

Meng Die: A New Cultivar of *Iris spuria*

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Meng Die is a novel cultivar of *Iris spuria* developed through interspecific hybridization between *Iris halophila* var. *sogdiana* and *I. spuria* ‘Lucky Devil’. This new cultivar features attractive purplish blue flowers and blooms from mid-May (around 19 May) to early June in Beijing. ‘Meng Die’ reaches an impressive height of 132.5 cm and, after 5 years of growth, produces up to 32 inflorescences per plant, with each fan yielding one inflorescence and an average of seven blooms per stem. The hybridization process incorporated the local genetic traits of *I. halophila* var. *sogdiana* into ornamental cultivars of the series *Spuriae*. Compared with other cultivars within this series, ‘Meng Die’ is distinguished by its considerable height, vigorous growth, numerous shoots, and remarkable floral attributes, including unique coloration and prolific flowering. These characteristics make ‘Meng Die’ a valuable addition to ornamental horticulture and a potential genetic resource for future breeding efforts.

Origin

The genus *Iris* (Iridaceae) is diverse and widespread, comprising ~280 species known for their ornamental appeal and ecological significance. Species within this genus exhibit a wide range of flower forms, colors, and habitats, and are divided into several subgenera reflecting their varied morphological characteristics and adaptations. Series *Spuriae*, a botanical series under section *Limniris*, consists of 15 original species—including *Iris spuria*, *Iris orientalis*, and *Iris crocea*—and 1018 hybrid cultivars. Both parents of ‘Meng Die’ belong to series *Spuriae* (American Iris Society 2009). *Spuriae* irises are recognized for their tall stature (60–150 cm), elegant appearance, and attractive foliage, with blooms that often resemble orchids and range in color from white and yellow through

blue, wine, and brown, frequently featuring bright-yellow signals (American Iris Society 2024; Asgari 2022).

‘Meng Die’ was developed at the National Flower Engineering Center in Xiaotangshan, Changping District, Beijing, from 2016 to 2021. The female parent, *Iris halophila* var. *sogdiana*, was collected from the Xinjiang Uyghur Autonomous Region, China; the male parent, *I. spuria* ‘Lucky Devil’, was sourced from Aitken’s Salmon Creek Garden in Vancouver, WA, USA. Both parents were cultivated at the National Flower Engineering Center in Xiaotangshan. In 2016, hybridization was performed using *I. halophila* var. *sogdiana* as the female parent and ‘Lucky Devil’ as the male parent to obtain the F₁ generation. The F₁ progeny exhibited segregation in traits such as flower color and flower diameter.

Conventional artificial pollination involved the careful removal of perianth segments and anthers to facilitate controlled crosses. Within 2 to 3 d postpollination, successfully pollinated flowers exhibited enlarged ovaries, whereas unsuccessful ones abscised. Fruits matured ~60 to 90 d after pollination and were sown immediately in a substrate of perlite, vermiculite, and peat (1:1:3, v/v/v). Seedlings germinated within 1.5 to 3 months and were transplanted to the field Apr 2017. Blooming occurred in mid-May of the third year (2018).

Selection criteria focused on vigor, floral abundance, and disease resistance. ‘Meng Die’ was chosen for its superior traits—notably, its robustness and prolific flowering, producing up to 32 inflorescences per plant, with each fan bearing an inflorescence and seven blooms per stem. The use of *I. halophila* var. *sogdiana* as the female parent contributed to these desirable characteristics. In 2023, ‘Meng Die’ was approved for protection by the National Forestry and Grassland Administration (No. 20230557).

Description

In Beijing, ‘Meng Die’ blooms from mid-May to early June. Morphological characteristics were measured, including plant height, leaf length and width, flower color, flower diameter, inner perianth length and width, outer perianth length and width, and the overall flowering period. Flower colors were described according to the Royal Horticultural Society (RHS) color chart (Royal Horticultural Society 2015).

Compared with its female parent, *I. halophila* var. *sogdiana*, ‘Meng Die’ exhibits a significantly greater plant height (132.5 cm) and inflorescence length (132 cm), whereas *I. halophila* var. *sogdiana* reaches only 82.2 cm and 69.2 cm, respectively. The perianth segments of ‘Meng Die’ display a blue-purple coloration in the central region with blue margins, and the inner perianth segments are broad. In contrast, *I. halophila* var. *sogdiana* has light-blue perianth segments, with inner segments that are narrower and fold inward.

When compared with its male parent ‘Lucky Devil’, which has deep-blue-purple perianth coloration and brownish yellow eyes at the base of the outer perianth segments, ‘Lucky Devil’ demonstrates weaker resistance and growth vigor, producing an average of three flowers per scape. In contrast, ‘Meng Die’ produces a greater number of flowers per scape and an overall greater flower count; exhibits strong resistance to cold, drought, and waterlogging; and has taller plants with higher scapes.

‘Meng Die’ exhibits an impressive plant height of 132.5 cm, with inflorescences reaching 132 cm. Flowers measure 9 cm in diameter and 4.8 cm in length, with an average of seven blooms per stem. The outer perianth segments have a yellow base (RHS 14A), transitioning to blue-purple (RHS 92A) in the middle, edged with blue (RHS 92B), and featuring deep-purple veins (RHS 90B) (Fig. 1). The inner perianth segments display a blue-purple base (RHS 91A) with deep-purple veins (RHS 86B), and are broad and slightly wrinkled. Individual flowers open during daylight and last 48 to 72 h, contributing to a blooming period that spans from mid-May to June (Fig. 2).

