

Rhododendron 'Firestorm' and 'White Peter'

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The genus *Rhododendron* has >900 species (Dirr, 1990). Hybrid rhododendrons are, among the most popular flowering broadleaf evergreens in many regions of the United States. Hardy rhododendrons for the colder regions of the United States have relatively few flower colors and growth habits. *Rhododendron* 'Firestorm' and 'White Peter' are products of a breeding and evaluation program started at the Univ. of Connecticut in 1956. 'Firestorm' and 'White Peter' have been released after 28 years of evaluation because they possess a new combination of cold hardiness, growth habit, and flower color.

Origin

Both introductions are the result of controlled crosses made by G.A.L.M. in 1962. The parentage of 'Firestorm' is 'Vulcan' × 'Chocolate Soldier'. 'Vulcan' has fiery red flowers and dark green pointed leaves on a rounded plant. 'Vulcan' is cold tolerant only to -23C (Salley and Greer, 1986) and lacks sufficient hardiness for many northern areas. Pollen from a plant referred to as 'Chocolate Soldier' was collected by G.A.L.M. in 1961. 'Chocolate Soldier' is not a registered name but was the name used by the late P. Vossberg of the Westbury Rose Co. (Westbury, Long Island, N.Y.) to describe one of his hybrids. The parentage of 'Chocolate Soldier' is unknown, and recent attempts to locate plants have been unsuccessful. The flowers of 'Chocolate Soldier' are a dark, chocolate-red.

'White Peter' is the result of a self-pollination of 'Blue Peter'. 'Blue Peter' produces lavender-blue flowers with a prominent purple flare or blotch and dark, glossy green leaves on a plant that is wider than tall; it is cold hardy to -26C (Salley and Greer, 1986). Parentage of 'Blue Peter' is unknown, but it is thought to be a *R. ponticum* hybrid. Both 'Firestorm' and 'White Peter' are elepidote rhododendrons.

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Description

'Firestorm'. The original 'Firestorm' plant measured 120 cm tall × 225 cm wide after 28 years. The growth is slow to moderate with a dense and spreading habit. 'Firestorm' leaves are 11.4 to 15.3 cm long and between 2.5 and 6.4 cm wide. The simple leaves are elliptical, possess entire margins, acute tips, and cuneate bases. Petioles range from 1.9 to 2.5 cm and are pubescent. Mature leaves have a dull surface and are a dark, forest green [RHS 139A (Royal Horticulture Soc., 1986)] with contrasting yellowish-green midribs. The blades are flat and coriaceous. New foliage emerges a frosty, lime-green (RHS 136C) and possesses slight pubescence that changes from white to rusty before wearing-off. Foliage is retained for 3 years.

The original 'Firestorm' seedling first flowered in 1969, 7 years after being sown. Seedlings were field-grown after 2 years of growth in propagation facilities and did not benefit from accelerated growth conditions. In Storrs, Conn., peak flowering usually occurs during the first week of June, and plants are moderately to very floriferous, depending on the site. Flower substance is heavy, but there is no fragrance. Trusses are 16.5 cm wide and 15.3 cm high, dome-shaped, and comprised of 15 to 16 individual flowers (Fig. 1).

'Firestorm' flowers are openly funnel-shaped. The corolla measures 8.3 cm wide × 5.7 cm long and has a wavy margin and five to six lobes. The calyx is <0.2 cm long and pedicels are <4.5 cm long. Each flower has 10 straight, even-length stamens and a curved pistil of the same color as the corolla.

Corolla color for 'Firestorm' is a vibrant cardinal red (RHS 53A). Bud color does not differ significantly from open florets. Flowers do not possess a flare, or blotch, and are free of darker speckling in the corolla tube. The pedicels are red (RHS 53B).

'White Peter'. The original 'White Peter' seedling grew to 259 cm tall × 427 cm wide after 28 years. The overall growth habit can be described as broad-spreading and dense, although individual branches tend to be upright. 'White Peter' leaves range from 14.0 to 18.4 cm long and are 4.5 to 5.7 cm wide, with glabrous petioles 2.5 to 3.2 cm long.

Foliage of 'White Peter' is glabrous and lustrous green to dark green (RHS 137A and 139A), and even young leaves lack pubescence. The simple, flat, oblong-elliptical leaves possess entire margins, acute tips, and cuneate bases, closely resembling the foliage

of 'Blue Peter'. Leaves are retained for 3 years.

