

# ‘Robert Brown’ Winter-hardy Hibiscus (*Hibiscus* × *moscheutos* L.)

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Winter-hardy hibiscuses are herbaceous, shrub-like perennials in the mallow (Malvaceae) family that belong to six species native to the United States and southern Canada (Lawton, 2004; Winters, 1970). They grow naturally in marshy habitats. Unlike their distant relative, *H. rosa-sinensis*, winter-hardy hibiscuses have a distinctive winter dormancy period, when the shoots die to the crown. In spring, new shoots are produced from buds associated with the crown.

Winter-hardy hibiscuses, especially *H. moscheutos* and its hybrids, have attractive, tropical-looking flowers reaching up to 30 cm in diameter. Winter-hardy hibiscus species are long-day plants (Warner and Erwin, 2001) that abundantly produce flowers from mid-summer through late fall. The flowers last 1 d and colors range from white through pink to red, depending on species, with a dark red or brown center eye. Recently developed cultivars such as ‘Fantasia’ (PP11,853) and ‘Plum Crazy’ (PP11,854) have lavender flowers. Cultivars with dual-color flowers are still rare but include ‘Peppermint Schnapps’ (PP18,939) and ‘Turn of the Century’. ‘Robert Brown’ has been released to provide a cultivar with a unique combination of red and white flower color, which has not been previously reported for winter-hardy hibiscus.

## Origin

‘Robert Brown’, also known under experimental line designation ‘TAMUS-3310’ (10-103-1), is an interspecific hybrid between two winter-hardy hibiscus species: *H. coccineus* (Medik.) Walter and *H. moscheutos* L. (Fig. 1). It was derived from an F<sub>1</sub> family resulting from a controlled hybridization of experimental line ‘HM-2008-DM6’ with experimental line ‘TAMUS-3092’ made by the authors at Vernon, TX, in 2009. The maternal line ‘HM-2008-DM6’ was selected from an F<sub>1</sub> progeny

resulting from a controlled hybridization between *H. coccineus* ‘Davis Creek’ and the cultivar Peppermint Schnapps. Colors were designated using the Royal Horticultural Society (RHS) Color Chart (Royal Hort. Soc. and Flower Council of Holland, 2007). The maternal line ‘HM-2008-DM6’ has soft pink (RHS 73C) flowers with a red (RHS

57B) eye reaching 15 cm in diameter. The pollen parent, experimental line ‘TAMUS-3092’, was selected from an F<sub>1</sub> progeny resulting from a controlled hybridization between experimental line ‘TAMUS-2879’ and the cultivar Fantasia. The paternal plant has strong reddish purple (RHS 70B) color flowers that are 17 cm in diameter with a deep purplish red (RHS 71A) eye. Leaves are green and hastate (Fig. 2).

Seeds from one pod of the stated hybridization between ‘HM-2008-DM6’ and ‘TAMUS-3092’ were planted in the greenhouse at the Texas AgriLife Research and Extension Center in Vernon, TX, in Jan. 2010. Twelve seedlings were transplanted to the field in Apr. 2010 and bloomed for the first time in July 2010. ‘Robert Brown’ was selected from this population for its unique, dual-color flowers.

## Description

‘Robert Brown’ is a new and distinct cultivar of winter-hardy hibiscus. Plants branch freely at the bottom and reach a height of 1 m. Flower color is deep purplish pink (RHS 67C) with randomly distributed white

