

Identification and Morpho-Botanic Characterization of Old Rhododendron Hybrids of Burcina Park (Pollone-Biella) in Italy

D. Remotti
Dipartimento di Agronomia,
Selvicoltura e Gestione del Territorio,
Università di Torino Via Leonardo da Vinci 44,
10095 Grugliasco (Torino), Italy
e-mail: remotti@agraria.unito.it

Keywords: rhododendron, ancient cultivars, germplasm, genetic resource, phenotypic, characterization

Abstract

Burcina Park is a landscape historical garden established around 1850 by Piacenza family near Biella (Italy). It extends over an area of 57 hectares covering almost completely the slopes of a mountain called Brik Burcina. The most attractive part of Burcina Park is the rhododendron valley, extending over a surface of about 2 hectares and blooming around the half of May. Felice Piacenza started to collect rhododendron hybrids during the last decade of XIXth century and bought very precious and unique cultivars selected in Europe. It took 40 years to improve the collection and to gather over 120 different cultivars. During XXth century nomenclature of these hybrids have been lost. The aim of this work is to identify these cultivars that represent an important genetic patrimony, since a number of them are deceased worldwide. We characterized and identified over fifty cultivars.

INTRODUCTION

The rhododendron, introduced into cultivation in Europe during 17th century, assumed during the 19th century a remarkable position, first in English horticulture, where the breeder activity reached high perfection levels. Soon this flower crop became widespread in Belgium, France and in Germany where many nurserymen grew rhododendrons and introduced into a great number of gardens. In Italy the cultivation of rhododendron never reached to the important level assumed in other countries, but there are some refined historic gardens and parks which own old rhododendron specimens, dated back to an ancient introduction, and their safeguard and exploitation become important goals for the historic, cultural and scientific purpose they hold. The investigation carried out in Burcina Park located near Biella, in Piedmont (Northern Italy) brought to the characterization and identification of 50 cultivars selected during 18th century in England, Belgium and France.

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Felice Piacenza started to collect rhododendron hybrids during the last decade of XIXth century and bought very precious and unique cultivars selected in Europe from two important nurseries, Croux & Fils in Chateney (Seine – France) and Van Houtte & Peré in Gand (Belgium). It took 40 years to improve the collection and to gather over 120 different cultivars (Remotti and Accati, 2001).

MATERIALS AND METHODS

The research was divided in two directions consisting in a bibliographical investigation and a fieldwork including the examination and characterization of specimen. The bibliographical investigation took long time and was first carried out in the archive of the park where the name of the cultivars planted between 1895 and 1930 were found from

the sales invoices and a list, which quotes rhododendron growing in the park in 1930's. The determination of the cultivars is made according to the descriptions including the eighteenth century catalogues (Ottolander and Hoftman, 1870; Croux, 1902/03; Croux, 1928/29; van Bellenghen, 1913; Koster, 1877/78; Seidel, 1889/90 Moser, 1899; Lamken, 1925/26; Lamken, 1931, Barbier, 1927/28) and, while rare ancient prints published on magazines of horticulture of that time or in specific iconographic books are available, a detailed bibliographical investigation was made in some important botanical libraries provided with historical documents. Some cultivars are described also in recent works (Cox and Cox, 1988; Salley and Greer, 1986; Fletcher, 1958).

The morpho-botanical characterization consisted in filling specific identification cards in which the following features are considered, based on references (and integrating them: plant habit, blooming (density and period), truss (shape, diameter, height, flower number), flower (lob number, diameter, depth, edge, stalk length, colour), stamens (number, filament colour, anther colour), pistil (as regards corolla, as regards stamens, stylus colour, stigma colour), leaf (shape, surface, length, width, leaf index, upper and lower surface colour, upper and lower surface hairiness, stalk length). There are also historical and bibliographical information referred to place of origin, year of origination, name of the breeder, previous descriptions and quotations. Each card also had a photograph illustrating the truss and with a detailed photo of the single flower of the cultivar.

