‘Blue Chip’ and ‘Miss Ruby’ *Buddleja*

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Additional index words. *Buddlejaceae*, *Scrophulariaceae*, *Loganiaceae*, interspecific hybridization, plant architecture, invasiveness

Buddleja (*Scrophulariaceae* Juss., formally *Buddlejaceae* K. Wilhelm and *Loganiaceae* R. Brown), commonly called butterfly bush, is a popular landscape shrub worldwide valued for its summer flowering, fragrance, and attractiveness to butterflies. Numerous cultivars in a range of flower colors are available. Most cultivars are vigorous, often attaining a height of over 2 m in one growing season, too large for many residential landscapes. To address the issue of excessive vigor, a compact cultivar of *Buddleja* named ‘Blue Chip’ was released.

Pink is a popular color in *Buddleja*, but few pink-flowered cultivars are available. ‘Pink Delight’, the most common cultivar, is very vigorous, limiting its landscape uses. ‘Miss Ruby’ has been released to provide a cultivar demonstrating improved pink color and compact growth habit as compared with ‘Pink Delight’.

Origin

‘Blue Chip’. ‘Blue Chip’ resulted from open pollination of NC2003-7 (Fig. 1). NC2003-7 was derived from open pollination of a family obtained from the controlled hybridization of ‘Honeycomb’ × NC2000-1. ‘Honeycomb’ is a yellow-flowered cultivar of *Buddleja* × *weyeriana* Weyer (Dirr, 1998). NC2000-1 is an interspecific hybrid derived from a controlled cross of *B. davidii* var. *nanhoensis* (Chitt.) Rehd. ‘Nanho Purple’ and *B. lindleyana* Fort. ex Lindl. (Elliott et al., 2004). ‘Blue Chip’ was selected in 2004 in field trials at the Sandhills Research Station, Jackson Springs, NC. It was subsequently tested in replicated field trials and grower locations under the test number NC2004-9. ‘Blue Chip’ was released by North Carolina State University (NCSU) in 2007.

‘Miss Ruby’. ‘Miss Ruby’ resulted from controlled hybridization of ‘White Ball’ × ‘Attraction’ made in 2002. ‘White Ball’, released by the Boskoop Agricultural Research Station, Boskoop, The Netherlands,

is a compact white-flowered cultivar of unknown parentage (Gert Fortgens, personal communication). ‘Attraction’, showing deep-purple flower color, was derived from open pollination of ‘Honeycomb’ (Dirr, personal communication). ‘Miss Ruby’ was selected in field trials in 2003 at the Sandhills Research Station, Jackson Springs, NC. It was subsequently tested in replicated field trials and grower locations under the test number NC2003-22. ‘Miss Ruby’ was released by NCSU in 2007.

Description

‘Blue Chip’. ‘Blue Chip’ has a symmetric, compact, spreading habit (Fig. 2). In replicated trials of 10 plants, unpruned ‘Blue Chip’ averaged 79.8 cm height and 123.6 cm width (height/width ratio = 0.65) after two growing seasons (Table 1). Mature leaves are elliptic, up to 9.5 cm long and 3.6 cm wide. Foliage is green [Royal Horticultural Society (RHS) 137A] on the adaxial side, and grayed-green (RHS 191B) on the abaxial side (Royal Horticultural Society, and Flower Council of Holland, 1986). Plants are very dense, a consequence of abundant lateral branching (Fig. 3). Leaves are tardily deciduous, often retained until mid-December in U.S. Department of Agriculture (USDA) hardiness zone 7b.

Flowering begins in mid-May in Raleigh, NC, and continues throughout the growing season until interrupted by the first fall freeze event. Inflorescences average 8 cm in length and produce up to 200 flowers. Color of open flower petals is violet-blue (RHS 90C). Color of the corolla tube inside surface is orange (RHS 25B). Flowers are fragrant. Anthers are malformed or lacking and produce little to no viable pollen. In a field setting surrounded by numerous fertile cultivars, ‘Blue Chip’ produced few fruit, and seed set was extremely

low, although minimal numbers of seedlings were produced.

‘Miss Ruby’. ‘Miss Ruby’ has an upright, globose habit (Fig. 4). In replicated trials of 10 plants, unpruned ‘Miss Ruby’ averaged 106.3 cm height and 117.4 cm width (height/width ratio = 0.91) after two growing seasons (Table 1). Mature leaves are elliptic, averaging 6.7 cm long and 1.8 cm wide. Foliage is green (RHS 137A) on the adaxial side and grayed-green (RHS 194B) on the abaxial side. Plants are very dense with abundant lateral branching. Leaves are deciduous.

