The Genus Phalaenopsis
(L.) Blume, Bijdr. Fl. Ned. Ind.: 294 (1825)
Type: Phalaenopsis [Phal.] amabilis

[fal-en-OP-sis a-MA-bill-iss]

Phalaenopsis amabillis
'Jayne Garrison' AM/AOS
Jan 2010, NS 7.5 x 6.5 cm

This is a vandaceous genus comprised of 83 species, mostly epiphytic and some lithophytic species spread throughout southeast asia and the islands of southwest Pacific. Westernmost limit is Sri Lanka, India, Nepal to easternmost limit in Papua New Guinea and adjacent Australia. The northern limit is southern China, Taiwan, and the Philippines. They are monopodial typically with large succulent, drooping leaves with short stems, giving rise off the stem from among the leaves to an inflorescence which can have a few to a hundred flowers with a distinct 3-lobed clawed lip. They grow best in pots with a wood media or from wood slat baskets hung sideways with two wires. They like good air circulation and typically a minimum of light. They grow in habitats ranging from semi-desert to rainforest, from hot steamy lowlands to the Himalayan foothills. Most are epiphytes or sometimes lighophytes and there are even a few terrestrials, usually with erect inflorrescences. The large distribution has led to a diverse cultural requirements and morphology. Some species require a dry period in which the plants adapted by being deciduous, some to seasonally cool conditions, while others have adapted to life high in the forest canopy by needing bright light and having thick leaves, while another group have adopted to very deep shade near the forest floor. All Phalaenopsis have a three-lobbed clawed lip.

Phalaenopsis plants (both hybrids and to some extent species) are among the most frequently cultivated orchids because o their rapid growth and early flowering, as well as having large, long lasting flowers (related to tetraploid seedlings of Phal. Doris) that has a wide range of size, shape, color, and pattern.

Of the roughly 83 species only 18 have not been use in hybridization or have not received an award.

Common Name or Meaning – Greek for "having moth like flowers"

Generally, for the hybrids you would point scale using the Phalaenopsis point scale but most species and novelty hybrids the General scale may be more appropriate.

Christenson				**Fighetti**		
Subgenus	**Section**	**Type**		**Subgenus**	**Section**	**Type**
				Hygrochilus		P. japonica
				Ornithochilus		P. difformis
Parishianae		P. lobbii		Parishianae	Parishinae	P. lobbii
Parishianae		P. parishii				P. parishii
Proboscidioides		P. lowii			Aphyllae	P. lowii
Aphyllae		P. stobartiana				P. stobartiana
Aphyllae		P. taenialis				P. taenialis
Phalaenopsis	Deliciosae	P. deliciosa			Deliciosae	P. deliciosa
	Esmeralda	P. buyssoniana			Esmeralda	P. buyssoniana
	Phalaenopsis	P. amabilis		Phalaenopsis	Phalaenopsis	P. amabilis
	Stauroglottis	P. equestris				P. equestris
Polychilos	Amboinenses	P. amboinensis			Polychilos	P. amboinensis
	Fuscatae	P. fuscata				P. fuscata
	Polychilos	P. cornu-cervi				P. cornu-cervi
	Zebrinae	P. zebrina (Syn)				P. sumatana
	Zebrinae	P. tetraspis				P. tetraspis

Although there are only 83 species, Phalaenopsis have been divided into several sections. We were assigned to use the taxonomy as described by Christenson in his 2001 book Phalaenopsis – A Monograph. But based on taxonomy provided at the Carlos Fighetti there is a more recent taxonomy. The genus Phalaenopsis as understood today contains the former genera: Doritis, Hygrochilus, Kingidium, Lesliea, Ornithochilus, Nothodoritis, and Sedirea.

The changes in Fighetti article is based on the recent change made at the 2014 World Orchid Conference recognizing the distinction between Phalaenopsis borneenisi, Phalaenopsis pantherina and Phalaenopsis cornu-cervi.

A table showing the relationship between these two taxonomies and some key speicies are in the above table and discussed below.

The two genera that were Sedirea (cool growing) were moved to the Phalaenopsis subgenus Hygrochilus. The prior Ornithochilus was moved to the Phalaenopsis subgenus Ornithochilus.

An additional change has been the consolidation of the Phalasenopsis five subgenera mentioned in Christenson's book into two Phalaenopsis subgenera and then further divided into six sections. A summary of this taxonomy division is shown above for both Christenson's work and Fighetti's article.

The subgenera mentioned in Christenson's book Parishianae, Proboschidioides, and Aphyllae as well as the Phalaenopsis subgenus sections Deliciosae and Esmeralda have been considated into Fighetti's Phalaenopsis subgenus Parishianae with the following sections: Parishianae, Aphyllae, Deliciosae, and Esmeralda.

The subgenera mentioned in Christenson's book Polychilos as wells as the Phalaenopsis subgenus sections Phalaenopsis and Stauroglottis have been considated into Fighetti's Phalaenopsis subgenus Polychilos and Phalaenopsis.

We have been instructed to use Christenson's book as our baseline for this year and the remaining reports will mostly follow this request.

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

Phalaenopsis Section Phalaenopsis

(L.) Blume, Bijdr. Fl. Ned. Ind.: 294 (1825)

Type: Phalaenopsis [Phal.] amabilis

[fal-en-OP-sis a-MA-bill-iss]

Phalaenopsis amabilis
'Jayne Garrison' AM/AOS
Jan 2010, NS 7.5 x 6.5 cm

When one thinks of this Phalaenopsis section, Phalaenopsis subgenus - Phalaenopsis section, which presently contains nine species (OrchidWiz [update Dec 2020]), one thinks of the classical white Phalaenopsis species and hybrids. But this section is also the basis of most Phalaenopsis hybrids with two of the species, Phal. amabilis and Phal. aphrodite, involved in over 90% of all Phalaenopsis hybrids (36,840 hybrids per OrchidWiz). (**Comment**: The members of this section are based on the taxonomy information on the website www.orchidspecies.com and contains the species that are normally thought of as in this section as well as the species in the Phalaenopsis subgenus – Staurogolottis section. In Christensons book he comments the plants in the Stauroglottis section are similar to and share several characteristics with those of section Phalaenopsis. The differences that are sited are: smaller flowers, subsimilar sepals and petals, and an undivided lip apex. Obviously based on more recent, unknown to me, information these differences are not sufficient to continue having them in a separate section.)

These species are characterized by having a single callus (a swelled area on the labellum) and smooth lateral lobes of the lip. With the exception of spots found at the base of the sepals and on the petals of some species (such as Phal. stuartiana) all species are essentially unmarked white or pink flowers. Most of the species are native to the Philippines growing on trees from sea level up to 4900 ft (1500 m). A table of the species is provided below, as a point of reference those species that were previously in the Stauroglottis Section are mark with a (S).

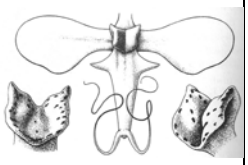
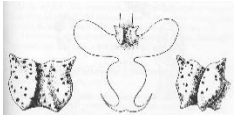
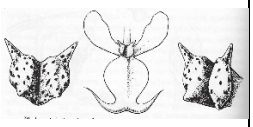
Generally, you would point scale using the Phalaenopsis point scale.

Table of species, (www.orchidspecies.com – Dec 2020 update)

Species marked with a * are used the most in hybridization, (S) Previously Stauroglottis Section						Progeny		AOS Awards										
Kew Name	Sub Genus	Section	Country	Temp	Season	F1/Total	Awds	FCC	AM	HCC	JC	AD	AQ	CCE	CCM	CHM	CBR	Total
Phalaenopsis amabilis*	Phalaenopsis	Phalaenopsis	Sumatera, Borneo, Indonesia, New Guinea, Australia	Warm to Hot	Winter - Spring	483/33257	69		20	11	4		1		8	1		45
Phalaenopsis aphrodite*	Phalaenopsis	Phalaenopsis	Philippines, Taiwan		Winter - Spring	62/33353	66		13	8			1	2	12	1	1	38
Phalaenopsis celebensis (S)	Phalaenopsis	Phalaenopsis	Sulawesi	Hot	Year round	49/75	27		7	8	1				2		1	19
Phalaenopsis equestris (S)*	Phalaenopsis	Phalaenopsis	Philippines, Taiwan	Warm to Hot	Year round	564/23601	133	2	32	30	19		1		12	3	2	101
Phalaenopsis lindenii (S)	Phalaenopsis	Phalaenopsis	Philippines	Warm	Fall - Winter	120/654	43		12	7	1				2			22
Phalaenopsis philippinensis	Phalaenopsis	Phalaenopsis	Philippines	Warm	Spring	113/192	20		4	5	1			1	1			12
Phalaenopsis rimestadiana	Phalaenopsis	Phalaenopsis	**Now Phal. amabilis**															
Phalaenopsis sanderiana*	Phalaenopsis	Phalaenopsis	Philippines	Hot	Year round	117/27201	10	1	3						1		1	6
Phalaenopsis schilleriana*	Phalaenopsis	Phalaenopsis	Philippines	Warm to Hot	Winter - Spring	255/29795	72		20	13			1	6	11			51
Phalaenopsis stuartiana*	Phalaenopsis	Phalaenopsis	Philippines	Hot	Winter - Spring	399/28217	43		12	14					5	2		33

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

Because of the floral similarity between the species in this section, in particular in those listed in Christensons book (the classic white Phalaenopsis species), there has been some confusion in identifying them correctly the following table list some of the differences. Note: The key to identifying Phalaenopsis is the lip details.

Species	General	Callus	Lip details		Distribution
Phalaenopsis amabilis*	Largest Flower, white flower color, round flower shape, arching raceme. Flowers per spike: 13.0, NS: 7.9 cm	Uniseriate, peltate, shield-shaped, the posterior edge smoothly notched between one pair of blunt teeth, the anterior edge obtuse-rounded			Widespread from Sumatra and Java to the southern Philippines, and eas to New Guinea and Queensland, Australia
Phalaenopsis aphrodite*	The other large flower, white flower color. Flowers per spike: 16.7, NS: 7.5 cm	Uniseriate, the posterior edge notched forming four erect teeth, the anterior edge obtuse-rounded			Northern Philippines and southeastern Taiwan
Phalaenopsis philippinensis	Richly marked leaves, pure yellow lateral lobes, tends to open all flowers on an inflorescence quickly. Flowers per spike: 25.9, NS: 8.2 cm	Uniseriate, peltate, channeled, the posterior edge extended in a pair of wing-like teeth			Philippines
Phalaenopsis sanderiana*	Blooms mid to late summer. Flowers per spike: 14.2, NS: 8.0 cm	Uniseriate, erect, peltate, the posterior edge deeply notched in the middle, each side with one larger, taller, inner, rounded tooth and one smaller, shorter, outer, acute tooth.			Philippines
Phalaenopsis schilleriana*	Bright pink flowers, richly marbled foliage, and a faint, pleasing floral scent. Flowers per spike: 34.6, NS: 7.0 cm	Uniseriate, peltate, channeled, both the posterior and anterior edges notched, forming paired teeth to either side of the channel			Philippines
Phalaenopsis stuartiana*	Flowers floriferous, long lasting. Flowers per spike: 34.7, NS: 6.3 cm	Uniseriate, peltate, channeled, the posterior edge notched with a long, triangular tooth to each side, the anterior edge shallowly notched with a blunt tooth to each side			Philippines

Hybridization:

Hybridization in the Phalaenopsis family is dominated by the species in the Phalaenopsis section over 90% of the hybrids has at least one species from this section in its heritage. A table of classical six species in the Phalaenopsis section, broken down by decade, is shown below.

amabilis	**1870**	**1880**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Total**
Reg	0	5	3	0	1	7	25	87	340	1241	3228	5802	8835	7649	5733	301	33257
Assc Awds	0	12	1	0	0	3	9	48	320	766	1247	2230	2864	2510	706	3	10719
F1	0	5	2	0	1	3	8	14	26	22	10	35	100	145	107	5	483
Assc Awds	0	12	1	0	0	3	5	0	2	1	2	6	54	43	14	0	143
aphrodite																	
Reg	1	3	5	1	0	6	26	87	352	1259	3272	5816	8794	7657	5768	306	33353
Assc Awds	10	3	0	0	0	2	9	45	320	778	1255	1953	2862	2522	724	3	10486
F1	1	1	2	0	0	3	5	6	2	2	0	2	9	13	16	0	62
Assc Awds	10	3	0	0	0	0	0	0	0	0	0	8	2	4	3	0	30
philippinensis																	
Reg	0	0	0	0	0	0	0	0	0	0	0	2	53	54	79	4	192
Assc Awds	0	0	0	0	0	0	0	0	0	0	0	0	31	4	10	0	45
F1	0	0	0	0	0	0	0	0	0	0	0	2	49	36	23	3	113
Assc Awds	0	0	0	0	0	0	0	0	0	0	0	0	30	3	3	0	36
sanderiana																	
Reg	0	0	3	1	0	6	16	53	136	637	1930	4181	7428	7058	5472	280	27201
Assc Awds	0	0	0	0	0	1	4	3	78	284	714	1473	2502	2356	683	3	8101
F1	0	0	3	1	0	5	4	12	14	33	14	11	8	5	6	1	117
Assc Awds	0	0	0	0	0	1	0	0	4	3	0	1	1	0	0	0	10
schilleriana																	
Reg	1	1	4	1	0	9	36	78	246	768	2226	4863	8289	7415	5573	285	29795
Assc Awds	10	7	13	0	0	3	5	7	126	331	808	1642	2662	2419	689	3	8725
F1	1	1	2	1	0	6	11	15	13	31	18	24	41	43	45	3	255
Assc Awds	10	7	13	0	0	1	3	3	1	10	4	2	4	12	5	0	75
stuartiana																	
Reg	0	1	8	1	0	3	14	62	142	557	1827	4344	7912	7382	5670	294	28217
Assc Awds	0	0	32	0	0	2	0	4	77	199	696	1544	2596	2458	702	3	8313
F1	0	1	6	1	0	1	4	6	5	18	34	109	125	47	39	3	399
Assc Awds	0	0	32	0	0	2	0	3	1	24	22	74	26	9	0	0	193

From the above table one can see that although the first crosses were made in was made in 1870s, and took off after World War II ended, related to the highly successful Phal. Doris crossed in which one cultivar was identified as a tetraploid. As can be seen from the above table breeding of Phalaenopsis took off.

Also included in this table of is the registration of F1 crosses for each species. From is information it is clear that breeding with Phal. amabilis is still going strong, Phal. aphrodite is low but of increasing interest in the past two decades, Phal. philippinensis is at a low to moderate level since being introduced in the 1980s, while interest in Phal. sanderiana appears to be waning. Interest in breeding with Phal. schilleriana and Phal. stuartiana is remaining at a moderate level today.

Species	General	Breeding	
		Strength	Weakness
Phalaenopsis amabilis	Largest Flower, white flower color, round flower shape, arching raceme. Flowers per spike: 13.0, NS: 7.9 cm	Large, round flowers, arching inflorescences, Can reflower by branching on old inflorescences, efficient pollinator, quick to reach maturity, easy growth requirements	Variable lip color, the presence and density of red spots on lip side-lobes
Phalaenopsis aphrodite	The other large flower, white flower color. Flowers per spike: 16.7, NS: 7.5 cm	Similar to Phal. amabilis, fuller flowers, more flowers per inflorescences, cold tolerance	Some what smaller flowers
Phalaenopsis philippinensis	Richly marked leaves, pure yellow lateral lobes, tends to open all flowers on an inflorescence quickly. Flowers per spike: 25.9, NS: 8.2 cm	Pure yellow lateral side-lobes, tends to open all flowers on an inflorescence at once, large number of flowers per inflorescences	Recently introduced, large plant size
Phalaenopsis sanderiana	Blooms mid to late summer. Flowers per spike: 14.2, NS: 8.0 cm	Pink flowers, Mid to late summer blooming, heat tolerant	Flowers may have pinkish overtones,
Phalaenopsis schilleriana	Bright pink flowers, richly marbled foliage, and a faint, pleasing floral scent. Flowers per spike: 34.6, NS: 7.0 cm	Pink flowers, Easy to grow, has fragrance, massive flower display on multi-branched inflorescences; white lip	Fragrance not detected by all
Phalaenopsis stuartiana	Flowers floriferous, long lasting. Flowers per spike: 34.7, NS: 6.3 cm	Spots on lateral sepals and lip, branching, floriferousness, spotting, flower form and spacing, long inflorescences, and long lasting flowers	Smaller flower size, highly variable species

The final hybridizing point that I want to bring up is the wide range of color and patterns that have been obtained with Phalaenopsis breeding, most colors of the rainbow, specular patterns, strips, spots, flower size, etc. The following pictures are just a small sample of Phalaenopsis breeding, most progeny and awards for each species above.

Phal. Doris
(Phal. Elisabethae x
Phal. Katherine Siegwart)
262 / 32,093 progeny
29 AOS awds
'Hazel McCoy' AM/AOS
Mar 1967

Phal. Golden Buddha
(Phal. Cher Ann x
Phal. Yardstick)
309 / 2503 progeny
6 AOS awds
'Raspberry Delight' AM/AOS
Mar 1987, NS 7.3 cm

Phal. Orchid World
(Phal. Malibu Imp x
Phal. Deventeriana)
22 / 25 progeny
103 AOS awds
'Trenton' FCC/AOS
Mar 1990, NS 7.0 cm

Phal. Sogo Yukidian
(Phal. Yukimai x
Phal. Taisuco Kochdian)
167 / 542 progeny
12 AOS awds
'Symphony Angel' AM/AOS
Mar 2002, NS 14.0 x 12.0 cm

Phal. Mini Mark
(Phal. Micro Nova x
Phal. philippinensis)
7 / 7 progeny
14 AOS awds
'Dixie Pixie' AM/AOS
Mar 2000, NS 3.9 x 3.9 cm

Phal. OX Lucky Boy
(Phal. KS Culiacan x
Phal. Nobby's Amy)
7 / 7 progeny
2 AOS awds
'OX 1649' AM/AOS
Mar 2015, NS 6.3 x 5.6 cm

Phal. Leopard Prince
(Phal. Sun Prince x
Phal. Ho's French Fantasia)
242 / 837 progeny
12 AOS awds
'Hwa Yuan Red Leopard'
FCC/AOS
Mar 2013, NS 11.2 x 9.6 cm

Phal. Ambo Buddha
(Phal. Brother Buddha x
Phal. amboinensis)
4 / 4 progeny
30 AOS awds
'Phoenix' FCC/AOS
Apr 2000, NS 7.1 x 6.8 cm

Phal. Solar Flare
(Phal. Golden Sands x
Phal. Golden Pride)
19 / 71 progeny
29 AOS awds
'Classic' AM/AOS
Apr 1986, NS 7.5 cm

Phal. Abendrot
(Phal. Lippezauber x
Phal. Lippstadt)
229 / 4504 progeny
16 AOS awds
'Celia' FCC/AOS
Dec 1984, NS 9.8 cm

Phal. Misty Green
(Phal. Barbara Moler x
Phal. Bamboo Baby)
103 / 4709 progeny
28 AOS awds
'Selsal' AM/AOS
Feb 1994, NS 8.9 x 8.5 cm

Phal. Cassandra
(Phal. equestris x
Phal. stuartiana)
226 / 3759 progeny
24 AOS awds
'Little Prince' AM/AOS
Mar 1998, NS 4.7 x 4.5 cm

The following grexes have been identified to represent some additional breeding lines, not depicted by above grexes, representing novel color patterns (harlequin, stripes, spots, splash) and flower shapes (Big Lip) that are / were key breeding lines, but not necessarily key grexes for these lines.

Phal. Golden Peoker
(Phal. Misty Green x
Phal. Liu Tuen-Shen)
218 / 4087 progeny
9 AOS awds
'Nan-Cho' AM/AOS
Apr 1996, NS 6.5 x 6.0 cm

Phal. Little Gem Stripes
(Phal. Taisuco Stripe x
Phal. Taisuco Gem)
157 / 411 progeny
16 AOS awds
'Stones River' AM/AOS
Jan 2012, NS 6.4 x 5.5 cm

Phal. Ching Her Buddha
(Phal. Golden Sun x
Phal. Salu Spot)
75 / 788 progeny
8 AOS awds
'Cat's Paw Mystique' HCC/AOS
May 2012, NS 7.8 x 7.2 cm

Phal. Snow Leopard
(Phal. Alida x
Phal. Francine)
74 / 186 progeny
4 AOS awds
'Colorama' HCC/AOS
Feb 1983, NS 7.4 cm

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https://secure.aos.org/aqplus/SearchAwards.aspx
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Christenson, E.; *Phalaenopsis – A Monograph*, 2001

Phal. World Class
(Phal. May Hitch x
Phal. Kathy Sagaert)
48 / 670 progeny
3 AOS awds
'Biogfoot' JC/AOS
Apr 1997, NS 8.5 x 8.4 cm

Phal. Taisuco Firebird
(Phal. Happy Smile x
Phal. Taisuco Candystripe)
163 / 1498 progeny
12 AOS awds
'Alisan' HCC/AOS
Jan 2010, NS 10.4 x 9.5 cm

Building Block Data Sheet

Phalaenopsis stuartiana, Rchb.f., Gard. Chron., n.s., 16: 748 (1881)

[fal-en-OP-sis stu-ar-TEE-aa-na]

Phalaenopsis [Phal.] stuartiana is native to the northern provinces of Mindanao Island, Philippines. Known for long (24 inches or more) arching branching flowerous (not uncommon for over 50 flowers) inflorescences above shiny, slivery-green, mottled leaves. The typical flowers, with a substance silimar to paper, are white-to-creamy-white with degrees of intense maroon spotting on the lateral sepals and lip. A basal greenish white color on the lateral sepals is evendent beneath the maroon spotting on some specimens. The degree of spotting on the dorsal sepal, petals, and upper lateral sepals varies from none to heavy spotting concentrated around the column. The intensity of the lip's and lower lateral sepals color is directly proportional to the amount of spotting: the greater the amount of spotting, the darker, more heavily marked is the lip.

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

Breeding Characteristics:

It is a member of the Phalaenopsis subgenus - Phalaenopsis section, which forms the basis of the classical white Phalaenopsis species and hybrids. As a parent, Phal. stuartiana contributes an increase in flower count, prevents overcrowding, medium size, and the lightly spotted forms do NOT influence the color of the progeny. When the heavily spotted forms are bred with pink flowers, the off-spring may bear earth-toned or mauve-colored flowers. The greenish color on the inside of the lateral sepals can result in progeny with 'dirty' colored flowers. Due to large size of the inflorescences and large robust leaves the plants are difficult for windowsill growers.

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

	1870	**1880**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Total**
Reg	0	1	8	1	0	3	14	62	142	557	1827	4344	7912	7382	5670	294	28217
Assc Awds	0	0	32	0	0	2	0	4	77	199	696	1544	2596	2458	702	3	8313
F1	0	1	6	1	0	1	4	6	5	18	34	109	125	47	39	3	399
AA	0	0	32	0	0	2	0	3	1	24	22	74	26	9	0	0	193
F2	0	0	2	0	0	2	5	10	17	31	33	77	238	104	46	3	568
AA	0	0	0	0	0	0	0	0	2	18	47	67	93	29	3	0	259
F3	0	0	0	0	0	0	5	22	7	45	45	67	315	363	225	7	1101
AA	0	0	0	0	0	0	0	0	0	24	13	55	186	147	24	0	449

From this table one sees that Phal. stuartiana has been a major contributor with approximately 77% of all Phalaenopsis hybrids being Phal. stuartiana progeny. The first hybrid was registered in 1888 and an early peak of eight hybrids registered in the 1890s. There was then a significant lull until the 1930s with a significant increase after World War II. The use of Phal. stuartiana peaked as a primary and secondary parent in the 1990s with the peak in third generation progeny occurring in the 2000s.

The chart below indicates some of the major Phal. stuartiana breeding lines, the lines used to improve floral form are not included in this table. The starting point for this table was:

* The top five primary hybrids (F1, both in F1 progeny and Associated Awards)
* The top ten in progeny (F1 progeny) and Awards (per OrchidWiz X7.1, December 2020 update, this includes awards from other organizations besides AOS)
* The six grexes as well as some of their top progeny that were mentioned in the John Stubbings article on Judging Spotted Phalaenopsis
* Seven grexes mentioned by Carlos Fighetti in Brooklyn Botanic Garden web article on Phalaenopsis (5 of 7 were Phal. stuartiana progeny).

					Progeny		AOS Awards									
Kew Name	**Parent 1**	**Parent 2**	**Year**	**Hybridizer**	**F1/Total**	**Awds**	**FCC**	**AM**	**HCC**	**JC**	**AD**	**AQ**	**CCE**	**CCM**	**CHM**	**CBR**	**Total**
Phal. stuartiana					399/28217	8313											
Phal. Cassandra	Phal. equestris	Phal. stuartiana	1896	Veitch	226/3759	25		7	9	3				5			24
Phal. Suwanee	Phal. Cassandra	Phal. Barbara Beard	1970	Frederick L. Thornton	6/1482	0											0
Phal. Pink Fantasy	Phal. Percy Porter	Phal. Suwanee	1978	Richella	3/1473	0											0
Phal. Be Glad	Phal. Swiss Miss	Phal. Cassandra	1978	Hager Orchids	137/1488	18		7	10					1			18
Phal. Be Tris	Phal. Be Glad	Phal. equestris	1989	Krull-Smith	77/413	19		1	16	1							18
Phal. Glad Melinda	Phal. Be Glad	Phal. Melinda Nan	1985	H. Hager	34/202	2		1	1								2
Phal. Gladrose	Phal. Melinda Rose	Phal. Glad Melinda	1988	H. Hager	32/140	8		3	5								8
Phal. Joyful	Phal. Gladrose	Phal. equestris	1992	H. Hager	7/17	3			3								3
Phal. Pixie Star	Phal. pulcherrima	Phal. Joyful	1997	M. Pendleton	6/9	21		10	10					1			21
Phal. Timothy Christopher	Phal. Cassandra	Phal. aphrodite	1982	J. Sandrik	204/750	8		2	3			1		1			7
Phal. Tying Shin Fantastic World	Phal. Chian Xen Pearl	Phal. Timothy Christopher	2008	Kuo Liang Hung	3/3	17		7	1			1		3			12
Phal. Little Netsuke	Phal. Snow Leopard	Phal. Cassandra	1987	E. Carlson	10/19	10		2	7					1			10
Phal. Brecko Dawnet	Phal. Little Netsuke	Phal. Dawn Treader	1999	Breckinridge	6/9	8			7					1			8
Phal. Terilyn Fujitake	Phal. Pink Fantasy	Phal. stuartiana	1983	R. Fujitake	14/1469	0											0
Phal. Carmela's Pixie	Phal. Terilyn Fujitake	Phal. Cassandra	1990	Carmela	160/1454	22		9	11	1				1			22
Phal. Zuma's Pixie	Phal. Carmela's Pixie	Phal. equestris	1992	Zuma Canyon	137/883	25		6	16			1		1			24
Phal. Sogo Vivien	Phal. Sogo Alice	Phal. Zuma's Pixie	1999	Sogo	191/478	9		2		1				1			4
Phal. Petite Snow	Phal. Cassandra	Phal. stuartiana	1985	Richella	23/32	5		2	1					1			4
Phal. Annie Hoffman	Phal. Doris	Phal. stuartiana	1948	R. Swearingen	4/1422	0											0
Phal. Kruemel	Phal. Annie Hoffman	Phal. Francine	1974	A. Rohl	3/1398	0											0
Phal. Kruemeline	Phal. Kruemel	Phal. Francine	1974	A. Rohl	11/1395	0											0
Phal. Joline	Phal. Joyau	Phal. Kruemeline	1981	Marcel Lecoufle	17/1329	0											0
Phal. Coquinette	Phal. Scaramouche	Phal. Joline	1983	Marcel Lecoufle	40/1214	4		3	1								4
Phal. Ho's Fancy Leopard	Phal. Elise de Valec	Phal. Coquinette	1990	Tin-Fan Ho	23/1095	1		1									1
Phal. Wiganiae	Phal. schilleriana	Phal. stuartiana	1899	S. Low	17/21520	4											0
Phal. Fontainebleau	Phal. schilleriana	Phal. Wiganiae	1930	Vacherot-Lecoufle	21/18656	0											0
Phal. Rosita	Phal. Fontainebleau	Phal. Roselle	1949	O. Kirsch	2/3945	0											0
Phal. Harlequin	Phal. Rosita	Phal. Grace Palm	1959	O. Kirsch	19/3942	3		1	2								3
Phal. Percy Porter	Phal. Harlequin	Phal. Mildred Karleen	1970	A. S. Cavaco	44/3643	1											0
Phal. Wendel George	Phal. Percy Porter	Phal. Aglow	1975	R. Takase	17/1649	1			1								1
Phal. Hawaii	Phal. Fontainebleau	Phal. schilleriana	1935	Armacost	12/14961	0											0
Phal. Dark Hawaii	Phal. Hawaii	Phal. Regnier	1948	Mrs. L. McCoy	9/6900	0											0
Phal. Alice Bowen	Phal. Dark Hawaii	Phal. Pink Cloud	1955	Mrs. L. McCoy	11/6886	7		4	3								7
Phal. Betty Beard	Phal. Alice Bowen	Phal. Virjudy	1966	C. Beard	12/5220	0											0
Phal. Palm Beach Rouge	Phal. Virginia	Phal. Alice Bowen	1963	C. Beard	9/4141	0											0
Phal. Ann Marie Beard	Phal. Palm Beach Rouge	Phal. Rozada	1966	C. Beard	53/4118	2		1	1								2
Phal. Vicki Sue Lockhart	Phal. Ann Marie Beard	Phal. Irene Van Alstyne	1970	W. Lockhart	32/2523	0											0
Phal. Pink Hawaii	Phal. Hawaii	Phal. Pink Glory	1948	Alberts / Merkel	9/11892	1											0
Phal. Ruby	Phal. Pink Hawaii	Phal. Summit Queen	1956	W. Romanoff	2/11777	0											0
Phal. Ruby Wells	Phal. Ruby	Phal. Bess Wells	1960	G. de Jong	12/10730	0											0
Phal. Lipperose	Phal. Ruby Wells	Phal. Zada	1968	F. Hark	141/10260	0											0
Phal. Lippstadt	Phal. Doris Wells	Phal. Lipperose	1971	F. Hark	53/6817	1			1								1
Phal. Samson	Phal. Sesam	Phal. Lippstadt	1977	F. Hark	19/3402	0											0
Phal. Abendrot	Phal. Lippezauber	Phal. Lippstadt	1974	F. Hark	229/4504	17	1	6	9								16
Phal. Morgenrot	Phal. Lipperose	Phal. Lippstadt	1974	F. Hark	24/2818	1			1								1
Phal. Aalsmeer Rose	Phal. Ruby	Phal. Marmouset	1960	Shaffer's	33/6566	1			1								1
Phal. Raycraft	Phal. Aalsmeer Rose	Phal. Doris	1962	Santa Cruz	23/5391	6			4								4
Phal. Otohime	Phal. Grace Palm	Phal. Raycraft	1973	M. Watanabe	45/5098	0											0
Phal. Happy Valentine	Phal. Otohime	Phal. Odoriko	1983	Dogashima	201/4132	17		5	10								15
Phal. Nobby's Valentine	Phal. Happy Valentine	Phal. Eva's Nevado Puro	2000	Nobby Orchids	2/1150	0											0
Phal. Arai	Phal. Arthur Freed	Phal. Raycraft	1977	H. Arai	24/3045	1			1								1

