS 155C) (Fig. 3D), whereas 'Introrsa' shows pink petals (RHS 73B) (Fig. 3E). 'Tangyun' blooms from mid early March to mid-March. With its moderate flower diameter and distinctive bicolored petals, this cultivar differs notably from *P. pseudocerasus*. It presents a more elegant appearance compared with the solid pink coloration of 'Introrsa', demonstrating significant ornamental value.

*Fruiting.* 'Tangyun' resembles *P. pseudocerasus* in its fruiting ability (Fig. 3F), with both producing red berries (RHS 32A) at maturity. The fruit typically develop within 60 to 70 d, forming clusters of four to five berries, with an average diameter of 8 to 12 mm. In contrast, 'Introrsa' is typically nonfruiting. As a new cultivar of *P. pseudocerasus*, 'Tangyun' retains the fruiting trait from its source plant, achieving an optimal combination of ornamental value and fruit-bearing capacity.

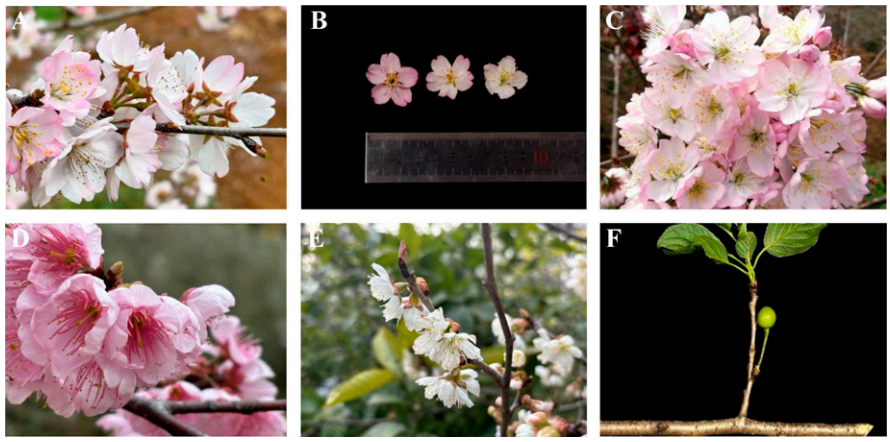


Fig. 3. The floral morphological characteristics of 'Tangyun', *Prunus pseudocerasus*, and 'Introrsa' cultivated in Anhui Province, China, in 2018, with the drupe of 'Tangyun'. (**A**) The floral morphological characteristics of 'Tangyun' in March. (**B**) Comparison of flower diameter: From left to right in the figure are 'Introrsa', 'Tangyun', and *P. pseudocerasus*. (**C**) The flowers of 'Tangyun' in March. (**D**) The flowers of *P. pseudocerasus* in March. (**E**) The flowers of 'Introrsa' in March. (**F**) The drupe in April.

## Cultivation Techniques and Uses

'Tangyun' is a light-loving cultivar (adapted to full-sun conditions) with tolerance to drought, barren soil, and cold stress, and thrives in slightly acidic to acidic soil. Grafting has been used successfully for propagating this cultivar, with T-budding on 1-year-old rootstocks in autumn (around October) being a commonly practiced method. The following spring, after the scion begins to sprout, the rootstock above the graft union should be removed, and any suckers or lateral shoots must be pruned promptly. By the next autumn, the grafted plants typically reach more than 1.5 m in height, with a survival rate exceeding 90%. During production, waterlogging must be prevented, and organic fertilizers should be applied regularly. For young grafted plants, protection against borer insects is critical, whereas mature trees require windbreak measures to prevent stem damage. Proper management ensures long-term ornamental stability and aesthetic value. 'Tangyun' exhibits stress resistance, a spreading growth habit, and abundant flowering. Its showy blossoms exhibit vivid coloration and emit a distinct floral fragrance. These traits, combined with low maintenance requirements, make it ideal for ornamental landscaping. For optimal canopy management, open-center pruning is recommended during dormancy to maintain airflow and light penetration.

## Availability

The owners of 'Tangyun' are Nanjing Forestry University (Nanjing, China) and Chuzhou Zhongying Ecological Agricultural Science and Technology Co., Ltd (Chuzhou, China). 'Tangyun' can be purchased from Chuzhou Zhongying Ecological Agricultural Science and Technology Co., Ltd. Contact Wang Yu (e-mail: 524455628@qq.com) for inquiries.

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