

# Phalaenopsis Subgenus Parishianae Section Deliciosa

Rchb.f., Bonplandia (Hannover) 2: 93 (1854)

Type: *Phalaenopsis* [Phal.] *deliciosa* [fal-en-OP-sis de-lis-ee-OH-suh]

The Deliciosa Section consist of five species with Phal. *deliciosa* being the type species. Phal. *deliciosa* is the most widespread ranging from India to southern China, Southeast Asia, to Java and the Philippines. The other species have relatively small habitats within this range. The plants tend to be miniature both in physical size and flower size.

This section is morphologically intermediate between the *Phalaenopsis* Subgenus *Phalaenopsis* and Subgenus *Parishianae*. The flowers bear lateral lip lobes with tooth-like flaps, similar to those found in section *Polychilos*, while having uniseriate calli as in the Subgenus *Parishianae*.

The close affinity of this section with section *Esmeralda* is suggested by molecular data, their breeding behavior, both have four pollinia, and the bifid structure of their callus.

*Phalaenopsis deliciosa*  
'Shiny Leaves' HCC/AOS  
Sep 2015, NS 1.8 x 1.6 cm  
9 Flwrs, 20 Buds, 1 Inflor.



The table below provides some details on the five species.

Species marked with a * are used the most in hybridization				Progeny	AOS Awards										
Kew Name	Country	Temp.	Season	F1/Total	FCC	AM	HCC	JC	AD	AQ	CCE	CCM	CHM	CBR	Total
<i>Phalaenopsis chibae</i>	Vietnam	Warm to Hot	Spring-Summer	18/20		2	3				1	1		1	8
<i>Phalaenopsis deliciosa</i> *	India, China, Southeast Asia, Java, Borneo, Philippines	Warm to Hot	Summer - Fall	35/53		3	5	1					2	1	12
<i>Phalaenopsis finleyi</i>	Southeast Asia	Cool to warm	Summer - Fall	30/36			1							1	2
<i>Phalaenopsis mirabilis</i>	Southeast Asia	Warm to Hot		0/0											0
<i>Phalaenopsis mysorensis</i>	Southern India subcontinent	Warm	Winter - Spring	0/0											0



*Phal. chibae*  
'Highjack' AM/AOS  
May 2012, NS 1.2 x 1.5 cm  
203 Flws, 165 Buds, 16 Infl.



*Phal. finleyi*  
'OK' CBR/AOS  
Sep 2002, NS 1.1 x 2.0 cm  
2 Flws, 3 Buds, 1 Infl.



*Phal. mirabilis*



*Den. williamsianum*  
'Ruth' CBM/AOS  
May 1976, NS 5.7 cm

## Breeding Characteristics:

As can be seen by the above table, there has been limited breeding among these species with additional details in the table below on hybrid registration and associated awards for all species in the Deliciosa Section.

<u>Deliciosa Section</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>Total</u>
<b>Reg</b>	0	1	10	11	7	27	43	4	103
<b>Assc Awds</b>	0	5	5	2	1	24	8	0	45
<b>F1</b>	0	1	7	5	4	23	36	3	79
<b>AA</b>	0	5	1	1	0	21	8	0	36
<b>F2</b>	0	0	3	5	2	2	7	1	20
<b>AA</b>	0	0	4	0	1	2	0	0	7
<b>F3</b>	0	0	0	1	1	1	0	0	3
<b>AA</b>	0	0	0	1	0	1	0	0	2

The first hybrid, Phal. Tiny (Phal. pulcherrima x Phal. deliciosa), was registered in 1966 by Ron McLellan Co. Since this first registration there has been 103 hybrids registered and 22 have caught the judges eye in receiving 45 awards. Six have been crosses within the section (two receiving awards), 87 with six (18 crosses receiving awards) of the eight other Phalaenopsis Sections and / or Subgenus (only the Subgenus Hygrochilus and Ornithochilus have yet to have a Deliciosa Section cross registered) and four intergeneric families have been created with a total of ten crosses (one receiving an award). Based on awards the dominate characteristics are plant and flower size as well as flower color.

In the introduction a comment was made that the Deliciosa Section has a close affinity with the Esmeralda Section as suggested by molecular data and their breeding behavior. To confirm this comment, I looked at the heritage of all 103 hybrids and found that 33 were also progeny of Esmeralda Section species with 14 receiving 26 awards, over half of all awards for this family. Clearly there is some reality to comment, but over two-thirds are not Esmeralda Section progeny.

Based on the limited number of offspring, I suspect there may be some fertility issues with and / or lack of interest in these crosses.

## Breeding Characteristics, species with the most progeny:

Below are the the top four hybrids in regards to number of progeny, with at least one from each species (there are only three) used.



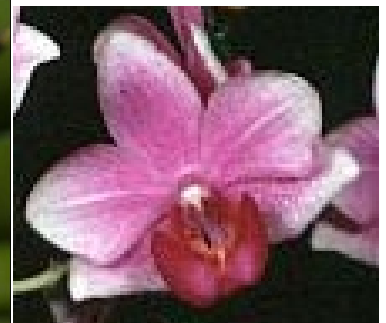
Phal. Tiny  
'Zuma Canyon' HCC/AOS  
(Phal. pulcherrima x  
Phal. deliciosa)  
Jun 1990, NS 1.4 cm  
139 Flws, 108 Buds, 6 Infl.  
12 F1 / 16 total progeny



Phal. Musick Surprise  
'Bryon Kelly Rinke' HCC/AOS  
(Phal. pulcherrima x  
Phal. chibae)  
May 2008, NS 1.6 x 1.6 cm  
33 Flws, 25 Buds, 2 Infl.  
2 F1 progeny



Phal. Donna's Delight  
'Gesine' BM/DOG  
(Phal. equestris x  
Phal. finleyi)  
Jun 2018  
5 F1 progeny



Phal. Nacescent  
'Zuma Canyon' AM/AOS  
(Phal. Tiny x Phal. Red Coral)  
Oct 1986, NS 4.5 cm  
16 Flws, 12 Buds, 1 Infl.  
1 F1 / 2 total progeny

## **Breeding Characteristics, species with the most progeny:**

Below are the the top four hybrids, not already mentioned, in regards to number of awards, with at least one from each species.



Phal. Orchid Classic's Golden Showers  
'Little Gem' AM/AOS  
(Phal. *deliciosa* x Phal. *chibae*)  
Mar 2012, NS 1.2 x 1.1 cm  
3 Flws, 8 Buds, 1 Infl.

Phal. Tying Shin Glider  
'FANGtastic' HCC/AOS  
(Phal. *Anna-Larati* Soekardi x  
Phal. *chibae*)  
Apr 2008, NS 1.9 x 2.4 cm  
11 Flws, 22 Buds, 2 Infl.

Phal. Wossner Pumuckl  
'Franz' SM/DOG  
(Phal. *stobartiana* x  
Phal. *chibae*)  
Jun 2016, NS 2.0 x 2.0 cm  
47 Flws, 3 Buds, 3 Infl.

Phal. Liu's Star Dusts  
'Arnie' HCC/AOS  
(Phal. *Timothy Christopher* x  
Phal. *finleyi*)  
Apr 2019, NS. 3.3 x 2.9 cm  
8 Flws, 7 Buds, 2 Infl.

## **References:**

[www.orchidspecies.com](http://www.orchidspecies.com)

<http://apps.kew.org/wcsp/qsearch.do>

<http://www.plantsoftheworldonline.org/>

<https://secure.aos.org/aqplus/SearchAwards.aspx>

OrchidWiz.Database x7.2, update: March 2021

Christenson, E.; *Phalaenopsis – A Monograph*, 2001

Orchids, Jun 2015, *The Genus Phalaenopsis – The Species*, Fighetti, C., Vol. 84(6), pg. 352-355

## Phalaenopsis Section Esmeralda

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

**Type: Phalaenopsis [Phal.] pulcherrima** [fal-en-OP-sis pul-KAIR-ih-muh]

The Esmeralda Section is native to Southeast Asia region and known for being terrestrial / lithophytic (covered with humus or moss), a dwarf plant habit, and are dominate in erect inflorescences, flower shape, and flower color. For years the species in this section was placed in the genus *Doritis* but was reclassified squarely in the *Phalaenopsis* genus (especially DNA markers) around 2004. Another feature of species in this section is that the roots are produced a principal flush of roots in a root collar all around the plant. This is presumably an adaptation to rooting in and rising above a fresh layer of leaf litter in nature.

The lance (“doratos”, a lance) shaped lip of the species in the Esmeralda section led to the name of the previous genus *Doritis*. These species differ from true *phalaenopsis* by two linear appendages to a long, slender claw of the lip which furthermore is deflexed and has a raised ridge from the base of the side lobes to tip of the mid-lobe.

The species in this section have been used extensively in breeding, prime factors are erect inflorescences and flower color.

There are presently three recognized species with *Phal. regnieriana* identified as *Phal. pulcherrima* var. *regnieriana*. Of the three recognized species two have been cultivation since the 1800s while the third,

*Phal. ubonensis* was introduced in 2014 and has yet does not have any progeny or awards. A table summarizing information on these species is in the table below.



*Phalaenopsis pulcherrima*  
‘Cedarwood Fuchsia Embers’ AM/AOS  
Sep 2019, NS 3.1 x 2.7 cm  
9 Flws, 12 Buds, 1 Infl

Species marked with a * are used the most in hybridization				Progeny	AOS Awards										
Kew Name	Country	Temp.	Season	F1/Total	FCC	AM	HCC	JC	AD	AQ	CCE	CCM	CHM	CBR	Total
<i>Phalaenopsis buyssoniana</i>	Thailand, Vietnam	Cool to warm	Fall	36/500		2	4	1				3		1	11
<i>Phalaenopsis pulcherrima</i> *	India, China, Southeast Asia, Borneo	Warm to Hot	Summer - Fall	286/10790		51	46	7	1	1		6	5	1	118
<i>Phalaenopsis regnieriana</i>	<b>Now <i>Phal. pulcherrima</i></b>														
<i>Phalaenopsis ubonensis</i>	Thailand, Laos	Hot	Summer - Fall	0/0											0

### Breeding Characteristics:

The species in this section have been used extensively in breeding, prime factors are erect inflorescences and flower shape and color.

