

New Plant Introductions — Cultivar Releases

Buddleja ‘Orange Sceptre’ and ‘Winter Waterfall’¹

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Significance to Nursery Industry

Butterfly bush, *Buddleja davidii* Franch. in particular, is a popular woody shrub typically grown in the landscape for its attractive long-lasting flower panicles during the summer months. Another use for *Buddleja* L. is for greenhouse or conservatory displays. Winter flowering Asian and South American *Buddleja* species can provide excellent seasonal interest. Two *Buddleja* hybrids suitable for greenhouse or conservatory use are released. One, ‘Winter Waterfall’, features larger flowers and a longer bloom time compared to the commonly-grown *Buddleja asiatica* Lour. The second release, ‘Orange Sceptre’ produces upright inflorescences of orange flowers throughout most of the year. ‘Orange Sceptre’ may also be cultivated outdoors in warmer (Zone 7b+) USDA plant hardiness zones.

The two butterfly bush (*Buddleja* L.) introduced here result from a breeding program at the University of Arkansas that began in 1999. Both are proposed for primary use as greenhouse or conservatory plants. Currently, *B. asiatica* Lour. and hybrids between *B. asiatica* and *B. madagascariensis* Lam. (*B. ×lewisiana* Everett) are the most frequently encountered greenhouse or conservatory-grown species and hybrids (1).

Origin

Single plants of *B. stachyoides* Vell. and *B. tubiflora* Benth. were obtained from Longwood Gardens (Kennett Square, PA). Controlled pollinations between *B. stachyoides* (female) and *B. tubiflora* (male) were made beginning on April 15, 2002, by Scott Renfro (3). Nineteen seedlings were obtained from these crosses. One of the hybrids, which was tested as *Buddleja* 02-53-391, was later selected and named ‘Orange Sceptre’. Similar crosses between these two species have been reported by Norman (2) where she recounted the unpublished results of hybridization with these two species by Raymond Moore. Norman also reported on natural hybrids between the two species in Argentina (2).

Single plants of both *B. asiatica* and *B. crispa* Benth. were obtained from Forestfarm Nursery (Williams, OR). Controlled pollinations between a *B. asiatica* × *B. crispa* hybrid (female, selection 01-21-530) and *B. asiatica* (male) were performed by Greg Bujarski on January 22, 2002. Five seedlings were obtained from this cross. All progeny were grown under greenhouse conditions. The progeny selected

for release has been tested as *Buddleja* 02-34-221 and later named ‘Winter Waterfall’.

Description

‘Orange Sceptre’ had an upright and somewhat open growth habit similar to *B. stachyoides*. Mature plants reached heights of 2.5 m (8.2 ft). Stems were quadrangular and covered with grayish tomentum. Leaves were oblong to ovate-lanceolate measuring 17 cm (6.6 in) long by 5.5 cm (2.1 in) wide. It had tomentulose trichomes on the adaxial side of the leaf similar to *B. tubiflora*; however, the leaf base was amplexicaul, or clasping, which is a characteristic of *B. stachyoides*. The spicate-like inflorescence was similar to *B. stachyoides* in size and shape averaging 38 cm in length with 20–30 pairs of axillary cymes (Fig. 1). Each cyme produced 15–24 sessile flowers. On greenhouse-grown material, flowering occurred throughout the year except for a few months in winter. Corolla tube was intermediate between the two parents averaging 15 mm (0.59 in) in length, but the width

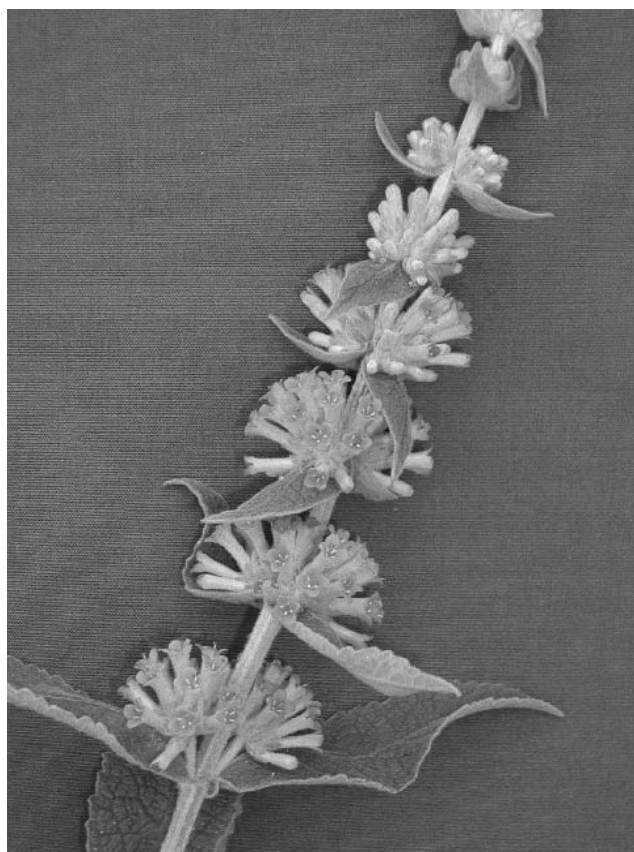


Fig. 1. Inflorescence of ‘Orange Sceptre’.

