

A Medium Sized *Cymbidium* ‘Pink Glory’ with Brilliant Pink Flowers

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Abstract. The new *Cymbidium* variety ‘Pink Glory’ (Palace Court ‘Jacky’ × Lucky Rainbow ‘Saint Rapine’) was developed at the National Institute of Horticultural & Herbal Science, Rural Development Administration in 2006. A cross was made in 1995 between *C. Palace Court ‘Jacky’* with a medium sized bright pink colored flowers, and *C. Lucky Rainbow ‘Saint Rapine’* with pink colored flowers. In 1999, one line was selected based on the flower color, leaf shape, flower stalk, and vigorous growth. Evaluation and selection trials were conducted from 2000 to 2004. ‘Pink Glory’ has a light pink sepal (RHS, RPN66D), red lip (R52B) and a leaf length of 87.5 cm. The average number of flowers on each peduncle was 20.5 and the flower diameter was 8.6 cm. The general impression of petals and sepals showed some incurved and some spreading. ‘Pink Glory’ has a vigorous growth character and a rounded flower shape. It has an adequate peduncle height (66.5 cm) compared to leaf length (87.5 cm) and starts to bloom in late January under optimal cultural conditions.

Additional key words: breeding, crossing, hybridization, orchid flower

Introduction

The genus *Cymbidium* is one of the most popular orchids in the world including Korea and China. It has long sprays of fine showy flowers in an abundance of colors: white, cream or yellow to green, and pink, red and bronze, with every shade in between. *Cymbidium*, or boat orchid, is a genus composed of 52 evergreen species in the family Orchidaceae (Du pay and Cribb, 2007). The species may be epiphytic, lithophytic or terrestrial. It is found from China to Australia in the south, from high up in the Himalayas to the coast line of the China Sea, and from tropical rain forests to dry rocky outcrops. The genus is very versatile, and cymbidiums, with their varying habitats, have evolved into many different shapes and forms. The hybrids have been bred from only a small handful of species from the Himalayas (Norten, 1983).

The destiny of the large-flowered cymbidium was determined by the discovery of *C. Alexanderi* ‘Westonbirt’ (*C. eburneolowianum* × *C. insigne* ‘Westonbirt’) registered by H.G. Alexander in 1922 (Norten, 1983).

Cymbidium hybridization was recorded in the later part of the nineteenth century between *C. lowianum* and *C. eburneum* in England (Hugo, 1979). However, subsequent breeding and cultivation have taken place in Japan, Holland, and New Zealand.

Today, complex hybrids have taken precedence with unpredictable progeny characteristics especially in colors ranging from white, cream, bronze, green, gold or pink.

Recently, *Cymbidium* export has become a promising business compared to other flower crops in Korea. Korean-produced *Cymbidium* is exported to China during the Chinese New Year season, and export earnings amounted to about US\$ 20 M in 2010 (MIFAFF, 2011). To establish a continuous and stable export system, the supply of domestically produced seedlings and breeding of new cultivars are highly required. Twenty nine hybrids were bred by the National Institute of Horticultural & Herbal Science (NIHHS) of RDA since 2003 (Kim et al., 2006, 2007, 2008, 2009, 2010a, 2010b, 2011).

The breeding program for pot *Cymbidium* aims for many flower number, various flower color and upright type of leaf and flower attitude. This new hybrid was bred to combine the characteristics of *C. Palace Court ‘Jacky’* with large flower and vigorous growth and *C. Lucky Rainbow ‘Saint Rapine’* with round flower shape to obtain a variety with round flower shape and vigorous growth.