The original 'White Peter' seedling first flowered in 1967, 5 years after being sown. The seedling was raised as described earlier for 'Firestorm'. In Storrs, the first week of June usually represents the peak period of bloom for 'White Peter'. Plants typically flower heavily with multiple trusses per shoot tip. Trusses are 14 to 16.5 cm wide and 12.7 to 15.2 cm tall, conical, and comprised of 16 to 18 individual flowers (Fig. 1).

'White Peter' flowers are openly funnel-shaped. The corolla measures 6.3 to 7.6 cm wide and 5.1 to 5.7 cm long and has a wavy margin and five lobes. The calyx is <0.2 cm long and pedicels are between 2.5 and 3.2 cm long. Each flower has 10 curved, even-length stamens and a curved pistil of the same color as the corolla.

The corolla for 'White Peter' is white (RHS 155D) with a purple blotch (RHS 187A to 187C) on the upper inside of the corolla. Buds are light lavender-pink (RHS 69B) and contrast decidedly from open florets. The pedicel is medium pea-green (RHS 146B).

Cold hardiness

'Firestorm' has proven to be cold hardy to -31C based on outdoor survival in Connecticut. 'Firestorm' is suitable for hardiness zones 4b to 5a (U.S. Dept. of Agriculture, 1990). Cold hardiness evaluations below -31C have not been conducted. There does not appear to be a disparity between flower bud hardiness and plant hardiness.

'White Peter' exhibits cold hardiness similar to 'Firestorm'. Cold injury has not been observed on this cultivar in Storrs.

Propagation

Limited studies conducted at commercial nurseries, the Univ. of Connecticut, and the Univ. of Rhode Island indicate that both 'Firestorm' and 'White Peter' shoot cuttings can be rooted with relative ease using fall cuttings, 8000 ppm indole-3-butyric acid in talc, 1 peat : 1 perlite (v/v), and intermittent mist. Both cultivars can be rooted from cuttings on a commercial scale.

As an alternative to cutting propagation, 'Firestorm' and 'White Peter' can be readily micropropagated using procedures that are effective with other rhododendrons. Tissue cultures initiated from actively growing shoot tips and shoots were proliferated on Woody Plant Medium (Lloyd and McCown, 1980) containing 15 µM *N*-(3-methyl-2-butenyl)-1 *H*-purin-6-amine (2iP), 3% sucrose, 0.1% phytagel (Sigma, St. Louis), 0.3% agar (Sigma) at a medium pH of 5.2. Microcuttings were easily rooted using nonsterile rooting techniques.

Principal merits

Among large-leaf rhododendrons, truly red-flowering cultivars suffer from not being reliably hardy in the colder regions of the United States. Red-flowering cultivars that are hardy

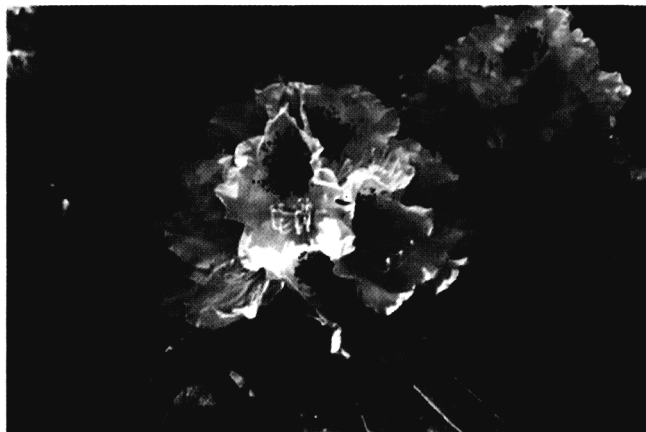


Fig. 1. Flower trusses of *Rhododendron* 'Firestorm' (left) and 'White Peter' (right).

to -30°C have flowers that are contaminated with blue. 'Firestorm' combines truly red flowers with superior cold hardiness, extending the range in which red rhododendrons can be grown. 'Firestorm' also has desirable, compact growth and high quality foliage.

'White Peter' combines a very floriferous nature with dense growth and lustrous dark green foliage. The white flowers, boldly blotched with purple, are unusual on a plant with cold hardiness to -31°C . The high vigor and easy culture of 'White Peter' are also assets.

Registration

These cultivars are registered with the Royal Horticultural Society, which acts as the International Registrar for the genus *Rhododendron*.

Availability

A limited number of plants and cuttings is available to institutions and commercial nurseries from the Dept. of Plant Science at the Univ. of Connecticut. In vitro tissue cultures are also available to micropropagation facilities.

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