

Building Block

***Phalaenopsis pulcherrima* (Lindl.) J.J.Sm., Repert. Spec. Nov. Regni Veg. 32: 366 (1933).**

The Beautiful Doritis - In Thailand - Ya Dawk Hin - Ma Wing - In China Wu Chun Lan

Synonyms

- *Doritis pulcherrima* Lindl., Gen. Sp. Orchid. Pl.: 178 (1833).

The genus *Doritis* was created by Lindley in 1838. The genus name was formed from "*doru*" which means "*lance*", in reference to the shape lobe of the lip. The type species was *Doritis pulcherrima*. It has a very wide distribution, ranging from Himalayas of northern India, through Thailand and Burma, to Malaysia, Indonesia and the Philippines. It varies widely in the coloring of its flowers and sometimes also in the size of the flowers. (Teuscher 1977).

Dr. Christenson does not separate *Doritis* from *Phalaenopsis* and placed *P. pulcherrima* in section Esmeralda.

P. pulcherrima are terrestrials forming large clumps by basal offshoots, leaves are oblong to elliptic, acute, concave. Inflorescences stiffly erect racemes to 60 cm long. Flowers are brilliant saturated cerise, the erect lateral lobules of the midlobe of the lip orange, the disk of the midlobe white, the column white. The callus uniseriate, small, transverse, with a rounded leading edge.

Protocorms of *P. pulcherrima* have been treated with colchicine to effect doubling of the chromosome number, the result are large flowers with fuller-formed segments and more intensely saturated floral pigments. Also, there are peloric clones of *P. pulcherrima* and have been given the informal varietal name *champornensis*. (Christenson 2001).

There are three color morphs formally named.

Phalaenopsis pulcherrima f. *alba*

Phalaenopsis pulcherrima f. *albiflora*, this form produces flowers with white sepals and petals that contrast with a rose-colored lip.

Phalaenopsis pulcherrima f. *coerulea*, the flowers are bluish violet. The amount of cerise pigmentation is variable. Modern selections have favored less cerise pigment, resulting in bluish lavender (grayish) flowers.

One of the most difficult aspects of analyzing the hybridizing of red-flowered phalaenopsis is determining which colors could be considered red, within the *Cattleya* alliance, true red pigmentation exists, unfortunately the "red" in *Phalaenopsis* is used as a general term referring to a broad array of reddish, violet and purple flowers.

Dtps. *Abed-nego* 'Orchid Konnection' grown by Meir Moses is a cross *P. Inferno* x *P. Malibu Imp* had flowers approaching true red color. Overall, this breeding line has produced brilliant, saturated colors with high flower counts. Given the success of this line of breeding, it certainly seems as though continued improvements in red breeding could be made by extending the use of *Dor. Pulcherrima* and its hybrids (Goo 1998).

Regarding breeding blue *Phalaenopsis*, *P. pulcherrima* f. *caerulea*, played an important role. It has been used to originate hybrids that can be anything from light bluish to a strong indigo. Also *P. pulcherrima* impart its round flower shape and strong color to its progeny.

P. Kenneth Schubert (*P. pulcherrima* x *P. violacea*) registered by Claren in 1963 or *P. Purple Gem* (*P. pulcherrima* x *P. equestris*), also registered in 1963, by E. Iwanaga. They flowers are sometimes of a very profound and brilliant bluish purple. In addition, both are very easy to grow and flower freely.

In *P. pulcherrima*, the blue form of the species had flowers that were more alkaline (pH 5.7) than the typical purple-flowered form of the species (pH 4.9; Griesbach, 1997). The higher pH of *P. pulcherrima* f. *caerulea* 'Indigo Bunting', HCC/AOS was the result of a single recessive gene. When *P. pulcherrima* f. *caerulea* 'Indigo Bunting' HCC/AOS, with a pH of 5.8 was crossed to the typically colored *P. pulcherrima* 'Arlington' AM/AOS, with a pH of 5.0, all of the seedlings were purple with an intermediate pH of 5.5. These seedlings were both backcrossed to *P. pulcherrima* f. *caerulea* 'Indigo Bunting' HCC/AOS and intercrossed among themselves. The resulting backcross population produced about half blue and half purple progeny, while the intercross population produced about one quarter blue progeny. These are the expected ratio for a single recessive gene. (Griesbach 2005).

Additionally, the unique lip structure of the species passes through to the next generation giving its offspring a distinct nonphalaenopsis-like lip. (Harper 2017).

References

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