There has been confusion between the two species *Phal. buyssoniana* and *Phal. pulcherrima*. This has been enhanced by the fact that until around 2000

*Phal. buyssoniana* was known as *Phal. pulcherrima* var. *buyssoniana* and its progeny was registered (as is the custom of the RHS) as *Phal. pulcherrima* progeny. In general, *Phal. buyssoniana* has lighter colors, larger

flowers, and is a tetraploid while *Phal. pulcherrima* has much darker flowers, small flower size, and is a diploid. An experiment to confirm these as different species by treating *Phal. pulcherrima* protocorms to obtain tetraploid plants resulted in plants with larger flowers, fuller-formed segments, and more intensely saturated floral pigments. They did NOT resemble *Phal. buyssoniana*. Consequently, some of the earlier registered *Phal. pulcherrima* progeny may actually be *Phal. buyssoniana* progeny.



*Phal. ubonensis*

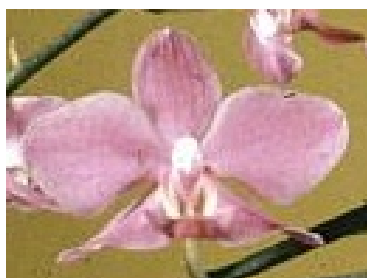
*Phal. buyssoniana*  
‘Skyscraper’ AM/AOS  
Sep 2018, NS 4.8 x 3.8 cm  
14 Flws, 33 Buds, 2 Infl

The hybridizers have favored *Phal. pulcherrima* with over 286 primary hybrids and 10,790 total progeny. At one time these species were the preferred species to obtain solid colored *Phalaenopsis* hybrids. Below is a chart that summarizes the hybridization history of the Esmeralda Section.

	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
<b>Reg</b>	0	1	2	0	6	76	344	812	1991	3666	4042	271	11211
<b>Assc Awds</b>	0	2	0	0	28	167	162	247	722	1301	459	1	3089
<b>F1</b>	0	1	2	0	6	38	56	35	66	72	27	2	305
<b>AA</b>	0	2	0	0	28	84	39	28	81	65	3	0	330
<b>F2</b>	0	0	0	0	0	37	104	81	42	95	70	6	435
<b>AA</b>	0	0	0	0	0	82	58	16	10	81	13	0	260
<b>F3</b>	0	0	0	0	0	1	74	83	114	52	49	3	376
<b>AA</b>	0	0	0	0	0	1	32	45	42	13	9	0	142

The first thing that stands out in reviewing the data in the above table is that the first hybrid was registered in 1923, *Phal. Asahi* (*Phal. lindenii* x *Phal. pulcherrima*). Although it was an attractive flower, having received two awards, it has essentially not been used for further breeding. Interest in using the species in the Esmeralda Section did not really take-off until the around 1960. The increase in interest was due to the cross *Phal. Red Coral* ((*Phal. buyssonianana* x *Phal. Doris*), 1959, Clarelen, 84 F1 and 295 total progeny, 22 AOS awards (1 FCC, 6 AMs, 12 HCCs, 1 JC, 1 AD, 1 CCM)) and to a lesser extend *Phal. Purple Gem* ((*Phal. pulcherrima* x *Phal. equestris*), 1963, E. Ewanaga, 33 F1 and 46 total progeny, 30 AOS awards (12 AMs, 14 HCCs, 1 JC, 3 CCMs). As with most *Phal. equestris* hybrids, *Phal. Purple Gem* has many 'sports'.

Using the number of F1 registration as an indicator, interest in using Esmeralda Section species appears to have times of interest since there are registration peaks in 1970s and 2000s. This is also true for both F2 registrations, peaks in 1970s and 2000s, and F3 registrations, peak in 1990s.



Phal. Asahi  
'McQuerry' AM/AOS  
Jul 1974, NS 4.4 cm  
24 Flws, 27 Buds, 4 Infl

Phal. Red Coral  
'Fuchsia' FCC/AOS  
Jul 1965  
67 Flws, 10 Buds, 3 Infl

Phal. Purple Gem  
'Ching Hua' AM/AOS  
Jul 1999, NS 2.7 x 2.9 cm  
42 Flws, 24 Buds, 3 Infl

Phal. Purple Gem  
'Douglas Rose' HCC/AOS  
Sep 2000, NS 3.3 x 3.3 cm  
28 Flws, 18 Buds, 3 Infl

Note: The major reason that *Phal. pulcherrima* has over 10,000 progeny is that it is listed as one of the parents of *Phal. Pink Jewel* (1964) ((*Phal. pulcherrima* x *Phal. Pink Princess*), 7 F1 and 10,186 total progeny. No other grex has more than 300 total progeny, something does NOT look right (Christenson mentions, pg.228, that some Esmeralda Section progeny do not look right and these have been DNA tested and found to have NO Esmeralda section DNA, possibly due to a mislabeled flask of standard *Phalaenopsis* hybrids.)

## Key Hybrids not mentioned above:

Below are the the top four hybrids in regards to number of F1 progeny or number of awards with at least two from each species (there are only two) used.



Phal. Coral Gleam  
'Samuel B. Mosher' FCC/AOS  
(Phal. Red Coral x  
Phal. Rose Gleam)  
Jul 1974, NS 9.0 cm  
24 Flws, 12 Buds, 2 Infl.  
71 F1 / 164 total progeny



Phal. Talitha Klehm (1984)  
'Lola' AM/AOS  
(Phal. Pretty Nice x  
Phal. pulcherrima)  
Oct 1996, NS 4.5 x 3.8 cm  
36 Flws, 39 Buds, 2 Infl.  
5 F1 progeny



Phal. Pixie Star  
'Cat's Paw Hat Trick' AM/AOS  
(Phal. Pulcherrima x  
Phal. Joyful)  
May 2010, NS 3.7 x 3.0 cm  
32 Flws, 18 Buds, 2 Infl.  
7 F1 / 10 total progeny



Phal. Pretty Nice  
'Houghton' AD/AOC  
(Phal. Mem. Clarence Schubert  
x Phal. Jerri Sue King)  
Jul 1985, NS 5.7 cm  
68 F1 / 86 total progeny

## References:

[www.orchidspecies.com](http://www.orchidspecies.com)

<http://apps.kew.org/wcsp/qsearch.do>

<http://www.plantsoftheworldonline.org/>

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Christenson, E.; *Phalaenopsis – A Monograph*, 2001

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Bulletin, Nov 1976, *Famous Doritaenopsis Crosses*, Freed, H.; Vol. 45(11), pg. 1008-1015

# Building Block Data Sheet

## Phalaenopsis pulcherrima

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

[fal-en-OP-sis pul-KAIR-ih-muh]

Phalaenopsis [Phal.] pulcherrima is native to the region from India to Borneo and north to southern China. It normally is found in evergreen, lowland forests along canyons of montane streams and rivers on rocks and in sandy soils as a small sized, hot to warm growing, clump forming by basal offshoots, lithophytic or terrestrial orchid at elevations of 50 to 1200 meters. The plant is a short, leafy stem, carrying oblanceolate to narrowly elliptic, obtuse to subacute leaves, 15 x 3 cm, that blooms in the summer and fall on a simple, erect to 40" [100 cm] tall, successively to 10, many flowered inflorescence. Flowers, 0.5 to 1.2 in (1.25 to 3.0 cm), brilliant saturated cerise, the erect lateral lobules of the midlobe of the lip orange, the disk of the midlobe white, the column white. Column straight, stout, with a pair of knee-like projections at the base.

Phal. pulcherrima readily produces basal offshoots, resulting in large clumps of stems in cultivation. Although the species is easy to grow, some people report difficulty getting the plants to flower: plants either do not flower at all or only produce a few inflorescences on a many-stemmed plant. The plant prefer higher light intensities than other species on in the genus and poor flowering is usually the result of less than optimum light intensity.

Peloric clones of Phal pulcherrima are not uncommon and have been given the informal varietal name *champornensis*. This name has never been validly published.

### **Breeding Characteristics:**

NOTE: Until around 2000 Phal. buyssoniana was known as Phal. pulcherrima var. buyssoniana and its progeny was registered (as is the custom of the RHS) as Phal. pulcherrima progeny.

In general the breeding characteristics of Phal. pulcherrima are uniform dark purple flowers, small flower size, and is a diploid (breeding with standard tetraploid Phalaenopsis will result in a large number of infertile seed).

Per OrchidWiz, Phal. pucherrima has 10,878. Of these 10,878 progeny 10,186 are progeny of one grex, Phal. Pink Jewel (1964). As mentioned in the Esmeralda Section report, there is suspicion about this cross having Phal. pulcherrima or any other Esmeralda Section Species. To get a clearer understanding of traits associated with Phal. pulcherrima the rest of the report will exclude Phal. Pink Jewel (1964) and ALL of its progeny.

With this exclusion, Phal. puclerrima has 600 progeny registered. The table below has the registration of all Phal. pulcherrima progeny minus the Phal. Pink Jewel (1964) progeny and associated awards with separate lines for total progeny as well as first (F1), second (F2), and third (F3) generations.