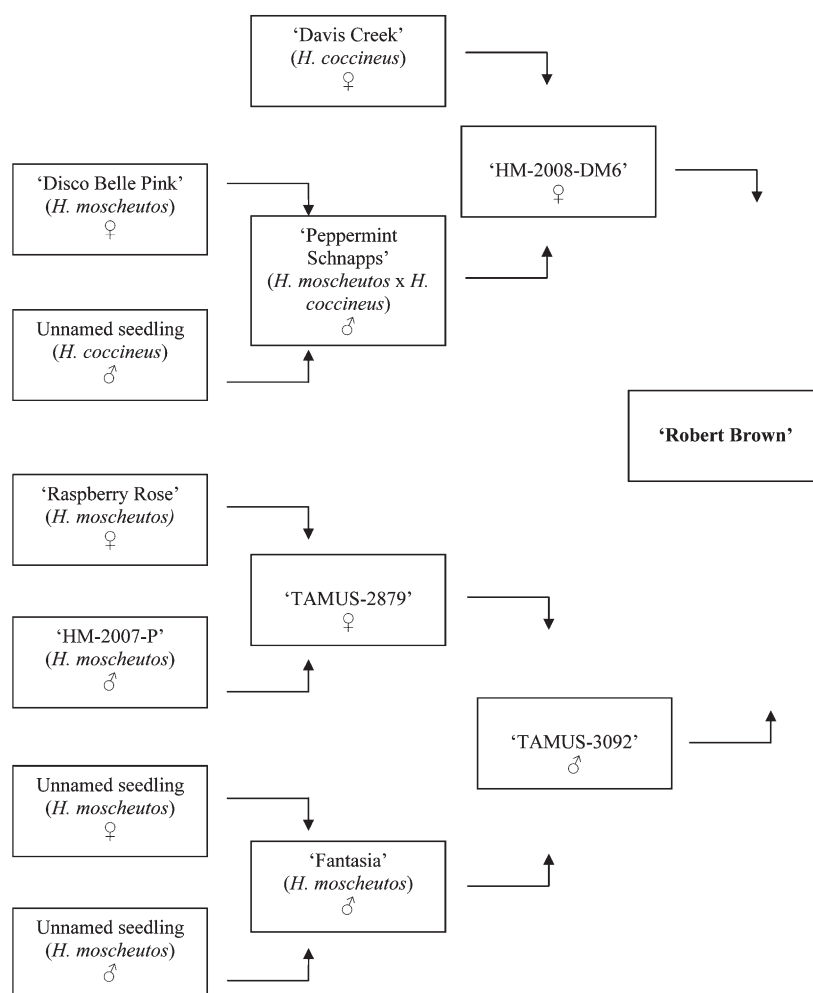


Fig. 1. Hybridization schema of the ‘Robert Brown’ winter-hardy hibiscus. Origin of ‘Peppermint Schnapps’ and ‘Fantasia’ hibiscus cultivars after Smith (2008) and Fleming and Zwetzig (2001), respectively.

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Fig. 2. Leaf of 'Robert Brown' winter-hardy hibiscus.

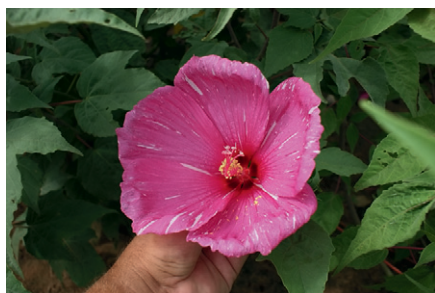


Fig. 3. Flower color of 'Robert Brown' winter-hardy hibiscus.

stripes running along the petal length (Fig. 3). The center eye is light red on the outside edge, becoming brown toward the center of the flower. Seed pods contain six to 12 seeds.

'Robert Brown' has been evaluated for 2 years in Vernon, TX (USDA Hardiness Zone 7a) and has proven fully cold-hardy without protection at this location where the lowest temperature was  $-17^{\circ}\text{C}$  in Feb. 2011. In vitro propagated plants have been trialed for one growing season at several locations across Texas, including College Station, Dallas, Lubbock, San Antonio, and Vernon. The cloned plants repeated the characteristics of the mother plant. Long-term trials have not been conducted in other regions. Considering winter-hardiness of its parentage components, it is anticipated 'Robert Brown' will be adapted to USDA Hardiness Zones 4 through 8.

### Culture

'Robert Brown' is well suited for use as a specimen plant for small gardens, where its architecture and unique flower color can be best displayed. Like with other winter-hardy hibiscus cultivars, 'Robert Brown' should be planted in full sun to promote maximal plant development and blooming. No diseases and pests have been observed at the trial location in Vernon, TX. However, like with other species in the mallow family, 'Robert Brown' may be susceptible to cotton root rot caused by the fungus *Phymatotrichum omnivorum*, especially when grown in areas where cotton (*Gossypium hirsutum* L.) is cultivated. In some areas of cultivation, pests like Japanese beetles (*Popillia japonica*), sawflies (suborder Symphyta), spider mites (family Tetranychidae), and aphids (family Aphidoidea) may cause damage to winter-hardy hibiscus.

### Propagation

Propagation of 'Robert Brown' winter-hardy hibiscus has been achieved successfully in vitro using the method described by West and Preece (2004). Alternatively, the cultivar has been propagated from stem cuttings collected in midsummer and treated with 0.1% indole-3-butyric acid.

### Availability

A U.S. plant patent application will be submitted for 'Robert Brown' winter-hardy hibiscus and plant patent rights will be assigned to Texas A&M University System. Propagation and production rights have not been assigned to a specific commercial partner as of the date of this publication. Vouchers of 'Robert Brown' winter-hardy hibiscus are deposited with the Texas Superstar® program (Texas AgriLife Research and Extension, Texas A&M System).

Robert B. Brown (born 19 May 1975, died 19 Oct. 2010) was born into a family of third-generation agriculturists. He had a deep love of all things living, both plants and animals. Until his last days, Robert enjoyed observing efforts of the authors on breeding and selecting winter-hardy hibiscus lines. As a tribute to his family and in memory of Robert, Dr. Malinowski chose to name this released cultivar 'Robert Brown'. Robert's father, Robert S. (Steve) Brown, was one of the contributors to the development of this cultivar.

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