Phal. Eva's Nevado Puro	Phal. Hinamatsuri	Phal. Arai	1999	Orquideas Eva	5/1157	0											0
Phal. Elisa	Phal. Grace Palm	Phal. Aalsmeer Rose	1959	Shaffer's	32/1906	13		6	7								13
Phal. Naughty Pink	Phal. Elisa	Phal. Pink Chief	1966	Rod McLellan Co.	9/1799	0											0
Phal. Hinamatsuri	Phal. Musashino	Phal. Naughty Pink	1983	K. Nagai	34/1772	4		3	1								4
Phal. Roswell	Phal. Ruby Wells	Phal. Aalsmeer Rose	1960	Shaffer's	25/752	3		1	2								3
Phal. Elizabeth Marshall	Phal. Gladys Read	Phal. Roswell	1966	Shaffer's	15/246	0											0
Phal. Pink Chiffon	Phal. Pink Hawaii	Phal. Doris	1958	Alberts / Merkel	4/225	2			1								1
Phal. Rosalie	Phal. Hawaii	Phal. schilleriana	1945	Mrs. L. McCoy	5/9745	0											0
Phal. Rosalani	Phal. Rosalie	Phal. Monique	1954	Mrs. L. McCoy	1/9738	0											0
Phal. Pink Wave	Phal. Rosalani	Phal. Marmouset	1956	Mrs. L. McCoy	10/9737	0											0
Phal. Riley	Phal. Pink Wave	Phal. Zada	1962	Fantastic Gardens	1/4051	1			1								1
Phal. Satin Rouge	Phal. Pink Chief	Phal. Riley	1967	J. F. Hughes	37/4050	6			6								6
Phal. Flor de Mato	Phal. Zada	Phal. Satin Rouge	1972	Hager Orchids	92/3625	5		3	2								5
Phal. Corralitos Rose	Phal. Satin Rouge	Phal. Pink Chief	1979	J. F. Hughes	3/209	0											0
Phal. Pamela	Phal. Elisabethae	Phal. Fontainebleau	1939	S. Low	20/15400	0											0
Phal. Pink Glory	Phal. Hawaii	Phal. Pamela	1943	Alberts / Merkel	13/12352	0											0
Phal. Judith	Phal. Pink Glory	Phal. Doris	1956	Alberts / Merkel	7/6114	0											0
Phal. Virjudy	Phal. Virginia	Phal. Judith	1962	C. Beard	4/5344	0											0
Phal. Pink Sunset	Phal. Reve Rose	Phal. Pamela	1951	Mrs. L. McCoy	18/9016	0											0
Phal. Susie Darlin	Phal. Doris	Phal. Pink Sunset	1959	Mrs. L. McCoy	14/1715	0											0
Phal. Gigi	Phal. Pink Sunset	Phal. Diamond Head (1954)	1959	Mrs. L. McCoy	7/4922	0											0
Phal. Shocking Pink	Phal. Reve Rose	Phal. Pink Sunset	1957	Mrs. L. McCoy	1/4518	1			1								1
Phal. Pink Vision	Phal. Pink Sunset	Phal. Shocking Pink	1959	Mrs. L. McCoy	17/4517	2		1									1
Phal. Pink Victory	Phal. Pink Sunset	Phal. Mary Manda	1954	Mrs. L. McCoy	3/508	0											0
Phal. Radiant Glow	Phal. Pink Victory	Phal. Doris	1959	Mrs. L. McCoy	16/505	0											0
Phal. Rothomago	Phal. Fontainebleau	Phal. Reve Rose	1943	Vacherot-Lecoufle	10/6925	0											0
Phal. Mistinguett	Phal. Rothomago	Phal. Helle	1956	Marcel Lecoufle	47/6913	4			1								1
Phal. Pino	Phal. Phobos	Phal. Mistinguett	1962	Marcel Lecoufle	2/6913	0											0
Phal. Joyau	Phal. Pino	Phal. Lipperose	1977	Marcel Lecoufle	50/1424	0											0
Phal. Ondine	Phal. Mistinguett	Phal. sanderiana	1964	Vacherot-Lecoufle	29/4140	0											0
Phal. Modine	Phal. Ondine	Phal. Elizabeth Marshall	1974	Shaffer's	11/80	0											0
Phal. French Delight	Phal. Marquise	Phal. Modine	1988	Carmela	27/57	1			1								1
Phal. Melinda Nan	Phal. Mistinguett	Phal. Mouchette	1979	Shaffer's	30/368	2			2								2
Phal. Melinda Rose	Phal. Corralitos Rose	Phal. Melinda Nan	1986	J. F. Hughes	23/204	0											0
Phal. Sourire	Phal. Henriette Lecoufle	Phal. Mistinguett	1970	Vacherot-Lecoufle	14/1205	0											0
Phal. Abondance	Phal. Sourire	Phal. Barbara Beard	1974	Vacherot-Lecoufle	11/474	0											0
Phal. Cataracte	Phal. Cinnamon Candy	Phal. Abondance	1978	Vacherot-Lecoufle	36/375	0											0
Phal. Vladimir Horowitz	Phal. Cataracte	Phal. Dame de Coeur	1989	B. Woodson	17/23	3			3								3
Phal. Lutece	Phal. aphrodite	Phal. Wiganiae	1930	Vacherot-Lecoufle	2/5191	0											0
Phal. Ispahan	Phal. Jardin des Plantes	Phal. Lutece	1944	Vacherot-Lecoufle	1/5189	0											0
Phal. Damas	Phal. Ispahan	Phal. Fanchette	1960	Vacherot-Lecoufle	5/5188	0											0
Phal. Eva	Phal. Damas	Phal. Diva	1966	Vacherot-Lecoufle	4/2778	0											0
Phal. Jardin des Plantes	Phal. Ariadne-Amabilis	Phal. Wiganiae	1937	Jardin des Plantes	8/9036	0											0
Phal. Cendrillon	Phal. amabilis	Phal. Jardin des Plantes	1948	Vacherot-Lecoufle	8/8619	0											0
Phal. Iris	Phal. Cherubin	Phal. Cendrillon	1955	Vacherot-Lecoufle	8/5101	0											0
Phal. Fanchette	Phal. aphrodite	Phal. Jardin des Plantes	1949	Vacherot-Lecoufle	18/9013	0											0
Phal. Lachesis	Phal. Fanchette	Phal. Cendrillon	1955	Vacherot-Lecoufle	24/6704	1			1								1
Phal. Diva	Phal. Isis	Phal. Lachesis	1960	Vacherot-Lecoufle	3/2289	0											0
Phal. Henriette Lecoufle	Phal. Lachesis	Phal. Ramona	1967	Vacherot-Lecoufle	56/3550	0											0
Phal. Opaline	Phal. Henriette Lecoufle	Phal. Capitola	1970	Vacherot-Lecoufle	61/1780	6			1								1
Phal. Meridian	Phal. Opaline	Phal. Vallehigh	1977	Hans Koch	4/1231	0											0
Phal. Taisuco Kochdian	Phal. Kochs Schneestern	Phal. Meridian	1991	Taiwan Sugar	61/1165	3	1		1								2
Phal. Sogo Yukidian	Phal. Yukimai	Phal. Taisuco Kochdian	1998	Sogo	167/542	35		4	1			6	1				12
Phal. Taisuco Kaalakian	Phal. Mount Kaala	Phal. Taisuco Kochdian	1993	Taiwan Sugar	65/388	6		2									2
Phal. Taisuco Crane	Phal. Taisuco Windian	Phal. Taisuco Kaalakian	1995	Taiwan Sugar	27/81	2		1									1
Phal. Sogo Musadian	Phal. Musashino	Phal. Taisuco Kochdian	1998	Sogo	28/99	4		3									3
Phal. Taisuco Windian	Phal. Winter Kaala	Phal. Taisuco Kochdian	1993	Taiwan Sugar	27/293	3		1	2								3
Phal. Exquis	Phal. Diva	Phal. Fanchette	1970	Vacherot-Lecoufle	1/2274	0											0
Phal. Artigny	Phal. Exquis	Phal. Eva	1971	Vacherot-Lecoufle	9/2273	0											0
Phal. Anouche	Phal. Fanchette	Phal. Isis	1970	Vacherot-Lecoufle	9/5011	0											0
Phal. Rapture	Phal. Anouche	Phal. Isis	1970	Vacherot-Lecoufle	17/3869	0											0
Phal. Raptigny	Phal. Artigny	Phal. Rapture	1976	Vacherot-Lecoufle	37/1716	0											0
Phal. Scherzo	Phal. Francine	Phal. Rapture	1974	Vacherot-Lecoufle	5/2938	0											0
Phal. Welcome Home	Phal. Hokuspokus	Phal. Rapture	1979	Hausermann	34/223	0											0
Phal. Dawn Welcome	Phal. Welcome Home	Phal. Melissa Dawn	1992	Orchid Zone	2/55	0											0
Phal. Minouche	Phal. Karleen's Wendy	Phal. Anouche	1971	Vacherot-Lecoufle	11/639	0											0
Phal. Alida	Phal. Artigny	Phal. Minouche	1979	Vacherot-Lecoufle	36/373	0											0
Phal. Ann Krull	Phal. Alida	Phal. Royal Satin	1986	J. Ewing	3/3	11		6	5								11

Phal. Vitrail	Phal. Rapture	Phal. Anouche	1975	Vacherot-Lecoufle	11/68	0											0
Phal. Sarah Elizabeth Rowe	Phal. Melissa Dawn	Phal. Vitrail	1983	John E. Wilson	4/32	3			3								3
Phal. Mouchette	Phal. Francine	Phal. Anouche	1972	Vacherot-Lecoufle	71/4106	0											0
Phal. Elise de Valec	Phal. Raptigny	Phal. Mouchette	1980	Vacherot-Lecoufle	70/1980	1			1								1
Phal. Dame de Coeur	Phal. Elise de Valec	Phal. Frisson	1984	Vacherot-Lecoufle	33/82	4		1	3								4
Phal. Scaramouche	Phal. Marquise	Phal. Mouchette	1979	Vacherot-Lecoufle	30/1452	0											0
Phal. Frisson	Phal. Mouchette	Phal. Scherzo	1979	Vacherot-Lecoufle	75/2790	0											0
Phal. Ever-spring Star	Phal. Matou Freed	Phal. Frisson	1990	Ever-spring	1/1247	0											0
Phal. Rousserole	Phal. Cataracte	Phal. Frisson	1984	Vacherot-Lecoufle	76/132	6		1	5								6
Phal. Sylvie	Phal. Elisabethae	Phal. Jardin des Plantes	1942	Vacherot-Lecoufle	5/6169	0											0
Phal. Domremy	Phal. Sylvie	Phal. Fanchette	1960	Vacherot-Lecoufle	2/6164	0											0
Phal. Francine	Phal. Domremy	Phal. Damas	1966	Vacherot-Lecoufle	32/4963	1			1								1
Phal. Snow Leopard	Phal. Alida	Phal. Francine	1982	C. Hoover	74/186	4			3	1							4
Phal. Sand Pebbles	Phal. Snow Leopard	Phal. Sarah Elizabeth Rowe	1986	E. Carlson	14/24	5		1	3								4
Phal. Melissa Dawn	Phal. Alice Gloria	Phal. Francine	1973	R. Ernst	15/212	2			2								2
Phal. Hokuspokus	Phal. Lipperose	Phal. Francine	1974	A. Rohl	67/794	1		1									1
Phal. Dawn Promise	Phal. Dawn Welcome	Phal. stuartiana	1992	J. Ewing	2/51	0											0
Phal. Dawn Treader	Phal. Dawn Promise	Phal. Gladrose	1992	H. Hager	25/48	6		1	5								6
Phal. Gloriosa	Phal. Pink Glory	Phal. stuartiana	1948	Alberts / Merkel	7/4803	3			1					1			2
Phal. Kathy Maguire	Phal. Gloriosa	Phal. Zada	1964	C. Beard	4/4789	2			2								2
Phal. Kathryn Leahey	Phal. Kathy Maguire	Phal. Betty Beard	1969	C. Beard	5/4780	0											0
Phal. Eagle	Phal. Kathryn Leahey	Phal. Irene Van Alstyne	1973	C. Beard	7/4763	0											0
Phal. New Eagle	Phal. Eagle	Phal. Lipperose	1986	Hsin Fu-Hsing	44/4289	0											0
Phal. New Cinderella	Phal. Pinlong Cinderella	Phal. New Eagle	1997	Brother	48/1985	2			1								1
Phal. Nobby's Pink Lady	Phal. Nobby's Valentine	Phal. New Cinderella	2000	Nobby Orchids	51/1146	7		3	2					1			6
Phal. Chian Xen Pearl	Phal. Ching Hua Spring	Phal. Nobby's Pink Lady	2002	Fu-Liang Huang	174/1042	25		5	4								9
Phal. Cypress Pink	Phal. New Eagle	Phal. Samson	1987	Lo Tzung-Jen	5/2857	0											0
Phal. Sun Prince	Phal. Cypress Pink	Phal. Houpi Beauty	1995	Sogo	39/2844	0											0
Phal. Minho Princess	Phal. Sun Prince	Phal. Ta Lin Freeds	1996	Sogo	122/1787	7		2	5								7
Phal. Leda	Phal. amabilis	Phal. stuartiana	1888	Veitch	16/51	0											0
Phal. Ariadne (1896)	Phal. aphrodite	Phal. stuartiana	1896	Veitch	8/23093	0											0
Phal. Perle Blanche	Phal. Ariadne (1896)	Phal. Rothschildiana	1896	Vacherot-Lecoufle	1/20825	0											0
Phal. Psyche	Phal. Gilles Gratiot	Phal. Perle Blanche	1932	Vacherot-Lecoufle	10/20824	0											0
Phal. Altadena	Phal. La Canada	Phal. Psyche	1946	Orchid Research	7/20776	0											0
Phal. Doctor Henry O. Eversole	Phal. Altadena	Phal. Winged Victory	1950	Orchid Research	14/9474	1		1									1
Phal. Fenton Davis Avant	Phal. Chieftain	Phal. Doctor Henry O. Eversole	1962	Sykora	6/9256	0											0
Phal. Golden Sands	Phal. Fenton Davis Avant	Phal. lueddemanniana	1964	Fields Orchids	140/7717	18	1	8	6					1			16
Phal. Golden Amboin	Phal. Golden Sands	Phal. amboinensis	1976	Jones & Scully	114/3417	11		4	5								9
Phal. Brother Angel	Phal. Golden Buddha	Phal. Golden Amboin	1988	Brother	2/100	1		1									1
Phal. Salu Beauty	Phal. Golden Amboin	Phal. Sentra	1995	Ching Her	8/636	0											0
Phal. Salu Spot	Phal. Paifang's Auckland	Phal. Golden Amboin	1992	Ching Her	44/1868	3		1	2								3
Phal. Golden Sun	Phal. Salu Spot	Phal. Sentra	1995	Ching Her	108/1423	5		1	2								3
Phal. Goldiana	Phal. Golden Sands	Phal. lueddemanniana	1973	Wm. A. Miles	85/376	11		2	8					1			11
Phal. Liu Tuen-Shen	Phal. gigantea	Phal. Golden Sands	1979	I. Dobkin	80/5548	6			4					2			6
Phal. Fortune Buddha	Phal. Golden Buddha	Phal. Liu Tuen-Shen	1983	Brothers	82/950	3		1	2								3
Phal. Brother Buddha	Phal. Fortune Buddha	Phal. Brother Angel	1992	Brother	26/98	1			1								1
Phal. Ambo Buddha	Phal. Brother Buddha	Phal. amboinensis	1993	Brother	4/4	30	1	14	13				1	1			30
Phal. Darling Taiwan	Phal. Barbara Moler	Phal. Liu Tuen-Shen	1982	Darling	17/1595	0											0
Phal. Three Stars	Phal. Paifang's Queen	Phal. Darling Taiwan	1994	H. N. Hsiao	2/1553	0											0
Phal. Sentra	Phal. Paifang's Queen	Phal. Three Stars	1994	H. N. Hsiao	16/1550	0											0
Phal. Paifang's Auckland	Phal. Liu Tuen-Shen	Phal. Paifang's Queen	1987	Paifang Orchid Garden	43/2059	0											0
Phal. Solar Flare	Phal. Golden Sands	Phal. Golden Pride	1979	Fort Caroline	19/71	29		19	10								29
Phal. Mattie Shave	Phal. Mary Lou Stoddard	Phal. Fenton Davis Avant	1962	Roy Fields	6/1832	0											0
Phal. Miami Maid	Phal. Mattie Shave	Phal. Winifred Prahl	1968	Fields Orchids	48/1815	2		1									1
Phal. Winter Maiden	Phal. Miami Maid	Phal. White Gull	1973	Hausermann	62/991	2		2									2
Phal. Winter Kaala	Phal. Winter Maiden	Phal. Mount Kaala	1985	Aromic Gardens	18/522	0											0
Phal. Margaret Bean	Phal. Doris	Phal. Altadena	1953	R. Bean	35/17082	7		1	2								3
Phal. Spitfire	Phal. Margaret Bean	Phal. Roselle	1960	Rod McLellan Co.	4/10923	0											0
Phal. Mad Hatter	Phal. Spitfire	Phal. Ann Hatter	1965	Rod McLellan Co.	104/10910	3		1	1					1			3
Phal. Mad Lips	Phal. Ann Hatter	Phal. Mad Hatter	1969	Rod McLellan Co.	42/1758	0											0
Phal. Hugo Freed	Phal. Ella Freed	Phal. Mad Lips	1973	Freed	63/1062	8			8								8
Phal. Career Girl	Phal. Show Girl	Phal. Mad Hatter	1971	Freed	50/6488	2			2								2
Phal. Freed's Danseuse	Phal. Ella Freed	Phal. Career Girl	1975	Freed	54/5159	4			4								4
Phal. Lien-Hung Lip	Phal. Snow Mist	Phal. Freed's Danseuse	1992	Lin Mu-Lien	2/1800	0											0
Phal. Zuma Dancer	Phal. Barbara Freed Saltzman	Phal. Freed's Danseuse	1979	Zuma Canyon	10/3806	0											0
Phal. Jason Beard	Phal. Pueblo Jewel	Phal. Mad Hatter	1972	C. Beard	46/6521	4		4									4
Phal. Odoriko	Phal. Jason Beard	Phal. Eva Lou	1980	Dogashima	52/5281	0											0
Phal. Goleta	Phal. Doris	Phal. Margaret Bean	1956	R. Bean	23/14376	6			5					1			6

Phal. Elwyn Middleton	Phal. Ruby Lips	Phal. Goleta	1962	C. Beard	5/11432	0											0
Phal. Suemid	Phal. Susan Merkel	Phal. Elwyn Middleton	1965	C. Beard	24/9849	0											0
Phal. Red Lip (1968)	Phal. Pink Jewel (1964)	Phal. Suemid	1968	C. Beard	21/6570	1		1									1
Phal. Happy Day	Phal. Red Lip (1968)	Phal. Lois Jansen	1972	C. Beard	30/4711	3		1	1								2
Phal. Ella Day	Phal. Ella Freed	Phal. Happy Day	1992	Lo Ching-Po	1/4419	0											0
Phal. Tsuei You Queen	Phal. Terry-Beth Ballard	Phal. Ella Day	1992	Tsuei You	1/4418	0											0
Phal. Carter Shenk	Phal. Lois Jansen	Phal. Suemid	1972	C. Beard	16/5275	0											0
Phal. Lucky Shenk	Phal. Lucky Lady	Phal. Carter Shenk	1979	Kelly Yu	4/5219	0											0
Phal. Midlip	Phal. Ruby Lips	Phal. Elwyn Middleton	1966	C. Beard	9/3045	0											0
Phal. Lady Ruby	Phal. Ruby Zada	Phal. Midlip	1971	C. Beard	64/2881	3		1	2								3
Phal. Redfan	Phal. Goleta	Phal. Ann Hatter	1967	Rod McLellan Co.	68/8101	0											0
Phal. Marquise	Phal. Redfan	Phal. Lady Ruby	1975	Vacherot-Lecoufle	64/1823	1			1								1
Phal. Eva Lou	Phal. Suemid	Phal. Redfan	1971	C. Beard	54/5744	1			1								1
Phal. Cindy Brandt	Phal. Goleta	Phal. Palm Beach	1963	C. Beard	26/1788	2		2									2
Phal. Daryl Beard	Phal. Dos Pueblos	Phal. Cindy Brandt	1966	C. Beard	58/1627	1			1								1
Phal. Vera Henderson	Phal. Daryl Beard	Phal. Long Life	1974	C. Beard	15/206	0											0
Phal. Florida Snow	Phal. Teakwood	Phal. Vera Henderson	1984	Krull-Smith	77/186	6		4	2								6
Phal. Dazzler	Phal. Margaret Bean	Phal. Thomas Tucker	1957	H. D. Wright	4/615	0											0
Phal. Galaxy	Phal. Dazzler	Phal. Arcadia	1957	H. D. Wright	2/560	2											0
Phal. Recoverer	Phal. Winifred Prahl	Phal. Galaxy	1960	H. D. Wright	3/558	0											0
Phal. Valley Queen	Phal. Royal Veil	Phal. Recoverer	1968	H. Kagawa	3/555	0											0
Phal. Queen Anna	Phal. Anna Tham	Phal. Valley Queen	1980	Kodama	1/520	0											0
Phal. Hakalau Wonder	Phal. Queen Anna	Phal. Mount Martian	1980	Kodama	12/519	1		1									0
Phal. Hakalau Queen	Phal. Hakalau Wonder	Phal. Danny Lee	1985	Carmela	67/383	7		5	2								0
Phal. Tokyo Bridal	Phal. Hakalau Queen	Phal. Mount Kaala	1997	Tokyo Orchid Nursery	3/183	0											0
Phal. Cygnus	Phal. Tokyo Bridal	Phal. Silky Moon	1997	Kokubunji	47/179	5	1	2	1								0
Phal. Innocence	Phal. Elisabethae	Phal. Psyche	1945	Vacherot-Lecoufle	5/6899	0											0
Phal. Altano	Phal. Altadena	Phal. Innocence	1948	Orchid Research	1/6871	0											0
Phal. White Foam	Phal. Altano	Phal. Winged Victory	1956	Shaffer's	8/6870	0											0
Phal. Pinocchio	Phal. White Foam	Phal. equestris	1959	O. Kirsch	4/6860	0											0
Phal. Ariadne-Amabilis	Phal. amabilis	Phal. Ariadne (1896)	1896	Unknown	1/9037	0											0
Phal. Linda Vasquez	Phal. Hugo Freed	Phal. stuartiana	1976	Zuma Canyon	5/6	7		3	4								7
Phal. Mollie's Joy	Phal. Goldiana	Phal. stuartiana	1983	Livingston's Orchids	2/2	7		4	2					1			7
Phal. Flor Del Valle	Phal. Golden Amboin	Phal. stuartiana	1985	J. Ewing	2/2	11		3	8								11
Phal. Charisma	Phal. Jolly Roger	Phal. stuartiana	1984	J. Ewing	2/2	7		3	4								7
Phal. Hermione	Phal. lueddemanniana	Phal. stuartiana	1899	Veitch	11/8840	3			1					2			3
Phal. Rosy Charm	Phal. Hermione	Phal. Pink Wave	1962	E. Iwanaga	32/8474	13		5	7								12
Phal. Ministripes	Phal. Rosy Charm	Phal. Pinocchio	1968	Stoddard	10/6855	3		1	1								2
Phal. Jiminy Cricket	Phal. Ministripes	Phal. Red Lip (1965)	1971	Jones & Scully	6/6720	1		1									1
Phal. Cindy Tsai	Phal. Red Lip (1965)	Phal. Jiminy Cricket	1975	I. Dobkin	12/5686	0											0
Phal. Chiali Stripe	Phal. Cindy Tsai	Phal. Lucky Shenk	1983	Long River	21/5211	0											0
Phal. Houpi Beauty	Phal. Tsuei You Queen	Phal. Chiali Stripe	1992	Lai Ching-Feng	5/4417	0											0
Phal. Modern Stripes	Phal. Freed's Danseuse	Phal. Chiali Stripe	1987	Lee Peng-Lang	21/4447	0											0
Phal. Okay Seven	Phal. Modern Stripes	Phal. Houpi Beauty	1992	Liao Lung-Hsien	24/2865	1		1									1
Phal. Taisuco Jewel	Phal. Okay Seven	Phal. equestris	1997	Taiwan Sugar	25/593	4		1	3								4
Phal. Chih Shang's Stripes	Phal. Modern Stripes	Phal. Matou Freed	1989	M. Lin	84/2528	5		1	4								5
Phal. Ta Lin Freeds	Phal. Lien-Hung Lip	Phal. Chih Shang's Stripes	1996	Sogo	4/1796	0											0
Phal. Chiali Freed	Phal. Cindy Tsai	Phal. Ella Freed	1983	Long River	25/4433	0											0
Phal. Matou Rose	Phal. Vicki Sue Lockhart	Phal. Chiali Freed	1988	Ma-Tou	11/557	0											0
Phal. Minho Lit-Rose	Phal. Matou Rose	Phal. equestris	1996	Min-Ho	8/520	0											0
Phal. Sogo Alice	Phal. Minho Lit-Rose	Phal. Taisuco Jewel	1999	Sogo	13/508	1		1									1
Phal. Matou Freed	Phal. Zuma Dancer	Phal. Chiali Freed	1988	Ma-Tou	41/3796	0											0
Phal. Martha Kennedy	Phal. Sunrise	Phal. Rosy Charm	1967	Mrs. L. McCoy	1/1591	0											0
Phal. Waimanalo Sunrise	Phal. Martha Kennedy	Phal. Harlequin	1978	John Noa	3/1590	0											0
Phal. Kathleen Ai	Phal. Waimanalo Sunrise	Phal. Wendel George	1978	David Ai	139/1587	13		3	9					1			13
Phal. Violet Glow	Phal. Hermione	Phal. Susie Darlin	1963	E. Iwanaga	4/1647	1			1								1
Phal. Schilglow	Phal. Violet Glow	Phal. schilleriana	1968	E. Iwanaga	1/1670	1			1								1
Phal. Elaine Mishima	Phal. Viola Tanaka	Phal. Schilglow	1982	H. Tanaka	3/1669	0											0
Phal. Jutta Brungor	Phal. Elaine Mishima	Phal. Lipperose	1982	H. Tanaka	10/1505	0											0
Phal. Carmela's Spots	Phal. Jutta Brungor	Phal. Frisson	1989	G. & D. Kobayashi	73/1300	2			2								2
Phal. Ho's French Fantasia	Phal. Ho's Fancy Leopard	Phal. Carmela's Spots	1993	Tin-Fan Ho	41/1071	0											0
Phal. Leopard Prince	Phal. Sun Prince	Phal. Ho's French Fantasia	1997	Sogo	242/837	32	1	4	6					1			12
Phal. I-Hsin Sun Beauty	Phal. Salu Peoker	Phal. Leopard Prince	2003	W. T. Chien	10/15	15		2	4					1			7
Phal. Hilo Lip	Phal. Hilo Beauty	Phal. Elaine Mishima	1985	H. Tanaka	72/172	17		3	11		1						15
Phal. Lively Susan	Phal. Bataan	Phal. stuartiana	1951	Mrs. L. McCoy	2/9221	0											0
Phal. Sunrise	Phal. Lively Susan	Phal. Roselle	1956	Mrs. L. McCoy	21/9219	2			2								2
Phal. Sunbeam	Phal. Gigi	Phal. Sunrise	1963	Mrs. L. McCoy	8/4906	0											0
Phal. Honey Dew	Phal. Moon Monarch	Phal. Sunbeam	1967	Jones & Scully	4/4890	0											0

Phal. Bamboo Baby	Phal. Honey Dew	Phal. amboinensis	1971	Jones & Scully	72/4878	21	1	10	8								19
Phal. Misty Green	Phal. Barbara Moler	Phal. Bamboo Baby	1981	J. Redlinger	103/4709	28		12	16								28
Phal. Golden Peoker	Phal. Misty Green	Phal. Liu Tuen-Shen	1983	Brothers	218/4087	9		4	2	2				1			9
Phal. Ever-spring Light	Phal. Ever-spring Star	Phal. Golden Peoker	1992	Ever-spring	26/1246	5		1	2	1							4
Phal. Ching Hua Spring	Phal. Minho Princess	Phal. Ever-spring Light	1998	Ching Hua	6/1182	0											0
Phal. Yellow Peoker	Phal. Golden Peoker	Phal. Salu Beauty	1998	Ching Her	18/508	0											0
Phal. Salu Peoker	Phal. Yellow Peoker	Phal. Golden Sun	2000	Ching Her	94/387	4			3								3
Phal. I-Hsin Black Jack	Phal. Golden Peoker	Phal. Leopard Prince	1999	W. T. Chien	28/212	14		3	7	1							11
Phal. Orglade's Lemon Dew	Phal. Honey Dew	Phal. Deventeriana	1989	Jones & Scully	8/8	20		10	6			1		1			18
Phal. Best Girl	Phal. Pink Vision	Phal. Sunrise	1961	Mrs. L. McCoy	62/4423	6			4								4
Phal. Dear Heart	Phal. Best Girl	Phal. Ondine	1971	Hager Orchids	13/3551	0											0
Phal. Herbert Hager	Phal. Dear Heart	Phal. Flor de Mato	1977	Stewart Inc.	56/2936	14		3	11								14
Phal. Pinlong Cinderella	Phal. Morgenrot	Phal. Herbert Hager	1983	Today Tropical Nursery	23/2299	1											0
Phal. Ann Lovelace	Phal. Radiant Glow	Phal. Sunrise	1962	Mrs. L. McCoy	39/406	3			3								3
Phal. Pink Formal	Phal. Pink Chiffon	Phal. Ann Lovelace	1972	Freed	6/251	0											0
Phal. Rhoda Fredricks	Phal. Ann Marie Beard	Phal. Pink Formal	1973	Freed	9/189	4		1	3								4
Phal. Hilo Beauty	Phal. Mamie Moser	Phal. Rhoda Fredricks	1985	H. Tanaka	1/173	0											0
Phal. Arctic Tern	Phal. Elinor Shaffer	Phal. stuartiana	1979	Beall	1/57	0											0
Phal. Good Tern	Phal. Arctic Tern	Phal. Alida	1986	Livingston's Orchids	9/56	2		1	1								2
Phal. Bright Morning	Phal. Good Tern	Phal. French Delight	1989	Carmela	10/13	4		2	2								4
Rnthps. Mildred Jameson	Renanthera monachica	Phal. stuartiana	1969	H. Wallbrunn	4/4	16		3	8					1			12

Observations related to above table:

* Of the 399 Phal. stuartiana F1 Hybrids, only 17 are on the table.
* In all cases Phal. stuartiana is used as the seed/pod parent.
* Lines were determined by the most recent introduction of Phal. stuartiana and related F1 hybrids. (If a F3 Phal. stuartiana grex was crossed with a F5 Phal. stuartiana grex, the hybrid would be placed in the F3 grex line.)
* There was one intergeneric hybrid in above list of the 193 total intergeneric Phal. stuartiana hybrids (second most intergeneric progeny and most awards).
* Of the 17 Phal. stuartiana F1 Hybrids on the table only seven have 10 or more progeny included on the table. Comments on some of these F1 hybrid lines follow:

Phal. Cassandra
(Phal. equestris x Phal. stuartiana)
'Soroa' AM/AOS
Mar 1989, NS 4.5 cm

Phal. Tying Shin Fantastic World
(Phal. Chian Xen Pearl x
Phal. Timothy Christopher)
'Diana' AM/AOS
Mar 2013, NS 7.1 x 6.7 cm

* **Phal. Cassandra** (Phal. equestris x Phal. stuartiana) was made in 1896 by Veitch, there are a total of 226 F1 hybrids and 3759 total progeny.
  * All of these hybrids would be considered miniature, aka. small, Phalaenopsis
  * The above table includes six F1 hybrids and 17 total progeny (Included in the Phal. Cassandra line is the allied Phal. Terilyn Fujitake (Phal. Pink Fantasy x Phal. stuartiana) line).
  * Of the grexes in this table, six grexes have received the 10 most AOS awards in this group.
  * Of the grexes in this table, four grexes have the 10 most F1 progeny in this group.
  * The most recently registered grex in this table is Phal. Tying Shin Fantastic World (Phal. Chian Xen Pearl x Phal. Timothy Christopher) was made in 2008 by Kuo Liang Hung, there are a total of 3 F1 progeny.

* **Phal. Wiganiae** (Phal. schilleriana x Phal. stuartiana) was made in 1899 by S. Low, there are a total of 17 F1 and 21,520 total progeny (there are a total of 36,840 total Phalaenopsis hybrids).

Phal. Wiganiae
(Phal. schilleriana x Phal. stuartiana)

Phal. Chian Xen Pearl
(Phal. Ching Hua Spring x
Phal. Nobby's Pink Lady)
'Ming-Ho' AM/AOS
Mar 2002, NS 9.3 x 7.5 cm

  * Includes the largest number of grexes, 110, in above table will divide into major 'lines'
  * Phal. Fontainebleau (Phal. schilleriana x Phal. Wiganiae) was made in 1930 by Vacherot-Lecoufle, there are a total of 21 F1 hybrids and 18,656 total progeny.

Phal. Happy Valentine
(Phal. Otohime x Phal. Odoriko)
'Excell' AM/AOS
Mar 1993, NS 11.7 x 8.7 cm

  * Has most of the classic pinks associated with Phal. stuartiana, not unusal for the same grexes to be 'spotted.'
  * Two grexes are in the top ten in number of F1 grexes, Phal. Happy Valentine most recently registered.
  * Phal. Chian Xen Pearl (Phal. Ching Hua Spring x Phal. Nobby's Pink Lady), included in above table, is the most recent progeny in the table of Phal. Happly Valentine.
  * Phal. Jardin des Plantes (Phal. Ariadne-Amabilis x Phal. Wiganiae) was made in 1899 by Jardin des Plantes, there are a total of 8 F1 hybrids and 9,036 total progeny – Phal. Lachesis (Phal. Fanchette x Phal. Cendrillon) was made in 1955 by Vacherot-Lecoufle, there are a total of 24 F1 hybrids and 6,704 total progeny.

Phal. Sogo Yukidian
(Phal. Yukimai x
Phal. Taisuco Kochdian)
'V3' CCE/HCC/AOS
Mar 2015, NS 12.8 x 11.3 cm

    * This line has the Classical Large White Phalaenopsis.
    * Phal. Sogo Yukidian is among the top ten in above table in number of F1 progeny. The clone picture had 54 flowers and 2 buds on one multi-branched inflorescences.
  * The name 'French spots' are tied to
    * Plants that were breed by Vacherot-Lecoufle with spots
    * 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." With Phalaenopsis a spot can be circular, a blotch (a large or irregular spot), or a bar (strip, band or broad line)
  * The classical 'French spots' are mostly in two related lines
    * Phal. Jardin des Plantes (Phal. Ariadne-Amabilis x Phal. Wiganiae) was made in 1899 by Jardin des Plantes, there are a total of 8 F1 hybrids and 9,036 total progeny – Phal. Anouche (Phal. Fanchette x Phal. Isis) was made in 1970 by Vacherot-Lecoufle, there are a total of 9 F1 hybrids and 5,011 total progeny.
    * Phal. Sylvie (Phal. Elisabethae x Phal. Phal. Jardin des Plantes) was made in 1942 by Vacherot-Lecoufle, there are a total of 5 F1 hybrids and 6,169 total progeny.
  * There are two breeding programs of 'French spots'

Phal. Dame de Coeur
(Phal. Elise de Valec x Phal. Frisson)
'Ponkan's Beauty Spot' HCC/AOS
Jan 1986, NS 8.2 cm

* The original 'French' line as defined above
* The 'American' line which started with Vacherot-Lecoufle plants bred by American breeders but soon add plants outside of the original Vacherot-Lecoufle line.