Origin

The new cultivar, *C. ‘Pink Glory’*, came from a cross

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※ Received 9 May 2012; Revised 4 July 2012; Accepted 4 July 2012.

between Palace Court ‘Jacky’, a large-sized plant with white sepals, and Lucky Rainbow ‘Saint Rapine’, a medium-sized plant with pink petals and dark red lip at the NIHHS, Suwon, Korea, in 1995. Eighty seedlings were obtained after planting and acclimatization in the greenhouse. Varietal evaluation, selection and breeding were done for nine years (1996-2004). The new cultivar was finally selected for its distinguishing characteristics such as flower color and shape, length of flower stalk, leaf attitude, and vigorous growth, and named as *C.* ‘Pink Glory’ (Fig. 1). This hybrid was bred with the objective of combining good qualities such as flower color and vigorous growth of Palace Court ‘Jacky’ and Lucky Rainbow ‘Saint Rapine’ orchids.

Cymbidium ‘Enzan Spring’, a control hybrid with pink colored flower, round flower shape and medium sized plant was cultivated in Korea as a pink-flower *Cymbidium* a few years ago and was similar with characteristics of ‘Pink Glory’.

The characteristics were evaluated based on the manual for agricultural investigation and guidelines for the conduct of tests for distinctness, uniformity and stability for *Cymbidium* (UPOV, 1999). In 2003, consumer preference was surveyed during the *Cymbidium* show in NIHHS, and *C.* ‘Pink Glory’ was commercially released to consumers in 2004.

Description and Performance

Plant

C. ‘Pink Glory’ is a sturdy, medium-sized plant. The shape

of the leaf is semi-upright with erect flower spikes arising from above ground pseudobulbs at approximately 50 mm. When mature, the plant displays multispiking characteristics in 18 cm diameter pots. Plant height is approximately 87.5 cm from the base of the pseudobulb to the tip of the leaf. Leaf width, however, is similar with ‘Enzan Spring’ (Table 1). *C.* ‘Pink Glory’ can withstand high temperatures during the summer season in Korea without damage or death of the flower buds. The shape of the pseudobulb is slightly elongated circular and about 5.0 cm in height.

Flower

The pink colored flower of ‘Pink Glory’ was close to *C.* Palace Court ‘Jacky’, which was a female parent with medium sized bright pink colored flowers. The type of flower and leaf was similar with *C.* Lucky Rainbow ‘Saint Rapine’ which was male parent with round shape.

The predominant color of the flower is pink (RHS, RPN 66D: petal, P76D: sepal) with red lip (R52B) when fully opened. This flower color is brilliant in comparison with ‘Enzan Spring’ (P76C: sepal and R51A: lip). *C.* ‘Pink Glory’ has medium bright pink flowers that have no fragrance and are arranged bilaterally on the raceme. The petals and sepals show some incurved and spreading shape. The flowering season is mid-winter from 1 February to 30 March under optimal cultural conditions (Sakamoto, 1996). Inflorescences that are uncut typically exceed 60 days in a wide range of environmental conditions. Spike habit is strong and erect without any arching (Table 2).

