

Summary of Characteristics

Buddleja NC2006-6 (proposed to be released as 'Lilac Chip')

Introduction

Buddleja L. (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. The majority of cultivars are *B. davidii*, and 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 concern of excessive vigor, a compact cultivar of *Buddleja* named 'Lilac Chip' is proposed for release.

NC2006-6

Buddleja NC2006-6 was derived from a summer 2005 hybridization of 'Blue Chip' (NCSU cultivar tested as NC2004-9, USPP 19,991) x 'Miss Molly' (NCSU cultivar tested as NC2005-8, PPAF). 'Blue Chip' is a complex hybrid containing 3 different species and one botanical variety of *Buddleja* (*B. davidii*, *B. davidii* var. *nanhoensis*, *B. lindleyana*, and *B. globosa*). 'Miss Molly', the other parent of 'Lilac Chip', is a hybrid of 'Miss Ruby' x 'Attraction'. 'Miss Ruby' was derived from hybridization of 'White Ball' x 'Attraction'. 'Attraction' was derived as an open-pollinated seedling of 'Honeycomb', which is a hybrid of *B. globosa* x *B. davidii*. 'White Ball' is described as a complex hybrid by its developer (Gert Fortens, personal communication), presumably containing *B. davidii* and *B. fallowiana*. The pedigree of NC2006-6 is shown in Table 1. All hybridizations shown in the pedigree were performed in the author's breeding program. Seeds were germinated in January 2006 and 343 progeny were grown out in summer 2006 at the Sandhills Research Station, Jackson Springs, NC. One seedling, designated NC2006-6, demonstrated extremely compact growth and lilac flower color (Figures 2, 3, and 4). In 2007 through 2010, NC2006-6 was tested in a replicated trial at the Sandhills Research Station at Jackson Springs, NC. In this trial, unpruned plants of 'Lilac Chip' attained a height and

spread of 40.5 and 74.5 cm, respectively, after two years of growth (year 2008, Table 1). Plants were moderately pruned after year 2008, and thereafter left unpruned. Similar differences in vigor and growth habit were revealed after the third growing season in year 2009 (Table 2). NC2006-6 is judged as extremely dwarf compared to standard cultivars, and more compact than 'Blue Chip', the current dwarf standard in the trade. Foliage is very dense and full. The attractive violet flower color (RHS 86C (bud) and RHS 78C (petal)) and extreme dwarfism of NC2006-6 are the primary reasons for release. The inflorescences are typical of *Buddleja*, and individual flowers are very fragrant. NC2006-6 produces moderate amounts of seed, but considerably less than standard cultivars of butterfly bush. Foliage of NC2006-6 is deciduous.

Adaptability

Plants of NC2006-6 have been grown in North Carolina (Raleigh and Jackson Springs, USDA hardiness zone 7b), and Michigan (Grand Haven, USDA hardiness zone 5). NC2006-6 has demonstrated reliable cold hardiness for two winters in the Michigan trial, and five winters in both North Carolina test sites. In the Michigan trial, plants died back to the ground, and resumed growth from the crown the following spring. In North Carolina, above ground shoots survived over winter, hence plants may require occasional moderate pruning to maintain the desired compact growth. Cultural requirements of NC2006-6 are similar to other cultivars of *Buddleja*, most critically full sun exposure and well drained soil. The compact growth habit and the unique lilac flower color of NC2006-6 are highly desirable traits that will allow this selection to be used in a wide range of landscape situations.

Propagation

Propagation of 'Lilac Chip' 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 (IBA), and placing under intermittent mist. Rooting usually occurs within 2 weeks.

Intellectual Property Protection

A U.S. plant patent applications have been submitted for 'Lilac Chip'. Plant patent rights will be assigned to NCSU. Propagation and marketing rights will be assigned to Spring Meadow Nursery, Grand Haven, MI.