RESULTS

Among the over 100 rhododendron specimen characterized in the Rhododendron Valley, the following 50 cultivars have been identified:

'Alarm', 'Alexander Adie', 'Amilcar', 'Annica Bricogne', 'Chevalier Felix de Sauvage', 'Comte de Gomer', 'Comtesse Roquette de Buisson', 'Countess of Normanton', 'Cunningham's White', 'Emperor de Maroc', 'Everestianum', 'Fastosum Flore Pleno', 'Francis B. Hayes', 'George Peabody', 'Haydeé', 'James Marshall Brooks', 'John Walter', 'Joseph Whitworth', 'Kate Waterer', 'Lady Annette de Trafford', 'Lady Eleonor Cathart', 'Lady Rolle', 'Lord Selborne', 'Madame Boyer', 'Madame Carvalho', 'Madame Linden', 'Madame Masson', 'Madame Patti', 'Madame Wagner', 'Marchioness of Lansdowne', 'Memoire de Dominique Vervaene', 'Michael Waterer', 'Mrs. Isaac Davies', 'Mrs. John Clutton', 'Mrs. John Penn', 'Nigrescens', 'Nirens', 'Old Port', 'Onsloweanum', 'Perspicuum', 'Pink Pearl', 'Prince Camille de Rohan', 'Princesse Hortense', 'Purity', 'Robert Croux', 'Sappho', 'The Strategist', 'The Warrior', 'Vesuvius', 'William Austin'. Among those cultivars over 50 % came from England, while the other from France or Belgium. Some of those rhododendrons are unknown all over the world, in particular 'Countess of Normanton', 'Emperor de Maroc', 'George Peabody', 'Haydeé', 'Lady Rolle', 'Lord Selborne', 'Madame Boyer', 'Madame Patti', 'Mrs. Isaac Davies', 'Onsloweanum', 'Perspicuum', 'Princesse Hortense'. Excluding few cultivars currently available in Italy ('Chevalier Felix de Sauvage', 'Cunningham's White', 'John Walter', 'Sappho' and 'Vesuvius'), only hardly few of the identified cultivars are commercialised abroad; most of them are very rare.

The morpho-botanic characterization of the cultivars unknown all over the world is reported according to the following properties: Truss of (n°) flowers, shape of truss, size of the truss (diameter x high), shape of flower, size of the flower (diameter x depth), number of lobes, colour in bud, colour of opened flower and spots, colour of stamens and anthers, colour of style and stigma, length of pedicels, shape of the leaves, length and width, leaf index ($I_{lf} = \text{Length/width}$), surface, indumentum, colour upper surface, colour lower surface, length of petioles, growth habit, flowering density, flowering time.

'Countess of Normanton'

Fls 18-20/domed truss, 140-160 x 120-125 mm, open campanulate flowers, 65-70 x 24-40 mm, with 5 linear-edged lobes, occasionally incised, violet (84A) in bud, opening pale pink violet (75B) with white centre, pink (68B) at the base of the throat, black dorsal

spots. Filaments white (155D), anthers light brown (164B), style yellowish white (158C), stigma strong purplish red (63A). Pedicels 34mm. Lvs lanceolate, 108-128 x 33-40 mm, $I_{lf} = 3,2$, dark yellowish green (139A) above, moderate yellow green (147C) below, hairless. Petioles 18 mm. Tree-shaped. Late (early June).

'Emperor de Maroc'

Fls 13-16/ domed- conical truss, 110 x 80-90 mm, with 5 linear-edged lobes, dark red (187A) in bud, opening deep reddish purple (77A) lighter inside (71A), dark red (187A) dorsal spotting, with a dark red (59A) blotch at the base of three dorsal lobes, creased petals, stamens 10, filaments phlox purple (75C) darker at base, anthers yellow-ochre (165B), style white, stigma dark red (187A). Pedicels 18-20 mm. Lvs lanceolate, 120-129 x 31-44 cm, $I_{lf} = 3,3$, dark olive green (147A) above, hairless, midvein quite engraved, moderate yellow-green (147C) below, hairless. Petioles 14-20 mm. Compact shrub. Free flowering. Early (mid April).