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Fig. 2. 'White Waterfall' (left), *B. asiatica* (right).

was slightly larger than either parent, averaging 7 mm (0.28 in). The calyx length was also intermediate between the two parents averaging 6.5 mm (0.26 in) long. Flower color was orange (14C, RHS) (4) when the flowers opened, which is intermediate of the yellowish-orange *B. stachyoides* and the reddish-orange *B. tubiflora*. The style averaged 14 mm (0.55 in) in length with a globose stigma, 0.6 mm (0.02 in) long. It was elevated above the anthers at anthesis creating a unique appearance.

'Winter Waterfall' has a spreading somewhat open growth habit similar to *B. asiatica*. Mature plants reached heights of 3 m (10 ft). Stems were quadrangular to subterete and covered with grayish tomentum. Leaves were dark green, elliptic to oblong-lanceolate measuring 11.8 cm (4.6 in) long by 2.8 cm (1.1 in) wide with an acute apex. Margins were irregularly serrulate to entire. Leaves were glabrous above and tomentose on the adaxial side of the leaf similar to both parents. The inflorescences were borne on three-flowered cymes arranged in a panicle and average 8.5 cm (3.3 in) in length. Flowers are similar to *B. asiatica* in size averaging 1 cm (0.4 in) in length, but resembled *B. crispa* in shape having a more compact flower panicle (Fig. 2). Corolla tubes are white, glabrous averaging 6 mm (0.2 in) in width. Pubescence within the corolla was brown unlike *B. asiatica* where it is yellow. The calyx length and width was similar to *B. asiatica* averaging 3 mm (0.1 in) long and 0.5 mm (0.02 in) wide. Flower color was white (155D, RHS) (4), which is similar to *B. asiatica*.

Cultural Conditions

These hybrids are recommended for greenhouse or conservatory display. In addition 'Orange Sceptre' has survived outdoor cultivation at the University of Arkansas Research Farm in Fayetteville, AR (USDA Zone 6b/7a) for three growing seasons. It has also been trialed successfully in North Carolina (Zone 7b). 'Winter Waterfall' has not been successfully over-wintered in Fayetteville, AR. Both 'Orange Sceptre' and 'Winter Waterfall' tolerate dry soils but grow best on moist, well-drained soil. Soils near neutral are preferred. These selections grow best in full sun conditions, a general characteristic of *Buddleja*. Under greenhouse conditions, both plants readily adapt to cool winter [10C (50F)] night temperatures. Plants of 'Orange Sceptre' will flower nearly year round, while flowering for 'Winter Waterfall' occurs from November through March. Outdoors, 'Orange Sceptre' flowers on new growth beginning in mid-summer and continuing until a hard freeze in mid to late fall. They should be expected to grow 1 m (3.3 ft) a year. Both cultivars should be pruned immediately after flowering and pruning on 'Winter Waterfall' should cease in mid-summer to allow for inflorescence development during the short days of fall.

Performance

Both cultivars have showed consistent bloom qualities for five years. 'Orange Sceptre' would be a focal point in any conservatory with its bright orange flowers. 'White Waterfall' would attract attention with its abundance of white dropping panicles. Like *B. asiatica*, 'Winter Waterfall' is highly fragrant with a sweet scent, and has a larger flower size. It also begins to flower 30 to 45 days earlier in the greenhouse compared to *B. asiatica*. 'Orange Sceptre' also will perform well outdoors in areas of USDA Zone 7b and south. In Zone 7a, 'Orange Sceptre' behaves as an herbaceous perennial, dying back to the base by the end of the winter. Outdoors, inflorescences of 'Orange Sceptre' should be removed post-flowering to prevent seed production.

Propagation

Propagation of these cultivars can be achieved with high rate of success from softwood cuttings dipped in 1,000 ppm K-IBA, and placed under intermittent mist in perlite or other similar medium.

Availability

Currently 'Orange Sceptre' and 'Winter Waterfall' are not in general commerce. Propagules can be obtained by contacting Jon T. Lindstrom, Department of Horticulture, University of Arkansas, Fayetteville.

Literature Cited

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