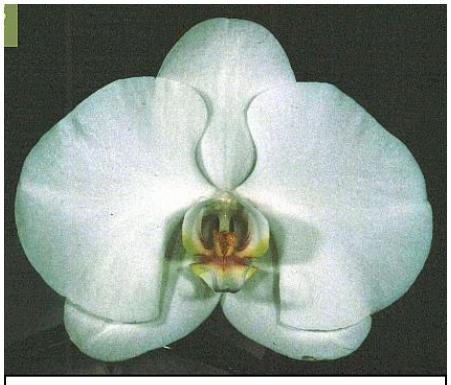
* **Phal. Ariadne (1896)**
(Phal. aphrodite x Phal. stuartiana)

was made in 1896 by Veitch, there are a total of 8 F1 hybrids and 23,093 total progeny (there are a total of 36,840 total Phalaenopsis hybrids).

* Includes the second largest number of grexes, 68, in above table will divide into major 'lines'
  * Phal. Golden Sands (Phal. Fenton Davis Avant x Phal. lueddemanniana) was made in 1964 by Fields Orchids, there are a total of 140 F1 hybrids and 7,717 total progeny.
    * The introduction Phal. lueddemanniana in this line has enhanced the tendance for spots, especially blotches.
    * Two grexes in this line were in the top 10 for number of AOS awards, Phal. Ambo Buddha (Phal. Brother Buddha x Phal. amboinensis) and Phal. Solar Flare (Phal. Golden Sands x Phal. Golden Pride).
  * Margaret Bean (Phal. Doris x Phal. Altadena) was made in 1953 by Rod McLellan Co., there are a total of 4 F1 hybrids and 10,923 total progeny.
    * This is line included white Phalaenopsis with a red lip as well as another white Phalaenopsis line.
    * Two noted grexes in this line are: Phal. Florida Snow (Phal. Teakwood x Phal. Vera Henderson) and Phal. Cygnus (Phal. Tokyo Bridal x Phal. Silky Moon).

Phal. Sand Pebbles
(Phal. Snow Leopard x
Phal. Sarah Elizabeth Rowe)
'Echo Valley' HCC/AOS
Feb 1989, NS 9.0 cm

Phal. Ambo Buddha
(Phal. Brother Buddha x
Phal. amboinensis)
'Phoenix' FCC/AOS
Apr 2000, NS 7.1 x 6.8 cm



Phal. Cygnus
(Phal. Tokyo Bridal x
Phal. Silky Moon)
'Ono-2' FCC/AOS
Feb 2001, NS 14.0 x 12.0 cm

Phal. Hermione
(Phal. Lueddemanniana x
Phal. stuartiana)
'Songer'

* **Phal. Hermione**
(Phal. lueddemanniana x
Phal. stuartiana) was made in 1899 by Veitch, there are a total of 11 F1 hybrids and 8,840 total progeny.
    * This line of breeding is known for stiped Phalaenopsis and dark lips.
    * Examples grexes from the table would be:
* Phal. Kathleen Ai (Phal. Waimanalo Sunrise x Phal. Wendel George) was made in 1953 by Rod McLellan Co., there are a total of 4 F1 hybrids and 10,923 total progeny.
* Phal. Leopard Prince (Phal. Sun Prince x Phal. Ho's French Fantasia) was made in 1997 by Sogo, there are a total of 242 F1 (the most F1 progeny with Phal. stuartiana parentage, yet registered in 1997) and 837 total progeny.
* **Phal. Lively Susan** (Phal. Bataan x Phal. stuartiana) was made in 1951 by Mrs. L. McCoy, there are a total of 2 F1 hybrids and 9,221 total progeny.
    * Includes the third largest number of grexes, 28, in above table. With one major line Phal. Lively Suzan – Phal. Sunrise.
    * This line of breeding is known for smaller, branched inflorescence, pink Phalaenopsis.
    * The key grex from this line is Phal. Golden Peoker (Phal. Misty Green x Phal. Liu Tuen-Shen) made in 1983 by Brothers, there are 218 F1 and 4087 total progeny.

Phal. Sunrise
(Phal. Lively Suzan x Phal. Roselle)
'Rose' HCC/AOS
Mar 1959

Phal. Kathleen Ai
(Phal. Waimanalo Sunrise x
Phal. Wendel George)
'Memoria Pauline Krause' AM/AOS
May 1992, NS 9.6 x 8.2 cm

Phal. Leopard Prince
(Phal. Sun Prince x
Phal. Ho's French Fantasia)
'Hwa Yuan Red Leopard' FCC/AOS
Mar 2013, NS 11.2 x 9.6 cm

Phal. Golden Peoker
(Phal. Misty Green x
Phal. Liu Tuen-Shen)
'Cat's Paw Magician' AM/AOS
Mar 2002, NS 7.4 x 7.6 cm

Phal. stuartiana f. nobilis
'Paraiso Tropical' AM/AOS
Apr 2013, NS 7.0 x 6.2 cm

Synonyms:

None recently

Varieties / forms:

There are two recognized forms:

Phal. stuartiana f. nobilis – pale, sulfur-yellow flowers. There maybe some very lite spotting on the dorsal sepal and petals.

Phal. stuartiana f. punctatissima – spotting on the dorsal sepal and petals like the spotting on the lateral sepals. Spotting is unstable, dependent on environmental changes when the flowers are in bud, resulting in random spots from flower to flower (note example).

Phal. stuartiana f. punctatissima
'Sogo' HCC/AOS
Apr 1996, NS 5.5 x 4.5 cm

Awards:

Phal. stuartiana	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS		12	14			5		2		33
Year(s) Awarded		1977-2013	1977-1998			1974-2011		2007-2013		1974-2013

AOS Quality Awardees (not included prior, highest point if more than one):

Phal. Solar Flare
'Arizona Sunshine' AM/AOS
Mar 1984, NS 5.5 cm
(Phal. Golden Sands x
Rlc. Golden Pride
[Phal. Ariadne (1986) –
Golden Sands line])

Phal. Misty Green
'Selsal' AM/AOS
Feb 1994, NS 8.9 x 8.5 cm
(Phal. Barbara Moler x
Phal. Bamboo Baby
[Phal. Lively Suzan line])

Phal. Zuma's Pixie
'Cat's Paw Purr-fect' AM/AOS
Feb 2004, NS 4.5 x 4.7 cm
(Phal. Carmela's Pixie x
Phal. equestris
[Phal. Cassandra line])

Phal. Taida Lawrence
'Chester Shimizu' AM/AOS
May 2006, NS 7.8 x 8.1 cm
(Phal. Brother Lawrence x
Phal. Goldberry
[Phal. Lively Suzan line])

Phal. Brother Precious Stones
'Sedona's First Son' AM/AOS
Feb 2004, NS 6.1 x 8.3 cm
(Phal. Brother Fancy x
Phal. Brother Purple
[Phal. Lively Suzan line])

Phal. Carmela's Pixie
'Lines' AM/AOS
Oct 1996, NS 4.9 x 5.3 cm
(Phal. Terilyn Fujitake x
Phal. Cassandra
[Phal. Cassandra Line])

Phal. Maki Watanabe
'Myrna's Memory' AM/AOS
Jun 2014, NS 11.5 x 10.9 cm
(Phal. Romance Miki x
Phal. Otohime
[Phal. Wiganiae –
Phal. Fountainebleau Line])

Phal. Baldan's Kaleidoscope
'Golden Treasure' AM/AOS
Apr 1992, NS 9.3 x 8.5 cm
(Phal. Hausermann's Candy x
Phal. Daryl [Phal. Wiganiae –
Phal. Fountainebleau Line])

Most recent awardees:

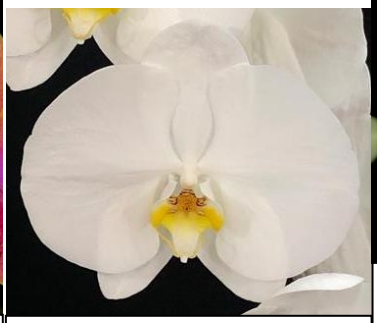
Phal. Fuller's Paint Brush
'Mayfield' AM/AOS
Apr 2019, NS 10.5 x 9.7 cm
(Phal. Fuller's Miss x
Phal. Sung Woei Rosaria
[Phal. Cassandra Line])

Phal. Lioulin R Lip
'Snookie' JC/AOS
Jan 2020, NS 8.2 x 7.5 cm
(Phal. Tying Shin Unicorn x
Phal. Lioulin Pretty Lip
[Phal. Hermione Line])

Phal. AL Sun Hannover
'RED' AM/AOS
Jan 2020, NS 6.7 x 7.0 cm
(Phal. Mituo Sun x
Phal. Hannover Passion
[Phal. Ariadne –
Phal. Golden Sands line])

Phal. Peggy Tauscher
'Owen' AM/AOS
Mar 2020, NS 9.3 x 8.5 cm
(Phal. Sogo Lawrence x
Phal. Tying Shin Forever Love
[Phal. Ariadne –
Phal. Golden Sands line])

Phal. Phoenix Legacy
'Shadow' HCC/AOS
Mar 2020, NS 6.7 x 6.0 cm
(Phal. Sogo Lawrence x
Phal. Brother Dendi
[Phal. Ariadne – Phal. Golden
Sands line])



Phal. Stuart Henderson
'Memoria Harold Smith' AM/AOS
Mar 2019, NS 14.5 x 12.5 cm
(Phal. John Naugle x
Phal. Crystelle Smith
[Phal. Phal. Ariadne –
Phal. Margaret Bean Line])

Phal. Susan Philips
'Logan' HCC/AOS
Mar 2020, NS 7.7 x 7.7 cm
(Phal. Emeraude x
Phal. Tsay's Evergreen
[Phal. Ariadne –
Phal. Doctor Henry O.
Eversole line])

Phal. Walnut Valley Purple Pixie
'B & M' AM/AOS
Sep 2020, NS 3.5 x 3.8 cm
(Phal. Purple Gem x
Phal. Pixie Star
[Phal. Cassandra Line])

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Building Block Data Sheet

Phalaenopsis amabilis, (L.) Blume, Bijdr. Fl. Ned. Ind.: 294 (1825)

[fal-en-OP-sis a-MA-bill-iss]

Phalaenopsis amabilis
'Jayne Garrison' AM/AOS
Jan 2010, NS 7.5 x 6.5 cm

Phalaenopsis [Phal.] amabilis has one of the widest ranges of all phalaenopsis, northern Australia, Indonesia, Papua & New Guinea, the Philippines and New Britain. It is usually found in rainforests on trunks and branches overhanging rivers, swamps and streams occuring at elevations up to 600 meters. It is a medium sized, hot to warm growing, robust, epiphyte with a short, pendulous, robust stem enveloped by imbricating leaf bases and carrying 3 to 5 fleshy or coriaceous, shiny green leaves. It usually blooms in the spring and summer on a slender, to 3' [90 cm] long, racemose or paniculate, laxly few to many flowered inflorescence carrying color and size variable, fragrant, showy, long-lasting flowers.

Phal. amabilis is variable in many of its characters, as one would expect in a species with a broad geographic range that has genetic isolating mechanisms formed by the disjointed island biology. Most of the variation is minor and does not warrant formal recognition. This variation includes the amount of red and yellow pigment on the lip, the presence and density of red spots on the lateral lobes of the lip and the overall flower shape.

It can handle more light than the average Phalaenopsis. You can tell if it is receiving the proper light levels if the leaves have a slight reddish cast.

Phal. amabilis is adaptable to a wider range of temperatures than other species in the genus. The temperature can range from 54-95 F (12-35 C), with the optimum temperature range from 64-90 F (18-31C). Leaf surfaces must be provided 70 percent shade from May to October and 50 percent shade in winter (temperate areas). If temperatures are under 68 F (20 C), the plants need to be cultivated under rather dry conditions as overwatering invites root rot. Flowering can be induced by maintaining a temperature of less than 64F (18 C) at night and 77 F (25 C) during the day for six to eight weeks.

Breeding Characteristics:

It is a member of the Phalaenopsis subgenus - Phalaenopsis section, which forms the basis (along with Phal. aphrodite) of the classical white Phalaenopsis species and hybrids. As a parent, Phal. amabilis contributes an increase in flower count, large size, and long arching inflorescences. Due to large size of the inflorescences and large robust leaves the plants are difficult for windowsill growers.

The table below has the registration of Phal. stuartiana progeny and associated awards with separate lines for total progeny as well as first (F1), second (F2), and third (F3) generations. This main feature of this table is it essentially show the breeding of ALL phalaenopsis since this table has 33,256 grexes while there are 36,935 grexes, that is 90% of all hybrids have Phal. amabilis lineage.

amabilis	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	5	3	0	1	7	25	87	340	1241	3228	5802	8835	7649	5733	301	33257
Assc Awds	0	12	1	0	0	3	9	48	320	766	1247	2230	2864	2510	706	3	10719
F1	0	5	2	0	1	3	8	14	26	22	10	35	100	145	107	5	483
AA	0	12	1	0	0	3	5	0	2	1	2	6	54	43	14	0	143
F2	0	0	1	0	0	4	16	40	75	49	13	42	208	201	187	12	848
AA	0	0	0	0	0	0	4	38	12	6	8	376	156	72	33	0	705
F3	0	0	0	0	0	0	1	28	146	221	119	57	290	325	251	14	1452
AA	0	0	0	0	0	0	0	6	158	166	24	24	123	105	42	0	648

From this table one sees that Phal. amabilis has been and continues to be a major contributor in Phalaenopsis breeding programs. The first hybrid was registered in 1886. There was then a significant lull until the 1930s with a more significant increase after World War II. The use of Phal. amabilis peaked in the 1990s and 2000s.

The chart was generated to determine some of the major breeding lines, but is to large to be included here. Since Phal. is the basis of most Phalaenopsis, did focus on white Phalaenopsis. The starting point for this table was:

* The Phal. stuartiana table from my report on Phal. stuartiana
* The top five primary hybrids in number of awards and top 10 primary hybrids in number of their F1 progeny
* The top five white hybrids in number of awards and top eight white hybrids in number of F1 progeny (per OrchidWiz X7.1, December 2020 update, this includes awards from other organizations besides AOS)
* The five most recently awarded white phalaenopsis in OrchidWiz and in AOS OrchidPro
* Seven white grexes mentioned by Carlos Fighetti in Brooklyn Botanic Garden web article on Phalaenopsis.

The included the entire parentage of each grex identified above, with each grex listing parents, registration information, number of progeny, and awards. Observations related to above described table:

* Of the 687 hybrids listed in the table, only 36 did NOT have Phal. amabilis, ~95% have Phal. amabilis progeny
* Of the 483 Phal. amabilis F1 Hybrids, only 28 are on the table, 92.5%.
* Phal. amabilis was used as the seed parent 17 times and the pod parent 12 times, this is roughly equal.
* Lines were determined by the most recent introduction of Phal. amabilis and related F1 hybrids. (Example: An F3 Phal. amabilis grex is crossed with a F5 Phal. amabilis grex, the hybrid would be placed in the F3 grex line.)
* There was NO intergeneric hybrids in this list.
* Of the 28 Phal. stuartiana F1 Hybrids on the table 18 have 100 or more total progeny included on the table.

Another observation that was made was breeding lines associated with parentatage, as an example see the below table that show breeding between species in the subsection Phalaenopsis:

	amabilis	aphrodite	celebensis	equestris	lindenii	philippinensis	sanderiana	schilleriana	stuartiana
amabilis		300++	1	5	3	2	12	15	5
Number of crosses in table of 687 hybrids									
amabilis		91	0	2	0	1	1	4	1

Clearly there has been significant breeding between Phal. amabilis and Phal. aphrodite. The 300+ grexes is associated with ~88% Phal. amabilis and ~13% Phal. aphrodite, this ratio of Phal. amabilis and Phal. aphrodite appears to be a key to breeding classical white Phalaenopsis. There where of other ratios between the members of this family that appear routinely but will not be discussed here.

Comments on some of these F1 hybrid lines follow:

Phal. Elisabethae
(Phal. amabilis x Phal. rimestadiana)
AM/RHS
Mar 1929

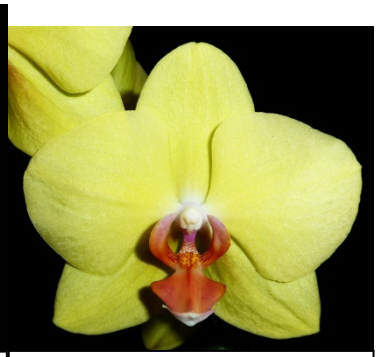
Phal. Doris
(Phal. Elisabethae x Phal. Katherine Siegwart)
'Hazel McCoy' AM/AOS
Mar 1967

* **<u>Classic Phalaenopsis Lines</u>** are all tied to either Phal. Doris or Phal. Elisabethae (Phal. amabilis x Phal. rimestadiana [syn. Phal. amabilis], a parent of Phal. Doris, which is actually a 2nd generation Phal. amabilis. A 3rd generation Phal. amabilis is Phal. Jane L. Kingsbury (Phal. amabilia x Phal. Elisabethae)).
  * The introduction of the tetraploid Phal. Doris caused an explosion of breeding in Phalaenopsis and to this day Phal. Doris progeny is ~87% of all Phalaenopsis Hybrids.
    * Phal. Doris is 87.5% Phal. amabilis and 12.5% Phal. aphrodite.
    * The continue crossing of Phal. amabilis and Phal. aphrodite is the foundation of the classic white Phalaenopsis with ~700 hybrids that are 95% or better similar parentage.
  * The introduction of Phal. schilleriana results in the 'pink' lines and 'stripe' lines, such as Phal. Zada line, Phal. Cherubin line, Phal. Monique line, Phal. Rothschidiana line, Phal. Reve Rose, etc. to name just a few
  * The introduction of Phal. equestris results in increase flower count, contrasting lips and additional peloric forms.
  * The introducion of the other species in the sug-genus Phalaenopsis improves form, fower count, substance, etc.
  * The most recent breeding trends is the introduction of species from the other phalaenopsis sub-genera to additional color (such as solid yellow and reds), true miniature plants, etc.

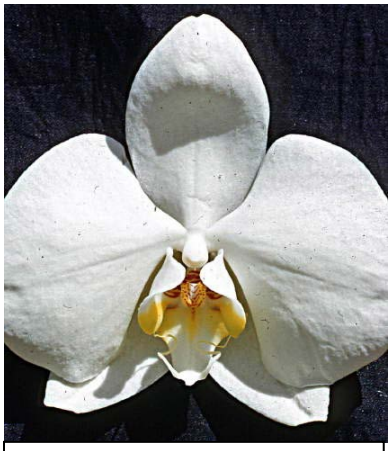
Phal. Ruby Lips
(Phal. Roselle x Phal. Doris)
'Malibu' AM/AOS
Mar 1968

Phal. Abendrot
(Phal. Lippezauber x Phal. Lippstadt)
'Zuma Canyon' AM/AOS
May 1984, NS 11.5 cm

Phal. Charming Crystal Water
(Phal. Tying Shin Valentine's Day x Phal. Fureshing Mark)
'Lee 1288' FCC/AOS
Mar 2017, NS 9.0 x 8.7 cm



Phal. Fuller's Sunset
(Phal. Taisuco Date x Phal. Chian Xen Queen)
'A08154' AM/AOS
Mar 2015, NS 9.1 x 8.2 cm



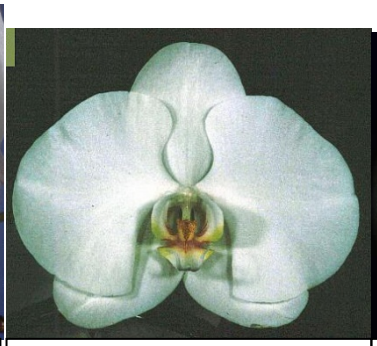
Phal. Doris
(Phal. Elisabethae x
Phal. Katherine Siegwart)
'Angel' AM/AOS (89 pts)
Feb 1952, NS 11.5 cm

* **Phal. amabilis - Phal. aphrodite line** is the cornerstone of breeding white Phalaenopsis.
  * As an indication of how the judging bar has moved since the introduction of Phal. Doris
    * To the left is the oldest available picture of Phal. Doris 'Angel' although receiving an AM/AOS (there are two earlier FCC's for Phal. Doris but pictures were not available) it did received 89 pts, one point away from an FCC
    * To the right the most recently awarded FCC to a grex in the Phal. amabilis – Phal. aphrodite line, Phal. Joseph Palm 'Waterfield Snowball'
      * Clearly the intensive breeding in this line has resulted in fuller and larger flowers that are crowded.
    * Breeding along this line was wanned in favor of the lines which include additional species from the sub-genus Phalaenopsis that reduces the crowding from the increasingly larger flowers.

Phal. Joseph Palm
(Phal. Joseph Hampton x
Phal. Grace Palm)
'Waterfield Snowball' FCC/AOS
Jun 2011, NS 15.8 x 13.0 cm
11 flowers, 3 buds

Phal. Taisuco Kochdian
(Phal. Kochs Schneestern x
Phal. Meridian)
'Crownfox Sugarloaf' FCC/AOS
Mar 2000, NS 14.0 x 12.0 cm
6 Flwrs, 3 Buds, 1 Infl
Phal. schilleriana 2.7%
Phal. stuartiana 1.2%
Phal. sanderiana 0.8%

Phal. Taisuco Crane
(Phal. Taisuco Windian x
Phal. Taisuco Kaaladian)
'Cat's Paw Ghost' AM/AOS
Mar 1988, NS 12.7 x 11.5 cm
10 Flwrs, 3 Buds, 1 Infl
Phal. schilleriana 4.2%
Phal. stuartiana 0.6%
Phal. sanderiana 0.6%



Phal. Cygnus
(Phal. Tokyo Bridal x
Phal. Silky Moon)
'Ono-2' FCC/AOS
Feb 2001, NS 14.0 x 12.0 cm
8 Flwrs, 4 Buds, 1 Infl
Phal. schilleriana 3.1%
Phal. stuartiana <0.1%
Phal. sanderiana 0.0%

Phal. Sogo Musadian
(Phal. Musashino x
Phal. Taisuco Kochdian)
'Orchid Konnection' AM/AOS
Mar 2005, NS 13.2 x 11.0 cm
5 Flwrs, 8 Buds, 1 Infl
Phal. schilleriana 2.9%
Phal. stuartiana 0.6%
Phal. sanderiana 0.4%

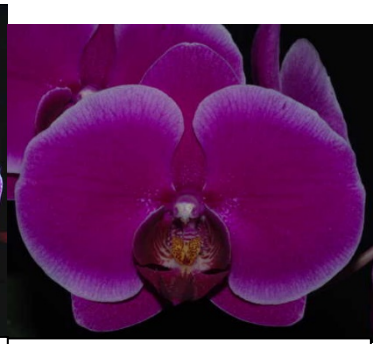
Phal. Rothschildiana
(Phal. amabilis x Phal. schilleriana)
'M & B' HCC/AOS
Feb 2008, NS 8.0 x 7.0 cm

Phal. Zada
(Phal. San Songer x
Phal. Doris)
'Shirley' AM/AOS
Oct 1976, NS 9.8 cm
Phal. schilleriana 28.1%
Phal. sanderiana 12.5%

Phal. Saint Andre
(Phal. Rothschildiana x
Phal. schilleriana)
'Pink Fragrance' HCC/AOS
Feb 2017, NS 6.9 x 6.3 cm

* The introduction of Phal. schilleriana results in the 'pink' lines but the 'pink' was just a various amounts of pink blush centrally. Introduction of some of the other species in the sub-genus Phalaenopsis darken / and more uniformly distributed color, such as Phal. Zada line, Phal. Cherubin line, Phal. Monique line, Phal. Rothschidiana line, Phal. Reve Rose, etc. to name just a few
  * The pink from Phal. schilleriana appears to not be a dominate color from a breeding point of view, most crosses are lightly blushed pink.
  * In the breeding of pinks, compared to white, relatively quickly other species were introduced into the Phal. amabilis – Phal. schilleriana breeding line to improve color.
  * Some of the species introduced to improve color are: Phal. sanderiana, Phal. pulcherrima, Phal. lueddemanniana, Phal. amboinensis, Phal. violacea, etc.
  * Some of the recent pink grexs are shown below:

Phal. Brother Purple Passion
(Phal. Golden Sun x
Phal. Brother Red Splendor)
'Cat's Paw' AM/AOS
Mar 2004, NS 9.0 x 8.0 cm
6 Flwrs, 2 Buds, 1 Infl
Phal. lueddemanniana 20.8%
Phal. amboinensis 8.5%
Phal. gigantea 5.5%
Phal. schilleriana 3.9%
Phal. equestris 1.9%, etc.



Phal. Ruey Lih Beauty
(Phal. Hsing Lady x
Phal. Formosa Rose)
'Beth Martin' AM/AOS
Jan 2010, NS 8.8 x 7.6 cm
14 Flwrs, 2 Infl
Phal. schilleriana 20.6%
Phal. sanderiana 7.7%
Phal. stuartiana 2.2%
Phal. equestris 1.4%
Phal. pulcherrima 0.8%, etc.

Phal. Plantation Rhapsody
(Phal. Tretes Rapture x
Phal. Plantation Elegance)
'The Queen' AM/AOS
Mar 2004, NS 11.0 x 8.8 cm
7 Flwrs, 5 Buds, 1 Infl
Phal. schilleriana 26.3%
Phal. sanderiana 6.6%
Phal. stuartiana 1.7%
Phal. equestris 0.2%
Phal. lueddemanniana 0.2%

Phal. Malibu Marron
(Phal. Malibu Tidings x
Phal. Gallant Beau)
'Sierra Vasquez' HCC/AOS
Jul 2002, NS 12.0 x 9.8 cm
10 Flwrs, 1 Infl
Phal. schilleriana 16.4%
Phal. sanderiana 7.8%
Phal. equestris 4.3%
Phal. lueddemanniana 1.5%
Phal. amboinensis 1.4%, etc.

Phal. equestris
'Krull Smith' AM/AOS
Oct 2014, NS 3.4 x 3.4 cm
53 Flws, 19 Buds, 1 Infl

Phal. Artemis
(Phal. amabilis x Phal. equestris)
'Winter Carnival' HCC/AOS
Jan 2003, NS 5.9 x 5.0 cm
29 Flws, 18 Buds, 1 Infl

Phal. Ruby Lips
(Phal. Roselle x Phal. Doris)
'Malibu' AM/AOS
Feb 1963
5 Flws, 8 Buds, 1 Infl

* The introduction of Phal. equestris results in smaller flowers, increase flower count, contrasting lips and peloric forms.
* Major progeny from a breeding point of view are: Phal. Artemis and Phal. Roselle (Phal. Elisabethae x Phal. equestris, major progeny are Phal. Ruby Lips, Phal. Sunrise, Phal. Spitfire, Phal. Rosita)
* To look into the impact of Phal. equestris breeding I looked at the F1 offspring of Phal. equestris and selected Phal. Jaisuco Jewel, largest num ber of F1 progeny. I then selected the most award F1 progeny of Phal. Jaisuco, Phal. Elfin King, in an attempt to get more recent breeding habits. I then, using the OrchidWiz 'cousins ' key gather data on the awarded Phal. Elfin King cousins. The data on 94 'cousins' was reviewed. Selected grexes shown below.
    * Although as a general rule the number of flowers per inflorescences increases this was not always the case. There were ~7% of the cases with fewer than 10 flowers per inflorescences, clearly not an increase, but in general Phal. equestris does increase the number of flowers per inflorescences.

Phal. Taisuco Gem
(Phal. Taisuco Gaster x
Phal. equestris)
'SIO's Little Rose' AM/AOS
Nov 2007, NS 3.9 x 4.4 cm
27 Flwrs, 22 Buds, 2 Infl
Phal. equestris 51.6% (1F1)
Phal. amabilis 24.7%
Phal. schilleriana 6.6%
Phal. aphrodite 6.3%, etc.

Phal. Sogo Alice
(Phal. Minho Lit-Rose x
Phal. Taisuco Jewel)
'Iowa' AM/AOS
Feb 2002, NS 5.3 x 4.4 cm
9 Flwrs, 5 Buds, 1 Infl
Phal. equestris 54.1% (2F2)
Phal. amabilis 22.8%
Phal. aphrodite 5.9%
Phal. schilleriana 5.7%, etc.

Phal. Taisuco Jewel
(Phal. Okay Seven x
Phal. equestris)
'FANGtastic' AM/AOS
Mar 1994, NS 5.6 x 4.4 cm
19 Flwrs, 11 Buds, 1 Infl
Phal. equestris 55.5% (1F1)
Phal. amabilis 25.8%
Phal. aphrodite 5.8%
Phal. sanderiana 3.3%, etc.

Phal. Sogo Vivien
(Phal. Sogo Alice x
Phal. Zuma's Pixie)
'Diana' AM/AOS
Mar 2017, NS 5.9 x 4.5 cm
74 Flwrs, 17 Buds, 4 Infl
Phal. equestris 59.7% (1F2, 2F3)
Phal. stuartiana 13.6%
Phal. amabilis 12.9%
Phal. schilleriana 3.7%, etc.

* The reduction in flower size is a dominate trait, with most flowers having a natural spread of 6.0 cm or less. Of the 94 'cousins', there were five 'cousins' that were 4th generation Phal. equestris or greater and of these there was one (Phal. Lioulin Yenlin, 2F4, 5F5) with a natural spread of 11.0 cm. The next largest award grex (Phal. Soroa Snowflake, 1F1) flower had a natural spread of 8.3 cm. NOTE: There is a slight element of truth in the thought that the larger the flower the fewer flowers per inflorescence.
* The dark (usually red, dark purple, etc.) lip of Pha l. equestris is a dominate factor and has led to many lines of flowers with a colored lip, the most developed being white flowers with a red lip (Phal. City Girl, 1F5) but there ar e also yellow flowers with red lips (Phal. Fuller's Sunset) and many others.

Phal. Lioulin Yenlin
(Phal. Lioulin Grape x
Phal. Chia E Yenlin)
'CX491' AM/AOS
Nov 2017, NS 11.0 x 10.0 cm
25 Flwrs, 9 Buds, 2 Infl
Phal. equestris 49.4% (2F4, 5F5)
Phal. amabilis 20.5%
Phal. stuartiana 12.7%
Phal. aphrodite 5.2%, etc.

Phal. Soroa Snowflake
(Phal. Hakalau x
Phal. equestris)
'Frankie's Gemstone' AM/AOS
Mar 1996, NS 8.3 x 7.2 cm
21 Flwrs, 2 Infl
Phal. equestris 50.0% (1F1)
Phal. amabilis 40.5%
Phal. aphrodite 8.3%
Phal. schilleriana 0.8%, etc.

Phal. City Girl
(Phal. Odoriko x
Phal. Jason Beard)
'New Age #3' AM/AOS
Mar 1993, NS 10.8 x 8.2 cm
11 Flwrs, 1 Infl
Phal. amabilis 62.1%
Phal. aphrodite 12.9%
Phal. pulcherrima 9.4%
Phal. equestris 8.6% (1F5), etc.

Phal. Fuller's Sunset
(Phal. Taisuco Date x
Phal. Chian Xen Queen)
'Dorothy's Sunset' AM/AOS
Apr 2015, NS 8.5 x 8.0 cm
14 Flwrs, 12 Buds, 3 Infl
Phal. amabilis 47.8%
Phal. amboinensis 14.1%
Phal. aphrodite 9.7%, …
Phal. equestris 2.3% (1F7), etc.

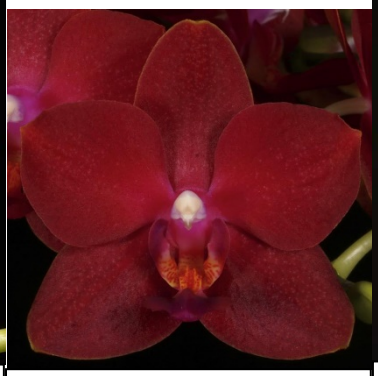
* Phal. equestris has a greater than normal tendancy to generate peloric forms. There are two common forms, petals similar to the lip and the lip similar to the petals ('big lip'). Examples of both forms shown.

Phal. Lioulin Diana Lip
(Phal. Lioulin Thick Lip x
Phal. KS Big Diana)
'Iowa' AM/AOS
Mar 2019, NS 10.5 x 11.0 cm
4 Flwrs, 4 Buds, 1 Infl

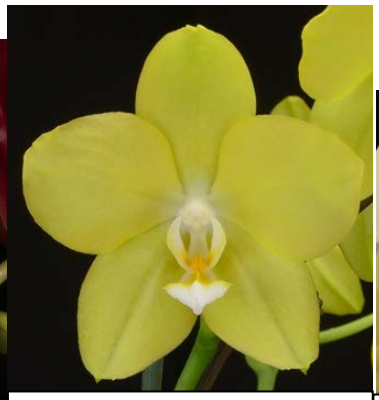
Phal. Liu's Bride Rouge
(Phal. Pentel Gem x
Phal. equestris)
'KF #1' HCC/AOS
Sep 2019, NS 3.5 x 4.1 cm
9 Flwrs, 5 Buds, 1 Infl

* The most recent breeding trends is the introduction of species from the other phalaenopsis sub-genera to add additional color (such as solid reds and yellows), harlequins / splash petals, true miniature plants (lobbii), etc.
    * For red Phal. amabilis progeny there are rougly two breeding trends with starrett shaped flowers, both with in the Subgenus Phalaenopsis, one results in heavy substance, waxy flowers similar to those in Section Polychilos, such as Phal. AL Sun Hannover, and the other to more classically textured flowers as in the Section Phalaenopsis, such as Phal. Krull's Sunrise.
    * For yellow Phal. amabilis progeny there are rougly two breeding trends, both with in the Subgenus Phalaenopsis, one results in more starrett flowers similar to those Section Polychilos, such as Phal. Taida Yellow Passat, and the other to classically shaped flowers in the Section Phalaenopsis, such as Phal. OX New Moon.