Flowering begins in mid-May in Raleigh, NC, and continues throughout the growing season. Inflorescences average 10.6 cm in length and produce up to 160 flowers per inflorescence. Unopened flower buds are red-purple (RHS 71A) and open to red-purple (RHS 71B to 71C; Fig. 5). Color of the corolla tube inside surface is orange (RHS 25A). In comparison, unopened flower buds and open flowers of ‘Pink Delight’, the existing standard pink cultivar in the trade, are purple (RHS 75A) and purple (RHS 75B), respectively. Flowers are fragrant. In a field setting surrounded by fertile cultivars, ‘Miss Ruby’ produced moderate amounts of seed, but less than most commercial cultivars of *Buddleja*.

Adaptability

Propagules of ‘Blue Chip’ and ‘Miss Ruby’ have been grown in North Carolina (Raleigh and Jackson Springs, USDA hardiness zone 7b), Michigan (Grand Haven, USDA hardiness zone 5), and the RHS Garden Wisely, U.K. Both cultivars have demonstrated reliable cold hardiness for two winters in the Michigan and U.K. trials and five winters in both North Carolina test sites. In the Michigan trial, plants of both cultivars died back to the ground and resumed growth from the crown the next spring. In North Carolina, aboveground shoots survived over winter; hence, plants may require occasional moderate pruning to maintain the desired compact growth. ‘Miss Ruby’ and ‘Blue Chip’ were entries in the 2008 Royal Horticultural Society *Buddleja* Euro-trial at RHS Garden Wisely, U.K. Of 97 cultivars included in the trial, ‘Miss Ruby’ and ‘Blue Chip’ ranked first and second, respectively, in the public popularity poll. Cultural requirements of ‘Blue Chip’ and ‘Miss Ruby’ are similar to other cultivars of

Fig. 1. Pedigree of ‘Blue Chip’.

Received for publication 2 Mar. 2009. Accepted for publication 30 Mar. 2009.

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We gratefully acknowledge the technical assistance of the staff of the Sandhills Research Station, Jackson Spring, NC.

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Fig. 2. One-year-old plants of 'Blue Chip' showing profuse flowering, dwarf habit, and spreading architecture.

Fig. 3. Inflorescence and dense growth habit of 'Blue Chip'.

Fig. 4. One-year-old plant of 'Miss Ruby' showing bright pink flower color and dense growth.

Table 1. Plant height, width, and height/width ratio of *Buddleja* 'Blue Chip', 'Miss Ruby', and control cultivars after two growing seasons in Jackson Springs, NC.^z

Cultivar	Ht (cm)	Width (cm)	Ht/width ratio
Blue Chip	79.8	126.3	0.64
Miss Ruby	106.3	117.4	0.91
Black Knight	162.2	128.8	1.37
Ellen's Blue	171.1	117.4	1.46
Lochin	162.0	118.4	1.37
Nanho Purple	108.4	123.9	0.88
Pink Delight	167.9	125.8	1.34
Potter's Purple	193.7	136.4	1.43
Royal Red	181.4	133.4	1.37
White Ball	79.7	100.6	0.79
Least significant difference (0.05 level)	11.5	12.5	0.11

^zPlants were not pruned between growing seasons. Values shown represent the mean of two replications with five plants per replication.

Buddleja, most critically full sun exposure and well-drained soil.

Performance

'Blue Chip'. 'Blue Chip' has shown outstanding flowering performance in all trials. Unlike many cultivars of *Buddleja* that show reduced flower production in late summer and fall, 'Blue Chip' continues to flower prolifically throughout the entire growing

season. Because few viable fruit are produced, panicles senesce quickly after flowering and detract little from the appearance of the plant. Because of its compact, spreading growth habit, 'Blue Chip' is appropriate for use in the front of mixed plantings or for mass plantings. Similar to most *Buddleja*, it attracts butterflies in abundance.

'Miss Ruby'. 'Miss Ruby' has shown outstanding flowering performance in all trials. The dense growth and compact habit of 'Miss Ruby' make it appropriate as both a specimen plant and for use in mixed plantings. Its bright pink flower color is unique among existing cultivars of *Buddleja*. It attracts butterflies in abundance.

Propagation

Propagation of 'Blue Chip' and 'Miss Ruby' can be achieved successfully by using softwood cuttings taken any time in the growing season, treating with low to moderate rates of indole-3-butyric acid, and placing under intermittent mist. Rooting usually occurs within 2 weeks.

Availability

U.S. plant patent applications have been submitted and approved for both 'Blue Chip' and 'Miss Ruby' (numbers currently not assigned) and plant patent rights assigned

Fig. 5. Inflorescence of 'Miss Ruby'.

to NCSU. Plants and propagation rights can be obtained from Spring Meadow Nursery, Grand Haven, MI. Vouchers of both cultivars will be deposited in the NCSU Herbarium.

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