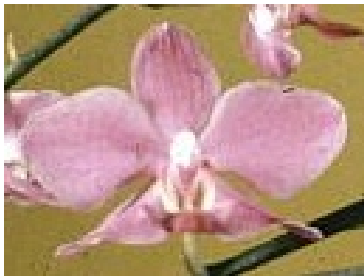


Phalaenopsis pulcherrima  
'Cedarwood Fuchsia Embers' AM/AOS  
Sep 2019, NS 3.1 x 2.7 cm  
9 Flws, 12 Buds, 1 Infl

	<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>Total</u>
<b>Reg</b>	0	1	1	0	5	34	85	88	180	224	147	11	776
<b>Assc Awds</b>	0	2	0	0	3	79	46	69	126	156	30	0	511
<b>F1</b>	0	1	1	0	5	27	48	36	71	71	24	1	285
<b>AA</b>	0	2	0	0	3	79	30	46	83	63	8	0	314
<b>F2</b>	0	0	0	0	0	7	35	34	37	109	70	6	298
<b>AA</b>	0	0	0	0	0	0	16	7	12	85	13	0	133
<b>F3</b>	0	0	0	0	0	0	2	17	65	32	45	3	164
<b>AA</b>	0	0	0	0	0	0	0	16	31	8	9	0	64
<b>F4</b>	0	0	0	0	0	0	0	1	7	12	7	1	28
<b>AA</b>	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>F5</b>	0	0	0	0	0	0	0	0	0	0	1	0	1
<b>AA</b>	0	0	0	0	0	0	0	0	0	0	0	0	0

From this table one sees that *Phal. pulcherrima* had a peak in breeding in the 1990s - 2000s for all generations. The other item to observe from this table is that there is a drop in awards as in each successive generation (as a further evidence of this lack of awards is the absent of awards for both any generation above the F3). As a check on this I looked at the awarded F3 generation, and it appears that the *Phal. pulcherrima* flower form is gone, but the uniform color is still dominant, with a few exceptions.

The first hybrid was registered in 1923, *Phal. Asahi* (*Phal. lindenii* x *Phal. pulcherrima*). Although it was an attractive flower, having received two awards, it has essentially not been



'McQuerry' AM/AOS  
Jul 1974, NS 4.4 cm  
24 Flws, 27 Buds, 4 Infl



'Ching Hua' AM/AOS  
Jul 1999, NS 2.7 x 2.9 cm  
42 Flws, 24 Buds, 3 Infl



'Douglas Rose' HCC/AOS  
Sep 2000, NS 3.3 x 3.3 cm  
28 Flws, 18 Buds, 3 Infl

used for further breeding. Interest in using the species in the Esmeralda Section did not really take-off until the around 1960. The cross that got the ball rolling was *Phal. Purple Gem* ((*Phal. pulcherrima* x *Phal. equestris*), 1963, E. Ewanaga, 33 F1 and 46 total progeny, 30 AOS awards (12 AMs, 14 HCCs, 1 JC, 3 CCMs). As with most *Phal. equestris* hybrids, *Phal. Purple Gem* has many 'sports'.

Reviews below are some of the key F1 gexes in some of the major *Phal. pulcherrima* breeding lines.



**Phal. Jerri Sue King** (Phal. Summit Snow x

Phal. pulcherrima), 1965, E. J. Smal, 12 F1 / 99 total progeny, 7 AOS awards (3 AMs, 4 HCCs). Major progeny are: **Phal. Pretty Nice** (Phal. Memoria Clarence Schubert x Phal.

Jerri Sue King), 1973, Hausermann, 68 F1 / 86 total progeny, 4 AOS awards (2 AMs, 2 HCCs); **Phal. Talitha Klehm (1984)** (Phal. Pretty Nice x Phal. pulcherrima), 1984, Arnold J. Klehm, 5 F1 progeny, 21 AOS awards (10 AMs, 7 HCCs, 1 AD, 1 AQ, 2 JCs); **Phal. Grebe** (Phal. Pretty Nice x Phal. Corning's Violet), 1982, R. Griesbach, 3 F1 progeny, 8 AOS awards (4 AMs, 2 HCCs, 1 AQ, 1 JC); **Phal. Hybridizer's Dream** (Phal. Pretty Nice x Phal. classic Carmela), 1991, Carmela, no progeny, 3 HCC/AOS awards.

Phal. Jerri Sue King  
'J & L' HCC/AOS  
Jun 1986, NS 6.6 cm  
46 Flws, 14 Buds, 1 Infl  
12 F1 and 99 total progeny



Phal. Grebe  
'Ann Griesbach' AM/AOS  
May 1984, NS 6.0 cm  
8 Flws, 2 Infl  
3 F1 / 3 total progeny

Phal. Hybridizer's Dream  
'Carmela' HCC/AOS  
Mar 1998, NS 7.4 x 6.0 cm  
45 Flws, 2 Infl  
no progeny

Phal. Talitha Klehm (1984)  
'Best Yet' AM/AOS  
Oct 1993, NS 4.6 cm  
11 Flws, 5 Buds, 1 Infl  
5 F1 / 5 total progeny

Phal. Pretty Nice  
'Delightful' HCC/AOS  
Apr 1976, NS 6.5 cm  
21 Flws, 15 Buds, 1 Infl  
68 F1 / 86 total progeny

**Phal. Kenneth Schubert**

(Phal. pulcherrima x Phal. violacea), 1963, Clarelen, 34 F1 and 93 total progeny, 11 AOS awards ( 5 AMs, 5 HCCs, 1 JC). Major progeny:

Phal. Kenneth Schubert  
 'Blue Angel' AM/AOS  
 Oct 2017, NS 4.3 x 4.4 cm  
 13 Flws, 7 Buds, 1 Infl  
 34 F1 / 93 total progeny



**Phal. Purple Martin** (Phal. Kenneth Schubert x Phal. violacea), 1989, H. Whallbrunn, 26 F1 and 42 total progeny, 1 AM/AOS award; **Phal. Little Blue Bird** (Phal. Kenneth Schubert), 1994, Hou Tse Liu, 5 F1 progeny, 2 AM/AOS awards; **Phal. Tying Shin Blue Jay** (Phal. Purple Martin x Phal. pulcherrima), 2009, Tying Shin Orchids, 11 F1 progeny, 2 HCC/AOS awards; **Phal. Tzu Chiang Sapphire** (Tzu Chiang Lilac x Phal. pulcherrima), 2006, Tzu Chiang Orchids, 5 F1 progeny, 1 HCC/AOS award.



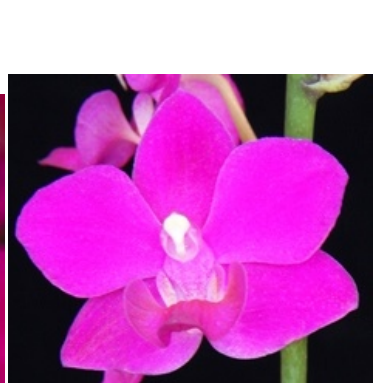
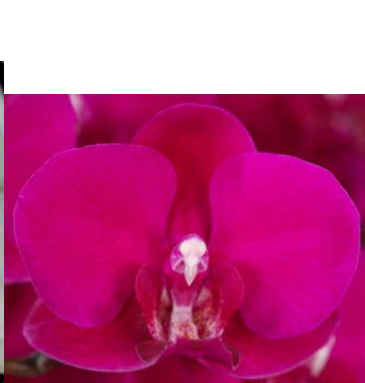
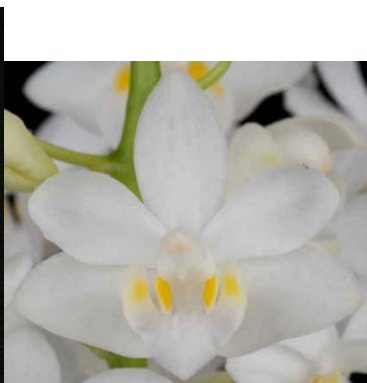
Phal. Purple Martin  
 'Sapphires Pride' AM/AOS  
 Jul 2015, NS 4.2 x 3.9 cm  
 3 Flws, 7 Buds, 2 Infl  
 26 F1 / 42 total progeny

Phal. Little Blue Bird  
 'Lucy' AM/AOS  
 Oct 2016, NS 3.3 x 3.5 cm  
 17 Flws, 25 Buds, 1 Infl  
 5 F1 progeny

Phal. Tying Shin Blue Jay  
 'Nova' HCC/AOS  
 Aug 2017, NS 2.8 x 2.5 cm  
 6 Flws, 4 Buds, 1 Infl  
 11 F1 progeny

Phal. Tzu Chiang Sapphire  
 'Big Mini' HCC/AOS  
 Aug 2015, NS 3.2 x 2.9 cm  
 40 Flws, 36 Buds, 3 Infl  
 5F1 progeny

**Phal. Purple Gem** (Phal. pulcherrima x Phal. equestris), 1963, E. Iwanaga, 33 F1 and 46 total progeny, 30 AOS awards (12 AMs, 14 HCCs, 1 JC, 3 CCMs). Major progeny: **Phal. OX Carmen** (Phal. Purple Gem x Phal. Ching Ann Diamond), 2007, Ming Chu Wu, no progeny, 1 AM/AOS awards; **Phal. Chew Tiek San** (Phal. Purple Gem x Phal. pulcherrima), 1995, Chew Tiek San, 4 F1 progeny, 2 HCC/AOS awards.



Phal. Purple Gem  
 'Ching Hua' AM/AOS  
 Jul 1999, NS 2.7 x 2.9 cm  
 42 Flws, 24 Buds, 3 Infl

Phal. Purple Gem  
 'Summer Snow' AM/AOS  
 Aug 2008, NS 3.8 x 3.8 cm  
 76 Flws, 50 Buds, 4 Infl

Phal. OX Carmen  
 'OX 1118' AM/AOS  
 Mar 2010, NS 5.0 x 4.0 cm  
 81 Flws, 4 Infl

Phal. Tying Shin Blue Jay  
 'Nova' HCC/AOS  
 Aug 2017, NS 2.8 x 2.5 cm  
 6 Flws, 4 Buds, 1 Infl



Phal. Red Elf  
 'Lenette #4' HCC/AOS  
 Sep 1991, NS 4.1 x 3.5 cm  
 31 Flws, 18 Buds, 3 Infl

**Phal. Red Elf**

(Phal. pulcherrima x Phal. fasciata), 1982, Oak Hill Gardens, 10 F1 and 46 total progeny, 2 AOS awards (1 AM, 1 CCM). Major progeny: **Phal. Inferno** (Phal. Red Elf x Phal. amboinensis), 1984, H. P. Norton, 18 F1 and 29 total progeny, 1 AM/AOS award; **Phal. Abed-nego** (Phal. Inferno x Phal. Malibu



Phal. Abed-nego  
 'Pro' AM/AOS  
 Jun 2003, NS 4.5 x 4.5 cm  
 9 Flws, 14 Buds, 2 Infl



Phal. Inferno  
 'H.P. Norton' HCC/AOS  
 May 1993, NS 4.2 x 3.8 cm  
 23 Flws, 15 Buds, 3 Infl

Imp), 1995, H. P. Norton, 4 F1 progeny, 16 AOS awards (4 AMs, 11 HCCs, 1 AQ).