Phal. AL Sun Hannover
(Phal. Mituo Sun x
Phal. Hannover Passion)
'RED' AM/AOS
Jan 2020, NS 6.7 x 7.0 cm
2 Flwrs, 1 Infl
Phal. amabilis 13.3%
Other Sect. Phal. 5.1%
Phal. mariae 25.0 %
Other Sect. Polychilos 56.7%



Phal. Krull's Sunrise
(Phal. Krull's Golden Champion
x Phal. Citrus Champion)
'Krull-Smith' AM/AOS
Jan 2019, NS 4.9 x 4.7 cm
18 Flwrs, 8 buds, 1 Infl
Phal. amabilis 17.1%
Other Sect. Phal. 25.7%
Phal. amboinensis 24.1%
Other Sect. Polychilos 33.1%



Phal. Taida Yellow Passat
(Phal. Brother Passat x
Phal. Sogo Chin Chien)
'Apple Green' HCC/AOS
Feb 2016, NS 7.0 x 7.3 cm
5 Flwrs, 3 Buds, 2 Infl
Phal. amabilis 40.2%
Other Sect. Phal. 5.6%
Phal. venosa 25.0%
Other Sect. Polychilos 39.3%

Phal. OX New Moon
(Phal. Lioulin Moon x
Phal. OX Success)
'OX 3015' AM/AOS
Apr 2015, NS 8.5 x 8.0 cm
19 Flwrs, 3 Infl
Phal. amabilis 50.7%
Other Sect. Phal. 26.6%
Phal. lueddemanniana 7.4%, …
Other Sect. Polychilos 15.3%

* Harlequin Phalaenopsis are Phalaenopsis whose flowers have random, non-repetitive patterns. The patterns can be spots, bars, blotches, picotees, splash petals, etc. Two examples, not complete set of examples, are Phal. Angel of Music and Phal. Ever Spring Prince
* There are a true miniature Phalaenopsis and in an attempt to obtain the classical Phalaenopsis shaped flower on a miniature crosses have been made between the these miniature spieces and Phal. amabilis hybrids. A couple of grexes are shown below.

Phal. Angel of Music
(Phal. Fairy Tales x
Phal. Medellin Spring)
'Crystelle' AM/AOS
Mar 2016, NS 7.5 x 6.2 cm
25 Flwrs, 1 Bud, 2 Infl

Phal. Ever Spring Prince
(Phal. Golden Poeker x
Phal. Taisuco Beauty)
'Susan' HCC/AOS
Dec 2017, NS 8.7 x 8.0 cm
14 Flwrs, 2 Infl

Phal. Liu's Cute Angel
(Phal. Jiaho Cherry x
Phal. lobbii)
'Yaphon' AM/CCM/AOS
Mar 2013, NS 3.5 x 3.9 cm
64 Flwrs, 116 Buds, 5 Infl

Phal. Joy Nancy Lady
(Phal. Anna-Larati Soekardi x
Phal. Bright Peacock)
'Krull-Smith' AM/AOS
Jan 2008, NS 4.0 x 3.5 cm
7 Flwrs, 7 Buds, 1 Infl

Synonyms:

None recently

Varieties / forms:

As mentioned in the introduction, Phal. amabilis is variable in many of its characters, as one would expect in a species with a broad geographic range that has genetic isolating mechanisms formed by the disjointed island biology. Most of the variation is minor and does not warrant formal recognition. This variation includes the amount of red and yellow pigment on the lip, the presence and density of red spots on the lateral lobes of the lip and the overall flower shape. But there are two reconized sub-spieces:

Phal. amabilis subsp. rosenstromii
'Ken' HCC/AOC
Sep 2002, NS 7.6 x 6.6 cm

Phal. amabilis subsp. moluccana – identified by having no lateral teeth at the base of the midlobe of the lip. It is considered endemic to Indonesia in Sulawesi, the moluccca Islands, and eastern Sabah.

Phal. amabilis subsp. rosenstromii – identified by the shorter, narrowly triangular midlobe of the lip, with inconspicuous teeth at the base. This subspecies is in endemic to New Guinea and Australia.

Awards:

Phal. amabilis	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS		20	11	1	4	8		1		33
Year(s) Awarded		1984-2010	1984-2019	1994	1999-2020	1990-2012		2009		1984-2020

AOS Quality Awardees:

Phal. Orchid World
'Mem. Irene Moran' AM/AOS
Mar 2000, NS 7.4 x 7.6 cm
(Phal. Malibu Imp x
Rlc. Deventeriana)
2 Flwrs, 2 Buds, 1 Infl
Phal. amabilis 25%
Phal. amboinensis 50%
Other Sect. Polychilos 25%

Phal. Sweet Memory
'Amy Dawn' AM/CCM/AOS
May 2000, NS 7.6 x 8.3 cm
(Phal. Deventeriana x
Phal. violacea)
87 Flwrs, 3 Buds, 9 Infl
Phal. amabilis 25%
Phal. violacea 50%
Other Sect. Polychilos 25%

Phal. Maraldee
'Queen of Hearts' AM/AOS
May 1993, NS 6.9 cm
(Phal. Maestro Rafael Alers x
Phal. Deventeriana)
5 Flwrs, 1 Bud, 1 Infl
Phal. amabilis 25%
Phal. amboinensis 56.3%
Other Sect. Polychilos 18.8%

Phal. Sogo Yukidian
'Iowa' AM/AOS
Sep 2007, NS 13.7 x 11.5 cm
(Phal. Yukimai x
Phal. Taisuco Kochdian)
11 Flwrs, 2 Infl
Phal. amabilis 81.5%
Phal. aphrodite 15.3%
Phal. schilleriana 2.1%

Most recent awardees:

Phal. Phoenix Legacy
'Shadow' HCC/AOS
Mar 2020, NS 6.7 x 6.0 cm
(Phal. Sogo Lawrence x
Phal. Brother Dendi)
2 Flwrs, 2 Buds, 1 Infl
Phal. amabilis 28.3%
Phal. amboinensis 40.6%

Phal. Susan Philips
'Logan' HCC/AOS
Mar 2020, NS 7.7 x 7.7 cm
(Phal. Emeraude x
Phal. Tsay's Evergreen)
8 Flwrs, 3 Infl
Phal. amabilis 41.4%
Phal. amboinensis 21.9%

Phal. Walnut Valley Purple Pixie
'B & M' AM/AOS
Sep 2020, NS 3.5 x 3.8 cm
(Phal. Purple Gem x
Phal. Pixie Star)
7 Flwrs, 18 Buds, 1 Infl
Phal. amabilis 2%
Phal. pulcherrima 50%

Phal. Peggy Tauscher
'Owen' AM/AOS
Mar 2020, NS 9.3 x 8.5 cm
(Phal. Sogo Lawrence x
Phal. Tying Shin Forever Love)
4 Flwrs, 4 Buds, 1 Infl
Phal. amabilis 22.5%
Phal. amboinensis 32.8%

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Award Descriptions (Feb 2021)

Phalaenopsis Harry's Fidimo – Quality Award Description
(Phal. Barbara x Phal. Fidibus)
Seven flowers on one 30 cm inflorescence; sepals and petals white, spotted wine red, more densely spotted to fused basally, lower half of lateral sepals larger and dark marron spots; lip cream mid lobe overlaid wine red, side lobes distally overlaid wine red, lip centrally overlaid light yellow with wine red spots convalescing to blotches, callus yellow, a few random wine red spots, centrally convalescing to a single broad wine red line; column and anther cap white; substance firm; texture matte.

Phalaenopsis Yaphon Cupid – Quality Award Description
(Phal. Yaphon Lobspis x Phal. Tying Shin Cupid)
Twenty-two flat stellate dark burnt-orange flowers and two buds on two inflorescences to 27cm long; sepals and petals burnt-orange picotee, yellow halo basally; lip dark orange; column and anther cap white; substance firm; texture crystalline.

Phalaenopsis Pylo's Dynamite – Cultural Award Description
(Phal. Natasha x Phal. Joy Spring Canary)
Fifty-five full, slightly cupped and five buds well-displayed on eleven inflorescences on an extremely well-grown, 70-cm tall by 120-cm wide plant grown in a 14-cm square teak basket in fir bark; sepals and petals ovate, charteuse distally transitioning to white centrally, dense random maroon blotches; lateral sepals inferior maroon blothes convalese; lip white, midlobe distally overlaid magenta, side lobes upright, yellow basally; column and anther cap white; substance hard; texture waxy.

Phalaenopsis Micro Sun – Quality Award Description
(Phal. Mituo Sun x Phal. Miro Buddha)
Four round, flat carmine flowers and one bud on one well-held inflorescence; sepals and petals cream, heavily blotched carmine leaving a thin picotee; lip carmine, midlobe apex overlaid dark carmine, sidelobe apex overlaid slightly darker carmine; column and anther cap white; substance very heavy; texture waxy.

Phalaenopsis Karisma Starlight – Quality Award Description
(Phal. Carmela's Wonder x Phal. Sharon Truscott)
Sixteen full, flat crystalline white flowers and one bud on one inflorescence; lip white with orange callus, sidelobe dark maroon striations basally, basally inferior margin yellow, midlobe superior margin light yellow; column and anther cap white, substance tissue-paper; texture crystalline.

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**
Phalaenopsis chibae	Vietnam	Warm to Hot	Spring-Summer	18/20		2	3				1	1		1	8
Phalaenopsis deliciosa*	India, China, Southeast Asia, Java, Borneo, Philippines	Warm to Hot	Summer - Fall	35/53		3	5	1					2	1	12
Phalaenopsis finleyi	Southeast Asia	Cool to warm	Summer - Fall	30/36			1							1	2
Phalaenopsis mirabilis	Southeast Asia	Warm to Hot		0/0											0
Phalaenopsis mysorensis	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. williansianum
'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.

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

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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.

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

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.

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**
Phalaenopsis buyssoniana	Thailand, Vietnam	Cool to warm	Fall	36/500		2	4	1				3		1	11
Phalaenopsis pulcherrima*	India, China, Southeast Asia, Borneo	Warm to Hot	Summer - Fall	286/10790		51	46	7	1	1		6	5	1	118
Phalaenopsis regnierana	**Now Phal. pulcherrima**														
Phalaenopsis ubonensis	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
Reg	0	1	2	0	6	76	344	812	1991	3666	4042	271	11211
Assc Awds	0	2	0	0	28	167	162	247	722	1301	459	1	3089
F1	0	1	2	0	6	38	56	35	66	72	27	2	305
AA	0	2	0	0	28	84	39	28	81	65	3	0	330
F2	0	0	0	0	0	37	104	81	42	95	70	6	435
AA	0	0	0	0	0	82	58	16	10	81	13	0	260
F3	0	0	0	0	0	1	74	83	114	52	49	3	376
AA	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. buyssoniana 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

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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.

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

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 characterisics of Phal. pulcherrima are uniform dark purple flowers, small flower size, and is a diploid (breeding with standard tetrapoid 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 suspection 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.

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

From this table one sees that Phal. puclerrima 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 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'.

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

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. 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. 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
'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 (Phal. pulcherrima x Phal. fasciata), 1982, Oak Hill Gardens, 10 F1 and 46 total progeny, 2 AOS

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

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

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 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. Anna-Larati Soekardi
'Bryon' HCC/AOS
(Phal. pulcerrima 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. pulcerrima 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. pulcerrima 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. apiculate – 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. apiculate

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 late ral 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:

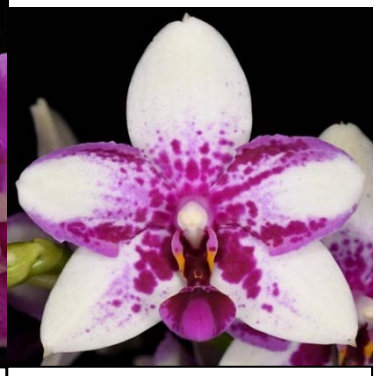
Phal. pulcherrima	FCC	AM	HCC	AD	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS		51	46	1	1	7	6		5	1	**118**
Year(s) Awarded		1964-2019	1965-2016	1992	1997	1960-2017	1967-2016		1984-2016	1959	**1959-2019**

Most recent awardees:

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])

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])

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])



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])

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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 increaes 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.

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

Phal. deliciosa subspecies hookeriana – A yellow-colored flower that has been imported from northeast India and appears to represent a well-difined sub-species, although the exact range is unknown. In addition to the flower dcolor, 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 f. alba
'Ketracel-White' CHM/AOS
Sep 2019, NS 1.2 x 1.4 cm
6 Flws, 5 Buds, 2 Infl.

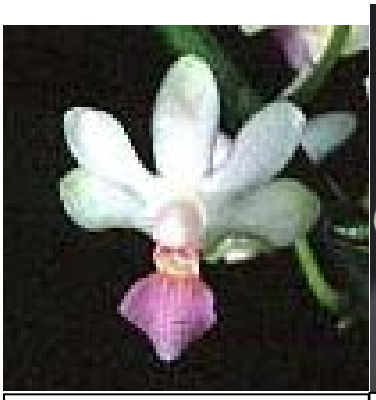
Phal. deliciosa subsp. hookeriana
'Diaina Fernandez' AM/AOS
Jun 2013, NS 1.7 x 1.5 cm
17 Flws, 43 Buds, 2 Infl.

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):

			
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.	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.	Phal. Forever Young 'B & M' AM/AOS Jul 2020, NS 2.0 x 1.9 cm (Phal. Purple Gem x Phal. deliciosa) 19 Flws, 16 Buds, 2 Infl.	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.

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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, condiuplicate 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.

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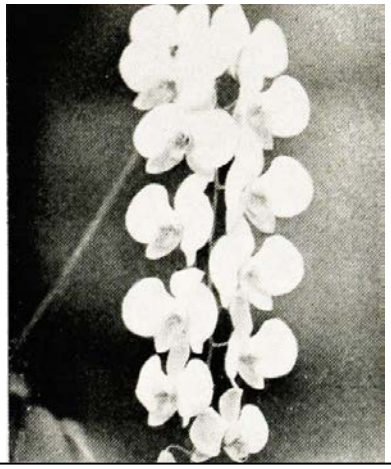
Christenson, E.; *Phalaenopsis – A Monograph*, 2001
Frowine, S. A.; *Moth Orchids – The Complete Guide to Phalaenopsis*, 2008

Phalaenopsis Breeding Lines – White
Pick out the major players in breeding. Are these breeding lines still being pursued? If so, how.



"…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 ½"…" Dec. 1943

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.

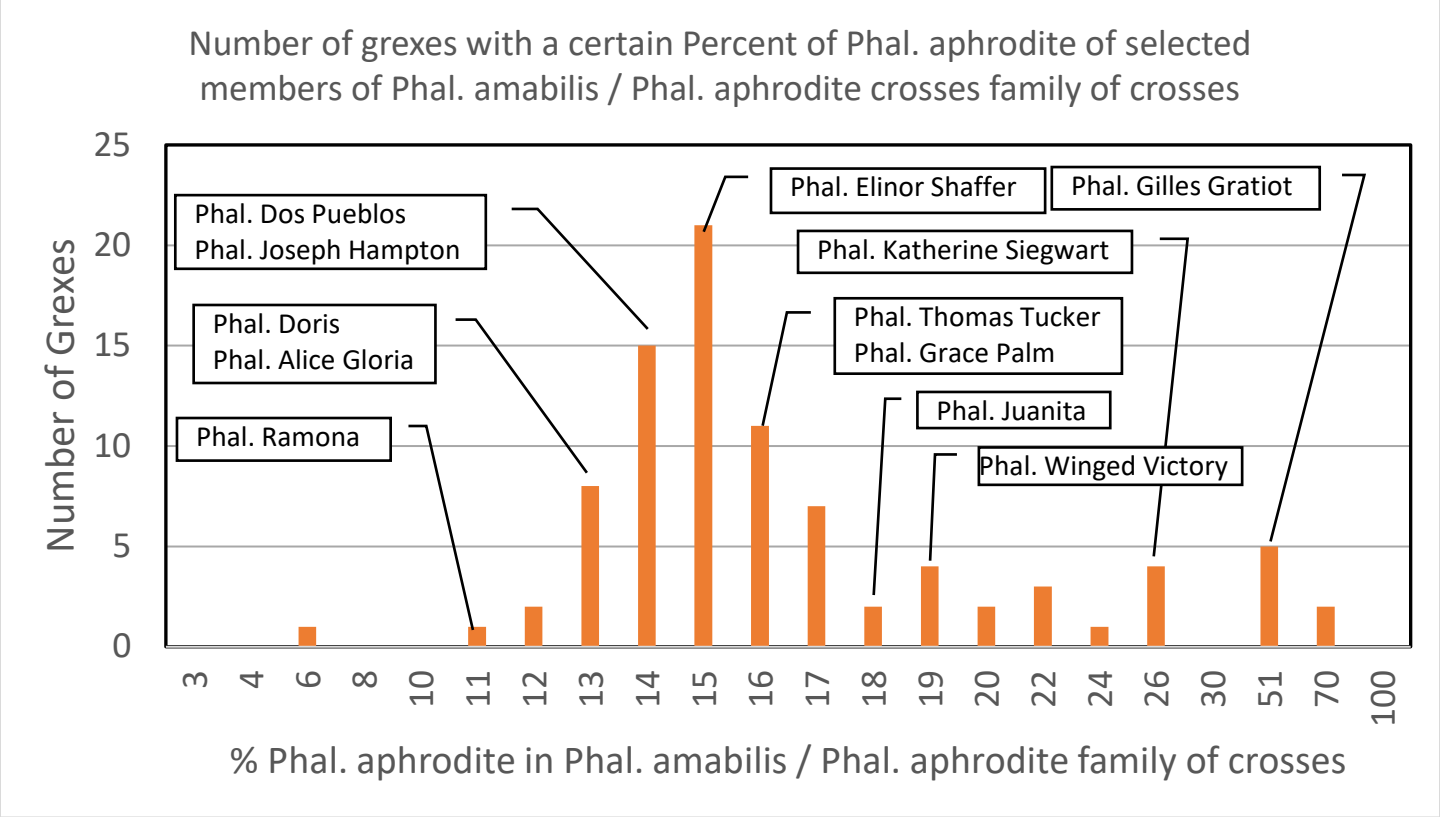
Phal. Doris
(Phal. Elisabethae x
Phal. Katherine Siegwart)
262 / 32,093 progeny
29 AOS awds
'Hazel McCoy' AM/AOS
Mar 1967, NS 10.5"
6 Flws, 1 Infl.

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.

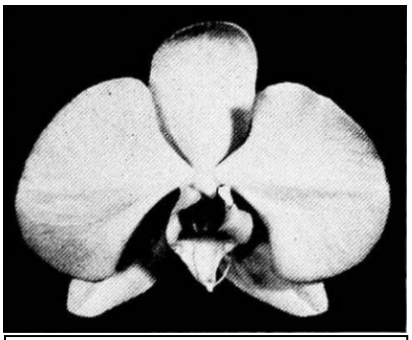
	amabilis	aphrodite	celebensis	equestris	lindenii	philippinensis	sanderiana	schilleriana	stuartiana
amabilis		300++	1	5	3	2	12	15	5
aphrodite	300++		0	3	0	1	4	2	2
celebensis	1	0		1	1	1	0	1	1
equestris	5	3	1		1	0	0	1	0
lindenii	3	0	1	1		0	1	1	1
philippinensis	2	1	1	0	0		1	1	3
sanderiana	12	4	0	0	1	1		4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



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, Perterson 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).

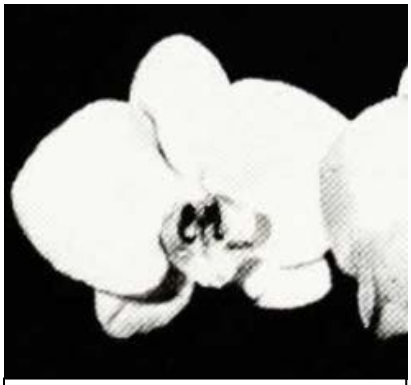
Phal. Grace Palm (Phal. Doris x Phal. Winged Victory), 1950, D. Ryerson, 141 F1 and 26,489 total progeny, 27 AOS awards (9 AMs, 16 HCCs, 2 CCMs). Second only to Phal. Doris regarding influence in breeding white Phalaenopsis. Major Progeny: **Phal. Alice Gloria** (Phal. Ramona x Phal. Grace Palm), 1961, 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. 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. 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 progen, 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. 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. 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. Taisuco Kochdian
'Crownfox Sugarloaf' FCC/AOS
Mar 2000, NS 14.0 x 12.0 cm
6 Flws, 3 Buds, 1 Infl.

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

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

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. 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).

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

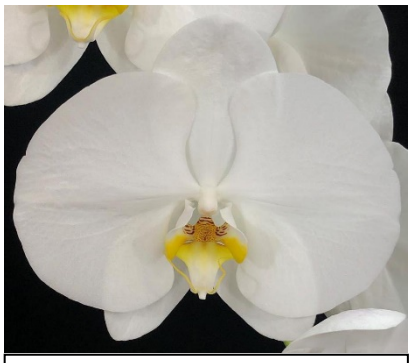
The next group of classic white Phalaenopsis are the most recently awarded cultivars. Three observations; natural spread on award quality classic white Phalaenopsis is currently around 14 cm and crossing back to a primary species (especially Phal. amabilis) appears to reduce natural spread trend, and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

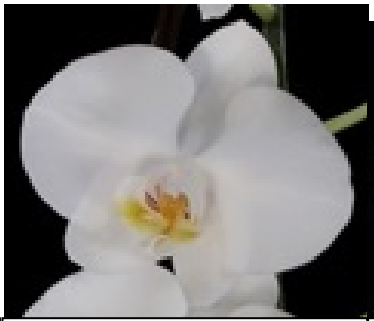
Phal. Ming-Hsing White Snow (Phal. Taisuco Kaaladian x Phal. Cygnus), 2003, Lin Ming-Hsing, 2 F1 and 4 total progeny, 1 AM/AOS award.

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

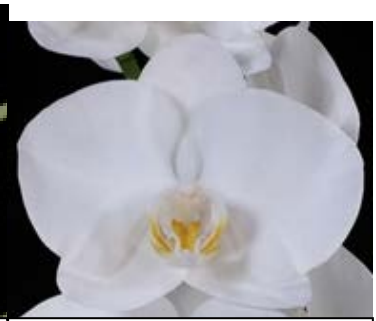
Phal. Unimax Pilot (Phal. Taisuco Swan x Phal. amabilis), 2009, Clone I.B., 1 F1 progeny, 1 AM/AOS award.

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.

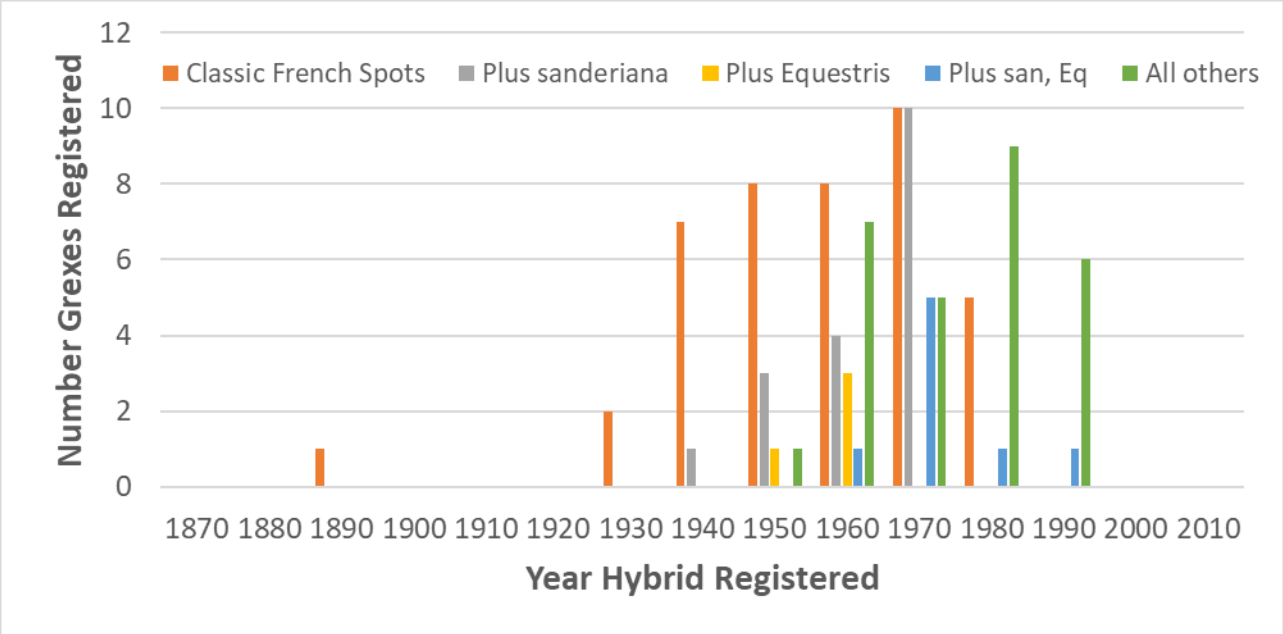
Phal. Elise de Valec
'Milky Way' HCC/AOS
Feb 1988, NS 8.7 cm
7 Flws, 2 Buds, 1 Infl.

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 of blotches).

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…"

'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 refered 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 transistion 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.

Phal. Mouchette
'Tahiko' AM/RHS
Oct 1973

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. 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 (4 AMs, 2 HCCs); **Phal. Ho’s Fancy Leopard** (Phal. Elise de Valec x Phal. Coquinette), 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. 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 Seurat
‘Debbi’ AM/AOS
Mar 1987, NS 8.7 cm

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

‘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).

Phal. Leopard Prince
‘Hwa Yuan Red Leopard’ FCC/AOS
Mar 2013, NS 11.2 x 9.6 cm
Dscpt: “… epitome of French Spot style…”

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. Carmela’s Spots
‘Galen Vasquez’ HCC/AOS
Nov 1990, NS 9.0 cm

Phal. Miva Smartissimo
‘Firelli’ AM/AOS
Mar 2018, NS 9.0 x 8.0 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 bloches centrally, thin white picotee; lateral sepals inferior half more heavily blotched; lip tri-lobe, cream, broad lateral strips, keel yellow with red spots, blotchs and bars; column pale magenta, anther cap cream; substance firm; texture crystalline.

Phalaenopsis Section Stauroglottis
J.Linn. Soc. 18: 332 (1881)
Type: Phalaenopsis [Phal.] equestris

[fal-en-OP-sis ee-KWES-tris]

Characteristic Summary

Phal. equestris
'Candor Violette' FCC/AOS
Jun 1995, NS 2.9 x 3.8 cm

Phal. equestris
'Krull Smith' FCC/AOS
Oct 2014, NS 3.4 x 3.4 cm
Traditional color and form

In 2014 the Phalaenopsis Section Staurogolottis was folded into Phalaenopsis Section Phalaenopsis. The table this recently combined Phalaenopsis Section is reproduced below with species that were previously in the Stauroglottis Section marked with a (S).

In Christensons book he comments the plants in the Stauroglottis section are similar to and share several characteristics with those of section Phalaenopsis. The differences that are sited are: smaller flowers, subsimilar sepals and petals, an undivided lip apex, floriferous branching inflorescence, and smaller plant habit.

These species are characterized by having a single callus (a swelled area on the labellum) and smooth lateral lobes of the lip. Except for spots found at the base of the sepals and on the petals of some species (such as Phal. stuartiana) all species are essentially unmarked white or pink flowers. Most of the species are native to the Philippines growing on trees from sea level up to 4900 ft (1500 m).

Since the 'Stauroglottis' species are now included in the Phalaenopsis section, the rest of this report will follow the format used in discussing the Phalaenopsis Section. Generally, you would point scale using the Phalaenopsis point scale.

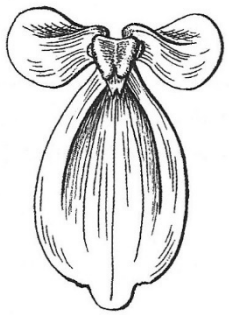
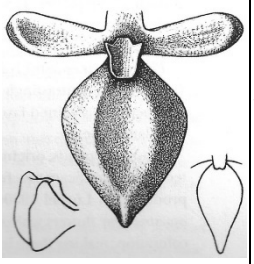
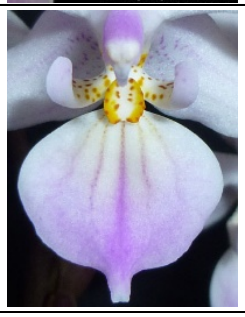
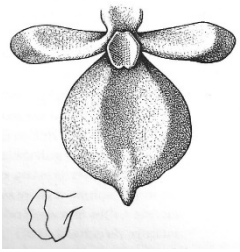
Table of species, (www.orchidspecies.com – Dec 2020 update)

Species marked with a * are used the most in hybridization, (S) Previously Stauroglottis Section						Progeny		AOS Awards										
Kew Name	Sub Genus	Section	Country	Temp	Season	F1/Total	Awds	FCC	AM	HCC	JC	AD	AQ	CCE	CCM	CHM	CBR	Total
Phalaenopsis amabilis*	Phalaenopsis	Phalaenopsis	Sumatera, Borneo, Indonesia, New Guinea, Australia	Warm to Hot	Winter - Spring	483/33257	69		20	11	4		1		8	1		45
Phalaenopsis aphrodite*	Phalaenopsis	Phalaenopsis	Philippines, Taiwan		Winter - Spring	62/33353	66		13	8			1	2	12	1	1	38
Phalaenopsis celebensis (S)	Phalaenopsis	Phalaenopsis	Sulawesi	Hot	Year round	49/75	27		7	8	1				2		1	19
Phalaenopsis equestris (S)*	Phalaenopsis	Phalaenopsis	Philippines, Taiwan	Warm to Hot	Year round	564/23601	133	2	32	30	19		1		12	3	2	101
Phalaenopsis lindenii (S)	Phalaenopsis	Phalaenopsis	Philippines	Warm	Fall - Winter	120/654	43		12	7	1				2			22
Phalaenopsis philippinensis	Phalaenopsis	Phalaenopsis	Philippines	Warm	Spring	113/192	20		4	5	1			1	1			12
Phalaenopsis rimestadiana	Phalaenopsis	Phalaenopsis	**Now Phal. amabilis**															
Phalaenopsis sanderiana*	Phalaenopsis	Phalaenopsis	Philippines	Hot	Year round	117/27201	10	1	3						1		1	6
Phalaenopsis schilleriana*	Phalaenopsis	Phalaenopsis	Philippines	Warm to Hot	Winter - Spring	255/29795	72		20	13			1	6	11			51
Phalaenopsis stuartiana*	Phalaenopsis	Phalaenopsis	Philippines	Hot	Winter - Spring	399/28217	43		12	14					5	2		33

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

The first thing to note from this table is that Phal. equestris is used the most in hybridization (not far behind the major species in the traditional Phalaenopsis Section) and most awarded among the species in the present Phalaenopsis Section (including the most FCCs). Phal. equestris is the primary species used in miniature Phalaenopsis breeding.

The following table list some of the differences between species that were previously in the Stauroglottis Section.

Species	General	Callus	Lip details		Distribution
Phalaenopsis celebensis	Dwarf plant size, richly mark leaves, and numerous unique, petals incurved with strongly revolute margins and a central brown stain, flowers. Flowers per spike: 54, NS: 3.1 cm	Solitary, triangular; acuminate			Sulawesi (Celebes)
Phalaenopsis equestris*	Highly variable, both vegetatively and in flower color. Leaves not marked. Peloric forms common. Used to produce semi-alba and striped hybrids. Flowers per spike: 55, NS: 2.9 cm	Solitary, peltate, quadrangular with a truncated apex			The Philippines and Taiwan
Phalaenopsis lindenii	Miniature plant size, Richly marked leaves, peppermint striped lips, cultivated varieties have prominently stripped sepals and petals, cool growing conditions. Flowers per spike: 23, NS: 3.6 cm	Solitary, peltate, elliptic with angular margins and a small notch on both he posterior and anterior margin.			The Philippines

Hybridization:

Hybridization in the among these three species is dominated by the Phal. equestris. A table of the three species, broken down by decade, is shown below.

celebensis	**1870**	**1880**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Total**
Reg	0	0	0	0	0	0	0	0	0	0	0	9	28	15	20	4	76
Assc Awds	0	0	0	0	0	0	0	0	0	0	0	10	7	1	6	0	24
F1	0	0	0	0	0	0	0	0	0	0	0	9	18	12	9	2	50
Assc Awds	0	0	0	0	0	0	0	0	0	0	0	10	2	1	6	0	19
equestris																	
Reg	0	3	6	1	1	3	0	11	25	266	1283	3240	6340	6653	5484	378	23694
Assc Awds	0	3	35	0	0	4	0	0	25	151	507	1204	2218	2378	698	1	7224
F1	0	2	5	0	1	1	0	3	9	36	28	61	245	118	52	3	564
Assc Awds	0	3	35	0	0	4	0	0	6	67	10	82	154	42	7	0	410
lindenii																	
Reg	0	0	0	0	0	2	0	1	1	11	63	83	147	130	198	21	657
Assc Awds	0	0	0	0	0	6	0	0	0	22	29	44	55	41	15	0	212
F1	0	0	0	0	0	2	0	1	1	11	21	24	23	16	19	2	120
Assc Awds	0	0	0	0	0	6	0	0	0	22	8	14	2	4	0	0	56

Two species have been in cultivation since the 1890s, the third, Phal. celebensis, was introduced to cultivation around 1980 and has not been used much in hybridization. Interest in using the other two species picked up in the 1970 and 1980s due to interest in miniature Phalaenopsis as well as semi-albas and stripped flowers.

Also included in this table of is the registration of F1 crosses for each species. From is information it is clear that breeding with Phal. equestris going strong but may be waning. Interest in using Phal. lendenii is still increasing due to interest in stripped flowers whereas interest hybridizing with Phal. celebensis is still in the exploratory phase, there is only one third generation progeny.