Landscape Use

The cultivar exhibits high resistance to cold, heat, and drought; shows low soil specificity; and thrives under minimal management conditions. This cultivar prefers full sunlight but can also tolerate partial shade.

Optimal growth is achieved in neutral to slightly alkaline, well-drained, fertile soils. ‘Meng Die’ is suitable for planting in northern, northwestern, and southern regions in China. In northern China and northwestern China, it can overwinter without any protective measures. When used in flower borders, as cut flowers and in clusters, or rock gardens, it provides excellent landscape effects because of its striking visual appeal and robust growth habit.

Availability

Iris spuria ‘Meng Die’ is available for research or trial purposes. Requests for samples of cloned plants may be addressed to Prof. Yike Gao (e-mail: gaoyk@bjfu.edu.cn), Beijing Forestry University, Beijing, China. Propagation can be done through division and tissue culture. In northern regions, division propagation can be carried out in late April.

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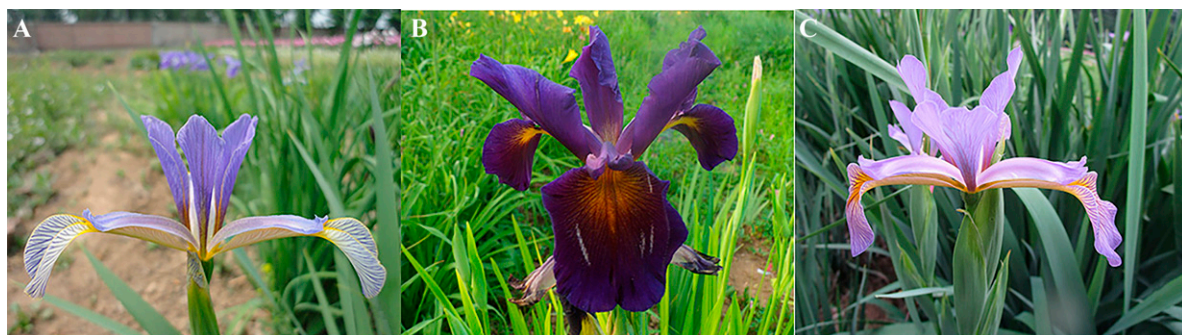


Fig. 1. (A) The female parent, *I. halophila* var. *sogdiana*. (B) The male parent, *Iris spuria* 'Lucky Devil'. (C) Flower of 'Meng Die' showing the characteristic purplish blue coloration and vein patterns.

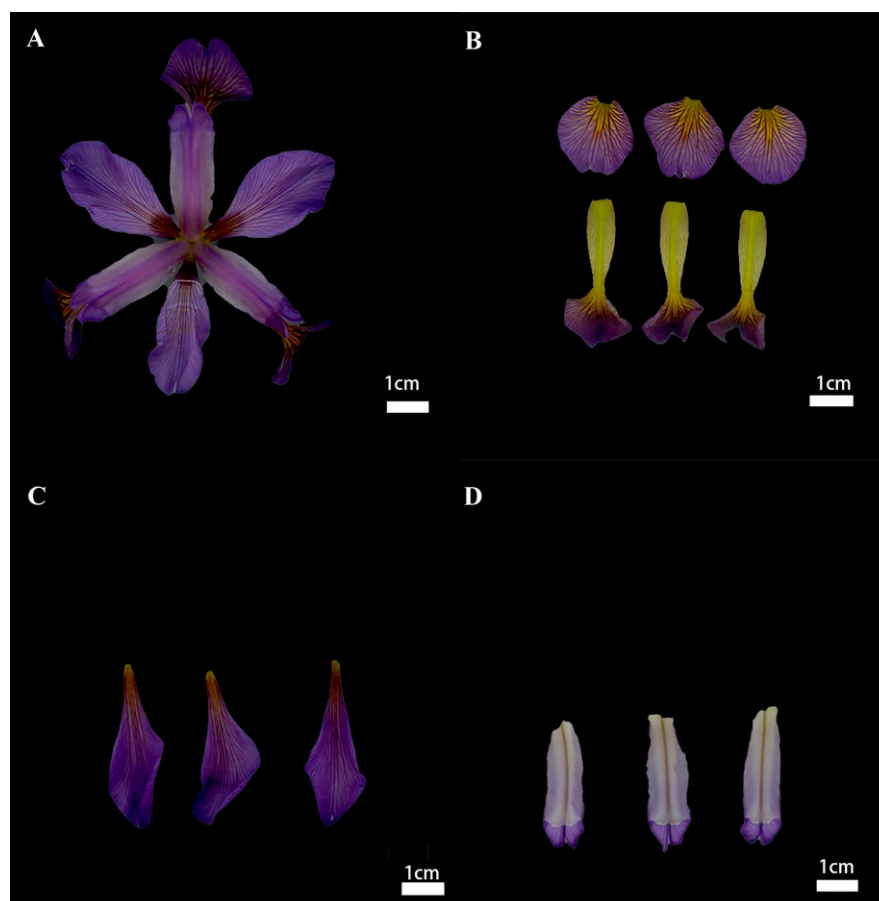


Fig. 2. The flower anatomic structure of the new cultivar Meng Die: flower (A), outer perianth (B), inner perianth (C), and pistil (D).

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