Key F1 gexes in some additional Phal. pulcherrima breeding lines are:

- \* Phal. Fire Cracker 10/19



Phal. Anna-Larati Soekardi  
 'Bryon' HCC/AOS  
 (Phal. pulcherrima x Phal. parishii)  
 Apr 2012, NS 2.5 x 2.5 cm  
 8 Flws, 3 Buds, 2 Infl  
 29 F1 and 38 total progeny



Phal. Jim  
 'Brennan's Orchids' AM/AOS  
 (Phal. pulcherrima x Phal. venosa)  
 Oct 2000, NS 3.4 x 3.5 cm  
 6 Flws, 15 Buds, 2 Infl  
 23 F1 and 29 total progeny

Sepals & petals amaranth  
 Lip solid amethyst



Phal. Arlington Amethyst  
 'Arlington' AM/AOS  
 (Phal. pulcherrima x Phal. Tigerette)  
 Aug 1982, NS 3.2 cm  
 3 Flws, 2 Infl  
 4 F1 and 24 total progeny



Phal. Fire Cracker  
 'MOR' AM/AOS  
 (Phal. Red Coral x Phal. pulcherrima)  
 Aug 1968, NS 5.0 cm  
 52 Flws, 1 Infl  
 10 F1 and 19 total progeny

**Synonyms:**

Doritis pulcherrima  
 No others recently

## Varieties / forms:

There are three recognized forms and four recognized varieties:

**Phal. pulcherrima f. alba** – white sepals, petals, and lip, the lip highlighted with yellow markings on the sidelobes and callus.

**Phal. pulcherrima f. albiflora** – white sepals and petals that contrast with a rose-colored lip.

**Phal. pulcherrima f. coerulea** – bluish violet flowers unlike the standard cerise flowers of the typical form. The amount of cerise pigmentation is variable. Modern selections have favored less cerise pigment, resulting in bluish lavender (grayish) flowers.

**Phal. pulcherrima var. apiculata** – differs from type by distinctly apiculate (short and sharp, but not stiff, point) lip apex, as in type there is a great variation in flower coloration.



Phal. pulcherrima f. alba  
'Bill's Weed' AM/AOS  
Oct 2014, NS 2.9 x 2.8 cm



Phal. pulcherrima f. coerulea  
'Hawaii' AM/AOS  
Sep 2005, NS 2.5 x 3.0 cm



Phal. pulcherrima f. apiculata



Phal. pulcherrima f. albiflora  
(No identified picture, closest)

**Phal. pulcherrima f. champornensis [champorne]** – peloric form

**Phal. pulcherrima var. marmorata** – leaves are have a marble appearance, flowers typical

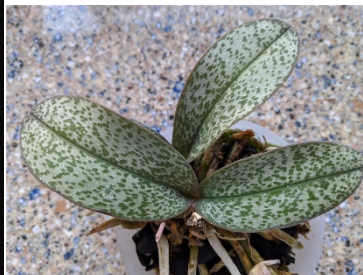
**Phal. pulcherrima var. regnieriana** – lip differs by having the lateral lobules of the midlobe as small, lightly incurved lobules, unlike the large, parallel, erect lobules of type. Also, the callus is a well-developed bifid structure, unlike the rounded to very shallowly notched callus of type. Color variations like type.



Phal. pulcherrima f.  
champornensis  
'Rainbow' AM/AOS  
Jul 2019, NS 5.0 x 4.7 cm



Phal. pulcherrima var. marmorata  
'Mackinac' CHM/AOS  
Nov 2019, NS 2.6 x 2.8 cm



Phal. pulcherrima var.  
regnieriana

## Awards:

Phal. pulcherrima	FCC	AM	HCC	AD	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS		51	46	1	1	7	6		5	1	118
Year(s) Awarded		1964-2019	1965-2016	1992	1997	1960-2017	1967-2016		1984-2016	1959	1959-2019

## Most recent awardees:



<p>Phal. Tying Shin Little Prince 'Marshall's Luck' AM/AOS Mar 2017, NS 6.1 x 4.8 cm 17 Flwrs, 21 Buds, 2 Infl. (Phal. Fuller's Lily x Rlc. Liu's Triprince [Phal. Eduardo Quisumbing line])</p>	<p>Phal. Kdares Black Swan 'PP-123-S1' AM/AOS Mar 2017, NS 5.3 x 5.0 cm 9 Flwrs, 7 Buds, 1 Infl. (Phal. Purple Martin x Phal. Haur Jin Princess [Phal. Kenneth Schubert line])</p>	<p>Phal. Hualien Pink Lady 'H1392-4 #3' AM/AOS Mar 2016, NS 5.8 x 6.0 cm 7 Flwrs, 2 Buds, 1 Infl. (Phal. Kenneth Schubert x Phal. Pink Island [Phal. Kenneth Schubert line])</p>	<p>Phal. Jia Ho Summer Love 'Little Pixie' HCC/AOS Nov 2016, NS 5.0 x 5.0 cm 6 Flwrs, 1 Bud, 1 Infl. (Phal. Taisuco Micky x Phal. bellina [New line])</p>
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# Building Block Data Sheet

## Phalaenopsis [Phal.] *deliciosa*, Rchb.f., Bonplandia (Hannover) 2: 93 (1854)

[fal-en-OP-sis de-lis-ee-OH-suh]

Phal. *deliciosa* is the type species of the *Deliciosa* Section. It ranges from India to southern China, Southeast Asia, to Java and the Philippines and is found in riverine forests at elevations below 600 meters. It is a miniature sized, warm to hot growing epiphyte with a very short stem carrying 3 to 6 oblong-lanceolate, dark green, 15 cm (6.0 in.) leaves. It is a free bloomer, 1.5 to 2.0 cm (½ to ¾ in.) flowers are produced continuously and sequentially over long periods at any time and more than once a year when well grown. The erect, arching branched inflorescences are typically 12 - 20 cm (4.7 – 8.0 in.) long, many flowered with the flowers facing in all directions. The typical flowers are fleshy, sepals and petals are white or yellow with degrees of rose suffusion and spotting basally, lip rose with darker venation, the column pastel pink, the anther cap white. The lateral lip lobes have tooth-like flaps, similar to those found in section *Polychilos*, while having uniseriate calli as in the Subgenus *Parishianae*.



Phalaenopsis *deliciosa*  
 'Shiny Leaves' HCC/AOS  
 Sep 2015, NS 1.8 x 1.6 cm  
 9 Flwrs, 20 Buds, 1 Inflor.

### Breeding Characteristics:

Phal. *deliciosa* is used in breeding to decrease the size of plants and the length of the inflorescence, and to increase the duration of flowering.

The table below has the registration of Phal. *deliciosa* progeny and associated awards with separate lines for total progeny as well as first (F1), second (F2), and third (F3) generations.

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>Total</u>
<b>Reg</b>	0	1	10	11	7	9	13	2	53
<b>Assc Awds</b>	0	5	5	2	1	4	3	0	20
<b>F1</b>	0	1	7	5	4	6	10	2	35
<b>AA</b>	0	5	1	1	0	3	3	0	13
<b>F2</b>	0	0	3	5	2	1	3	0	14
<b>AA</b>	0	0	4	0	1	0	0	0	5
<b>F3</b>	0	0	0	1	1	1	0	0	3
<b>AA</b>	0	0	0	1	0	1	0	0	2

From this table one sees that Phal. *deliciosa* has been used on a limited basis in breeding. And with closer look at the progeny only one has a significant number of progeny. The first hybrid, and the one with the most progeny, was registered in 1966. There have been peaks in breeding in the 1970s thru 1980s and then again in 2010s. The peak in the 2010s may continue into the 2020s due to interest in miniature phalaenopsis. There are no major breeding lines. There are fertility issues when breed with 'standard' phalaenopsis.

### Synonyms:

Kingidium *deliciosum*  
 Kingiella *philippinensis*  
 Kingidium *wightii*

### Varieties / forms:

There is one recognized subspecies and one form:

Karl Varian



**Phal. deliciosa subspecies hookeriana**

– A yellow-colored flower that has been imported from northeast India and appears to represent a well-defined sub-species, although the exact range is unknown. In addition to the flower color, these plants consistently have a somewhat larger, fuller flowers. The name *Doritis wightii*, based on a white-flowered plant from southern India, has been consistently misapplied to these plants when exported.

**Phal. deliciosa f. alba** – flower is pure white



Phal. deliciosa subsp. hookeriana  
 ‘Diaina Fernandez’ AM/AOS  
 Jun 2013, NS 1.7 x 1.5 cm  
 17 Flws, 43 Buds, 2 Infl.

Phal. deliciosa f. alba  
 ‘Ketracel-White’ CHM/AOS  
 Sep 2019, NS 1.2 x 1.4 cm  
 6 Flws, 5 Buds, 2 Infl.

**Awards:**

Phal. deliciosa	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS		3	5		1			2	1	12
Year(s) Awarded		2000-2014	1999-2015		2008			2010-2019	1985	1985-2019

The first quality award to Phal. deliciosa was in 1999, 14 years after receiving a CBM/AOS in 1985. Since then it has received a several awards and is always a show stopper.