Species	General	Breeding	
		Strength	Weakness
Phalaenopsis celebensis	Dwarf plant size, richly mark leaves, and numerous unique flowers, petals incurved with strongly revolute margins and a central brown stain. Flowers per spike: 54, NS: 3.1 cm	Dwarf plant size, numerous flowers, and richly marked leaves	Hybrids with traditional Phalaenopsis hybrids have produced offspring with poor form.
Phalaenopsis equestris*	Highly variable, both vegetatively and in flower color. Leaves not marked. Peloric forms common. Used to produce semi-alba and striped hybrids. Flowers per spike: 55, NS: 2.9 cm	Branching inflorescence, floriferousness, stripes, colored lips, can pass on peloric flower characteristics	Small flowers
Phalaenopsis lindenii	Miniature plant size, Richly marked leaves, peppermint striped lips, cultivated varieties have prominently stripped sepals and petals, cool growing conditions. Flowers per spike: 23, NS: 3.6 cm	Stripes, red coloration, attractively marked lip, floriferousness, extended flowering, branching inflorescence, beautiful foliage	Reluctant breeder, does not grow well in hot summers

The final hybridizing point that I want to bring up is the wide acceptance of using Phal. equestris in many different breeding lines. It appears that Phal. lindenii may be down the same path.

Some Key Grexes

Phal. Cellinde
(Phal. lindenii x
Phal. celebensis)
'Zuma Canyon' HCC/AOS
Jul 1988, NS 3.0 cm
5 / 6 progeny

Phal. Liu's Rainbow
(Phal. Be Glad x
Phal. lindenii)
41 / 74 progeny
No awards

Phal. Venus
(Phal. lindenii x
Phal. equestris)
41 / 70 progeny
No AOS awards

Phal. Peppermint
(Phal. lindenii x
Phal. Pink Profusion)
'Jeannette' AM/AOS
Oct 2003, NS 5.0 cm
41 / 70 progeny

Phal. Cassandra
(Phal. equestris x
Phal. stuartiana)
'Natalia' HCC/AOS
Mar 2014, NS 4.7 x 6.1 cm
226 / 3781 progeny
24 AOS awds

Phal. Cassandra
(Phal. equestris x
Phal. stuartiana)
'Angela' HCC/AOS
Jan 1997, NS 5.0 x 5.3 cm
226 / 3781 progeny
24 AOS awds

Phal. Timothy Christopher
(Phal. amabilis x
Phal. Cassandra)
'Snow White' AM/AOS
Mar 2000, NS 4.0 x 4.2 cm
205 / 756 progeny
7 AOS awds

Phal. Ruby Lips
(Phal. Roselle x
Phal. Doris)
'Malibu' AM/AOS
Feb 1963
55 / 14,697 progeny
5 AOS awds

Phal. Taisuco Jewel
(Phal. Okay Seven x
Phal. equestris)
'Breckinridge' HCC/AOS
Jan 1997, NS 5.5 x 5.0 cm
25 / 601 progeny
4 AOS awds

Phal. Zuma's Pixie
(Phal. Carmela's Pixie x
Phal. equestris)
'Cat's Paw Purr-fect' AM/AOS
Feb 2004, NS 4.5 x 4.7 cm
7 / 7 progeny
2 AOS awds

Phal. Ministripes
(Phal. Rose Charm x
Phal. Pinocchio)
'Peppermint' AM/AOS
Feb 1968
10 / 6938 progeny
2 AOS awds

Phal. Sogo Vivien
(Phal. Sogo Alice x
Phal. Zuma's Pixie)
'Diana' AM/AOS
Mar 2017, NS 5.9 x 4.5 cm
191 / 486 progeny
4 AOS awds

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Building Block Data Sheet

Phalaenopsis equestris, (Schauer) Rchb.f., Linnaea 22: 864 (1850)

[fal-en-OP-sis ee-KWES-tris]

Phal. equestris
'Candor Violette' FCC/AOS
Jun 1995, NS 2.9 x 3.8 cm

Phalaenopsis [Phal.] equestris is native to the Philippines and southern Taiwan near streams in hot valleys at an altitude of sealevel to 300 meters. It is a small sized epiphyte with a short stem enveloped by several imbricating leaf bases and carrying to 5, fleshy, recurved, oblong-elliptic to oblong-ovate leaves. Plants will bloom at almost any time of the year although the peak is September through April. The inflorescence is a suberect to arcuate, to 12" [30 cm] long, racemose or paniculate, and is denesly many flowered, 10-15 per inflorescence. The flowers are small, 0.6 to 1.2" [1.5 to 3 cm], long lasting, and successively open 2-3 at a time over a period of months. The delicate flowers, with sepals flaring back, are variably colored. The blossoms are usually white, variably flused with pink, and may be marked with purple, orange, or pink. The lip is rose with yellow sidelobes. The leaves are 6-8 in. (15-20 cm) long, bright green.

Phal. equestris
'Krull Smith' FCC/AOS
Oct 2014, NS 3.4 x 3.4 cm
Traditional color and form

Common Name – The Horse Phalaenopsis

This species has a habit of making keikis and can rebloom out of old spikes and can continue to send off branches so they are best left uncut.

This orchid is highly adaptable to various environments and is easy to grow, if given a drier winter although never let it dry out completely.

Breeding Characteristics:

It is currently a member of the Phalaenopsis subgenus - Phalaenopsis section, which forms the basis of the classical white Phalaenopsis species and hybrids. As a parent, Phal. equestris contributes an increase in flower count on multi-branching inflorescences, small size, and is used to create stripped and colored lip progeny. Peloric forms are common and can be passed on to its progeny. Due to small plant size, these plants on most early generation progeny are ideal for windowsill growers.

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

equestris	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	3	6	1	1	3	0	11	25	266	1283	3240	6340	6653	5484	378	23,694
Assc Awds	0	3	35	0	0	4	0	0	25	151	507	1204	2218	2378	698	1	7224
F1	0	2	5	0	1	1	0	3	9	36	28	61	245	118	52	3	564
AA	0	3	35	0	0	4	0	0	6	67	10	82	154	42	7	0	410
F2	0	1	1	1	0	1	0	6	15	71	99	105	377	437	209	13	1336
AA	0	0	0	0	0	0	0	0	16	10	52	67	199	155	21	0	520
F3	0	0	0	0	0	1	0	2	1	83	87	86	317	788	755	36	2156
AA	0	0	0	0	0	0	0	0	3	50	13	30	145	363	89	0	693

From this table one sees that Phal. equestris has been a major contributor with approximately 64% of all Phalaenopsis hybrids being Phal. equestris progeny. The first hybrid was registered in 1882 and an early peak of eight hybrids registered in the 1890s. There was then a significant lull until the 1950s. The use of Phal. equestris peaked as a primary parent in 1990s with the peaks as a second and third generation parent in the 2000s.

The table of amabilis hybrids includes 13 Phal. equestris F1 Hybrids with six have 1000 or more total progeny. Comments on these F1 hybrid lines follow:

Phal. Cassandra
(Phal. equestris x Phal. stuartiana)
'Soroa' AM/AOS
Mar 1989, NS 4.5 cm

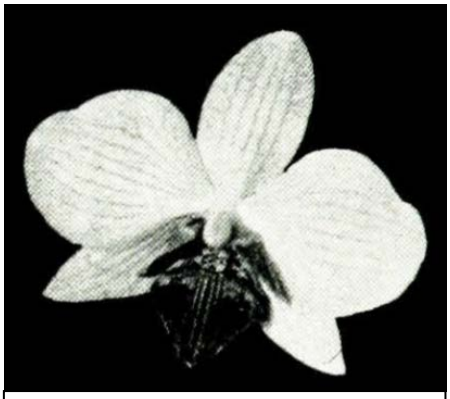
Phal. Tying Shin Fantastic World
(Phal. Chian Xen Pearl x
Phal. Timothy Christopher)
'Diana' AM/AOS
Mar 2013, NS 7.1 x 6.7 cm

* **Phal. Cassandra** (Phal. equestris x Phal. stuartiana) was made in 1896 by Veitch, there are a total of 226 F1 hybrids and 3759 total progeny.
  * Most of these hybrids would be considered miniature, aka. small, Phalaenopsis
  * The table includes six F1 hybrids and 17 total progeny (Included in the Phal. Cassandra line is the allied Phal. Terilyn Fujitake (Phal. Pink Fantasy x Phal. stuartiana) line).
  * Of the grexes in the table, six grexes have received the 10 most AOS awards in this group.
  * Of the grexes in the table, four grexes have the 10 most F1 progeny in this group.
  * The most recently registered grex in this table is Phal. Tying Shin Fantastic World (Phal. Chian Xen Pearl x Phal. Timothy Christopher) was made in 2008 by Kuo Liang Hung, there are a total of 3 F1 progeny.

* **Phal. Roselle – Phal. Ruby Lips** (Phal. Roselle x Phal. Doris) was made in 1955 by Mrs. L. McCoy, there are a total of 55 F1 hybrids and 14,697 total progeny.
  * Most progeny are white with strips, pink with darker pink veins, to solid pink all with dark lips.

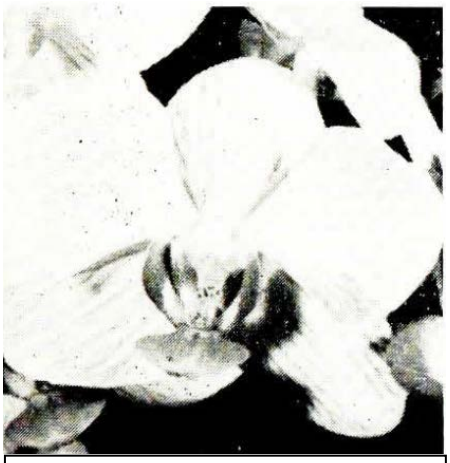
Phal. Happy Valentine
(Phal. Otohime x Phal. Odoriko)
'Excell' AM/AOS
Mar 1993, NS 11.7 x 8.7 cm
202 F1/4194 total progeny, 17 awds

Phal. Baldan's Kaleidoscope
(Phal. Hausermann's Candy x
Phal. Daryl Lockhart)
'Golden Treasure' HCC/AOS
Sep 2008, NS 8.3 x 7.3 cm
11 F1 progeny, 11 awds



Phal. Ruby Lips
'Gertie' AM/AOS
Mar 1964, NS 7.3 cm

* **Phal. ministripes** (Phal. Rosy Charm x Phal. Pinocchio) was made in 1968 by Stodard, there are 10 F1 hybrids and 6,855 total progeny. Below are two grexs, less than or equal to fifth generation with lots of progeny and high in either F1 or awards.



Phal. Ministripes
'Peppermint' AM/AOS
Feb 1968, NS 6.4 cm

Phal. Chih Shang's Stripes
(Phal. Modern Stripes x
Phal. Matou Freed)
'Bedford' AM/AOS
Feb 2003, NS 9.8 x 8.2.0 cm
85 F1 / 2563 total progeny, 5 awds

Phal. Chia Lin
(Phal. James Hall x
Phal. Johanna)
'Tsuei You' JC/AOS
Sep 1993, NS 6.5 x 5.5 cm
39 F1 / 3814 total progeny, 1 awd

* **Phal. Sally Lowrey** (Phal. Pua kea x Phal. equestris) was made in 1954 by O. Kirsch, there are a total of 32 F1 hybrids and 18,587 total progeny, no photo available.
  * Three major breeding lines are associated with Phal. Modern Stripes (no photo available), Phal. Ann Hatter, and Phal. Red Lip (1965) (no photo available).
  * Below for each line are photos of lead grex, most awarded and most progeny (less than fifth generation for both)

Phal. Chian Xen Pearl
(Phal. Ching Hua Spring x
Phal. Nobby's Pink)
'IS1540' AM/AOS
Mar 2019, NS 11.0 x 8.8 cm
175 F1/1070 total progeny, 25 awds

Phal. Chih Shang's Stripes
(Phal. Modern Stripes x
Phal. Matou Freed)
'Bedford' AM/AOS
Feb 2003, NS 9.8 x 8.2.0 cm
85 F1 / 2563 total progeny, 5 awds

Phal. Okay Seven
(Phal. Modern Strips x
Phal. Houpi Beauty)
'LO' AM/AOS
May 1998, NS 8.2 x 7.3 cm
24 F1 / 2927 total progeny, 1 awd

Phal. Ann Hatter
(Phal. Juanita x
Phal. New Era)
'Cher Ami' FCC/AOS
May 1963, NS 9.5 cm
21 F1 / 15,060 total progeny, 3 awds

Phal. Mad Hatter
(Phal. Spitfire x
Phal. Ann Hatter)
'Caliente Range' AM/AOS
Aug 1967, NS 8.9 cm
104 F1/10,996 total progeny, 3 awds

Phal. Golden Gift
(Phal. Deventeriana x
Phal. Golden Buddha)
'Jim Hamric' AM/AOS
May 1983, NS 8.5 cm
65 F1 / 222 total progeny, 20 awds

Phal. Chiali Stripe
(Phal. Cindy Tsai x
Phal. Lucky Shenk)
'NFS' AM/OSROC
21 F1 / 5287 total progeny

Phal. Leopard Prince
(Phal. Sun Prince x
Phal. Ho's French Fantasia)
'Hwa Yuan Red Leopard' FCC/AOS
Mar 2013, NS 11.2 x 9.6 cm
245 F1 / 854 total progeny, 32 awds

Phal. Jiminy Cricket
(Phal. Ministripes x
Phal. Red Lip (1965))
'Orchidglade' AM/AOS
Jan 1972, NS 8.3 cm
6 F1 / 6803 total progeny, 1 awd

* **Phal. Be Glad** (Phal. Swiss Miss x Phal. Cassandra) is the only major progeny of **Phal. Swiss Miss**. The cross was registered in 1974 by Hager Orchids, there are a total of 15 F1 hybrids and 1,545 total progeny and no awards. No photo available.

Phal. Be Glad
'Valley Forge' AM/AOS
Apr 1987, NS 5.1 cm

Phal. Pixie Star
(Phal. pulcherrima x Phal. Joyful)
'Norman' AM/AOS
May 2007, NS 4.1 x 3.6 cm
7 F1 / 10 total progeny, 21 awds

Phal. Be Tris
(Phal. Be Glad x Phal. equestris)
'Woodlawn' AM/AOS
Mar 1999, NS 4.1 x 4.1 cm
77 F1 / 421 total progeny, 19 awds

* **Phal. Artemis** (Phal. amabilis x Phal. equestris) was made in 1892 by Veitch, there are a total of 14 F1 hybrids and 6,803 total progeny.

Phal. Artemis
'Winter Carnival' HCC/AOS
Jan 2003, NS 5.9 x 5.0 cm

Phal. Comanche Rose
(Phal. Terry-Beth Ballard x
Phal. Lipperose)
'Henk'
6 F1 / 618 total progeny, 1 awds

Phal. New Rose
(Phal. Vick Sue Lockhart x
Phal. Valentine)
'Cover Girl' HCC/AOS
Feb 1996, NS 10.3 cm
3 F1 / 144 total progeny, 2 awds

Synonyms:

None recently

Varieties / forms:

There are three recognized forms:

Phal. equestris var. rosea – refers to evenly rose-colored flowers. Cesar Zapata, Jr. had the following comments "This form exists in a very small area north of the Philippine Island of Luzon-Bangui, Ilocos Norte. We call this form 'Ilocos' type. It has the smallest leaves of all the forms of the species and has a slightly different lip structure, especially the callus." Flowers tend to be smaller and produce full, round flowers with overlapping floral segments.

Phal. equestris f. alba – This is a pure white form, with no pigment associated with the callas.

Phal. equestris f. aurea– Pure white flowers with a highly contrasting solid yellow lip.

Phal. equestris var. rosea
'Maria Teresa' HCC/AOS
Nov 1991, NS 2.3 x 3.2 cm

Phal. equestris f. alba
'OrchidPhile' HCC/AOS
Sep 1994, NS 2.9 x 2.9 cm

Phal. equestris f. aurea
'OrchidPhile' AM/AOS
Aug 1996, NS 3.4 x 3.5 cm

Awards:

Phal. equestris	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS	2	32	30	1	19	12		3	2	**101**
Year(s) Awarded	1993-1995	1982-2019	1977-2019	1994	1966-2015	1959-2014		1979-2011	1961-1966	**1974-2013**

AOS Quality Awardees (not included prior, third generation or less):

Phal. Purple Gem
'Ching Hua' AM/AOS
Jul 1999, NS 2.7 x 2.9 cm
42 Flwrs, 24 Buds, 3 Inflor
(Phal. pulcherrima x
Phal. equestris)

Phal. Cassandra
'Little Prince' AM/AOS
Mar 1998, NS 4.7 x 4.5 cm
24Flwrs, 48 Buds, 2 Inflor.
(Phal. equestris x
Phal. stuartiana)

Phal. Zuma's Pixie
'Cat's Paw Purr-fect' AM/AOS
Feb 2004, NS 4.5 x 4.7 cm
35 Flwrs, 22 Buds, 4 Inflor.
(Phal. Carmela's Pixie x
Phal. equestris)

Phal. Carmela's Pixie
'Lines' AM/AOS
Oct 1996, NS 4.9 x 5.3 cm
32 Flwrs, 45 Buds, 1 Inflor.
(Phal. Terilyn Fujitake x
Phal. Cassandra)

Phal. Pixie Star
'Norman' AM/AOS
May 2007, NS 4.1 x 3.6 cm
30 Flwrs, 25 Buds, 2 Inflor
(Phal. pulcherrima x
Phal. Joyful)

Phal. Little Mary
'Doll' HCC/AOS
Apr 1993, NS 5.3 x 5.7 cm
47 Flwrs, 0 Buds, 1 Inflor.
(Phal. Mary Tuazon x
Phal. equestris)

Phal. Be Tris
'Woodlawn' AM/AOS
Mar 1999, NS 4.1 x 4.1 cm
34 Flwrs, 17 Buds, 1 Inflor.
(Phal. Be Glad x
Phal. equestris)

Phal. Be Glad
'Classic' AM/AOS
Apr 1986, NS 5.0 cm
30 Flwrs, 8 Buds, 1 Inflor.
(Phal. Swiss Miss x
Phal. Cassandra)

Most recent awardees (fourth generation or less):

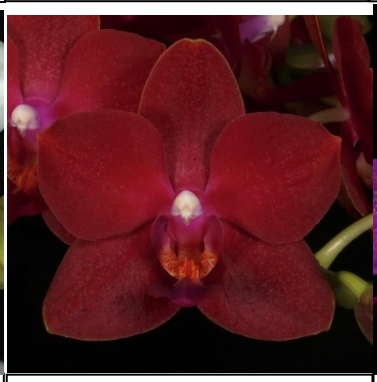
Phal. Peggy Tauscher
'Owen' AM/AOS
Mar 2020, NS 6.2 x 6.0 cm
4 Flwrs, 4 Buds, 1 Inflor.
(Phal. Sogo Lawrence x
Phal. Tying Shin Forever Love)

Phal. Pylo's Forever
'Lady Stella' AM/AOS
Aug 2018, NS 5.5 x 5.2 cm
4 Flwrs, 1 Bud, 1 Inflor.
(Phal. Tying Shin Forever Love
x Phal. Yungho Gelb Canary)

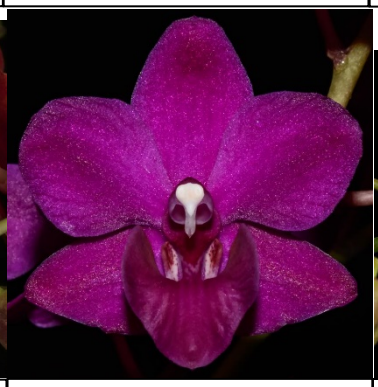
Phal. Springbrook Ruby
'Orange Glow' HCC/AOS
Apr 2019, NS 6.0 x 5.9 cm
11 Flwrs, 1 Bud, 1 Inflor.
(Phal. Tying Shin Forever Love
x Phal. H. P. Norton)

Phal. Taisuco Little Vivien
'H99952' CCM/AOS
Mar 2017, NS 5.1 x 4.4 cm
112 Flwrs, 20 Buds, 3 Inflor.
(Phal. Philisander x
Phal. Sogo Vivien)

Phal. Florida Rainbow
'Crystelle' AM/AOS
Apr 2019, NS 7.0 x 7.0 cm
8 Flwrs, 1 Bud, 2 Inflor.
(Phal. Tzu Chiang Chrisna x
Phal. George Vasquez)



Phal. Krull's Sunrise
'Krull-Smith' AM/AOS
Jan 2019, NS 4.9 x 4.7 cm
18 Flwrs, 8 Buds, 1 Inflor.
(Phal. Krull's Golden Champion
x Phal. Citrus Candy)



Phal. Fuller's Paint Brush
'Mayfield' AM/AOS
Apr 2019, NS 10.5 x 9.7 cm
10 Flwrs, 11 Buds, 2 Inflor.
(Phal. Fuller's Miss x
Phal. Sung Woei Rosaria)

Phal. Walnut Valley Purple Pixie
'B & M' AM/AOS
Sep 2020, NS 3.5 x 3.8 cm
16 Flwrs, 16 Buds, 1 Inflor.
(Phal. Purple Gem x
Phal. Pixie Star)

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Individual flowers of *sanderiana* and *schilleriana* are somewhat similar, but other characteristics are dramatically different. How might hybrids of these two differ?

Phal. sanderiana progeny:

- Leaves – Green with or without purple suffusion and a silvery overlay
- Inflorescence – Few branching resulting in typical flower counts in mid teens
- Fragrance – reported but not consistently
- Blooms in the Summer, Heat tolerant – Extends blooming season and less likely to have bud blast related to heat.

Phal. schilleriana progeny:

- Leaves – Dark Green marbled with silvery grey, lower surface purple suffused
- Inflorescence – Multi-branching resulting in typical flower counts in the mid thirties
- Fragrance – Multiply references to a fragrance, soft and sweet like a rose.
- Spring bloomer like Phal. amabilis and Phal. aphrodite
- Lip – Can pass on to progeny a white lip

Terminology – S –

sabulose (SAB-yew-lobz) Located near or in a sandy place. NOT USED IN Descriptions

saccatus, -a, -um (sak-KAY-tus) Sac-shaped.

Acampe, Aerangis, Aerides, Caasetum, Dendrobium, Sarcochilus, etc. (326)- … lip saccate …

sagittatus, -a, -um (saj-it-TAY-tus) Shaped like an arrow-head, the basal lobes directed backward and downward (6).

Dendrobium, Epidendrum – … midlobe sagittate …

Epidendrum, Macroclinium – … lip sagittate …

Lepanthes – … lip rigid sagittate …

Paphiopedilium – … staminode sagittate …

saccharinus, -a, -um (sak-ka-RYE-nus) Sweet.

salinus, -a, -um (sal-LYE-nus) Growing in saline places; salty.

sanctus. -a, -um (SANK-tus) Sacred; holy.

sanguineus, -a, -um (sang-GWIN-e-us) Blood colored.

Broughtonia, Bulbophyllum, Catasetum, Cattleya, etc. – Broughtonia sanguinea

sanguinolens (sang-OH-lenz) Close to blood in color.

Caucaea, Dendrobium, Kefersteinia – … Caucaea sanguinolenta

sanguinolentus, -a, -um (sang-gwin-o-LEN-tus) With blood-red spotting or veins.

sapidus, -a, -um (SAP-id-us) Savoury; pleasant flavored.

saprophyte (SAP-roh-fyte) A plant deriving its nutrition from dead or decaying organic matter of another plant or animal.

saprophytic (sap-pro-FIT-ik) Existing as a saprophyte.

sarcanthine (sar-KAN-theen) Similar to any Asiatic monopodial orchid.(1)

Cleisostoma subulatum – … Sarcanthine alliance …

sarcodes (sar-KOH-deez) Fleshlike in substance.

Gomesa – Gomesa sarcodes

sativus, -a, -um (sat-TYE-vus) Cultivated.

saxocolus, -a, -um (sax-IK-o-lus) Dwelling in or near rocky places.

scaber, scabra, scabrum (SKAY-ber) Rough.

scabrous (SKAY-brus) Rough or gritty to the touch (24).

Bulbophyllum Magnifico – … petals held vertical, lanceolate, margins scabrous; …

Bulbophyllum polliculosum – … lateral sepals spatulate, scabrous, folded forward …

Paphiopedilum Ron Sims – … petals elliptic, held downward, margins slightly undulate, finely scabrous, …

scalariform (ska-LAIR-i-form) With marking suggestive of a ladder (4).
Maxillaria scalariformis

scale (SKAYL) Any thin scarious body, usually a degenerate leaf, sometimes of epidermal origin; a trichome, if disc-shaped or flattened.
… transcends the point scale

scalloped (SKAL-lopd) With rounded teeth or lobes; crenate (35).
Dendrobium Royal Chip – … margins scalloped …
Warszewiczella timbiensis – … lip, undulated, scalloped, cream, …

Encyclia Orchid Jungle – … midlobe flat, scalloped, …

scandent (SKAN-dent) Climbing (43).
Schoenorchis paniculate – … plant 29cm wide x 33cm high, clean, monopodial, scandent, …
Maxillaria pendula – … scandent plant with slender rhizomes …
Epidendrum peperomia – … one well grown scandent plant …

scape (SKAYP) A leafless peduncle arising from the ground which may bear scales or bracts but no foliage leaves and may be one- or many-flowered. (107, most name or location)
Cynorkis calanthoides – … based on scape not being longer …
Scaphosepalum rinkei – … up to 40 pedicels on a 39-cm scape; …
Bulbophyllum taeniophyllum – … on a 9-cm scape; ….

scaposus, -a, -um (skap-OH-sus) Bearing a scape or scapes.

scariosus, -a, -um (skay-ri-OH-sus) Thin, dry and membranaceous, not green.

scion (SYE-on) The cutting used in grafting.

sclerenchyma (SLUR-ink-ki-muh) A strengthening tissue made up of dead thick-walled cells that are either long cells called fibers or short cells called sclerids.

scobicular (sco-BIK-yew-lar) Having the appearance of grains of sawdust.

scoparius (sco-PAR-ee-us) Broomlike, like a bundle of twigs.

scorpoid (sco-PEE-oid) Circinately coiled while in bud. (2)
Chytroglossa Ben Berliner – … on one 11.2-cm pendent inflorescence (scorpoid cyme); …

scrotiformis, -e (skro-ti-FOR-miss) Pouch-like.

sculptus, -a, -um (SKULP-tus) Having a carved appearance.

scurfy (SKER-fee) Having scale-like or bran-like particles. (2)
Bulbophyllum Magnifico – … exterior scurfy, …

scutellaris, e (skew-tell-AY-ris) Platter-shaped.

sebosus, -a, -um (seb-OH-sus) Tallowy; greasy.

sectile (SEK-til) Having the quality of being able to be cut smoothly with a knife.

section (SEK-shun) A taxonomic category below the rank of subgenus which is a subdivision of a genus.

secundus, -a, -um (sek-KUN-dus) Borne along one side of the axis: turned to one side. (56)

Dendrobium milaniae – … flowers on a 3-growth secund plant; …
Stelis glossulicles – … buds arranged in a secund manner …
Perreiraara Bangkok Sunset – … buds on one semi-upright, secund, 24-cm inflorescence; …

seed (SEED) The ripened ovule, consisting of the embryo, with or without endosperm usually with a seed coat.

seed pod (SEED pod) The horticultural term for the fruit or capsule of an orchid.

seedling (SEED-ling) A growing seed; the young plant that produces its first leaves and roots until it reaches its first flowering.

segment (SEG-ment) One of the parts of a leaf or other structure that is cleft or divided.

self-fertilization (SELF-fer-ti-lye-ZAY-shun) The fertilization of an ovule with its own pollen; selfing.

self-pollination (SELF-pol-in-AY-shun) The pollination of a flower by its own pollen.

selligerus, -a, -um (sel-LIJ-er-us) Shaped like a saddle.

semi- (SEM-i) Latin denoting half, used in compound words as a prefix.

semi-alba (semi-i-AL-buh) The horticultural term to mean a white flower with a colored lip.

semi-apertus, -a, -um (semi-i-ah-PER-tus) A half open flower.

semiterete (semi-ter-REET) Nearly round in cross section. (8)

Stelis imraei – … Semiterete column, …
Maxillaria gokusingii – … leaves semiterete, …
Cleisocentron gokusingii – … leaves semiterete …

senilis, -e (sen-NYE-lis) Aged; belonging to old people.

sepal (SEE-pal) A division of the calzx; the outermost whorl of a flower.

sepaline (SEP-a-leen) Made up of sepals; resembling a sepal. (474)
Bulbophyllum Magnifico – … sepaline tails askance; …
Bulbophyllum Lindsey Paris – … sepaline tails suffused burgundy; …
Masdevallia rex – … golden curved sepaline caudae, …

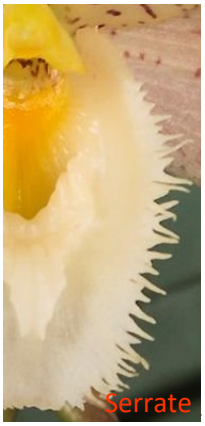
septate (SEP-tayt) Divided by partitions or cross-walls.

septum (SEP-tum) A cross-wall or partition.

sericeus, -a, -um (ser-ISS-e) Covered with a silky down; silky. (16)
Bulbophyllum unitubum – … lip articulate, green, sericeous, hairs white; …
Phalaenopsis Luedde-violacea – … keel faintly sericeous, …
Paphiopedilum Golden Palace – … petals ovate, margins hirsute, base sericeous, yellow, …

serpens (SER-penz) Creeping; like a serpent.

serratus, -a, -um (ser-AY-tus) With sharp teeth pointing forward. (396)
Rhyncattleanthe Vision Quest – … margins finely ruffled and serrate, …
Cattleya schilleriana – … margins ruffled, serrate; …
Dendrobium farmeri – … margins serrate; …



serrulate (ser-YEW-layt) Finely serrate. (32)

Masdevallia amanda – … keeled petals that are tridentate and serrulate; …

Stelis scabrata – … margins minutely serrulate, …

Fredclarkeara Saturn Sky – … margins finely serrulate; …

sesquipedalis, -e (sess-kwee-pee-DAY-liss) One-and-a-half feet long.

sessilis. -e (SESS-il-iss) Lacking a stalk of any kind. (21)

Dendrobium boosii – … leaves growing alternate 90 degrees on new canes, lanceolate, subsessile, …

Corybas geminigibbus – … leaf green, veined paler green sessile, ovate, …

Bletia patula – … lip sessile, tri-lobed, …

seta (SEE-tah) A bristle. (20)

Fredclarkeara Doubtless – … bisexual flowers with no setae. …

Bulbopyllum Doris Dukes – … margins lined with lanceolate setae; …

Catasetum Green Dragon – … right seta (trigger) projects forward; …

setaceus, -a, -um (se-TAY-see-us) Bristle-shaped; furnished with bristles. (2)

Paphiopedilum Tropical Magic – … margin setaceous, hairs dark maroon; …

Pescatorea Coronation – … lip darker beet purple with white setaceus lip …

setiformis, -a, -um (se-ti-FORM-iss) In the form of a bristle.

sexual propagation (SEK-shoo-al prop-a-GAY-shun) Increasing a plant population through the production and growth of seed.

sheath (SHEETH) A tubular protective envelope covering a developing stem or inflorescence.

shoot (SHOOT) A new growth originating from a root or stem.

shrub (SHRUB) A woody perennial, usually with several stems.

siculiformis, -e (sik-yew-li-FORM-iss) Shaped like a dagger.

sigmoid (SIG-moyd) Doubly curved like the letter S. (8)

Paph. spicerianum – … staminode … superior margin sigmoid; …

Bulb. A-doribil Collin – … dorsal sepal sigmoid …

Notyliopsis beatricis – … column sigmoid, …

signatus,-a, -um (si-NAY-tus) To mark; desiignate; to affix.

siliceus, -a, -um (si-LISS-e-us) Composed of silica; abounding in sand.

silky (SIL-kee) With the texture or appearance of silk. (82)

Usually textural

Paph. Shun-Fa Golden – … petals … proximal white silky hairs; …

similis, -e (SIM-ill-iss) Similar to.

silvestria, -e (sil-VES-triss) Growing in woods.

simple (SIM-pul) Unbranched or not divided; opposite of compound. (24)

Phal. Tying Shin Golden Eagle – … on three branched and one simple inflorescence; …

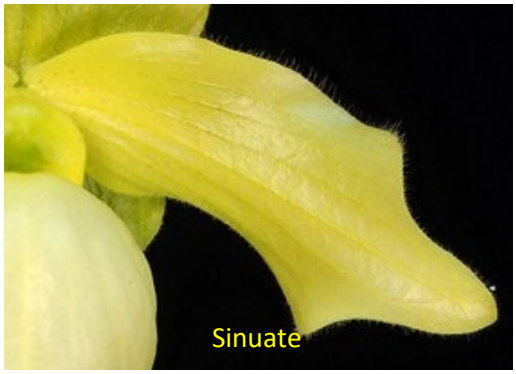
Prosthechea campylostalix – … simple, semi-erect, apical, inflorescence …

simulans (SIM-yew-lanz) Resembling.

sinensis, -e (si-NEN-sis) Native to China.

sinistrorse (sin-ist-TRORSS) Turned to the left.

sinuatus, -a, -um (sin-yew-AY-tus) With a deeply wavy margin or edge. (1)



Paph. Alice Barrios – … petals … margin sinuate; …

sinus (SYE-nus) THe cleft or recess between two lobes. (13)

Catasetum Saccatum – … lip sinus ivory, spotted chocolate brown, …

Catasetum Orchidglade – … callus golden yellow encircling deep sinus; …

smooth (SMOOTH) Lacking roughness; an inaccurate way used to describe the absence of pubescence. (469)

Cattleya aclandiae – … sepals and petals … margins almost smooth, …

Paphiopedilum thaianum – … pouch smooth, white, …

sobole (so-BOL) A shoot; a basal shoot.

socialis, -e (so-si-AY-liss) Forming colonies; allied.

solaris, -e (so-LAY-ris) Found in sunny places.

solitary (SOL-i-tay-ree) Borne alone, singly; blooming with a single flower. (52)

Masdevallia O'Brien's Passion – … flower on a solitary 44-cm inflorescences; …

Barbosella prorepens – … flowers on 412 erect, thin, up to 6-cm, solitary inflorescences …

sordidus, -a, -um (SOR-did-us) Appearing dirty in tint, chiefly applied to a structure when of impure white.

sparsus, -a, -um (SPAR-sus) A few. (907)

Paphiopedilum Conco-bellatulum – … pouch sparsely spotted …

Neotinea ustulate – … lip trilobed, white sparsely spotted …

spathaceous (spa-THAY-shus) With a sheath or a sheath-like bract.

spathe (SPATH) One or more bracts which subtend or enclose an inflorescence. (20)

Pleurothallis cardiostola – … a fascicle of solitary, successive flowers borne from an erect to suberect conduplicate spathe at the leaf base; …

Acianthera calypso – … flowers and buds hidden inside dry, brown spathe in leaf axil, …

spathulatus, -a, -um (spath-yew-LAY-tus) A broad flat blade; oblong, with the basal end attenuated like a spatula. (93)

Encyclia Amanda – … typical open form with spathulate petals …

Papilionanda Ben Fragrance – … sepals and petals spathulate, …

speciation (spee-see-AY-shun) The change over time of two or more species from one ancestral form; phyletic speciation is transformation in time due to mutation, recombination and selection.

species (SPEE-sheez) A botanical and horticultural term used as a singular or plural to indicate a particular kind; a fundamental category in taxonomy.

specimen (SPESS-i-men) A plant exemplifying a taxon; an individual in an herbarium collection.

speciosissimus, -a, -um (spee-see-o-SISS-i-mus) Showy; very handsome; beautiful.

speciosus, -a, -um (spee-see-OH-sus) Beautiful.

spectabilis, -e (spek-TAB-il-is) Spectacular; visible.

speculum (SPEK-yew-lum) Reflecting like a mirror. (3)

Ophrys lutea subsp. Lutea – … midlobe brown centrally, hirsute, speculum gray, …

spermatophyte (spur-MAT-o-fite) A plant bearing true seeds.

sphacelatus, -a, -um (sfass-ee-LAY-tus) Having the appearance of being diseased.

sphagnum (SKAG-num) The generic name for a bog moss used in potting media to maintain moisture; also used partially decomposed and known as peat moss.

spheroidal (sfeer-OY-dul) A solid being nearly spherical in shape.

spicatus, -a, -um (spy-KAY-tus) Having the arrangement or resembling a spike. (1)

Otochilus fuscus – … on seven apical, spicate inflorescences …

spiciformis, -e (spye-FOR-miss) Having the form of a spike.

spiculose (spye-KU-lohse) Having a surface covered with fine points. (1)

Zootrophion hypodiscus – … ovary apple green, ribbed spiculose;

spike (SPYKE) A form of inflorescence with the flowers sessile upon an elongated axis. Only a very few orchids have this type of inflorescence.

spikelet (SPYKE-let) A small secondary spike.

spilopterus, -a, -um (spy-LOP-ter-us) With spotted wings.