'George Peabody'

Fls 16-18/conical truss, 97-102 x 85-102 mm, open campanulate flowers, 59-64 x 25-28 mm, with 5 curled and briefly, thickly-wavy edged lobes, strong purplish pink (67A) in bud, opening deep purplish pink (58B) with shade of white at centre, brown (175B) dorsal spots. Filaments white, anthers pale brownish red (182C), style deep purplish pink (58D), stigma dark purplish red (187A). Pedicels 27mm. Lvs lanceolate, 127-155 x 50-58 mm, $I_{lf} = 2,7$, convex, dark olive green (137B) above, moderate yellow green (148C) below, hairless. Petioles 22-23 mm. Tree-shaped. Late May.

'Haydeé'

Fls 18-20/domed truss, 94-120 x 50-73 mm, open campanulate flowers, 43-51 x 23-27 mm, with 5 briefly wavy-edged lobes, purplish pink (72D) in bud, opening white (155A) with spraying of claret red (187B) at border, dark purplish red (187A) dorsal spots. Filaments white, anthers yellow-ochre (165C), style white (157C), stigma deep greyish orange (160D). Pedicels 15-17 mm. Lvs lanceolate, 85-107 x 30-33 mm, $I_{lf} = 3,0$, lightly concave, dark olive green (147A) above, moderate olive green (152B) below, with a brown indumentum below. Petioles 15-19 mm. Compact shrub. Late (May).

'Lady Rolle'

Fls 17-20/ conical truss, 110-130 x 85-102 mm, open campanulate flowers, 49-52 x 34-36 mm, with 5 linear-edged lobes, white (155A) with shade of light lilac (84B) at base in bud, opening white (155B) with light orange-brown and grey-brown (165B, 199A) dorsal spots. Filaments white, anthers light grey-brown (199D), style very pale yellowish green (145D), stigma brown (177A). Pedicels 22-25 mm. Lvs lanceolate, 118-135 x 38-43 mm, $I_{lf} = 3,3$, convex, moderate olive green (147A) above, pale yellow green (146D) below, hairless. Petioles 15-20 mm. Tree-shaped. Late May.

'Lord Selborne'

Fls 14-16/domed truss, 120 x 110-115 mm, open campanulate flowers, 47-50 x 38-43 mm, with 5 linear-edged lobes, vivid purple red (60A) in bud, opening deep purplish pink (63A) with maroon (180A) dorsal spots. Filaments moderate red purple (61C), anthers brown (166A-B), style light yellow (158D), stigma brown-claret red (185A). Pedicels 15-18 mm. Lvs lanceolate, 148-220 x 46-56 mm, $I_{lf} = 3,6$, flat, incised midvein, dark olive green (147A) above, moderate yellow green (147C) below, hairless. Petioles 25-27 mm. Tree-shaped. Free flowering (all flowers open together). Early-mid May.

'Madame Boyer'

Fls 15-20/domed truss, 130-140 x 90-100 mm, open campanulate flowers, 53-67 x 35-67 mm, with 5 briefly and thickly wavy-edged lobes, purplish red (72B) in bud, opening white (155D) with dark purplish red (187A) dorsal spots. Filaments white (155B), anthers orange white (159A), style white and very pale yellowish green (154C) at base, stigma dark purplish red (187A). Pedicels 25-27 mm. Lvs ovate, 115-152 x 49-55 mm, flat, $I_{lf} = 2,6$, bright dark green (141A) above, pale yellow green (146D) below, hairless. Petioles 14-18 mm. Late May-early June.

'Madame Patti'

Fls 14-17/domed truss, 90-105 x 58-69 mm, open campanulate flowers, 49-52 x 37-40 mm, with 5 linear-edged lobes, white (155A) with shade of dark pink (57D) at apex in bud, opening white (155B) with shade of dark pink (57D) at border, with yellowish green (151A) dorsal spots. Filaments white, anthers brown (165A), style light yellowish green (150D), stigma brownish red (180A). Pedicels 20mm. Lvs lanceolate, 95-140 x 30-35 mm, $I_{lf} = 3,0$, convex, moderate olive green (147A) above, dark grey-brown (199A) below, with a brown indumentum below. Petioles 15-18 mm. Tree-shaped. Mid-late May.