**AOS Quality Awardees (Most Progeny and Most Awards):**



Phal. Tiny  
 ‘Zuma Canyon’ HCC/AOS  
 Jun 1990, NS 1.4 cm  
 (Phal. pulcherrima x  
 Phal. deliciosa)  
 139 Flws, 108 Buds, 6 Infl.



Phal. Orchid Classic’s  
 Golden Showers  
 ‘Little Gem’ AM/AOS  
 Mar 20112, NS 1.2 x 1.1 cm  
 (Phal. deliciosa x  
 Phal. chibae)  
 3 Flws, 8 buds, 1 Infl.



Phal. Nacrescent  
 ‘Zuma Canyon’ AM/AOS  
 Oct 1986, NS 4.5 cm  
 (Phal. Tiny x  
 Phal. Red Coral)  
 16 Flws, 12 Buds, 1 Infl.



Renanthopsis Peachy Keen  
 ‘Breckinridge’ HCC/AOS  
 Nov 1998, NS 4.0 x 3.8 cm  
 (Renanthopsis Malibu Beach x  
 Phal. Tiny)  
 24 Flws, 1 Infl.

## Most recent awardees (Not already discussed):



<p>Phal. Calypso Musick 'Merry' AM/AOS Nov 2006, NS 2.3 x 1.8 cm (Phal. deliciosa x Phal. finleyi) 7 Flws, 6 Buds, 1 Infl.</p>	<p>Phal. Tying Shin Interest 'Jane' HCC/AOS Mar 2010, NS 4.5 x 4.3 cm (Phal. Tying Shin Amber x Phal. deliciosa) 19 Flws, 8 Buds, 1 Infl.</p>	<p>Phal. Forever Young 'B &amp; M' AM/AOS Jul 2020, NS 2.0 x 1.9 cm (Phal. Purple Gem x Phal. deliciosa) 19 Flws, 16 Buds, 2 Infl.</p>	<p>Phal. Wee Jewel 'Glenn' HCC/AOS Aug 2001, NS 3.5 x 3.9 cm (Phal. Nina x Phal. equestris) 23 Flws, 38 Buds, 3 Infl.</p>
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# Building Block Data Sheet

**Phalaenopsis mysorensis**, C.J.Saldanha, Indian Forester 100: 571 (1974)

[fal-en-OP-sis my-so-REN-sas]

Phalaenopsis [Phal.] mysorensis is native to southern India and Sri Lanka at elevations of 750 to 1800 meters (2500 to 6000 ft.). It is a mini-miniature, warm to cool growing epiphyte and usually carries 1 to 3 oblong-elliptic, conduplicate leaves. The short, erect, purplish violet racemes is 1 - 8 cm long with four to eight flowers with a trilobe lip. The flowers are white, the side lobes dark yellow and 0.4 to 0.6 in (1 to 1.5 cm). The lateral sepals are attached to the column foot forming a mentum.



Phalaenopsis mysorensis  
'Grange Gold' AM/AOS  
Dec 1997, NS 6.5 x 6.1 cm

## **Breeding Characteristics:**

This plant has NO breeding history.

## **Synonyms:**

Kingidium mysorensis

Kingidium niveum

Doritis mysorensis

## **Varieties / forms:**

None

## **Awards:**

Phal. mysorensis has not received any awards.

## **AOS Quality Awardees:**

None.

## **References:**

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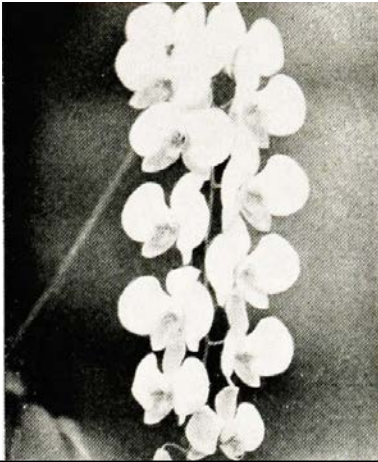
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## Phalaenopsis Breeding Lines – White

**Pick out the major players in breeding. Are these breeding lines still being pursued? If so, how.**



To address these two questions, I reviewed the data collect while writing reports on the Phalaenopsis genus, Phalaenopsis Subgenus Phalaenopsis Section, Phal. stuartiana, and Phal. amabilis all with a focus on white Phalaenopsis. As reported in these reports, it was stated many times that the introduction of the tetraploid Phal. Doris not only kick-off interest in Phalaenopsis genus but also in white Phalaenopsis in particular. Picture of the Phal. Doris awarded an FCC/AOS in Dec. 1943 is shown to the left. An improved form, Phal. Doris “Hazel McCoy” is shown to the right, awarded 24 years later. These two pictures are an excellent example of moving judging standards as breeding improves.



Phal. Doris  
(Phal. Elisabethae x  
Phal. Katherine Siegwart)  
262 / 32,093 progeny  
29 AOS awds  
‘Hazel McCoy’ AM/AOS  
Mar 1967, NS 10.5”  
6 Flws, 1 Infl.

“...close-up Phal. Doris awarded FCC...”,  
Jan 1944 AOS Bulletin, pg 269  
From awd dscpt.: “The stem was 50” long.  
The length of the spike from flowers to  
ends of the pods was 27”. There were eight  
buds not open and twelve fully developed.  
The flowers measured 4 5/8” [11.7 cm]  
spread, petal width 3 1/2”...” Dec. 1943

It was also noticed that there was a large number of crosses between two species, Phal. amabilis and Phal. aphrodite. To confirm this observation and to see if any

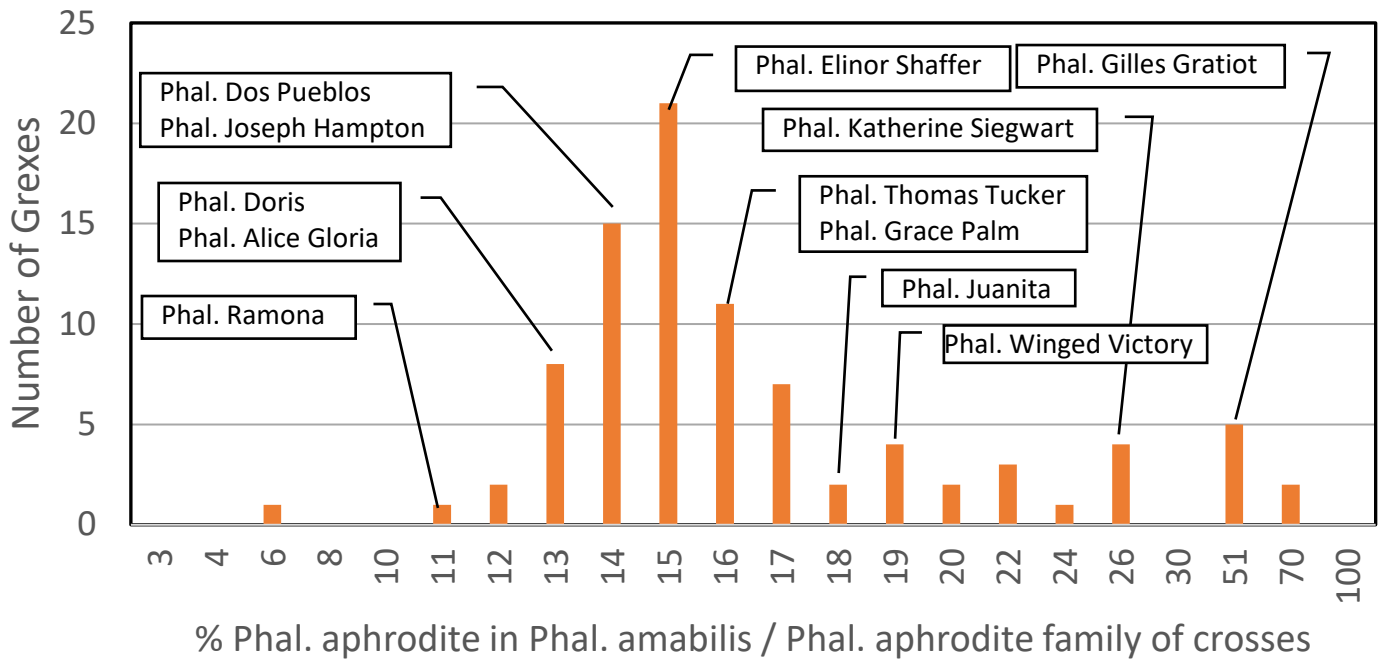
other ‘fundamental’ crosses existed between species in the Phalaenopsis section the following table was generated.

	amabilis	aphrodite	celebensis	equestris	lindenii	philippinensis	sanderiana	schilleriana	stuartiana
amabilis		300++	1	5	3	2	12	15	5
aphrodite	300++		0	3	0	1	4	2	2
celebensis	1	0		1	1	1	0	1	1
equestris	5	3	1		1	0	0	1	0
lindenii	3	0	1	1		0	1	1	1
philippinensis	2	1	1	0	0		1	1	3
sanderiana	12	4	0	0	1	1		4	1
schilleriana	15	2	1	1	1	1	4		7
stuartiana	5	2	1	0	1	3	1	7	

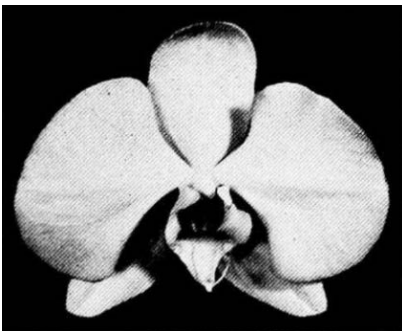
Clearly, Phal. amabilis – Phal. aphrodite family of crosses is a ‘foundation’ family of crosses. An additional point is that Phal. amabilis is the key species in the Phalaenopsis section.