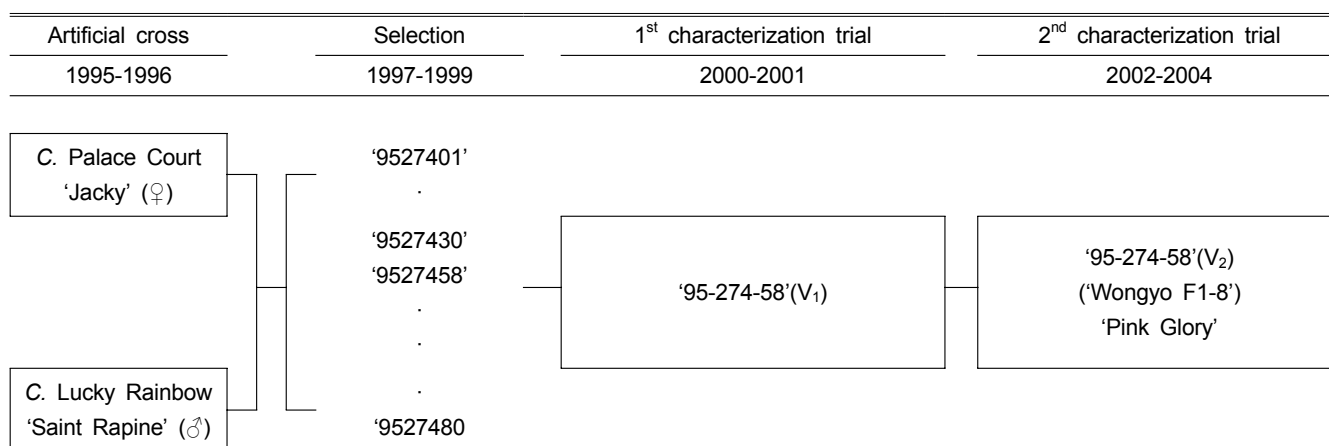


Fig. 1. Pedigree diagram of *Cymbidium* ‘Pink Glory’.

Table 1. Leaf and plant characteristics of ‘Pink Glory’ compared with ‘Enzan Spring’.

Cultivars	Length (cm)	Width (cm)	Leaf attitude	Plant size	Pseudobulb shape
Pink Glory	87.5 ± 6.5 ²	2.4 ± 0.9	Semi-upright	Medium	Circular
Enzan Spring (Control)	61.8 ± 7.4	2.3 ± 1.1	Semi-upright	Medium	Elliptic

²Mean ± standard error of 20 plants.

Table 2. Flower characteristics of ‘Pink Glory’ compared with ‘Enzan Spring’.

Cultivars	Flower		Peduncle attitude	Bloom	Fragrance
	Lip Color ^z	Shape			
Pink Glory	RPN66D (R52B)	Some incurved, Some spreading	Upright	Feb. 1 - Mar. 30	None
Enzan Spring (Control)	P76C (R51A)	Some incurved, Some spreading	Upright	Nov. 15 - Feb. 20	None

^zBased on the Royal Horticultural Society (RHS, 2001) color chart.

Table 3. Flower characteristics of ‘Pink Glory’ compared with ‘Enzan Spring’.

Cultivars	Flower	Length of flower stalk (cm)	No. of flowers/ flower stalk	No. of flower stalks	Preference ^z
	Width/Length (cm)				
Pink Glory	8.6 ± 1.1 ^y / 6.1 ± 0.8	66.6 ± 2.0	20.5 ± 2.1	2.3 ± 0.7	3.8 ± 0.4
Enzan Spring (Control)	5.2 ± 0.8/ 4.8 ± 0.9	55.9 ± 3.1	18.0 ± 2.3	2.1 ± 0.8	3.7 ± 0.7

^zPreference evaluation was conducted at the *Cymbidium* exhibition held at NIHHS in 2003. Poor (1) - Excellent (5).

^yMean ± standard error of 20 plants.



Fig. 2. Flower characteristics of the new *Cymbidium* ‘Pink Glory’.

The flowers of *C.* ‘Pink Glory’ (Fig. 2) have a natural horizontal spread of 8.6 cm and a vertical spread of 6.1 cm, which are larger than those of ‘Enzan Spring’ with 5.2 cm and 4.8 cm, respectively. The variety averages 20.5 flowers per stalk when the plant is 36 months from *in vitro* deflasking. The length of flower stalk is about 66.6 cm with a diameter of 11 mm. The plant produces 2.3 spikes per mature pseudobulb. *C.* ‘Pink Glory’ is a late season pot *Cymbidium*.

It is better than the ‘Enzan Spring’ cultivar and distinguished by its superior flower quality combined with good arrangement, flower shape, flower color, and cold-hardiness. Although ‘Enzan Spring’ was cultivated in Korea as a pink-flower *Cymbidium* a few years ago, it has low popularity or acceptability because of its too compact inflorescent interval. The new variety is, therefore, recommended for planting as an alternative to ‘Enzan spring’ in Korea. We expect that *C.* ‘Pink Glory’ has a great potential for increasing the farmer’s income based on the results of the preference survey (Table 3).

Availability

An application for plant variety protection was filed for ‘Pink Glory’ at the Korea Seed & Variety Service (Grant Number 3301). This variety has been cultivated in a *Cymbidium* farm since 2010.

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