'Mrs. Isaac Davies'

Fls 14-20/domed-flat truss, 110-135 x 80-90 mm, open campanulate flowers, 45-53 x 34-38 mm, with 5 linear-edged lobes, deep purplish pink (68B) in bud, opening white (155D) with black-dark purplish red (187A) dorsal spots. Filaments white, anthers moderate yellow-ochre (164A), style very pale greyish yellow (160D), stigma orange-brick red (172B). Pedicels 21-22 mm. Lvs lanceolate, 133-163 x 36-40 mm, $I_{lf} = 4,0$, lightly concave, dark yellowish green (139A) above, moderate yellow green (146C) below, with a brown indumentum below. Petioles 18-21 mm. Quite small-compact shrub. Free flowering. Early-mid May.

'Onsloweanum'

Fls 19-21/domed truss, 140-150 x 120-135 mm, open campanulate flowers, 65-80 x 35-43 mm, with 5 briefly wavy-edged lobes, pale pink (69A) with light purple (75C) at border in bud, opening pale pink (69A) with (153B) dorsal spots. Filaments white (155D), anthers light purple (75C), style white and pale yellow (1C) at base, stigma dark red (53A). Pedicels 35-43 mm. Lvs lanceolate-ovate, 106-124 x 40-45 mm, $I_{lf} = 2,4$ lightly convex, moderate olive green (137B) above, pale yellow green (146D) below, hairless. Petioles 18-21 mm. Shrub. Late May-early June.

'Perspicuum'

Fls 15/domed truss, 125-130 x 130-145 mm, open campanulate, 65-70 x 32-43 mm, with 5 slightly jagged edged lobes, sharp buds, pale pink (69A) in bud, opening white (155A) with moderate greyish yellow (160A) dorsal spots. Filaments white, anthers yellow ochre (165B), style greyish yellow (160D), stigma deep greyish orange (171A). Pedicels 22-26 mm. Lvs lanceolate, 132-160 x 36-40 mm, $I_{lf} = 3,8$, convex, acute at apex, dark olive green (147A) above, pale olive green (146B) below, hairless. Petioles 22-26 mm. Compact shrub. Free flowering. Early- mid May.

'Princess Hortense'

Fls 17-19/conical truss, 135-140 x 120-140 mm, open campanulate flowers, 70-75 x 38-46 mm, with 5 briefly jagged edged lobes, light purple (75C) in bud, opening pale pink-violet (75D) with yellowish olive green (153A, 189A) dorsal spots. Filaments pink (73D), anthers purplish pink (70D), style pale orange-pink (38D), stigma claret red (187B). Pedicels 36-38 mm. Lvs lanceolate-obovate, 96-113 x 38-44 mm, slightly convex, $I_{lf} = 2,7$, dark olive green (147A) above, moderate yellow-green (147C) below, hairless. Petioles 16-17 mm. Compact shrub. Free flowering. Mid May.

CONCLUSIONS

The identification and morpho-botanical characterization of the rhododendron hybrids of Burcina Park, beside the safeguard and exploitation of them, allowed the rediscovery of an interesting genetic heritage, the recovery of which could be of advantage to historical gardens, finding a useful employment in their restoration, and in modern horticulture, as these cultivars are surely adapted to local ecopedological conditions. The time spent inside this garden, and the survival of the mentioned specimens during periods of gardens abandonment (wartimes or property successions) and during exceptional bad weather conditions have extensively proved their resistance, representing selection factors that, therefore, grant the success of their employment.

ACKNOWLEDGEMENTS

This work was carried out with the funds of the Regione Piemonte and with the support of the Ministero delle Politiche Agricole e Forestali within the Cofinanced Interregional Program “Supporti per il settore floricolo”; it was also financed by the Riserva Naturale Speciale Parco Burcina F. Piacenza and was included in the strategic Project on Biodiversity of C.N.R. “Caratterizzazione e valorizzazione delle risorse genetiche vegetali, animali e microbiche”.

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