Looking a little closer at the ‘genealogy’ of grexes in the Phal. amabilis – Phal. aphrodite family of crosses it appeared to be a desirable ratio between these two crosses. To investigate this further, the percentage of Phal. aphrodite in the 89 Phal. amabilis / Phal. aphrodite family crosses that were identified in the ‘genealogy’ (total species in this genealogy group is 688 grexes) of the selected white Phalaenopsis crosses was determined and charted below was generated.

Number of grexes with a certain Percent of Phal. aphrodite of selected members of Phal. amabilis / Phal. aphrodite crosses family of crosses



From the above chart there clearly is a peak around 15% Phal. aphrodite (85% amabilis). Select crosses in this range are detailed below:



Phal. Thomas Tucker  
'Soquel' AM/AOS  
Mar 1954, NS 11.4 cm  
7 Flws, 1 Infl.

**Phal. Thomas Tucker** (Phal. Doris x Phal. Karen), 1949, N. Curson, 23 F1 and 25,903 total progeny, 3 AM/AOS awards. Major progeny: **Phal. Sharon Karleen** (Phal. Sally Lowrey x Phal. Thomas Tucker), 1957, Karleen, 15 F1 and 13,997 total progeny, 1 HCC/AOS award; **Phal. Norman Peterson** (Phal. Fairway Park x Phal. Grace Palm), 1964, Peterson Brothers, 48 F1 and 429 total progeny, 15 AOS awards (3 AMs, 12 HCCs). **Phal. Chief Tucker** (Phal. Chieftain x Phal. Thomas Tucker), 1957, N. Curson, 6 F1 and 22,422 total progeny, no awards.; **Phal. Ramona** (Phal. Thomas Tucker x Phal. Memoria Nasu Tomoguchi), 1957, Shaffer's, 52 F1 and 10,960 total progeny, 5 AOS awards (4 AMs, 1 HCC).

**Phal. Grace Palm** (Phal. Doris x Phal. Winged Victory), 1950, D. Ryerson, 141 F1 and 26,489 total progeny, 27 AOS awards (9 AMs, 16 HCCs, 2

CCMs). Second only to Phal. Doris regarding influence in breeding white Phalaenopsis. Major Progeny: **Phal. Alice Gloria** (Phal. Ramona x Phal. Grace Palm), 1961, Rayola, 157 F1 and 3623 total progeny, 19 AOS awards (9 AMs, 9 HCCs, 1 AQ); **Phal. Dos Pueblos**, see below; **Phal. Juanita** (Phal. Chief Tucker x Phal. Grace Palm), 1957, Shaffer's, 87 F1 and 22,278 total progeny, 7 HCC/AOS awards; **Phal. Princess Grace** (Phal. Cast Iron Monarch x Phal. Grace Palm), 1959, R. Kiesewetter, 39 F1 and 4712 total progeny, 15 AOS awards (1 AM, 1 AQ, 13 HCCs).



Phal. Grace Palm  
'Monterey Bay' AM/AOS  
Mar 1957, NS 11.4 cm  
6 Flws, 1 Infl.

**Phal. Dos Pueblos** (Phal. Doris x Phal. Grace Palm), 1956, R. Bean, 113 F1 and 13,174 total progeny, 5 AOS awards (2 AMs, 3 HCCs). Major Progeny: **Phal. Vallehigh** (Phal. Dos Pueblos x Phal. Grace Palm), 1959, Vallemar Gardens, 38 F1 and 1405 total progeny, 1 HCC/AOS award; **Phal. Sea Mist** (Phal. Doris x Phal. Dos Pueblos), 1965, Kodama, 16 F1 and 3296 total progeny, no awards.



Phal. Elinor Shaffer  
'Margaret' AM/AOS  
May 1971, NS 12.4 cm  
14 Flws, 1 Infl.

**Phal. Elinor Shaffer** (Phal. Juanita x Phal. Doris), 1960, Shaffer's, 74 F1 and 9967 total progeny, 20 AOS awards (8 AMs, 12 HCCs). Major progeny: **Phal. Bruce Shaffer** (Phal. Gladys Read x Phal. Elinor Shaffer), 1964, Shaffer's, 71 F1 and 1556 total progeny, 6 AOS awards (2 AMs, 4 HCCs); **Phal. Clyde** (Phal. Grace Palm x Phal. Elinor Schaffer), 1965, Enright, 39 F1 and 3682 total progeny, 3 AOS awards (1 AM, 2 HCCs); **Phal. Schone von Celle** (Phal. Alice Gloria x Phal. Elinor Schaffer), 1969, Wichmann Orchids, 19 F1 and 1375 total progeny, 3 AOS

awards (2 AMs, 1 HCC).

**Phal. Joseph Hampton** (Phal. Monarch Gem x Phal. Doris), 1966, Dos Pueblos, 178 F1 and 1933 total progeny, 9 AOS awards (5 AMs, 3 HCCs, 1 JC). Major progeny: **Phal. Hamptons Pride** (Phal. Joseph Hampton x Phal. John Martin), 1979, M. Bachner, 47 F1 and 141 total progeny, 1 AM/AOS award.

As can be seen by the above examples, this line of breeding the classic white phalaenopsis has improved size, form, and floriferousness (substance was also improved, but cannot really be seen in the photos and brief descriptions of the time), but it does appear to be reaching a limit.

Another line of breeding that was running in parallel with the above line and further improved the classic white phalaenopsis was to bring into the white phalaenopsis breeding pool other members of the Phalaenopsis Section. The additional species that has been included in most whites is Phal. schilleriana and it contributes branching spikes, flower substance, form, and floriferousness. From the examples below its contribution to the gene pool was between 0.8% to 6.3%. The next most introduced species is Phal. stuartiana with a contribution of around 1 % to the gene pool and it contributes floriferousness, branching, form, and flower spacing on long inflorescences. The remaining species that was use is Phal. sanderiana usually with a contribution of less than 1% to the gene pool and contributes extended blooming season (summer bloomer) and tolerance to heat (flowers do not blast in the heat of summer). Examples are shown below:



Phal. Mount Kaala  
'Elegance' HCC/AOS  
Feb 1996, NS 11.3 x 10.5 cm  
16 Flws, 16 Buds, 2 Infl.

**Phal. Mount Kaala** (Phal. Doreen x Phal. Elinor Schaffer), 1966, Kodama, 98 F1 and 5954 total progeny, 2 HCC/AOS awards. Its gene pool, on a percentage basis, is: 73.6% Phal. amabilis, 20.1% Phal. aphrodite, and 6.3% Phal. schilleriana. Major progeny: **Phal. Taisuco Kaaladian** (Phal. Mount Kaala x Phal. Taisuco Kochdian), 1993, Taiwan Sugar, 65 F1 and 391 total progeny, 2 AM/AOS awards; **Phal. Mount Beauty** (Phal. Mount Kaala x Phal. Hamakita Beauty), ABC Orchid Corp., 27 F1 and 1126 total progeny, no awards; **Phal. Winter Kaala** (Phal. Winter Maiden x Phal. Mount Kaala), 1985, Aromatic Gardens, 18 F1 and 530 total progeny, no awards; **Phal. Tokyo Bridal** (Phal. Hakalau Queen x Phal. Mount Kaala), 1997, Tokyo Orchid Nursery, 3 F1 and 185 total progeny, no awards.



Phal. Dos Pueblos  
'Cindy' AM/AOS  
Feb 1963, NS 12.4 cm  
7 Flws, 3 Buds, 1 Infl.



Phal. Joseph Hampton  
'Diane' AM/AOS  
Jun 1978, NS 12.6 cm  
18 Flws, 2 Buds, 1 Infl.

**Phal. Florida Snow** (Phal. Teakwood x Phal. Vera Henderson), 1984, Krull-Smith, 77 F1 and 186 total progeny, 6 AOS awards (4 AMs, 2 HCCs). Its gene pool, on a percentage basis, is: 82.0% Phal. amabilis, 15.1% Phal. aphrodite, 2.1% Phal. schilleriana, 0.8% Phal. sanderiana, 0.1% Phal. stuartiana. Major progeny:

**Phal. Crystelle Smith** (Phal. Lois Weaver x Phal. Florida Snow), 1996, Krull-Smith, 16 F1 and 26 total progeny, 9 AOS awards (1 FCC, 3 AMs, 4 HCCs, 1 AQ); **Phal. Jim Krull** (Phal. Florida Snow x Phal. Hausermann's Goldcup), 1991, Krull-Smith, 6 F1 and 7 total progeny, 9 AOS awards (2 AMs, 6 HCCs, 1 AQ); **Phal. John Naugle** (Phal. Crystelle Smith x Phal. Lois Weaver), 2000, Krull-Smith, 5 F1 and 6 total progeny, 4 AOS awards (1 FCC, 2 AM, 1 AQ).



Phal. Florida Snow  
'Breckinridge' AM/AOS  
Apr 1991, NS 12.7 x 10.0 cm  
8 Flws, 1 Infl.



Phal. White Dream  
'V3' AM/AOS  
Apr 2013, NS 12.3 x 11.5 cm  
10 Flws, 6 Buds, 1 Infl.

**Phal. White Dream** (Phal. Morning Moon x Phal. Joseph Hampton), 1987, Morita Inc., 29 F1 and 99 total progeny, 3 AOS awards (1 AM, 2 HCCs). Its gene pool, on a percentage basis, is: 85.0% Phal. amabilis, 14.3% Phal. aphrodite, 0.8% Phal. schilleriana. Major progeny: **Phal. Hysinying White** (Phal. Musashino x Phal. White Dream), Ching Hua, 15 F1 and 34 total progeny, no awards.