Spiral

spine (SPYNE) A strong, sharp-pointed woody body arising from the wood of the stem.(2)

Stanhopea insignis – … ovary and back of sepals ornamented with minute black spines; …

spinosus, -a, -um (spy-NO-sus) Possessing spines.

spinulosus, -a, -um (spy-new-LO-sus) With small spines.

spiralis, -e (spy-RAY-lis) Having an arrangement in a spiral. (319)

Bulbophyllum purpureorhachis – … along the upright, spiraling rachis, …

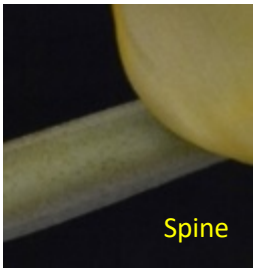
Paphiopedilum Krull's Eileen Hector – … petals linear, wide proximally, narrow, spiraled, spotted, …

splendens (SPLEN-denz) Showy; radiant. (100)

Used as … Approximately 3170 splendid flowers …

splendidus, -a, -um (SPLEN-did-us) Magnificent; glorious.

spore (SPOHR) A simple reproductive body more often composed of a single detached cell but without an embryo.


Spine


Spur

sport (SPORT) A sudden change from normal in a plant part; a mutation.


Stalk

spray (SPRAY) The small branches bearing leaves, flowers, etc.; the pesticide material or its application used to treat or prevent disease.

spur (SPER) A hollow sac-like tubular extension of some part of the flower, usually nectariferous. (1617)

Vanda christensoniana – … spur 1.5cm, tubular, soft pink; …

Angraecum sesquipedale – … spur 25-cm, light green, …

squalens (SKWAY-lenz) Looking dirty or dull in color.

squalidus, -a, -um (SKWAY-li-dus) The flowers dull in color; dirty.

squamellate (skwam-EL-layt) With tiny or secondary scales.

squamosus, -a, -um (skwam-OH-sus) Provided with a ragged scurfy surface.

stachys- (STAK-iss) A Greek word used in compound words meaning spike-like.

stalk (STAWK) A supporting stem such as a petiole, peduncle, pedical, filament or stipe. (66)

Paphiopedilum fairrieanum – … staminode cream, stalk with purple pubescence, …

Cycnoches Brown's Choice – … lip 2.0cm x 5.5cm, shield-shaped distally on a green stalk, …


Stamen


Staminode

stamen (STAY-men) The male structure of a flower which is pollen bearing.

Catasetum Dark Odyssey – … stamen triggers white, crossed; …

staminate (STAM-in-ayt) Having stamens; male.

staminode (STAM-in-ohd) A sterile stamen, or any structure without an anther which corresponds to a stamen.

Paphiopedilum Shin Yi Gigantic – … staminode pandurate, chartreuse, distal two-thirds overlaid raspberry-red, hirsute burgundy margins; …

Paphiopedilum Johanna Burkhardt – … staminode hirsute, caramel throughout; …


Stellata

standard (STAN-dard) The dorsal dilated petal or sepal of a flower.

station (STAY-shun) A particular locality for a given plant.

stele (STEE-al) The central vascular cylinder.

stellatus, -a, -um (stell-AY-tus) Shaped like a star.

Cyrtobrassidium Shirley Dunkelberger – Twenty-five slightly cupped stellata flowers …

stem (STEM) The main body of a plant bearing roots below and leaves and eventually flowers above.

Term commonly mis-used in reference to the inflorescence or peduncle.


Stigmatic

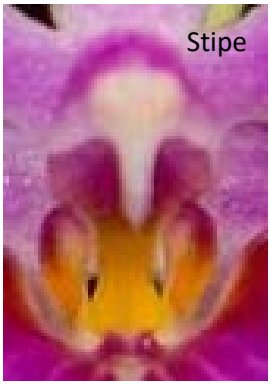
stenophyllus, -a, -um (sten-o-FILL-us) With narrow leaves.

sterile (STAIR-ill) Unproductive; infertile; free of any contaminating microorganisms.

stigma (STIG-ma) The apical portion of the pistil of a flower which receives the pollen for effective pollination and the eventual fertilization.

stigmatic (stig-MAT-ik) Belonging to or characteristic of the stigma. (135)

Fredclarkeara L'amour de vie de Sue – … white around stigmatic surface, …


Stipe

stipe (STYPE) The slender stalk-like support of a structure such as the pollinia in the Orchidaceae.

Phalaenopsis San Shia Apendo – …lip trilobed, forked calli, downward held, intense dark lavender, central white stripe, throat golden yellow; …

stipel or stipellum (STIP-el) An appendage of a leaflet similar to a stipule.


Stoloniferous

stipitatus, -a, -um (stip-i-TAY-tus) Having a stipe or stalk.

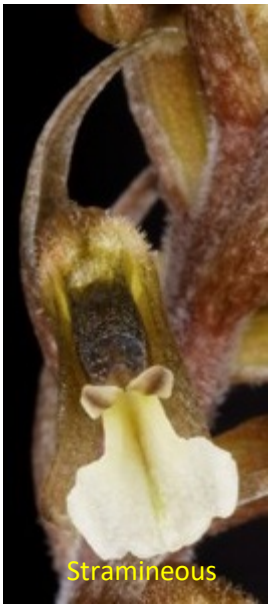
stipule (STIP-uhl) An appendage at the base of some leaves or on each side of their insertion.

stolon (STOH-lon) An above the ground stem modified to run horizontally on the surface to usually take root at the nodes. (see stoloniferous for example)

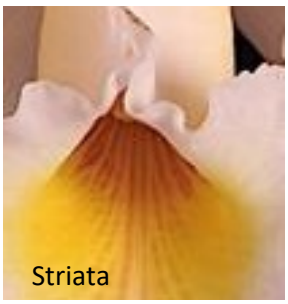
stoloniferous (sto-lon-IFF-er-us) Producing stolons. (18, mix with 'stolon')

Bulbophyllum crassipes – … cascading, stoloniferous 70-growth plant; …

stoma, stomate (STOH-mah) (plural - stomata (sto-MAH-tah) The opening between to guard cells in the epidermis of a leaf or stem which allows for gaseous exchange between the air and the internal tissues within the leaf or stem.


Stramineous

stramineous, -a, -um (str-MIN-e-us) Straw-colored; straw-like. (2)


Striata

stratiotes (str-ti-OH-teez) Like a soldier.

streptopetalus, -a, -um (strep-toh-PET-alus) Having twisted petals.

striatus, -a, -um (stry-AY-tus) Marked with fine longitudinal lines or marks. (4295)

Cattleya warscewiczii – … throat yellow, striated lavender; …

strictus, -a,-um (STRIK-tus) Very straight and upright; erect.

striga (STRIG-ah) A small straight hair-like scale.

strigosus, -a, -um (strig-OH-sus) Provided with appressed sharp straight and stiff hairs. (1)

Paphiopedilum Pinocchio – … dorsal sepal … veined dark maroon, strigose posteriorly, …

striolatus, -a, -um (stry-o-LAY-tus) Faintly striped or with fine lines.

strobile (STROB-ill) The inflorescence with imbricate scales similar to a cone.

style (STYLE) The unusually attenuated portion of the pistil connecting the stigma to the ovary; the stalk for the stigma.

stylidia (STEL-li-dee-ah) The column wings when present.

sub- A Latin prefix meaning under, lower or less.

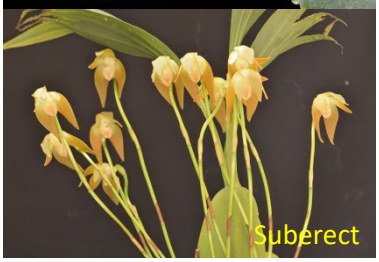
subacute (sub-AK-ute) Less than acute. (14)

Mormodes andicola – … petals ovate, subacute; …

subcordatus, -a, -um (sub-kor-DAY-tus) Somewhat heart shaped.

subcoriaceous (sub-kor-i-AY-shus) Nearly leathery in texture. (2)

Epidendrum sympetalostele – … leaves 7.2cm long x 4.5cm wide, blue-green, subcoriaceous, narrowly elliptic, retuse, …



subequal (sub-EK-whal) Almost the same in size. (5)

Epidendrum purpurascens – … contrasting tri-lobed lip white, adnate to column, midlobe sagittate, subequal side lobes resemble angel wings; …

suberect (suhb-ee-REKT) Nearly upright. (5)

Sudamerlycaste andreettae – Eleven cupped flowers on 11 suberect inflorescences emerging basally …

suberosus, -a, -um (soo-BER-osz) Corky in texture.

subfalcatus, -a, -um (sub-fal-KAY-tus) Somewhat curved or hooked. (3)

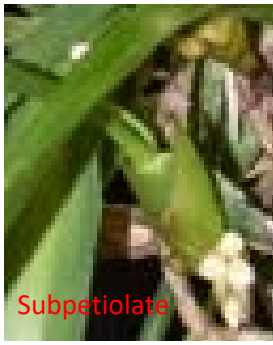
Brassocattleya Jamie XOXO – … lateral sepals subfalcate; …

subgenus (sub-jeen-us) A category in taxonomy below the rank of genus but above the rank of species.

submersus, -a, -um (sub-MER-sus) Growing under the water.

suborbicular (sub-or-BIK-yew-lar) Almost circular. (7)

Anathallis nanifolia – … leaves 0.5cm wide x 1cm long, suborbicular to ovate, dark green; …



subpetiolate (sub-PET-ee-o-layt) Almost opposing a petiole. (1)

Maxillaria parviflora – … leaves one per pseudobulb, linear-lanceolate, subpetiolate, acute, …

subplicate (sub-pli-KAYT) Nearly plicate. (2)

Scaphosepalum swertiifolium – … a single, acute, subplicate leaf, …

subsessile (sub-SESS-ill) Almost stalkless. (3)

Dendrobium boosii – … leaves growing alternate 90 degrees on new canes, lanceolate, subsessile, …

subspecies (sub-SPEE-sheez) In taxonomy, a taxon between the rank of species and variety.

substance (SUB-stans) The thickness and firmness of tissue.

substrate (sub-STRAYT) The material upon which a plant grows.

subtended (sub-TEN-ded) To stand below and close to. (62)

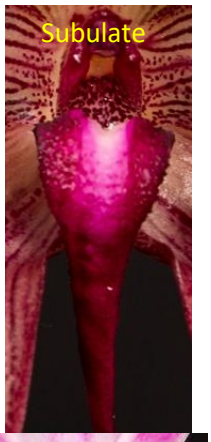
Vanda John De Biase – … inflorescences to 30 cm tall, subtended by numerous as yet unflowered keikis, …

subterete (sub-ter-REET) Nearly or imperfectly terete. (1)

Oncidium praestanoides – … column subterete, projecting on underside with a pair of recurved, elongate teeth on each side of the stigma; …

subterraneus, -a, -um (sub-ter-RAY-ne-us) Below ground. (1)

Eulophia plantaginea – … plant habit coarse grass-like, terrestrial, rhizomes subterranean; … (no photo)



subtribe (sub-TRYB) A taxonomic grouping of genera below the rank of family.

subulatus, -a, -um (sub-yew-LAY-tus) Awl-shaped; tapering from base to apex. (22)

Bulbophyllum Eileen's Fairy Tails – … lip articulate, subulate, broad proximally, …

subulifolius, -a, -um (sub-yew-li-FOH-li-us) With the leaves awl-shaped.

succulent (SUK-yew-lent) Soft and crushable; fleshy. (69)

Bulbophyllum fascinator – … leaves obtuse, elliptic, broadly attenuate, succulent to 11.2 cm in length …

sucker (SUK-er) A vegetative shoot of subterranean origin.

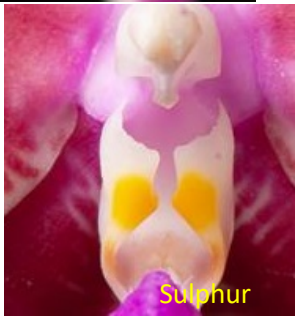
suffused (SUF-few-sed) To overspread; to diffuse beneath. (5716)

Dendrobium lasianthera – … lip suffused burgundy, centrally overlaid magenta, …

sulcatus, -a, -um (sull-KAY-tus) Grooved or furrowed longitudinally. (4)

Clowesetum Amazing Grace – … callus sulcate; …

sulphureus, -a, -um (sull-FEW-re-us) Light yellow in color like sulphur.



Phalaenopsis Lamb's Passion – … side lobes cream, apices sulpher…

super- or supra (sue-PER) Used as a Latin prefix meaning above.

superbiens (sue-PER-bi-enz) Stately and grand.

superbus, -a, -um (sue-PER-bus)

superposed (sue-per-POHZD) One on top of another.

superior (sue-PEER-i-or) The ovary is completely above the attachment of the calyx. (1883, probably all are associated with a different meaning, 'upper half')

Phalaenopsis Mainshow Dragon – … lateral sepals inferior half overlaid dark magenta superior-proximal quarter concentrically barred magenta; …

supinus, -a, -um (sue-PYE-nus) Position on its back: prostrate. NOTE: All reference to "supina" is the word non-resupinate.

surculose (sur-KEW-osz) Producing suckers.

suture (SUE-cher) A junction or seam of union; a line of opening or dehiscence. (2)

Masdevallia mejiana – … blushed gold-yellow along suture between dorsal and lateral speals, …

sylvticus, -a, -um (sill-VAT-i-kus) REferring to woodlands or forests.

sylvestris, -e (sill-VEST-ris) Growing in woods.

symbiosis (sim-bi-OH-siss) Two dissimilar organisms living together for mutual benefit

symbiotic (sim-bi-OT-ik) The mutual relationship of two dissimilar organism living together with the benefit to both. (1)

Epidendrum imatophyllum – … normally growing symbiotically with ants; … (no photo)

symmetrical (sim-MET-rik-al) The flower is regular as to the number of its parts; having the same number of parts in each whorl. (1752, but usually used to describe flower, similar parts facing each other around an axis.

Masdevallia deceptrix – …lateral caudae pleasingly and symmetrically crossed; …

sympatric (sim-PAT-rik) Said of a species or populations occurring in the same geographical location, overlapping in range.

sympetalous (sim-PET-al-us) With the petals united; gamopetalous.

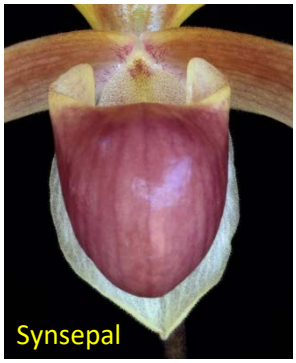
symphysis (SIM-fiss-iss) Growing together.

synplesionmorphy (sim-PLEEZ-ee-oh- more-fee) A cladistic term meaning shared ancestral character state; as opposed to synapomorphy.

sympodial (sim-POH-di-al) The growth habit of the stem in which the shoot has limited growth and the new shoot arises from the base of an old shoot; opposite of monopodial. (22)

Maxillaria pacholskii – …plant growth sympodial, cylindrical pseudobulbs …

synapomorphy (syn-APP-oh-more-fee) The cladistic term meaning shared derived character state, implying a common phylogenetic history as opposed to symplesiomorphy.



synonym (SIN-o-nim) In taxonomy, a scientific name considered the same for a species of plant or animal, hence it is not legitimate. (145, a term in descriptions that is insert by SITF to clarify the grex of an awarded plant)

synsepalum (sin-SEP-a-lum) The lateral sepals typically are coherent; a characteristic of the Subtribe Cypripedilinae in orchids. (6627, as synsepal)

Paphiopedilum helenae – … synsepal ivory; …

systematics (sis-tem-AT-iks) The attempt of trying to detect, describe and explain the diversity found in the plant and animal world based on the formalization of a hierarchial system of nomenclature.

Award Descriptions (Mar 2020)

Phalaenopsis TH Pearl – Quality Award Description

(Phal. celebensis x Phal. micholitzii)

Eight flowers and six buds on one 20-cm long inflorescence; sepals ovate, white overlaid light lemon yellow; petals flabellate, white overlaid light lemon yellow, dusting golden yellow centrally; lip tri-lobed, horns angularly upright, creamy yellow, lighter distally, rose-yellow basally, midlobe ovate, lemon-yellow white; column lemon-yellow, anther cap creamy yellow; substance firm; texture matte.

Phalaenopsis Striped Leopard – Quality Award Description

(Phal. Mahogany Leopard x Phal. Snow Leopard)

Thirty-five flowers and eight buds on one 25-cm four branch inflorescence; sepals ovate, white, spotted crimson basal two thirds, consolidating to crimson lines distal one third, narrow white picotee; lateral sepals similar to dorsal but larger spots; petals over-lap sepals, white, spotted crimson basal half, consolidating to crimson lines distal half, narrow white picotee; lip trilobe, side lobes arching to column, golden yellow, tessellated marron, golden yellow picotee, mid lobe golden yellow, striped marron, marron picotee, callus dark yellow, spotted marron; column white, dusted crimson, crimson ring basally, anther cap cream; substance firm; texture diamond dust.

Phalaenopsis Chicago Maroon – Cultural Award Description

(Phal. Micro Nova x Phal. Capella)

Fifty-eight pristine, stellate, flat flowers and six buds on six branched inflorescences ranging from 15 to 24 cm in length on a clean robust three crown plant with a spread of 15-cm in a 8-cm clay pot; sepals and petals pristine white with magenta spots, white picotee, lateral sepals basal half, spots converged to form blotches and bars; lip tri lobed, side lobes dark yellow, heavily spotted marron, mid lobe, dark yellow, heavily overlaided marron spots, mid line white; column and anther cap white; substance thick; texture sparkling.

Phalaenopsis Henry's Candy Lip – Quality Award Description

(Phal. Candy Cane x Phal. Midlip)

Twelve stellate flowers and two buds well arranged on one inflorescence; dorsal sepal elliptical, greenish-yellow, lightly striped marron; lateral sepals outward swept lanceolate-elliptical, greenish-yellow, lines broader than other segments, light marron, petals rhomboid, recurved, greenish-yellow, lightly striped marron; lip trilobe, dark greenish-yellow, side lobes stripped marron basally heavily spotted distally, mid lobe lightly overlaid marron; column greenish-yellow; anther cap greenish-yellow; substance firm; texture matte.

Phalaenopsis Moonlight Fantasy – Quality Award Description

(Phal. Moonlight Spin x Phal. Fancy Welcome)

Ten flowers on one inflorescence; dorsal sepal and petals white, spotted to blotches basally, magenta, white picotee; lateral sepals inferior half more heavily blotched; lip tri-lobe, yellow, heavily spotted dark marron, callus yellow, heavily spotted dark marron; column white, overlaid magenta, apically white, anther cap cream; substance firm; texture crystalline.

Phalaenopsis Subgenus Polychilos Section Amboinenses, Christenson, E.A.; Phalaenopsis: A Monograph, (2001) Type: Phalaenopsis [Phal.] violacea

[fal-en-OP-sis vye-oh-LAY-see-ah]

Characteristic Summary

Phal. violacea
'Orchid Konnection' AM/AOS
Oct 2020, NS 4.9 x 5.0 cm

Phal. violacea
Lip detail

Present Phalaenopsis taxonomy has all of Christensons' subgenus Polychilos in one section, Polychilos, in the subgenus Phalaenopsis (Fighetti, 2015). This report is based on the taxonomy as detailed by Christensons' *Phalaenopsis: A Monograph* (2001).

The primary source of color, spots and bars, fragrance, and substance in the Phalaenopsis genus are the species in the subgenus Polychilos. The plants in this subgenus bear fleshy, long-lasting flowers with two pairs of calli on the lip, the lateral lobes of the lip producing a raised tooth along the leading edge, and two pollinia. The species are native to the region from India thoughout Southeast Asia including Islands/countries of Philippines, Indonesia, and Borneo.

The often-fragrant flowers are probably bee pollinated, but no observations have been made under natural conditions. It appears that pollination is a relatively rare event in nature, perhaps explaining the remarkable longevity of the flowers. Several species, especially those related to Phal. lueddemanniana, exhibit post-pollination chlorophylly. After successful pollination, the flowers turn green (i.e. they lose their other pigments), and the sepals and petals persist throughout the life of the fruit. It is assumed that the persistent 'green' flowers augment the photosynthate coming from the parent plant.

Generally, you would point scale using the Phalaenopsis point scale.

Table of species, (www.orchidspecies.com – Dec 2020 update)

Species marked with a * are used the most in hybridization				Progeny	AOS Awards											Breeding Comments
Kew Name	Habitat, Country	Temp	Season	F1/Total	FCC	AM	HCC	JC	AD	AQ	CCE	CCM	CHM	CBR	Total	
Phalaenopsis amboinensis*	Maluku, Sulawesi	Hot	Yearround	551/17525		37	37					7	1	1	83	Thick substance, long blooming, star shaped flowers, low flower count, spotting and barring
Phalaenopsis bastianii	Philippines	Warm to Hot	Spring	21/22		3	2					3	2		10	
Phalaenopsis bellina	Borneo	Warm to Hot	Summer	147/567	12	55	29			3	2	1	1	1	104	Thick substance, attractive flower color, compact growing habit, sometimes fragrance, reduced flower count, difficult and slow-growing characteristics, tendence to create solid colors (blends bars and spots)
Phalaenopsis doweryensis	Borneo	Hot	Fall - Winter	10/10		2								1	3	
Phalaenopsis fasciata	Philippines	Hot	Fall	125/11341		1	3					2			6	Non-fading strong non-yellow color, waxy, fleshy substance, recurving flower parts
Phalaenopsis fimbriata	Borneo, Jawa, Sumatera	Warm to Hot	Spring - Summer	58/176		1	1					2		1	5	

Phalaenopsis floresensis	Lesser Sunda Island	Hot	Summer	42/100		2						2		4	
Phalaenopsis gigantea	Borneo	Warm to Hot	Fall, Spring	295/6571		22	22	1			4	14		1	64	Round shaped and strongly barred, large flowers, pendant spike, waxy substance, intensifies reds and spotted hybrids, small lips, pendant flowers reluctant breeder, bears flower over 360 degrees on the inflorescence
Phalaenopsis hieroglyphica	Philippines	Hot	Fall - Winter	22/10005	1	22	12	1			5	22	1	1	65	Strong barring and excellent flower substance, flower shape a negative
Phalaenopsis javanica	Jawa, Sumatera	Hot	Winter - Fall	115/250		2	3	1				1	1	1	9	
Phalaenopsis lueddemanniana*	Philippines	Warm to Hot	Spring - Summer	349/22467	1	15	13	3			1	4	3		40	Adds substance, color, barring, and spotting
Phalaenopsis maculata	Borneo, Malaya	Hot	Summer - Fall	37/83			3					1	1	1	6	Reduces plant size, red barring, reduces flower size, reduces plant vigor, narrow sepals and petals, poor grower and breeder
Phalaenopsis mariae	Borneo, Philippines	Hot	Spring - Summer	109/1530		3	2					4		1	10	Floriferousness, poor shape, fading red color
Phalaenopsis micholitzii	Philippines	Hot	Winter	68/2203		2	3								5	Mini Phalaenopsis, free flowering, short but multiple flower spikes, green and no-fade yellow flowers, poor (twisted) flower shape
Phalaenopsis modesta	Borneo	Hot	Summer	44/52			2					1	1		4	
Phalaenopsis pallens	Philippines	Hot	Winter - Spring	27/506		1	3					1		1	6	
Phalaenopsis pulchra	Philippines	Warm to Hot	Summer - Fall	44/78				1				2			3	
Phalaenopsis reichenbachiana	Philippines	Hot	Summer	5/5		1								1	2	
Phalaenopsis robinsonii	Maluku			0/0											0	
Phalaenopsis venosa	Sulawesi	Hot	Fall	344/4112	1	3	18				1	4	1		28	Strongly non-fading, yellow-colored hybrids, also oranges and reds, lowers flower count, increase number of spikes
Phalaenopsis violacea	Malaya, Sumatera	Hot	Summer - Fall	523/6414		65	63	10			1	20		2	161	Compact growth habit, fragrant, long-lasting, excellent substance, bright lip, reduced flower count, short inflorescence

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

From the above table one notices the variability within this Section. AOS Awards range from none to 161, Phal. violacea, with a median of 6. Number of progeny, both primary and total have similar differences. Phal. amboinensis and Phal. lueddemanniana have the most total progeny. Phal. amboinensis and Phal. violacea have the most primary progeny.

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Building Block Data Sheet

Phalaenopsis [Phal.] bellina, (Rchb.f.) Christenson, Brittonia 47: 58 (1995).

[fal-en-OP-sis bell-EE-na]

Phal. bellina is a small sized, hot growing, pendant growing epiphyte from Borneo in shady, humid, lowland and swampy riverine forests low down on trees often near or on branches overhanging stream banks at elevations of sea level to 200 meters. It has an erect to ascending, short stem completely enveloped by persistent leaf-bearing sheaths and carrying pendulous, broad, rounded [8-10 x 2.8-4.7 inches (20-25 x 7-12 cm)], shiny, light green leaves. It blooms summer to fall on a suberect or arcuate, 2 3/4" [7 cm] long, racemose or paniculate, flattened, 2 to 3 flowered inflorescence. There usually are 2 to 3, highly fragrant citrus scented flowers open at a time. The 2–inch flowers are greenish yellow, the basal inner edges of the lateral sepals intensely saturated purple, the base of the sepals and peatls +/- with purple suffusions and fine spotting, the lip purple with yellow lateal lobes.

Phalaenopsis bellina
'Stuart Henderson' FCC/AOS
Aug 2019, NS 5.8 x 5.5 cm
4 Flwrs, 1 Bud, 1 Inflor.

Phalaenopsis bellina
Lip detail

There are many similiarities between non-line breed Phal. bellina and Phal. violacea (sister species), the differences (besides color) are pointed out in the table below.

	Phal. violacea	**Phal. bellina**
Petals	Elliptic, less than 0.7 cm broad	Ovate, more than 1.3 cm broad
Lateral sepals General shape Apices allignment	 Not subfalcate ('bow-legged') Form an equilateral triangle (equal segments)	 Subfalcate ('bow-legged') Form an isosceles triangle (base shorter than other segments
Leaf shape, width	Generally less than 8 cm	Generally more than 10 cm
Fragrance	Spicy	Lemony (strong, like 'Fruit Loops')

The inflorescence on older plants can rebloom year after year so do not cut off green viable inflorescence.

Although mature plants are easy to grow, being rapid summer grower, but small seedlings – less than 3-inch (7.5-cm) leaf span – are difficult to grow due to a tendency to develop crown rot (their flattened leaves usually grow horizontally across the pot, readily trapping moisture).

Judge using the Phalaenopsis point scale.

Breeding Characteristics:

Phal. bellina contributes thick substance, attractive flower color, compact growing habit, and sometimes fragrance. It can contribute yellow, orange, and red floral colors to its offspring. On the negative side the progeny will generally have reduced flower count and the tendence to develop crown rot. It has a tendency to

spread spots and bars, creating a blended and sometimes solid color effect, which can be a neagtive or postive, depending on the breeder's objectives.

Due to the way registrations are recorded (variety names are excluded), the table below does not have any progeny that registered prior to 1995 since at that time Phal. bellina was considered a variety of Phal. violacea. The table below has the registration of Phal. belina progeny since the acceptance of the name change, 2003, and associated awards with separate lines for total progeny as well as first (F1), second (F2), and third (F3) generations.

bellina	**1990**	**2000**	**2010**	**2020**	**Total**
Reg	0	56	424	87	567
Assc Awds	0	71	62	1	134
F1	0	46	93	8	147
AA	0	71	11	0	82
F2	0	9	174	19	202
AA	0	0	46	1	47
F3	0	1	127	43	171
AA	0	0	4	0	4

From this table one sees that Phal. bellina has been used extensively since the elevation to species status (and probably before) in breeding. 2003 was the first year that hybrids, 11, were registered with the name Phal. bellina. This is VERY early in breeding with only two fifth generation progeny and no lines have been identified, although there are a few grexes with a significant number of F1 progeny.

Synonyms:

Phalaenopsis violacea var. bellina
Phalaenopsis violacea (Borneo type)
Phalaenopsis violacea var. borneo

Varieties / forms:

There are no recognized varieties and/or forms, but Christenson does mention four forms that may be recognized in horticulture (one receiving AOS awards) and the AOS society has recognized a fifth:

Phal. bellina f. alba – A pure white flower.

Phal. bellina f. bowringiana – flower has distinct spots and transverse bars of purple at the bases of the dorsal sepal and petals. No awards or photos available.

Phal. bellina f. alba
'St. Clair' AM/AOS
Jan 2019, NS 3.6 x 3.7 cm
1 Flws, 0 Buds, 1 Infl.

Phal. bellina f. bowringiana
Reichenbach's original watercolor

Phal. bellina f. murtoniana – The sepals and petals base color is light lemon-yellow. There have been some issues on the validity of this form since the older flowers of typical Phal. bellina turn yellow as they senesce (deteriorate with age). Clone picture is the right color if the picture is accurate. NOTE: Several orange-flowered plants have received AOS awards, but study has shown these to be of complex hybrid origin (for example 'Dorothy Martin', AM/AOS.

Phal. bellina f. punctata – Has distinctive purple bands of pigment along the inner margins of the lateral sepals broken up into a series of small spots. No awards or photos available.

Phal. bellina f. coerulea – flower is have a blue cast. Award descriptions use terms like light violet, flushed magenta, and amethyst.

Phal. bellina f murtoniana
'Strub' GM/DOG
Jan 2019

Phal. bellina f. punctata
Reichenbach's original watercolor

Phal. bellina f. coerulea
'Blue Ribbon' AM/AOS
Sep 2017, NS 5.0 x 5.2 cm
3 Flws, 6 Buds, 5 Infl.

Awards:

Phal. bellina	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS	12	72	46	3		6	2	1	2	**104**
Year(s) Awarded	2007-2019	1967-2020	1974-2019	2007-2018		1969-1992	2014-2015	2004	1961-1964	**1985-2019**

The first quality award to Phal. bellina was in 1967, 6 years after receiving a CBM/AOS in 1961. Since then it has received a several awards and is always a show stopper. The bar has changed over the years as shown by the two pictures of AMs below:

Phal. bellina
'Blue Ribbon' AM/AOS
Jul 1965
6 Flws, 2 Buds, 4 Infl.

Phal. bellina
'Krull's Evelyn' AM/AOS
Aug 2020, 5.3 x 5.3 cm
2 Flws, 1 Bud, 1 Infl.