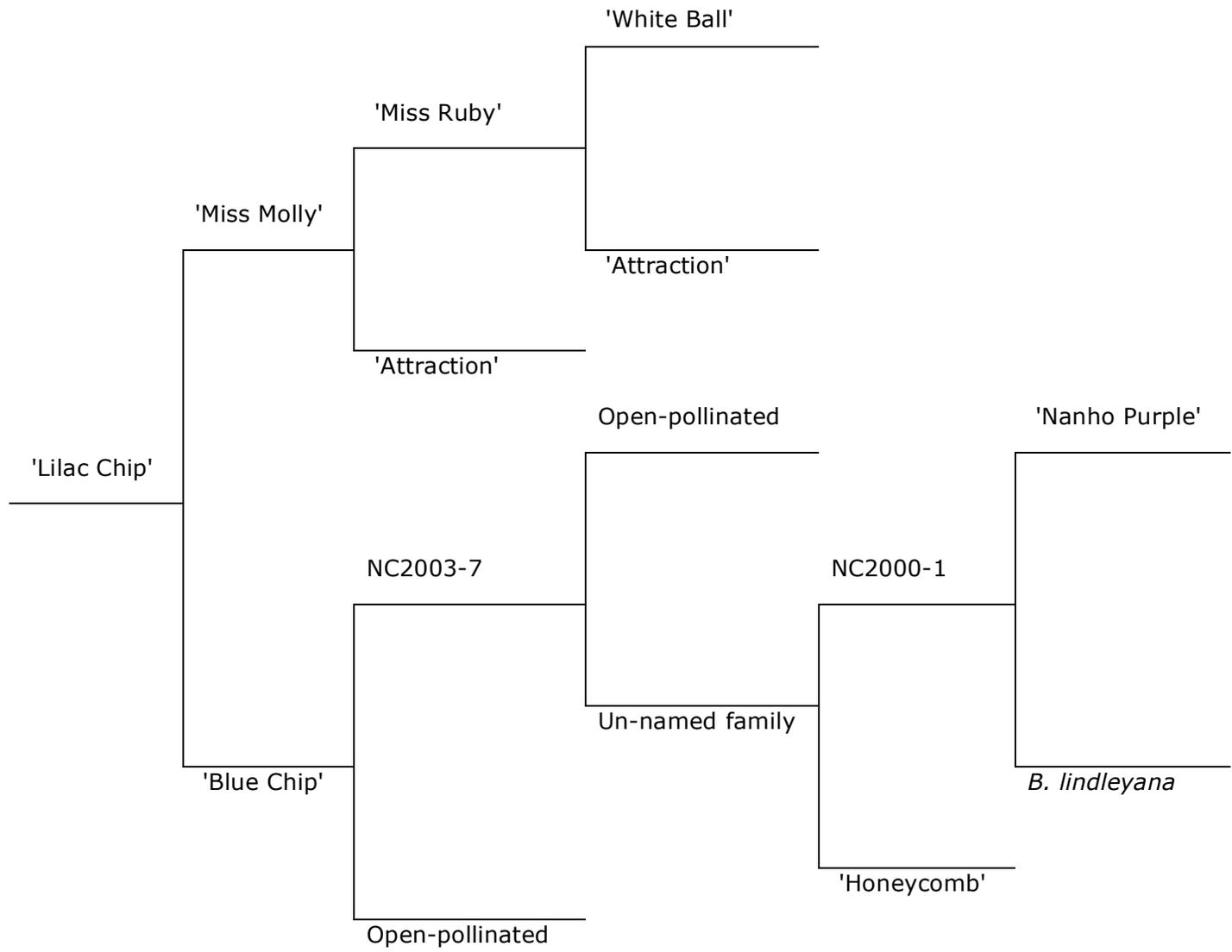


Figure 1. Pedigree of *Buddleja* 'Lilac Chip'.

Table 1. Plant height, width, and height/width ratio of *Buddleja* 'Lilac Chip' and check cultivars after 2 growing seasons (year 2008) in Jackson Springs, NC^z. Plants were not pruned between growing seasons one and two.

Cultivar	Height (cm)	Width (cm)	H/W ratio
NC2006-6 (<i>'Lilac Chip'</i>)	40.5	74.6	0.54
NC2006-10 (<i>'Ice Chip'</i>)	48.4	125.8	0.36
Miss Molly	132.3	112.9	1.18
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
Lochinch	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
LSD (0.05 level)	11.5	12.5	0.11

^zValues shown represent the mean of 2 replications with 5 plants per replication.

Table 2. Plant height, width, and height/width ratio of *Buddleja* 'Lilac Chip' and check cultivars after 3 growing seasons (year 2009) in Jackson Springs, NC^z. Plants were pruned after growing season two by removing about 50% of existing growth during the dormant season.

Cultivar	Height (cm)	Width (cm)	H/W ratio
NC2006-6 (<i>'Lilac Chip'</i>)	35.9	70.2	0.51
NC2006-10 (<i>'Ice Chip'</i>)	59.0	146.5	0.40
Miss Molly	159.2	191.2	0.83
Blue Chip	82.6	138.6	0.60
Miss Ruby	115.2	147.5	0.78
Black Knight	192.2	241.4	0.80
Ellen's Blue	174.9	217.0	0.81
Lochinch	173.9	217.6	0.80
Nanho Purple	119.5	183.3	0.66
Pink Delight	189.5	227.4	0.83
Potter's Purple	233.9	284.6	0.83
Royal Red	226.0	271.7	0.83
White Ball	123.3	115.9	1.06
LSD (0.05 level)	15.2	16.4	0.13

^zValues shown represent the mean of 2 replications with 5 plants per replication.



Figure 2. Compact growth and lilac flower color of *Buddleja* 'Lilac Chip'. Two-year-old plant shown.



Figure 3. Compact growth of *Buddleja* 'Lilac Chip'. Plant shown is two years old.



Figure 4. 'Lilac Chip' in a garden setting. Plant shown is 3 years old.