**Phal. Taisuco Kochdian** (Phal. Kochs Schneestern x Phal. Meridian), 1991, Taiwan Sugar, 62 F1 and 1180 total progeny, 2 AOS awards (1 FCC, 1 HCC). Its gene pool, on a percentage basis, is:

79.9% Phal. amabilis, 15.4% Phal. aphrodite, 2.7% Phal. schilleriana, 1.2% Phal. stuartiana, 0.8% Phal. sanderiana. Major progeny: **Phal. Sogo Yukidian** (Phal. Yukimai x Phal. Taisuco Kochdian), 1998, Sogo, 168 F1 and 547 total progeny, 12 AOS awards (4 AMs, 1 HCCs, 6 CCEs, 1 CCM); **Phal. Yu Pin Easter Island**



Phal. Cygnus  
'Ono-2' FCC/AOS  
Feb 2001, NS 14.0 x 12.0 cm  
8 Flws, 4 Buds, 1 Infl.

(Phal. Sogo Yukidian x Phal. World Class), 2009, Yu Pin Biotech, 84 F1 and 268 total progeny, 9 AOS awards (5 AMs, 3 HCCs, 1 JC); **Phal. Tying Shin Easter Star** (Phal. Sogo Genki x Phal. Yu Pin Easter Island), 2013, Tying Shin Orchids, 3 F1 progeny, 7 AOS awards (4 AMs, 2 HCCs, 1 AQ); **Phal. Taisuco Kaaladian** (Phal. Mount Kaala x Phal. Taisuco Kochdian), 1993, Taiwan Sugar, 65 F1 and 391 total progeny, 2 AM/AOS awards.

**Phal. Cygnus** (Phal. Tokyo Bridal x Phal. Silky Moon), 1997, Kokubunji, 47 F1 and 181 total progeny, 4 AOS awards (1 FCC, 2 AMs, 1 HCC). Its gene pool, on a percentage basis, is: 80.1% Phal. amabilis, 16.6% Phal. aphrodite, 3.1% Phal. schilleriana, 0.2% unknown, 0.0% Phal. stuartiana. No major progeny.

**Phal. Sogo Musadian** (Phal. Musashino x Phal. Taisuco Kochdian), 1998, Sogo, 28 F1 and 99 total progeny, 3 AM/AOS awards. Its gene pool, on a percentage basis, is: 81.0% Phal. amabilis, 15.1% Phal. aphrodite, 2.9% Phal. schilleriana, 0.6% Phal. stuartiana, 0.4% Phal. sanderiana. No major progeny.



Phal. Taisuco Kochdian  
'Crownfox Sugarloaf' FCC/AOS  
Mar 2000, NS 14.0 x 12.0 cm  
6 Flws, 3 Buds, 1 Infl.



Phal. Sogo Musadian  
'Orchid Konnection' AM/AOS  
Mar 2005, NS 13.2 x 11.0 cm  
5 Flws, 8 Buds, 1 Infl.

**Phal. Yukimai** (Phal. Musashino x Phal. Grace Palm), 1998, K. Nagai, 51 F1 and 956 total progeny, no AOS awards. Its gene pool, on a percentage basis, is: 83.3% Phal. amabilis, 15.2% Phal. aphrodite, 1.6% Phal. schilleriana. Major progeny: **Phal. Sogo Yukidian** (Phal. Yukidian x Phal. Taisuco Kochdian), 1998, Sogo, 168 F1 and 547 total progeny, 12 AOS awards (4 AMs, 1 HCCs, 6 CCEs, 1 CCM); **Phal. Yu Pin Easter Island** (Phal. Sogo Yukidian x Phal. World Class), 2009, Yu Pin Biotech, 84 F1 and 268 total progeny, 9 AOS awards (5 AMs, 3 HCCs, 1 JC); **Phal. Join Angel** (Phal. Taida Pinlong x Phal. Casablanca Joy), 2002, Join Orchids, 1 CCM/AOS award. No major progeny; **Phal. Join Grace** (Phal. Join Diamond x Phal. Taida Pinlong), 2002, Join Orchids, 35 F1 and 61 total progeny, 2 AOS awards (1 AM, 1 HCC).

The next group of classic white Phalaenopsis are the most recently awarded cultivars. Three observations; natural spread on award quality classic white Phalaenopsis is currently around 14 cm and crossing back to a primary species (especially Phal. amabilis) appears to reduce natural spread trend, and fewer classic white Phalaenopsis are being awarded.

Phal. Stuart Henderson (Phal. John Naugle x Phal. Crystelle Smith), 2019, Krull-Smith, no progeny, 2 AOS awards (1 AM, 1 HCC).

Phal. Krull's Florida Moon (Phal. Heartbeat x Phal. John Naugle), 2018, Krull-Smith, no progeny, 1 HCC/AOS award.

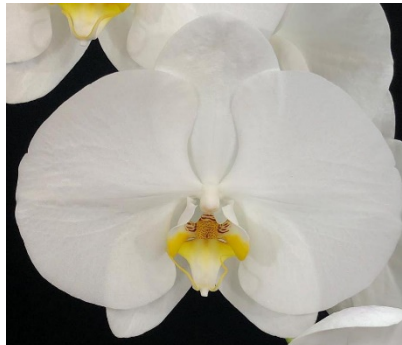
Phal. Zuma Angel (Phal. Angel White x Phal. White Castle), 1995, Zuma Canyon, 2 F1 and 3 total progeny, 2 AM/AOS awards.



Phal. Yukimai  
'Buck' AM/AOC  
Sept 1996, NS 12.1 x 10.3 cm  
13 Flws, 1 Infl.



Phal. Florida Moon  
'Ponkan' HCC/AOS  
Mar 2018, NS 14.1 x 11.8 cm  
7 Flws, 3 Buds, 1 Infl.



Phal. Stuart Henderson  
'Memoria Harold Smith' AM/AOS  
Mar 2019, NS 14.5 x 12.5 cm  
7 Flws, 1 Infl.



Phal. Zuma Angel  
'Sierra Vasquez' AM/AOS  
Mar 2017, NS 13.9 x 13.1 cm  
7 Flws, 3 Buds, 1 Infl.

Phal. Ming-Hsing Snow Angel (Phal. Ming-Hsing New Angel x Phal. Ming-Hsing Mount Snow), 2000, Ming-Hsing Orchids, 16 F1 and 2 AOS awards (1 AM, 1 CCM)

Phal. Ming-Hsing White Snow (Phal. Taisuco Kaaladian x Phal. Cygnus), 2003, Lin Ming-Hsing, 2 F1 and 4 total progeny, 1 AM/AOS award.

Phal. Taisuco Snowflake (Phal. Taisuco Kochdian x Phal. amabilis), 2007, Taisuco, no progeny, 1 CCM/AOS award.

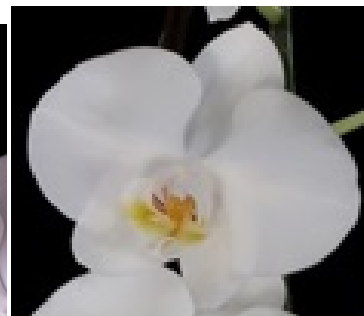
Phal. Unimax Pilot (Phal. Taisuco Swan x Phal. amabilis), 2009, Clone I.B., 1 F1 progeny, 1 AM/AOS award.



Phal. Ming-Hsing Snow Angel  
'#2 MFM 103' AM/AOS  
May 2016, NS 13.5 x 12.5 cm  
32 Flws, 2 Infl.



Phal. Ming-Hsing White Snow  
'Orchid Konnection' AM/AOS  
Mar 2016, NS 14.3 x 10.8 cm  
5 Flws, 7 Buds, 1 Infl.



Phal. Taisuco Snowflake  
'B06047' CCM/AOS  
Mar 2016, NS 10.0 x 9.0 cm  
38 Flws, 2 Infl.



Phal. Unimax Pilot  
'CL 359A' AM/AOS  
Mar 2016, NS 10.4 x 9.3 cm  
20 Flws, 5 Buds, 2 Infl.

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# Phalaenopsis Breeding Lines – French Spots

Pick out the major players in breeding.

Are these breeding lines still being pursued? If so, how.



Phal. Elise de Valec  
 'Milky Way' HCC/AOS  
 Feb 1988, NS 8.7 cm  
 7 Flws, 2 Buds, 1 Infl.

What is meant by a spot?  
 Webster's New World Dictionary defines spot as "a small area that is different, as in color or texture, from the background or main area of which it is a part." We also have a bar defined as "strip, band or broad line," a blotch defined as "a large or irregular spot" and a splotch defined as "a spot or splash that is irregular" (I like to think of a splotch as a merging

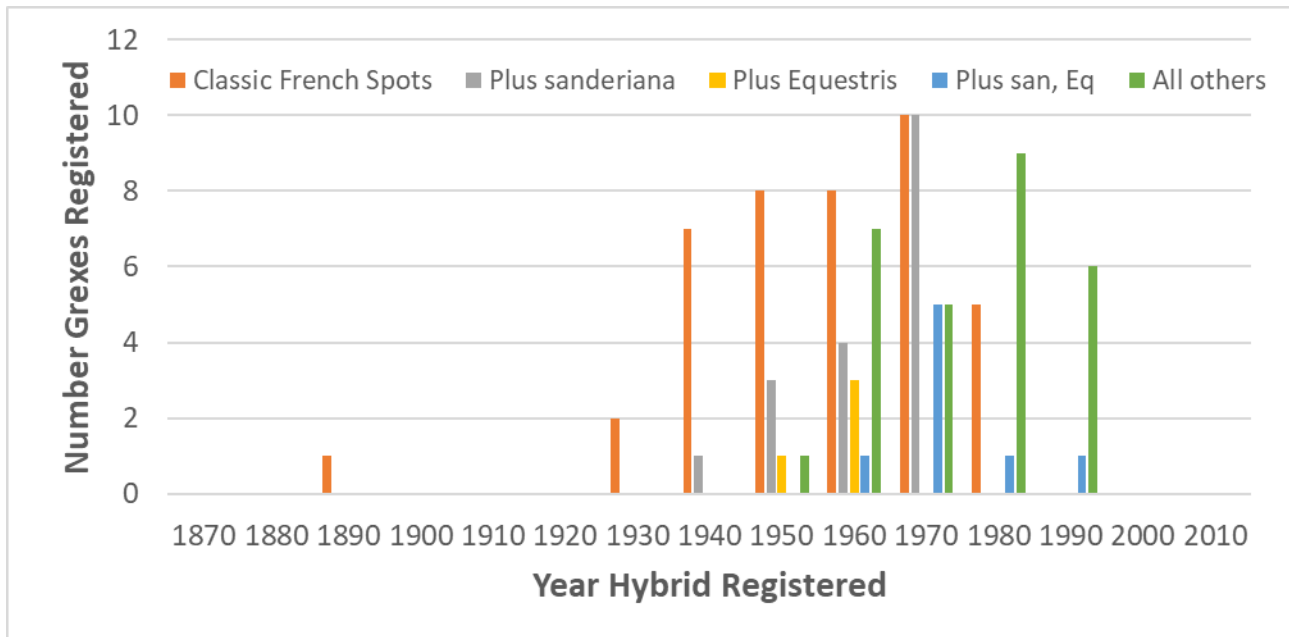


Phal. Leopard Prince  
 'Hwa Yuan Red Leopard' FCC/AOS  
 Mar 2013, NS 11.2 cm  
 16 Flws, 2 Buds, 1 Infl.  
 Dscpt: "... epitome of French Spot style..."

of blotches).