Due to the large number of awards and my uneasiness on judging polychilos section species I thought I would look at the several awarded clones of Phal. bellina to help me judge them below is a summary of my thoughts. My approach is analytical, that looking at the measurements and color pictures in the AOS

database. To be more specific I looked at the latest ten awardees in the three quality award categories. The awards were made from Aug 2013 to Aug 2020 at 14 different judgings. I then generated the averages for five measurements. Natural spread horizontal and vertical, these measurements would be used both for size of flower determination but also form, it appears that a 1:1+ ratio for the natural spread is appealing. The other three measurements dorsal sepal width, petal width, and lateral sepal width were used to quantify the form specifically the fullness of the flower. (NOTE: Some measurements appeared to be in error and were corrected based on comparison measurements from the pictures.) I then calculated the averages within each quality award category, see table below, and then determined which of the culitivers were above, near, or below the average. To determine color I looked at the basal half of the petals. These capatures of the petals could also be used to determine the petal angle. The final data that I looked at was the number of flowers, buds, and inflorescence(s).

	FCC	AM	HCC
Natural Spread, Horizontal	5.96	5.53	5.41
Natural Spread, Vertical	6.77	6.2	5.92
Dorsal Sepal, Width	2.10	1.90	1.87
Petal, Width	2.21	2.05	1.99
Lateral Sepal, Width	2.09	2.02	1.97

From this data may deduce that flower size and 'fullness' improves from HCC awardees to FCC awardess. This to me is very impressive and shows consistence between judges, centers, and time.

In regards to color, it is clear that the more color is a key contributor. To help point this out and the visual differences between these three categories I select a similar representative, most categories above average adjusted the size to correspond to the relative Natural Spread, Vertical of the three flowers below.

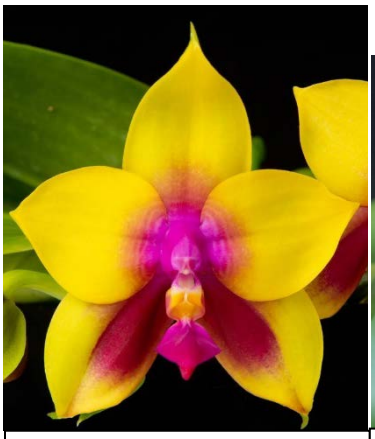
'Blue Ridge Finest' FCC/AOS
Jul 2019, NS 6.4 x 7.1 cm

'Margorie Scarlet' AM/AOS
Aug 2019, NS 6.0 x 6.9 cm

'Full Moon' HCC/AOS
Oct 2014, NS 5.7 x 6.2 cm

The over exposed picture of 'Blue Ridge Finest' does not help the flower color, but it is clear that it does have superior form and a more of the sepals and petals have color. It is also clear that the smaller size and less color is not enough to compensate for the lack of color in 'Full Moon'.

AOS Quality Awardees (Most Progeny):



Phal. LD's Bear Queen
'Topaz' AM/AOS
Sep 2020, NS 6.3 x 6.6 cm
(Phal. bellina x
Phal. Dragon Tree Eagle)
2 Flws, 3 Buds, 2 Infl.
Regr. 2008, Leader Orchids
70 F1 / 223 Total Progeny

Phal. Samera
'Bredren's Blue Heaven' AM/AOS
Nov 2018, NS 5.2 x 5.3 cm
(Phal. bellina x
Phal. violacea)
3 Flws, 0 buds, 1 Infl.
Regr. 2003, M. Liu
43 F1 / 67 Total Progeny

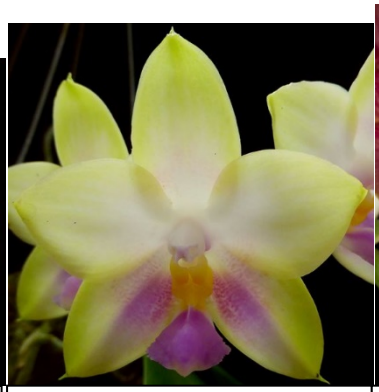
Phal. Mituo Prince
'Marley' AM/AOS
Jun 2015, NS 4.8 cm
(Phal. LD's Bear Queen x
Phal. LD's Bear King)
2 Flws, 2 Buds, 2 Infl.
Regr., 2012, Mituo Orchids
25 F1 / 34 Total Progeny

Phal. Mituo King Bellina
'Marley' FCC/AOS
Mar 2018, NS 5.7 x 6.0 cm
(Phal. LD's Bear King x
Phal. LD Bellina Eagle)
2 Flws, 3 Buds, 1 Infl.
Regr. 2013, Mituo Orchids
21 F1 / 23 Total Progeny

AOS Quality Awardees (Most Awards, not already covered):

Phal. Blue Ridge Dragon
'Asheville' FCC/AOS
Apr 2016, NS 5.9 x 7.0 cm
(Phal. Dragon Tree Eagle x
Phal. Joshua Irwin Ginsberg)
2 Flws, 1 Bud, 2 Infl.
Regr. 2012, M. Mims
3 F1 progeny

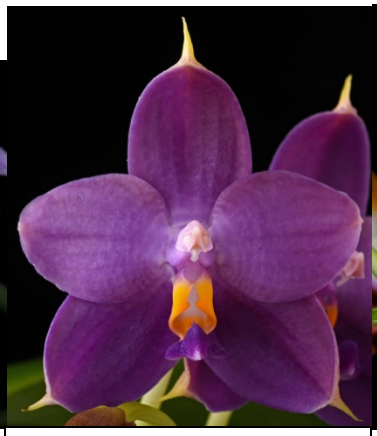
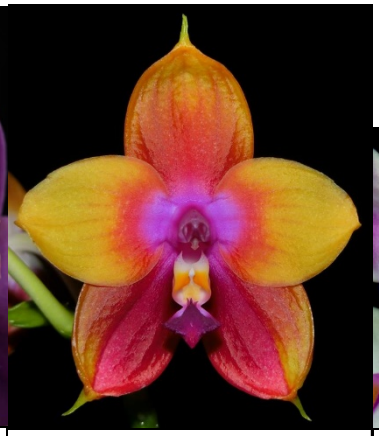
Phal. Crystal Surprise
'Cad's Solar Flare' AM/AOS
Aug 2019, NS 6.5 x 6.6 cm
(Phal. Lioulin Venus x
Phal. LD's Bear Queen)
12 Flws, 0 buds, 1 Infl.
Regr. 2017, Eric Lee
No Progeny



Phal. Penang Moonbright
'Dajao' AM/AOS
Feg 2016, NS 4.9 x 5.2 cm
(Phal. bellina x
Phal. Yungho Gelb Canary)
3 Flws, 0 Buds, 1 Infl.
Regr. 2009, Ooi Leng Sun
Np Progeny

Phal. Guadalupe Pineda
'Krull-Smith' AM/AOS
Oct 2013, NS 5.5 x 5.5 cm
(Phal. bellina x
Phal. amboinensis)
15 Flws, 9 Buds, 6 Infl.
Regr. 2003, C. G. Tobia
17 F1 Progeny

Most recent awardees (Not already discussed):

			
Phal. Jiaho Blueberry 'Blue Flare' HCC/AOS Sep 2019, NS 3.9 x 4.0 cm (Phal. Samera x Phal. equestris) 8 Flws, 6 Buds, 3 Infl. Regr. 2018, Jia Ho Orchids No progeny	Phal. Mituo Purple Dragon 'Pylo' AM/AOS Jul 2019, NS 4.5 x 4.2 cm (Phal. LD Purple 3S x Phal. Mituo Princess) 3 Flws, 1 Bud, 1 Infl. Regr. 2018, Mituo Orchids 1 F1 progeny	Phal. Long Trieu 'Phoenix' AM/AOS May 2019, NS 5.6 x 6.3 cm (Phal. Dragon Tree Eagle x Phal. Sweet Trinity) 3 Flws, 2 Buds, 1 Infl. Regr. 2018, E. Goo No progeny	Phal. KS Pulchebell 'Peloric' JC/AOS Jul 2019, NS 5.0 x 4.4 cm (Phal. pulcherrima x Phal. bellina) 4 Flws, 2 Buds, 1 Infl. Regr. 2018, Kung Sir Orchids No progeny

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Building Block Data Sheet

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

[fal-en-OP-sis ji-GAN-tee-ah]

Phal. gigantea is the largest plant of genus with five to six leaves that can be 27 x 10 inches (68 x 25 cm). It is endemic to the island of Borneo where it is found in lowland to hill forests from sea level to 1300 ft (400 m) as a warm to hot growing understory epiphyte. The short short stem carrys 5 to 6, pendulous, leathery, shiny on both sides, elliptic to oblong-ovate, bluish green, obtuse leaves. It is a free bloomer with a peak occurring in the late summer and early fall on a 6 to 15 in (15 to 40 cm) long, racemose or paniculate, pendulous, many flowered (up to 30 flowers) inflorescence. The flowers (1.5 to 2.75 in [3.75 to 7 cm]) are sweetly orange peel scented, simultaneously opening, very shallowly cupped, usually with overlapping segments. The base flower color is white or yellow densely covered with transverse brown bars that align to form irregular concentric rings. The lip is white with six purple longitudinal strips on the midlobe and with yellow-orange teeth on the lateral lobes, column white. The inflorescence if still green and undamaged can flower for several seasons so it is best to leave them on.

Phalaenopsis gigantea
'Krull's Ruby' AM/AOS
Nov 2013, NS 6.0 x 6.0 cm
58 Flwrs, 3 Buds, 3 Inflor.

Common Name The Gigantic Phalaenopsis - refers to the large leaves

Due to the size of mature plants (easy to spot) and the slower time than most Phalaenopsis to reach maturity, this species will probably require continued, long-term regulation of its international trade.

It has been reported by some growers to be difficult to flower. This is more likely to be related to the higher light levels needed and the need to keep the leaves from burning. A typical solution is to hang the plants in front of the cooling pads. Along the same line, a developed inflorescence can take months to bud up and flower.

Judge using the Phalaenopsis point scale.

Synonyms:

No recently used synonyms

Varieties / forms:

There are no recognized subspecies or forms, but an alba color form was recently awarded and the 'yellow' and red forms from the awarded cultivars are shown/discussed below:

Phal. gigantea var. aurea – A brighter yellow background color throughout the sepals and petals (including the area surrounding the column). No specifically identified picture.

Phal. gigantea f. decolorate (Alba, maybe) – 'Appears' to be anthocyanin-free form with a yellow background (no clear discussion on background color). From the Alba award – Flower is cream-white, sepals and petals overlaid heavily with concentric chartreuse bars and spots; lip striped in faint yellow.

Phal. gigantea
'Gleneyrie' AM/AOS
Aug 1972, NS 6.3 cm
8 Flws, 0 Buds, 1 Infl.

… deep mahogany markings over ivory …

Phal. gigantea
'Rocky Spots' HCC/AOS
Jan 2000, NS 5.4 cm
25 Flws, 0 Buds, 1 Infl.

Phal. gigantea (Alba)
'Queen' JC/AOS
Nov 2019, NS 1.7 x 1.5 cm
17 Flws, 43 Buds, 2 Infl.

… sepals and petals creamy chartreuse yellow with carmine spots …

Awards:

Phal. gigantea	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS		22	22		1	14	4		1	**64**
Year(s) Awarded		1966-2013	1966-2019		2019	1967-2007	2004-2011		1963	**1963-2019**

The first quality award to Phal. gigantea was in 1966, 3 years after receiving a CBM/AOS in 1963. Since then, it has received a several awards and is always a show stopper.

Breeding Characteristics:

Breeding with Phal. gigantea turns on the three Phal. gigantea color morphs: brown-red patterns against a white background, brown-red patterns agains a yellow background (yields enhanced red hybrids), and a paler brown patterns without red pigments agains a yellow background (yields enhanced yellow hybrids). The first is the 'Typical' variety while the later two will be discussed below as formally recognized because of their significance to horticulture.

Phal. gigantea would seem an unlikely candidate for hybridization because of the negative qualitities qualities of its huge planat size and pendent inflorescences. Fortunately, obth these features are recessive when the species is bred with complex tetraploid hybrids.

Generally, Phal. gigantea contributes its round shaped and strongly barred, large flowers, forne on a pendant spike, that are well shaped and fragrant with a waxy substance. It also produces hybrids with handsome foliage, which is usually of normal size when this species is breed with tetraploid hybrid Phalaenopsis. Intensifies reds and produces spotted progeny. On the negative side, it frequently passes on small lips and pendant flowers (especially on first-generation hybrids), and it can be areluctant breeder. Since it bears flowers 360 degrees on the inflorescence, it can disrupt the 'shingling' effect that most breeders prefer.

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

gigantea	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	1	0	0	2	51	194	654	2303	3125	241	6571
Assc Awds	0	0	0	0	14	44	145	530	1232	380	1	2346
F1	0	1	0	0	2	38	50	46	22	124	12	295
AA	0	0	0	0	14	42	29	12	9	7	0	113
F2	0	0	0	0	0	13	108	130	45	143	17	456
AA	0	0	0	0	0	2	100	45	6	3	0	156
F3	0	0	0	0	0	0	25	224	267	105	14	635
AA	0	0	0	0	0	0	13	175	146	11	0	345

From this table indicates that Phal. gigantea has first hybridized in 1935 at the Buitenzorg Botanical Gardens in now Bogor, Java, Indonesia. It was a cross with Phal. amabilis and named Phal. Bororiensis. The cross was not well received apparently since there are no progeny and Phal. gigantea was not used as a parent again until the late 60's, a span of 30 plus years by C. Y. Mok (from southeast asia area). This was a very successful, highly fragrant cross that is still being offered today and obvious kicked off the use of Phal. gigantea as a parent as shown by the registration peak in 80-90s. There was a tenative lull in the 2000, but with the increase interest in 'novelity' Phalaenopsis interest picked up again in the 2010s and continues today.

Phal. Golden Peoker
'BL' HCC/AOS
Feb 1998, NS 6.5 x 6.5 cm
6 Flws, 1 Buds, 1 Infl.

In regards to breeding lines there are major four; harlequin, red/violet, yellow, and novelties.

Harlequin Line: Phal. Golden Peoker (Phal. Misty Green x Phal. Liu Tuen-Shen), 1983, Brothers, 219 F1 and 4130 total progeny, 9 AOS awards (4 AMs, 1 CCM, 2 HCCs, 2 JC). Major progeny: **Phal. Chian Xen Pearl** (Phal. Ching Hua Spring x Phal. Nobby's Pink Lady), 2002, Fu-Liang Huang, 175 F1 and 1070 total progeny, 9 AOS awards (5 AMs, 4 HCCs); **Phal. Haur Jin Diamond** (Phal. Golden Peoker x Phal. Ching Her Buddha), 1999, Haur Jin Orchids, 83 F1 and 519 total progeny, 4 AOS awards (1 AM, 3 HCCs); **Phal. Ever Spring Prince** (Phal. Golden Peoker x Phal. Taisuco Beauty), 1997, Ever Spring Orchid Nursery, 48 F1 and 112 total progeny, 12 AOS awards (4 AMs, 7 HCCs, 1 JC; **Phal. Tying Shin Fantastic World** (Phal. Chian Xen Pearl x Phal. Timothy Christopher), 2008, Kuo Liang Hung, 3 F1 progeny, 12 AOS awards (7 AMs, 1 HCC, 1 AQ, 3 CCMs).

Phal. Chian Xen Pearl
'IS1540' AM/AOS
Mar 2019, NS 11.0 x 8.8 cm
20 Flws, 0 Buds, 2 Infl.

Phal. Tying Shin Fantastic World
'Diana' AM/AOS
Mar 2013, NS 7.1 x 6.7 cm
36 Flws, 9 Buds, 2 Infl.

Phal. Ever Spring Prince
'Pretty Cat' AM/AOS
May 2006, NS 9.6 x 8.3 cm
4 Flws, 0 Buds, 1 Infl.

Phal. Haur Jin Diamond
'Jose' AM/AOS
Apr 2004, NS 7.3 x 7.9 cm
10 Flws, 0 Buds, 2 Infl.

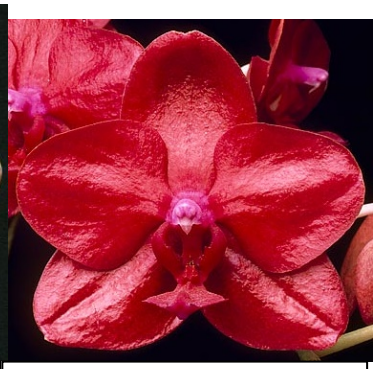
Phal. Brother Purple

<u>Red/Violet Line: Phal. Brother Purple</u> (Phal. Golden Peoker x Phal. Brother Glamour), 1995, Brother, 97 F1 and 343 total progeny, no AOS awards. Major red/violet progeny: **Phal. Brother Supersonic** (Phal. Sara Lee x Phal. Brother Purple), 1997, Brother, 23 F1 and 30 total progeny, 19 AOS awards (5 AMs, 12 HCCs, 1 AQ, 1 CCM); **Phal. Brother Precious Stones** (Phal. Brother Fancy x Phal. Brother Purple), 1998, Brother, 45 F1 and 67 total progeny, 23 AOS awards (15 AMs, 7 HCCs, 1 AQ); **Phal. Brother Pirate King** (Phal. Fortune Buddha x Phal. Brother Purple), 1998, Brother, 40 F1 and 76 total progeny, 18 AOS awards (6 AMs, 12 HCCs); **Phal. H. P. Norton** (Phal. Brother Pirate King x Phal. Krull's Red Hot), 2003, Krull-Smith, 18 F1 and 23 total progeny, 17 AOS awards (9 AMs, 7 HCCs, 1 AQ).

Phal. Brother Supersonic
'Gemstone' AM/AOS
Mar 2000, NS 6.8 x 6.8 cm
7 Flws, 4 Buds, 2 Infl.

Phal. Brother Precious Stones
'Sedona's Royal Robe' AM/AOS
Apr 1999, NS 7.6 x 7.7 cm
11 Flws, 13 Buds, 2 Infl.

Phal. Brother Pirate King
'Selsal's Red' AM/AOS
Mar 2001, NS 7.0 x 7.5 cm
13 Flws, 8 Buds, 2 Infl.



Phal. H. P. Norton
'GrandPa' AM/AOS
Mar 2004, NS 6.9 x 6.3 cm
7 Flws, 1 Buds, 1 Infl.

<u>Yellow Line: Phal. Liu Tuen-Shen</u> (Phal. gigantea x Phal. Golden Sands), 1979, I. Dobkin, 80 F1 and 5594 total progeny, 6 AOS awards (4 HCCs, 2 CCMs). Representative yellow progeny: **Phal. Salu Spot** (Phal. Paifang's Auckland x Phal. Golden Amboin), 1992, Ching Her, 45 F1 and 1884 total progeny, 3 AOS awards (1 AM, 2 HCCs); **Phal. OX Golden Star** (Phal. Sunrise Star x Phal. Fusheng's Golden Age), 2008, OX Orchids, 40 F1 and 46 total progeny, no awards; **Phal. Sin-Yuan Golden Beauty** (Phal. James Hall x Phal. Tsuei You Beauty), 2002, Sin Yaun Orchids, 114 F1 and 205 total progeny, 1 HCC/AOS award; **Phal. Brother New Canary** (Phal. Sara Lee x Phal. Brother New Player), 2004, Brother, 2 F1 progeny, 8 AOS awards (4 AMs, 1 HCC, 1 AQ, 1 CCE, 1 CHM).

Phal. Liu Tuen-Shen
'Joseph Pitta' HCC/AOS
May 1983, NS 8.0 cm
4 Flws, 6 Buds, 1 Infl.

Phal. Salu Spot
'KH #14' AM/AOS
May 2011, NS 9.1 x 9.0 cm
4 Flws, 0 Buds, 1 Infl.

Phal. Brother New Canary
'DeLeon' AM-CCE-CCM/AOS
Mar 2011, NS 6.6 x 6.0 cm
59 Flws, 17 Buds, 7 Infl.

Phal. OX Golden Star
'HT958 #2' TRO/TOGA

Phal. Sin-Yuan Golden Beauty

<u>Novelities: No major Lines, Most recently AOS Awards:</u> Phal. SpringBrook Ruby (Phal. Tying Shin Forever Love x Phal. H. P. Norton), 2018, J. Armstrong, no progeny, 1 HCC/AOS award; **Phal. Pylo's Phoenix** (Phal. KV Golden Star x Phal. Lawrie Springate), 2018, Big Leaf Orchids, no progeny, 1 AM/AOS award; **Phal. Lioulin Freckles** (Phal. Lioulin Pretty Lip x Phal. Lioulin R Lip), 2018, Huang Gao Ming, no progeny, 1 AM/AOS award; **Phal. Crystal Water** (Phal. Tying Shin Valentine's Day x Phal. Fureshing Mark), 2018, Char Ming Agri., no progeny, 2 AOS awards (1 FCC, 1 CCM).

Phal. Springbrook Ruby
'Orange Glow' HCC/AOS
Apr 2019, NS 6.0 x 5.9 cm
11 Flws, 1 Bud, 1 Infl.

Phal. Pylo's Phoenix
'Bristol' AM/AOS
Mar 2018, NS 6.7 x 6.5 cm
11 Flws, 1 Bud, 1 Infl.

Phal. Lioulin Freckles
'Iowa' AM/AOS
Jan 2018, NS 9.0 x 8.8 cm
4 Flws, 5 Buds, 1 Infl.

Phal. Crystal Water
'Lee 1288' FCC-CCM/AOS
Mar 2017, NS 9.0 x 8.7 cm
109 Flws, 0 Buds, 3 Infl.

Most recent awardees (Not already discussed):

Phal. Fuller's Paint Brush
'MayField' AM/AOS
Apr 2019, NS 10.5 x 9.7 cm
(Phal. Fuller's Miss x
Phal. Sung Woei Rosaria)
10 Flws, 11 Buds, 2 Infl.

Phal. Krull's Sunrise
'Krull-Smith' AM/AOS
Jan 2019, NS 4.9 x 4.7 cm
(Phal. Krull's Golden Champion x
Phal. Citrus Candy)
18 Flws, 8 Buds, 1 Infl.

Phal. Tying Shin Cao-Tun Beauty
'Pink Leopard' AM/AOS
Mar 2015, NS 8.9 x 8.4 cm
(Phal. Tying Shin Smile Angel x
Phal. Tying Shin New View)
15 Flws, 6 Bud, 2 Infl.

Phal. Taisuco Red Speckle
'BA5145' AM/AOS
Mar 2017, NS 11.0 x 10.0 cm
(Phal. Nobby's Pink Lady x
Phal. Taisuco Parakeet)
23 Flws, 7 Buds, 2 Infl.

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Species Data Sheet

Phalaenopsis micholitzii Sander ex H.J.Veitch, Gard. Chron., ser. 3, 8: 197 (1890)

[fail-en-OP-sis mik-oh-LITZ-ee-eye]

Phal. micholitzii is found on Mindanao Island in the Philippines near the base of tree trunks or lianas near rivers at elevations of 150 to 3000 ft. (50 to 900 m). It is miniature sized, hot to warm growing epiphyte with fleshy, oblong to oblanceolate glossy 6 x 2.3 inches (16 x 6 cm) leaves. Blooming in the summer on usually numerous, lateral to suberect, very short, 0.4 to 2 inches (1 to 5 cm) long, 1 to 3 cupped, slightly fragrant flowered inflorescence. The stark white to yellowish green flowers are 2 to 2.4 inches (5 to 6 cm), fleshy-succulent without any markings on the sepals and petals. The lip is white with yellow to yellow-orange lateral lobes, midlobe broadly elliptic-obovate, rounded, obtuse, with a raised center keel to the middle, with a raised pad from the middle to the apex densely covered with long trichomes.

Phal. micholitzii
'Alexander' AM/AOS
Nov 1998, NS 5.5 x 5.5 cm
5 Flws, 1 Bud, 5 Inflor.

Judge using the Phalaenopsis scale.

Synonyms / Varieties / forms:

Synonyms – None

Awards:

Below are AOS awards that Phalaenopsis micholitzii has received:

	FCC	AM	HCC	AQ	AD	JC	AQ	CCE	CCM	CHM	CBM	TOTAL
AOS		2	3									5
Year(s) Awarded		1983-1998	1983-1998									

This species has received 5 awards all in the 1980 to 2000 timeframe.

Breeding Characteristics:

Phal. micholitzii is only modestly involved in the hybridizing. Its 68 registered first-generation offspring have only garnered a total of 15 awards. While the clean white color of the flowers is pleasing, the segments are not as full as other members of subgenus Polychilos and are moderately reflexed proximal to the column.

Phal. Gelblieber
'Arienne' HCC/AOS
Mar 1984, NS 6.1 cm
11 Flws, 4 Buds, 4 Inflor.

Although there are a modest number of progeny, 2203 total progeny, most progeny are associated with one grexe: Phal. Gelblieber (Phal. amboinensis x Phal. micholitzii), 1984, with 48 F1 and 2021 total progeny, several significant grexes.

1970 was the earliest that any hybrids were registered with two that year, only Phal. Margie Lane (Phal. mannii x Phal. micholitzii) with 4 F1 and 5 total progeny.

The table below list the Phal. stratiotes progeny registered per decade and awards associated with the grex (per OrchidWiz 7.2). From this table one sees that interest in using Phal. micholitzii since 1970 has been at a fairly constant increase.

micholitzii	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	11	17	101	373	1459	242	2203
Assc Awds	0	1	12	75	262	163	3	516
F1	0	7	10	10	14	23	4	68
AA	0	0	7	1	5	2	0	15
F2	0	4	6	33	56	87	19	205
AA	0	1	5	19	33	8	0	66
F3	0	0	1	38	131	372	44	586
AA	0	0	0	21	106	44	0	171

'Major' Progeny, Most F1 Progeny:

Phal. Yungho Gelb Canary (Phal. Gelblieber x Phal. Princess Kaiulani), 1995, Yun-Ho, 110 F1 and 697 total progeny, 3 AOS awards (2 AMs, 1 HCC); **Phal. LD's Bear King** (Phal. Hannover Passion x Phal. Dragon Tree Eagle), 2008, Leader Orchids, 85 F1 and 180 total progeny, 6 AOS awards (4 AMs, 2 HCCs); **Phal. Hannover Passion** (Phal. Gelblieber x Phal. mariae), 1994, Cheng Hsien-I, 70 F1 and 384 total progeny, 2 AM/AOS awards); **Phal. Yungho Princess Gelb** (Phal. Yungho Gelbliambo x Phal. Princess Kiaulani), 1995, Yung-Ho, 68 F1 and 457 total progeny, 3 AOS awards (1 AM, 2 HCCs).

Phal. Yungho Gelb Canary
'Wen Ming' AM/AOS
Mar 2007, NS 5.1 x 6.0 cm
7Flws, 2 Buds, 2 Inflor.

Phal. LD Bear King
'Marley' AM/AOS
Mar 2017, NS 5.8 x 7.0 cm
4 Flws, 3 Buds, 2 Inflor.

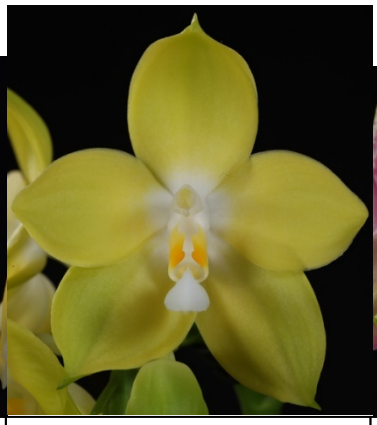
Phal. Hannover Passion
'Sogo' AM/AOS
Apr 1998, NS 6.0 x 6.0 cm
4 Flws, 1 Buds, 3 Inflor.

Phal. Yungho Princess Gelb
'Joy' AM/AOS
Mar 2011, NS 6.2 x 6.5 cm
3 Flws, 0 Buds, 2 Inflor.

‘Major’ Progeny, Most Awards:

Phal. Joy Spring Canary (Phal. Buena Jewel x Phal. Yungho Gelb Canary), 2002, J. Wu, 51 F1 and 60 total progeny, 13 AOS awards (3 AMs, 7 HCCs, 1 JC, 1 AQ, 1 CCM); **Phal. Nobby’s Green Eagle** (Phal. Gelblieber x Phal. Nobby’s Fox), 2005, Nobby Orchids, 33 F1 and 45 total progeny, 3 AOS awards (2 AMs, 1 CCM); **Phal. Sogo Cock** (Phal. Sogo Peak x Phal. Sogo Kaiulani), 1999, Sogo, 4 F1 progeny, 14 AOS awards (3 AMs, 10 HCCs, 1 AQ); **Phal. Tying Shin Popularity** (Phal. Tying Shin Surprise x Phal. Tying Shin Champion), 2009, Kuo Liang Hung, no progeny, 10 AOS awards (1 FCC, 8 AMs, 1 AQ).

Phal. Joy Spring Canary
‘Ben Belton’ AM/AOS
Nov 2018, NS 5.8 x 5.7 cm
3 Flws, 0 Buds, 2 Inflor.



Phal. Nobby’s Green Eagle
‘NB-05’ AM/AOS
Mar 2012, NS 5.6 x 6.1 cm
7 Flws, 3 Buds, 2 Inflor.

Phal. Sogo Cock
‘Sweet Fragrance’ AM/AOS
Aug 2014, NS 7.2 x 6.3 cm
8 Flws, 3 Buds, 3 Inflor.

Phal. Tying Shin Popularity
‘H6221’ FCC/AOS
Mar 2010, NS 6.0 x 5.1 cm
19 Flws, 13 Buds, 3 Inflor.

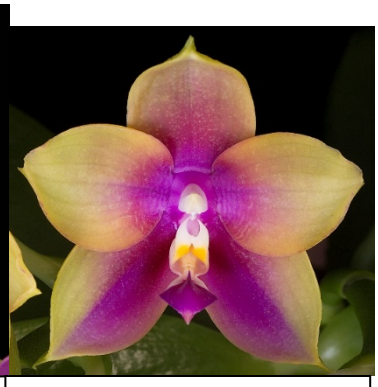
Most Recent Progeny with AOS Awards:

Phal. Susan Philips (Phal. Emeraude x Phal. Tsay’s Evergreen), 2020, W. Addison, no progeny, 2 AOS awards (1 HCC, 1 AQ); **Phal. Bredren’s Kaiulani Queen** (Phal. Mituo Kaiulani Eagle x Phal. LD’s Bear Queen), 2020, Bredren Orchids, no progeny, 1 HCC/AOS award; **Phal. Smiley Bluebird** (Phal. Vicky’s Sensational Heartbeat x Phal. Yaphon Blue Sea), 2019, Big Leaf Orchids, no progeny, 1 HCC/AOS award; **Phal. Mainshow Dragon King** (Phal. LD’s Bear King x Phal. Dragon Tree Eagle), 2019, Big Leaf Orchids, no progeny, 1 HCC/AOS award.

Phal. Susan Philips
‘Logan’ HCC/AOS
Mar 2020, NS 7.7 x 7.7 cm
8 Flws, 0 Buds, 3 Inflor.

Phal. Bredren’s Kaiulani Queen
‘Bredren’ HCC/AOS
Nov 2018, NS 3.9 x 3.8 cm
3 Flws, 2 Buds, 2 Inflor.

Phal. Smiley Bluebird
‘Timmy’s Cuddlebug’ HCC/AOS
Jun 2019, NS 5.0 x 6.0 cm
2 Flws, 1 Buds, 1 Inflor.



Phal. Mainshow Dragon King
‘Longster’ HCC/AOS
May 2018, NS 5.0 x 5.4 cm
6 Flws, 1 Buds, 2 Inflor.

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Species Data Sheet

Phalaenopsis maculata Rchb.f., Gard. Chron., n.s., 16: 134 (1881)

[fail-en-OP-sis mak-yew-LAY-ta]

Phalaenopsis maculata is a miniature native Borneo and Sulawesi in lowland to mixed hill forests at elevations of 200 to 1000 meters on limestone hills at the base of mossy trees (epiehyte) or on moist, bare rocks (lithophyte). The hot to warm growing plant has a very short stem with 2 to 3, fleshy, oblong-ligulate, 8.3 x 1.6 inch (21 x 4 cm), acute to bilobed apically, gradually narrowing to the base leaves whose upper surface is waxy. It typically blooms in the winter with a lateral, arched, racemose, few flowered inflorescence that is several times longer than the leaves. The flowers are small, 1.2 to 1.4" [3 to 3.5 cm], slightly cupped, usually with the dorsal sepal arching over the column. The sepal and petal are white to creamy white with transverse reddish brown bars, the lip scarlet, the column white.

Phalaenopsis maculata
'Tejas' HCC/AOS
Sep 2002, NS 3.4 x 3.6 cm
16 Flws, 0 Buds, 6 Inflor.

Phal. maculata has a reputation for being difficult to grow. Much of this reputation probably arose from the high mortality rate and general lack of vigor exhibited by earlier wild-collected plants. Current cultivated populations, artifically raised from seed, do not appear to be particularly difficult to grow.

Phalaenopsis maculate f. flava
'Magnifico' CCM/AOS
May 1994, NS 2.7 x 2.3 cm
7 Flws, 3 Buds, 2 Inflor.

This species grows at higher elevations than many other species in the genus and displays a preference for moist, heavily shaded habitats. Therefor, it should be grown under intermediate temperatures and given lower light levels.

Judge using the Phalaenopsis scale.

Synonyms / Varieties / forms:

No synonyms recently used.
The is a Phal. maculate f. flava described by Christenson but it is not recognized by the RHS. It is anthocyanin-free (no red pigment) resulting in flowers with deep yellow spots and lip.