'French Spots' – Initially referred to a Vacherot & Lecoufle breeding line which combined and recombined the shape and size of Phal. amabilis and Phal. aphrodite with the spots and color of Phal. stuartiana and Phal. schilleriana resulting in white flowers with spots on the sepals and petals. There was an additional breeding line started in the United States by Shaffer's Orchids that started with stock from Vacherot & Lecoufle that Shaffer's Orchids referred to as 'French Spots.'

Other breeders world wide also started breeding "French Spots" and now the term refers to Orchids that have as their prominent parentage the four species Phal. amabilis, Phal. aphrodite, Phal. schilleriana, and Phal. stuartiana plus Phal. sanderiana and/or Phal. equestris in addition to species from other Phalaenopsis sections such as Polychilos and Esmeralda. This transition to adding species is shown in the incomplete bar graph below (Incomplete because it does not reflect the recent surge in using Polychilos section species with the





classic French spots line, NOTE: all others refers to parentage which includes species from Polychilos and Esmeralda sections) of hybrids registered with 'French spot' heritage.

From this chart it is clear that there was a peak in breeding of classical 'French Spots' in the 1970 to 1980s. This peak was followed by the introduction of new species as mentioned above to improve form and add additional colors. Today's spotted white flowers have a more traditional shape, as well as non-traditional shapes, have more intense colors, improvement in form, more flowers, and have more than just spots.

**Classical 'French Spots'**

**Phal. Mouchette** (Phal. Francine x Phal. Anouche), 1972, Vacherot & Lecoufle, 71 F1 and 4152 total progeny, no AOS awards. Major progeny: **Phal. Summa** (Phal. Sabine x Phal. Francine), 1984, Universal, 18 F1 and 58 total progeny, 1 HCC/AOS award; **Phal. Liseron** (Phal. Tosca x Phal. Elise de Valec), 1986, Vacherot & Lecoufle, 19 F1 and 34 total progeny, 2 AOS awards (1 AM, 1 HCC); **Phal. Frisson** (Phal. Mouchette x Phal. Scherzo), 1979, Vacherot & Lecoufle, 75 F1 and 2835 total progeny, no AOS Awards; **Phal. Elise de Valec** (Phal. Raptigny x Phal. Mouchette), 1980, Vacherot & Lecoufle, 70 F1 and 1629 total progeny, 1 HCC/AOS award.



Phal. Mouchette  
'Tahiko' AM/RHS  
Oct 1973



Phal. Summa  
'Zuma Canyon' HCC/AOS  
Jan 1983, NS 8.5 cm



Phal. Liseron  
'Charles Rhoads' AM/AOS  
Jan 1995, NS 8.9 x 7.4 cm



Phal. Elise de Valec  
'Milky Way' HCC/AOS  
Feb 1988, NS 8.7 cm

**'French Spots' with Phal. equestris and / or Phal. sanderiana**

There is no clear initial cross from which identifies these particular breeding line(s). Four prominent grexes in this group are: **Phal. Hokuspokus** (Phal. Lipperose x Phal. Francine), 1974, A. Rohl, 67/794, 1 HCC/AOS award; **Phal. Melinda Nan** (Phal. Mistinguett x Phal. Mouchette), 1979, Shaffer's, 30/368, 2 HCC/AOS awards; **Phal. Georges Seruat** (Phal. Scaramouche x Phal. Hokuspokus), 1984, Vacherot-Lecoufle, 66/203, 6 AOS awards



Phal. Melinda Nan  
'Bill' HCC/AOS  
Mar 1981, NS 10.5 cm



Phal. Snow Leopard  
'Colorama' HCC/AOS  
Mar 1987, NS 7.4 cm



Phal. Georges Seruat  
'Debbi' AM/AOS  
Mar 1987, NS 8.7 cm



Phal. Hokuspokus  
'Oak Hill' AM/AOS  
Jan 1978, NS 10.0 cm

(4 AMs, 2 HCCs); **Phal. Ho's Fancy Leopard** (Phal. Elise de Valec x Phal. Coquinnette), 1990, Tim-Fan Ho, 23 F1 and 1116 total progeny, 1 AM/AOS award; **Phal. Snow Leopard** (Phal. Alida x Phal. Francine), 1982, C. Hoover, 74 F1 and 186 total progeny, 4 AOS awards (3 HCCs, 1 JC).



Phal. Leopard Prince  
'Hwa Yuan Red Leopard' FCC/AOS  
Mar 2013, NS 11.2 x 9.6 cm  
Dscpt: "... epitome of French Spot style..."

**'French Spots' with Polychilos Species**

The addition of the Polychilos species tends to give a full pattern on sepals and petals with a possible thin picotee. **Phal. Rosy Charm** (Phal. Hermione x Phal. Pink Wave), 1962, E. Iwanaga, 32 F1 and 8557 total progeny, 12 AOS awards (5 AMs, 7 HCCs).

**NOTE:** This grex is NOT a true French spot grex, no Phal. amabilis pedigree, but it was an early indicator how Polychilos species would influence spots; **Phal. Rousserole** (Phal. Cataracte x Phal. Frisson), 1984, Vacherot & Lecoufle, 76 F1 and 732 total progeny, 6 AOS awards (1 AM, 5 HCCs); **Phal. Miva Smartissimo** (Phal. Entrechat x Phal. Elise de Valec), 1988, Vacherot & Lecoufle, 27 F1 and 60 total progeny, 1 AM/AOS award; **Phal. Carmela's Spots** (Phal. Jutta Brungor x Phal. Frisson), 1989, G.

& D. Kobayashi, 73 F1 and 1321 total progeny, 2 HCC/AOS awards; **Phal. Leopard Prince** (Phal. Sun Prince x Phal. Ho's French Fantasia), 1997, Sogo, 245 F1 and 854 total progeny, 12 AOS Awards (1 FCC, 4 AMs, 6, HCCs, 1 CCM).



Phal. Rosy Charm  
'Mercedes Maria Rabago' AM/AOS  
Feb 1963

Phal. Rousserole  
'Dou Fang' HCC/AOS  
Apr 1996, NS 10.0 cm

Phal. Miva Smartissimo  
'Firelli' AM/AOS  
Mar 2018, NS 9.0 x 8.0 cm

Phal. Carmela's Spots  
'Galen Vasquez' HCC/AOS  
Nov 1990, NS 9.0 cm

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## Award Descriptions (Feb 2020)

### **Phalaenopsis Taiping Festival – Quality Award Description**

(Phal. Pink Festival x Phal. pulcherrima)

Eight flowers and six bud on one branched 45-cm long inflorescence; flowers violet-fuchsia concolor; lip dark violet-fuchsia; column violet-fuchsia, anther cap white; substance firm; texture sparkling velvet.



### **Phalaenopsis Jokers Gold – Quality Award Description**

(Phal. Jokers Wild x Phal. Theodore Goldiana)

Twelve flowers and five buds on one 40-cm long inflorescence; dorsal sepal recurved, cream lightly overlaid rose, white halo basally; lateral sepals cream, lightly overlaid rose superior half, spotted dark rose inferior half; petals cream overlaid rose with dark rose spots, overlaid dark centrally; lip

iridescent red; column rose-purple, anther cap cream; substance firm; texture matte.

### **Phalaenopsis Sogo Yukidian – Cultural Award Description**

(Phal. Yukimai x Phal. Taisuco Kochdian)

Twenty pristine, full, flat, white flowers and three buds beautifully presented on a 80-cm long inflorescence on a clean robust eight leaf specimen with a spread of 18-cm in a 8-cm by 20-cm beautifully vase-shaped pot; overlapping petals; lip centrally golden yellow; column and anther cap white; substance firm; texture matte.



### **Phalaenopsis Brother Black Berry – Quality Award Description**

(Phal. Brother Treasure x Phal. Zauberrot)

Twenty-two dark red flat flowers and three buds well arranged on two inflorescences; dorsal sepal slightly hooded; sepals and petals of uniform shape and size; lip trilobe, dark red, sidelobes red, yellow distally; column light red-magenta; anther cap white;

substance firm; texture matte.

### **Phalaenopsis Karisma Cavalier – Quality Award Description**

(Phal. Sogo Beach x Phal. I-Hsin Cherry)

Ten flowers on one branched inflorescence; flowers white overlaid magenta and dark magenta veins confalescing to spots then blotches centrally, thin white picotee; lateral sepals inferior half more heavily blotched; lip tri-lobe, cream, broad lateral strips, keel yellow with red spots, blotches and bars; column pale magenta, anther cap cream; substance firm; texture crystalline.