Awards:

Below are AOS awards that Phal. maculata has received:

	FCC	AM	HCC	AQ	AD	JC	AQ	CCE	CCM	CHM	CBM	TOTAL
AOS			3						1	1	1	**6**
Year(s) Awarded			1977-2002						1982	1994	1966	

This plant has received a relatively few awards and no quality awards above an HCC.

Phal. Micro Nova
'Stones River' AM/AOS
Mar 1998, NS 2.4 x 2.5 cm
8 Flws, 4 Buds, 2 Inflor.

Breeding Characteristics:

Breeding with Phal. tangerinum has been limited with only one primary hybrid out of the 37 crosses having significant progeny. That cross was Phal. Micro Nova (Phal. maculata x Phal. lobbii) made in 1980 by W. Wallbrunn with 23 F1 and 37 total progeny but with 3 AM/AOS awards. The other grex worth mentioning is Phal. Mini Mark (Phal. Micro Nova x Phal. philippinensis) made in 1992 by Breckinridge with 7 F1 / total progeny but with 14 AOS awards (7 AMs, 4 HCCs, 1 JC, 1 AQ, 1 CCM). There are a total of 83 Phal. maculata progeny with none higher that third generation.

Phal. Mini Mark
'Sky Island' AM/AOS
Dec 1994, NS 3.9 x 3.9 cm
9 Flws, 9 Buds, 2 Inflor.

The small flower size and the narrow floral segments are drawbacks to hybridizing with Phal. maculata, however, the desirable qualities of the intense scarlet lip, red barring/spots and small plant size are dominant.

Below is a table of Phal. maculata limited breeding through the first three generation, total progeny.

maculata	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	6	16	34	9	18	0	83
Assc Awds	0	1	5	27	5	2	0	40
F1	0	6	10	8	1	12	0	37
AA	0	1	5	0	0	2	0	8
F2	0	0	5	21	7	0	0	33
AA	0	0	0	26	5	0	0	31
F3	0	0	1	5	1	6	0	13
AA	0	0	0	1	0	0	0	1

'Major' Hybrids:

Phal. Fantasy Musick (Phal. Micro Nova x Phal. equestris), 2002, F. & M. Kaufmann, 2 F1 progeny, 3 AOS awards (1 AM, 2 HCCs); **Phal. Mini Doll** (Phal. Micro Nova x Phal. Snow Leopard), 1993, Breckinridge, no progeny, 3 AOS awards (2 HCCs, 1 JC); **Phal. Bauble** (Phal. Micro Nova x Phal. gigantea), 1994, H. Wallbrunn, no progeny, 2 AOS awards (1 AM, 1 HCC); **Phal. Kathleen Battle** (Phal. Micro Nova x Phal. Chamonix), 1992, H. Wallbrunn, 1 F1 progeny, 2 HCC/AOS awards.

Phal. Fantasy Musick
'Linda's Diamond' AM/AOS
Mar 2008, NS 3.2 x 3.4 cm
39 Flws, 28 Buds, 4 Inflor.

Phal. Mini Doll
'Virginia Pixie' HCC/AOS
Mar 1997, NS 3.5 x 4.0 cm
11 Flws, 3 Buds, 2 Inflor.

Phal. Bauble
'Breckinridge' AM/AOS
Mar 1996, NS 3.6 x 3.5 cm
19 Flws, 0 Buds, 2 Inflor.

Phal. Kathleen Battle
'Gypsy Lee' HCC/AOS
Oct 1996, NS 4.9 x 5.0 cm
19 Flws, 0 Buds, 2 Inflor.

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Christenson, E.; *Phalaenopsis – A Monograph*, 2001
Frowine, S. A.; *Moth Orchids – The Complete Guide to Phalaenopsis*, 2008

Species Data Sheet

Phalaenopsis pulchra (Rchb.f.) H.R.Sweet, Amer. Orchid Soc. Bull. 37: 1102 (1968)

[fail-en-OP-sis PULL-kra]

Phalaenopsis pulchra is found in the Philippines on eastern mountain slopes at elevations of 325 to 2000 feet (100 to 600 meters). It is a small sized, hot to warm growing, epiphytic with very short stems enveloped by imbricating leaf bases carrying suberect, arcuate, oblong-elliptic to narrowly obovate, acute or subobtuse 5.9 x 2.4 inch (15 x 6 cm) leaves. It typically blooms in the fall with a lateral, suberect to arcuate, 4 to 10" [10 to 25 cm] long, racemose or paniculate, few flowered inflorescence, shorter that the leaves, with fragrant, fleshy, star-shaped, magenta-purple flowers. The flowers are small, 1.6 to 2.4"

[4 to 6 cm], fleshy, glossy-lacquered, deep purple, the lateral lobes of the lip bright yellow, the column white.

It does at times produce a much longer to 2' [to 60 cm] inflorescence that does not produce flowers, instead it produces apical keikis.

Judge using the Phalaenopsis scale.

Phalaenopsis pulchra
'Lorrie' HCC/AOS
Jul 2003, NS 4.3 x 3.6 cm
2 Flws, 4 Buds, 5 Inflor.

Synonyms / Varieties / forms:

Phal. lueddemanniana var. pulchra

Awards:

Below are AOS awards that Phal. maculata has received:

	FCC	AM	HCC	AQ	AD	JC	AQ	CCE	CCM	CHM	CBM	TOTAL
AOS			1			1			2			4
Year(s) Awarded			2003			1965			2010* 2012			

This plant has received few awards and no quality awards above an HCC.

Breeding Characteristics:

Breeding with Phal. pulchra has been limited, 44 F1 and 78 total progeny, but interest has increased recently, only three cross prior to 2003. There are no sources of breeding characteristics but in reviewing progeny pictures it appears that the stellate shape, enhances tendence for bars, and yellow sidelobes are dominate. There are indications that the color of the other progeny parent is enhanced.

To the right is a table of Phal. pulchra limited breeding through the first three generation, total progeny.

pulchra	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	1	1	1	0	19	45	11	78
Assc Awds	0	0	0	0	0	5	0	0	5
F1	0	1	1	0	0	17	23	2	44
AA	0	0	0	0	0	5	0	0	5
F2	0	0	0	1	0	2	18	2	23
AA	0	0	0	0	0	0	0	0	0
F3	0	0	0	0	0	0	4	7	11
AA	0	0	0	0	0	0	0	0	0

‘Major’ Hybrids:

There are no major progeny with four grexes with more than 2 F1 progeny and three grexes with awards. **Phal. Chienlung Red King** (Phal. LD’s Bear King x Phal. pulchra), 2013, Chien Lung Orchids, 8 F1 and 10 total progeny, no awards; **Phal. Fintje Kunriawati** (Phal. pulchra x Phal. violacea), 2004, A. Kolopaking, 6 F1 and 8 total progeny , 3 HCC/AOS awards; **Phal. Cherry Spot** (Phal. bellina x Phal. pulchra), 2003, P. Lippold, no progeny, no AOS awards (1 AM, 1 HCC); **Phal. Herman Sweet** (Phal. cornu-cervi x Phal. pulchra), 2004, Casa Luna, no progeny, 1 HCC/AOS award.

Phal. Chienlung Red King

Phal. Fintje Kunriawati
‘Pendragon’ HCC/AOS
Sep 2020, NS 5.5 x 5.0 cm
12 Flws, 2 Buds, 8 Inflor.

Phal. Cherry Spot
‘Lea’ BM/DOG
Sep 2015, NS 4.0 x 4.0 cm
6 Flws, 2 Buds, 5 Inflor.

Phal. Kathleen Battle
‘Gypsy Lee’ HCC/AOS
Oct 1996, NS 4.9 x 5.0 cm
19 Flws, 0 Buds, 2 Inflor.

References:

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Christenson, E.; *Phalaenopsis – A Monograph*, 2001
Frowine, S. A.; *Moth Orchids – The Complete Guide to Phalaenopsis*, 2008

Species Data Sheet

Phalaenopsis doweryensis

Garay & Christenson in E.A.Christenson, Phalaenopsis: a monograph: 115 (2001)

[fail-en-OP-sis dow-ree-EN-sis]

Phalaenopsis doweryensis is native to Sabah, Borneo at elevations of sea level to 150 meters as a small sized, hot growing epiphyte. It has a short stem carrying 2, fleshy, ovate-elliptic to broadly elliptic, obtuse leaves that are obliquely bilobulate apically. Typically blooming in the spring on an erect, racemose, to 8" [20 cm] long, slightly compressed inflorescence with fleshy, somewhat fragrant flowers. The flowers are small, 1.8 to 2.0" [4.5 to 5.0 cm]. The sepal and petals are greenish yellow with brown spots and short transverse bars, the column and lip white, the lip high-lighted with bright yellow, the midlobe of the lip with reeish brwon parallel stripes.

"Similar to Phal. gigantea by virtue of their flat, round forms and the shape of the lip , but Phal. doweryensis differs in the much smaller, narrower leaves, a footless column and elliptic-obovate petals which yeild an open shaped flower." W Higgens

Judge using the Phalaenopsis scale.

Phalaenopsis doweryensis
'Highjack' AM/AOS
May 2011, NS 5.2 x 5.8 cm
17 Flws, 10 Buds, 3 Inflor.

Synonyms / Varieties / forms:

No synonyms recently used.

Awards:

Below are AOS awards that Phal. doweryensis has received:

	FCC	AM	HCC	AQ	AD	JC	AQ	CCE	CCM	CHM	CBM	TOTAL
AOS		2									1	3
Year(s) Awarded		2002-2011									2002	

This plant has received a relatively few awards.

Breeding Characteristics:

Breeding with Phal. deweryensis has been extremely limited with only ten primary hybrids (earliest in 2010) and no awarded progeny. Consequently, there is NO breeding information currently.

'Major' Hybrids: None.

References:

www.orchidspecies.com
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https://secure.aos.org/aqplus/SearchAwards.aspx
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OrchidWiz.Database x7.2, update: March 2021
Christenson, E.; *Phalaenopsis – A Monograph*, 2001

Many Phalaenopsis have received the Award of Quality. What is the AQ and why do you think so many Phalaenopsis have received it? Select one example of this award and discuss its significance.

From the AOS award site the AQ (Award of Quality) is awarded based on the following criteria:

> "Awarded once to a cross exhibited by a single individual as a group of not less than 12 plants or inflorescences of different clones of a hybrid or cultivated species. At least one of the inflorescences must receive a flower quality award and the overall quality of the group must be an improvement over the former type."

Of the 432 AQ/AOS awarded (as of Apr 2021), the top genera / alliances are:

Genera/Alliance	Nmbr AQs Awdd	Perct	Nmbr spcs & hybrs	Perct total pop.
Phalaenopsis	162	37.5%	37,081	18.1%
Paphiopedilum Alliance	82	19.0%	29,311	14.3%
Cattleya Alliance	81	18.8%	48,103	23.4%
Vanda Alliance	31	7.2%	12,206	5.9%
Masdevallia	16	3.7%	7,285	3.5%
Cymbidium	12	2.8%	19,250	9.4%
Dendrobium	12	2.8%	16,177	7.9%

Phalaenopsis has received 162 of the 432 (37.5%) AQs awarded, almost a factor of two more than second place Paphiopedilum with 82 (19.0%). From the above table the reason is not related to the number of hybrids/species. I suspect it is related to the current popularity (easy to grow, attractive long-lasting flowers, floral display, attractive when not in bloom, etc.) of Phalaenopsis among the general population as well as its popularity among orchid growers. This popularity has resulted in many vendors / breeders which increases the number of people that grow Phalaenopsis on all levels (windowsill, hobbyist, amateur, and professional). This large pool of plants and growers increases the number of people interested in attempting to receive an AQ.

Phal. Luedde-violacea
'Pendragon' AM/AOS
Sep 2020, NS 5.3 x 5.5 cm
3 Flws, 1 Bud, 3 Inflor.

The picture below is an early awarded Phalaenopsis AQ (first with picture and an awarded cultivar. The award was for a group of fourteen Phal. Luedde-violacea plants with one receiving an HCC/AOS. The picture is very dark and there is no picture of the awarded cultivar (I have enlarged a random selected flower from which to try to get a feel for flower quality). Even with the blurry picture you can see that the form is comparable to existing awarded cultivars and not that far off from the most recently award cultivar. Also, even though the cross was first registered in 1895, it is still being used as a parent and has 89 F1 and 3002 total progeny.

Phal. Luedde-violacea
'Varina' HCC/AOS
Aug 1970, NS 5.4 cm
3 Flws, 0 Buds, 3 Inflor.

Picture not available
Phal. Luedde-violacea
'Palm Beach' HCC/AOS
Aug 1967, NS 5.3 x 5.5 cm
1 Flws, 2 Buds, 1 Inflor.

Phal. Luedde-violacea AQ/AOS
Aug 1967, 14 plants

Award Descriptions (Apr 2021)

Phal. Pylo's Slurpee – Quality Award Description
(Phal. Lawrie Springate x Phal. Mituo King Bellina)
One full flat flower and one bud on a six-inch (15 cm) inflorescence; sepals and petals overlaid rusty red orange distally transiting to magenta basally; lip tri-lobed, mid-lobe magenta, broad white picotee basal half, side lobes erect, magenta distally, white centrally, rusty red-orange basally, callus yellow spotted rusty red-orange; column magenta; anther cap white; substance waxy; texture matte.

Phal. Pylo's Dragon – Quality Award Description
(Phal. gigantea x Phal. Blue Ridge Dragon)
One flower on a five-inch (13 cm) inflorescence; sepals and petals old gold distally transiting to white basally, maroon blotches distally transiting to concentric maroon blotched bars medial to smaller red-magenta blotches basally; dorsal sepal distal blotches medium sized; lateral sepals large blotches distally, inferior half overlaid red-magenta; petals small blotches distally; lip tri-lobe, base color old gold, side lobes erect, small maroon blotches, mid-lobe red-magenta; column cream, light red-magenta overlay; anther cap cream; substance firm; texture waxy.

Phal. (not named) – Cultural Award Description
(Phal. wilsonii x Phal. deweryensis)
Twenty-two slightly cupped starette flowers and eight buds on two inflorescences of around 15 in (38 cm) length presented on a clean robust plant mounted on a cork slab; sepals and petals creamy white, spotted and lightly overlaid magenta; lip tri-lobed, sidelobes erect, magenta spotted dark magenta distally, orange basally, midlobe shield shaped, dark magenta; column and anther cap white; substance firm; texture glistening.

Phal. YangYang Pink Mary – Quality Award Description
(Phal. Nobby's Green Eagle x Phal. Zheng Min Muscadine)
Ten well displayed crowded flowers on three inflorescences, longest 8 inches (20 cm); sepals and petals white with a broad yellow picotee; dorsal sepal veined and lightly overlaid magneta; later sepals superior half lightly lightly overlaid magenta basal half, inferior two-thirds heavily overlaid magenta; petals very lightly veined magenta basally; lip tri-lobe, sidelobes erect, yellow, white distally, midlobe yellow, broad magenta picotee; column white; anther cap light yellow; substance heavy; texture matte.

Phal. Millie's Lemon Berry – Quality Award Description
(Phal. Fantasy Musick x Phal. equestris)
Forty-five flowers and twelve buds on four branched inflorescences, longest eight inches (20 cm) long; sepals and petals white, lightly overlaid yellow basally; lip tri-lobed, sidelobe erect, yellow, red spots distal half, midlobe bright yellow; column and anther cap white; substance firm; texture diamond dust.

Award Descriptions (May 2021)

Phal. Henry's Gigant – Quality Award Description
(Phal. gigantea x Phal. Henry Wallbrunn)
Four stellate flat flowers on an eight-inch (20 cm) inflorescence; sepals and petals white, veined small red spots; lip trilobed, sidelobes erect, overlaid yellow-red, yellow centrally, midlobe yellow-red, callus yellow; column and anther cap white; substance firm; texture glistening.

Phal. Pylo's Dynamite – Quality Award Description
(Phal. Natasha x Phal. Joy Spring Canary)
Four flat flowers on one five-inch (13 cm) inflorescence; sepals and petals white with a broad chartreuse picotee, blotched brick-red; lateral sepals inferior half heavily bloched; lip tri-lobe, white, side lobes erect, yellow basal half, midlobe lightly blotched cyan; callus yellow; column and anther cap white; substance heavy; texture waxy.

Phal. Miro Sun – Cultural Award Description
(Phal. Mituo Sun x Phal. Miro Buddha)
Thirty-three flat full flowers and eight buds on eleven inflorescences of around 10 inches (25 cm) length presented on a clean robust multi-crown plant in a 15 in (38 cm) wood slat basket; sepals and petals cream, heavily overlaid red leaving a thin cream picotee, heavy faint brick red blotches; lip tri-lobed, red, sidelobes erect, midlobe overlaid dark brick-red, callus red; column and anther cap white; substance thick; texture glistening.

Phal. Jumbo King – Quality Award Description
(Phal. gigantea x Phal. Chienlung Red King)
three nodding flowers and two buds on one 6.5-inch (16.5 cm) inflorescence; sepals and petals white lemon yellow distally; sepals heavily blotched dark maroon; petals blotched dark maroon; lip tri-lobe, sidelobes erect, orange-red distally, yellow basally; midlobe serrated, overlaid light maroon; column and anther cap white; substance rigid; texture waxy.

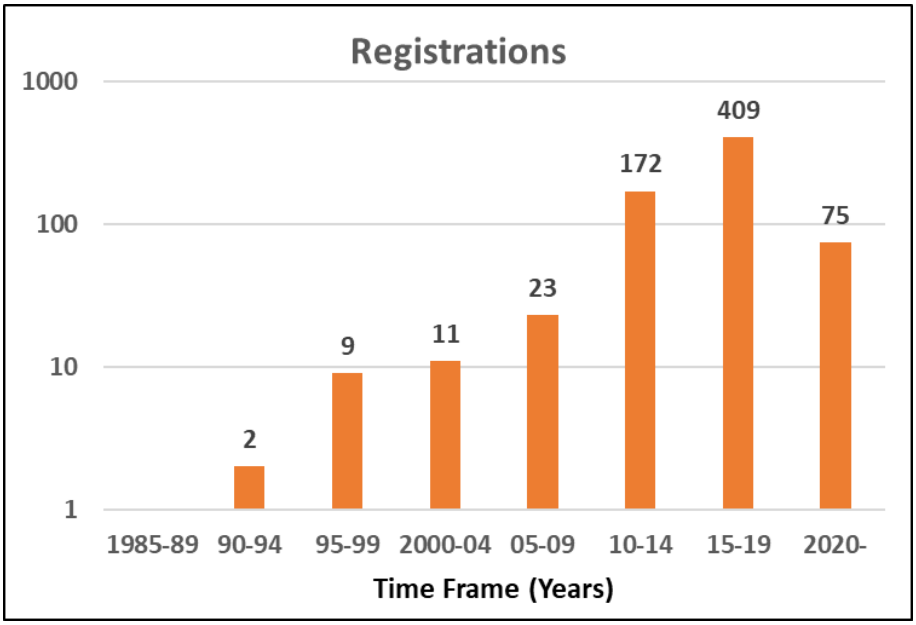
Phal. Pylo's Tangerine – Quality Award Description

(Phal. Sogo Lawrence x Phal. Pylo's Sweet Orange)
Three full flat flowers and one bud on one 6-inch (15 cm) inflorescence; sepals and petals butter-yellow, overlaid tangerine, concentric barred dark tangerine basally, blotched distally; lip trilobed, sidelobe erect, orange-magenta distally, tangerine basally, spotted dark tangerine, midlobe magenta distally, orange-red medially, tangerine basally, callus tangerine spotted dark tangerine; column white blushed magenta; anther cap white; substance hard; texture matte.

Phalaenopsis World Class 'Big Foot' JC/AOS
Progeny Report

Phalaenopsis World Class was registered in 1990 by Carmela Orchids and cultivar 'Big Foot' received a JC/AOS in 1991 when shown at the New England Orchid Show. It was the only cultivar with petal-like lips (petaloid) found in the population of Phal. World Class they raised. In fact, this kind of lip mutation was unknown until the 'discovery' of Phalaenopsis World Class 'Big Foot'. It was mericloned and sold to orchid hobbyists in the USA and Japan, beginning the big lip breeding line. It has been shown that the likelihood of the petaloid feature to be inherited in second generation progeny from first generation progeny is around 30 to 40 percent.

From 1990 to March 2021 there have been 48 F1 and 701 total progeny registered. A graph showing the number of registrations verses time is shown in the graph below.

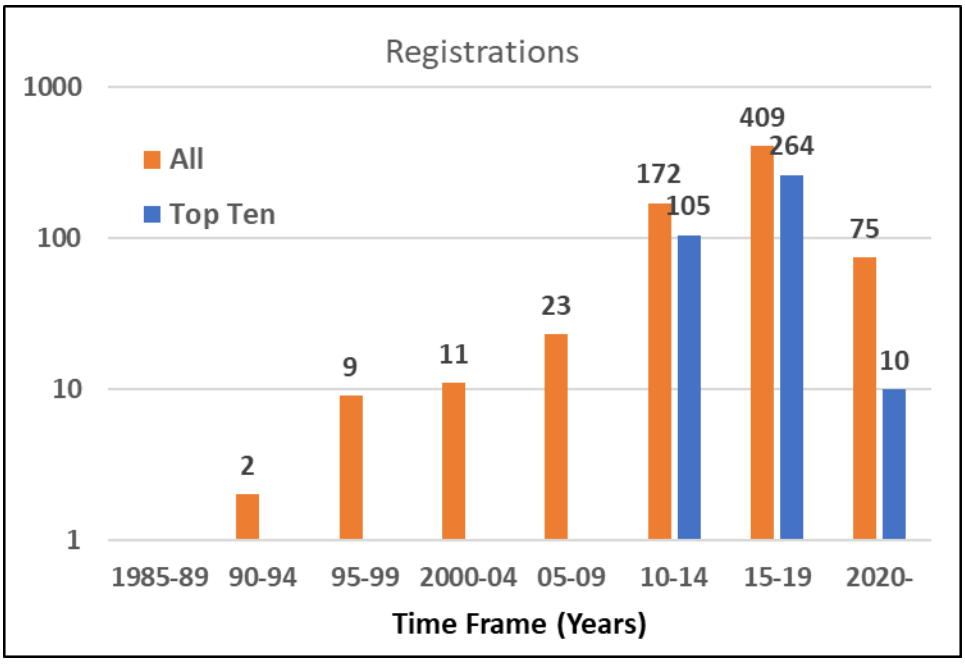


Phalaenopsis World Class
'Big Foot' JC/AOS
Apr 1997, 8.5 x 8.4 cm
6 Flwrs, 1 Bud, 1 Inflor.

From this graph, one sees that the breeding of Phal. World Class progeny did not really take off until around 2010. This is coupled with the widespread distribution of two key hybrids (Phal. Yu Pin Easter Island registered in 2009 and Phal. Yu Pin Fireworks in 2010) in Taiwan. Taiwan has since become THE source of big lip Phalaenopsis hybrids with the top ten hybridizers all located in Taiwan. The table below list the current top ten firms / people, number of registered Phal. World Class 'Big Foot' progeny awarded and the number of associated awards to each person/firm.

Firm / Person	Registrations	Assoc. Awards
Fuller's Orchids	85	6
Tying Shin Orchids	66	20
Mr. Gao Ming Huang	60	6
I-Hsin Biotechnology Inc.	45	0
Kung Sir Orchids	24	2
Taisuco Orchid Propagation Center	21	4
Wu Fu Shun	21	1
Ching Ann Orchids	20	0
Shih Ching Lin	19	0
Young Home Orchid	18	1

These top ten hybridizers account for 379 of the 701 (54.1%) registered Phal. World Class 'Big Foot' progeny and 40 of the 131 (30.5%) of the associated awards. To demonstrate the impact of these Taiwanese breeders the number of registration is added to the prior registration chart below.



Below are the some of the progeny, arranged by generation.

First Generation:

Phal. Yu Pin Easter Island (Phal. Sogo Yukidian x Phal. World Class), 2009, Yu Pin Biotech., 84 F1 and 272 total progeny, 9 AOS awards (5 AMs, 3 HCCs, 1 JC).

Phal. Yu Pin Fireworks (Phal. Sogo Dove x Phal. World Class), 2010, Neng-I Chang, 93 F1 and 330 total progeny, 9 AOS awards (4 AMs, 4 HCCs, 1 CCM).

Phal. Krull's Butterfly (Phal. Music x Phal. World Class), 2007, Krull-Smith, 2 F1 and 3 total progeny, 12 AOS awards (10 AMs, 1 AQ, 1 JC).

Phal. Dendi's Yeti (Phal. Taisuco Happybeauty x Phal. World Class), 2008, D. Diehm, no progeny, no AOS awards

Phal. Yu Pin Easter Island
'Sakura Blossom' AM/AOS
Jun 2017, NS 11.0 x 10.3 cm
9 Flws, 2 Buds, 1 Inflor.

Phal. Yu Pin Fireworks
'FANGtastic Broad Lip' AM/AOS
Apr 2014, NS 10.0 x 9.5 cm
9 Flws, 0 Bud, 1 Inflor.

Phal. Krull's Butterfly
'Stella' AM/AOS
Mar 2011, NS 8.5 x 8.4 cm
26 Flws, 0 Bud, 2 Inflor.

Phal. Dendi's Yeti
'Meenah' HCC/AOC
Oct 2012, NS 8.6 x 7.9 cm
8 Flws, 0 Bud, 1 Inflor.

Second Generation:

Phal. Tying Shin World Class (Phal. Sogo Vivien x Phal. Yu Pin Fireworks), 2011, Tying Shin Orchids, 21 F1 and 28 total progeny, 3 AOS Awards (2 AMs, 1 AQ)

Phal. Fuller's D-Plus (Phal. Yu Pin Easter Island x Phal. Fuller's Purple Queen), Fuller's Orchids, 21 F1 and 22 total progeny, 1 FCC/AOS award.

Phal. Tying Shin Eastern Star (Phal. Sogo Genki x Phal. Yu Pin Easter Island), Tying Shin Orchids, 3 F1 progeny, 7 AOS awards (4 AMs, 2 HCCs, 1 AQ)

Phal. Fangmei Dream Wedding (Phal. Mount Lip x Phal. Yu Pin Easter Island), 2013, Pi-I Chou, 5 F1 and 7 total progeny, 3 AOS awards (2 AMs, 1 HCC).

Phal. Tying Shin World Class
'2164-1' AM/AOS
Mar 2012, NS 5.5 x 6.0 cm
12 Flws, 6 Buds, 2 Inflor.

Phal. Fuller's D-Plus
'FL 89135' FCC/AOS
Mar 2017, NS 12.7 x 11.0 cm
11 Flws, 0 Bud, 1 Inflor.

Phal. Tying Shin Eastern Star
'JC226' AM/AOS
Mar 2014, NS 9.0 x 9.1 cm
14 Flws, 11 Buds, 1 Inflor.

Phal. Fangmei Dream Wedding
'FA7773-10' AM/AOS
Mar 2013, NS 10.9 x 10.4 cm
11 Flws, 2 Buds, 1 Inflor.

Third Generation:

Phal. Tying Shin Galaxy (Phal. Fantasia Prince x Phal. Tying Shin Unicorn), 2014, Tying Shin Orchids, 7 F1 progeny, 1 AM/AOS award

Phal. Younghome Princess (Phal. Leopard Prince x Phal. Fuller's E-Plus), 2012, Young Home Orchids, 7 F1 and 12 total progeny, 1 HCC/AOS award

Phal. Charming Crystal Water (Phal. Tying Shin Valentine's Day x Phal. Fureshing Mark), 2018, Char Ming Agri., no progeny, 2 AOS awards (1 FCC, 1 CCM)

Phal. Lioulin Hot Lip (Phal. Chian Xen Violin x Phal. Lioulin Lovely Lip), Huang Gao Ming, 2015, 6 F1 progeny, 3 AM/AOS awards

Phal. Tying Shin Galaxy
'9080' AM/AOS
Mar 2015, NS 9.0 x 8.8 cm
15 Flws, 29 Buds, 2 Inflor.

Phal. Younghome Princess
'YH0195-Dusty' HCC/AOS
Mar 2017, NS 9.4 x 8.4 cm
10 Flws, 2 Buds, 1 Inflor.

Phal. Charming Crystal Water
'Lee 1288' FCC/CCM/AOS
Mar 2017, NS 9.0 x 8.7 cm
109 Flws, 0 Bud, 3 Inflor.

Phal. Lioulin Hot Lip
'Charming Butterfly' AM/AOS
Mar 2019, NS 7.3 x 7.1 cm
51 Flws, 12 Buds, 3 Inflor.

Most recently awards (not mention above):

Phal. Lioulin R Lip (Phal. Tying Shin Unicorn x Phal. Lioulin Pretty Lip), 2015, Huang Gao Ming, 3 F1 progeny, 1 JC/AOS award (commendation for unusually large peloric lip).

Phal. Yu Pin Infrared Ray (Phal. Yu Pin Fireworks x Yu Pin Ocicat), 2013, Neng-I Chang, no progeny, 1 HCC/AOS award (light pink flowers).

Phal. Laura's Puzzle (Phal. Phal. Brother Pico Elf x Phal. World Class), 2021, Laura Newton, no progeny, 1 CCM/AOS award. NOTE: This plant was awarded originally as Phal. Sweet Talk 'Dwain's Choice' in Oct. 2019. I flag Laura Newton that this is not possible since Phal. World Class is not part of the parentage. She investigated the situation and found that the plant is a mericlone that was sold under the trade name Phal. 'Sweet Talk'. Laura contact RHS and the above changes were agreed to. The cross registration information is a guess on my part since all communications happened in June 2021 (14 Jun 2021 and 15 Jun 2021) with Laura Newton at AOS, RHS, and myself.

Phal. Lioulin Pretty Lip (Phal. Yu Pin Fireworks x Phal. Chian Xen Mammon), 2012, Huang Gao Ming, 14 F1 and 23 total progeny, 1 AM/AOS award

Phal. Lioulin R Lip
'Snookie' JC/AOS
Jan 2020, NS 8.2 x 7.5 cm
6 Flws, 3 Buds, 1 Inflor.

Phal. Yu Pin Infrared Ray
'Cotton Candy' HCC/AOS
Nov 2019, NS 8.0 x 8.0 cm
11 Flws, 1 Bud, 1 Inflor.

Phal. Laura's Puzzle
'Sweet Talk' CCM/AOS
Oct 2019, NS 10.0 x 9.3 cm
25 Flws, 0 Bud, 3 Inflor.

Phal. Lioulin Pretty Lip
'Gene and Jeanette' HCC/AOS
Jun 2019, NS 10.4 x 10.3 cm
24 Flws, 0 Bud, 3 Inflor.

Future breeding trends appears to be

- Towards round flowers, especially a round petaloid lip,
- Continue harlequin and miniature plant breeding trends
- Solid color, pink and yellow
- More flowers per inflorescence

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Orchids, Nov 2014, *Big-Lipped Phalaenopsis – Breeding of Big-Lip Phalaenopsis and its Achievements in Taiwan*, Kuo, Y. T., Chen, W. H., Vol. 83(11), pg. 692-695

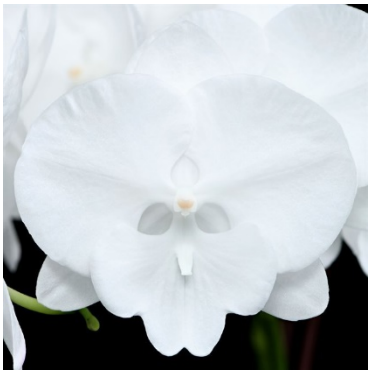
Award Descriptions (June 2021)

Phal. Big Foot Stripes – Quality Award Description

(Phal. Luchia Davis x Phal. World Class)
Eleven well-formed pink petaloid flowers on a fifteen-inch (38 cm) inflorescence; sepals and petals veined dark pink, narrow white picotee; lip trilobed, equal width elements, pink, veined dark pink, narrow white picotee, callus yellow; column dark pink; anther cap white; substance firm; texture matte.

Phal. Chia-Shing Pink Kiss – Quality Award Description

(Phal. Yu Pin Fireworks x Phal. Nobby's Pink Lady)
Twenty flat, well-formed white flowers on one twelve-inch (30 cm) inflorescence; petals overlap; lip tri-lobe, side lobes erect, white, spotted dark red basally, medial edge overlaid orange, distal half lavender, midlobe yellow-lavender, yellow basally, lavender distally; callus yellow, spotted dark red; column and anther cap white; substance heavy; texture glistening.



Phal. Younghome Snow Season – Cultural Award Description

(Phal. Timothy Christopher x Phal. Tying Shin Swallow)
Seventy-three flat full white petaloid flowers and eight buds on four inflorescences, longest 21 inches (53 cm) long presented on a clean robust multi-crown plant in a 15 in (38 cm) plastic pot; petals and lip overlap forming ovate open areas; lip tri-lobed, broad rounded segments, mid-lobe center rounded notch, callus rectangular, white; column white; anther cap creamy yellow; substance firm; texture matte.

Phal. Younghome New Staff – Quality Award Description

(Phal. Tying Shin Golden Staff x Phal. Tying Shin New View)
Seven well-formed, round, slightly cupped flowers and two buds on one 10.5-inch (27 cm) inflorescence; sepals and petals white, overlaid maroon basally, distinct gap then spotted maroon roughly along lines, spots larger basally, no spots on edges leaving a broad picotee; lip fan shaped, undulating edge, white, overlaid maroon basally, distinct small gap then spotted maroon along lavender veins, veins stop short of edge leaving a narrow picotee; column white spotted maroon; anther cap cream; substance rigid; texture waxy.

Phal. Dendi's Ching Hua – Quality Award Description

(Phal. Ching Hua Wizard x Phal. Sasquatch)

Eight full recurred flowers and one bud on one 10-inch (25 cm) inflorescence; sepals and petals white, distal three-quarters spotted red-violet generally along lines, spots small distally leaving a picotee; lip trilobed, white, sidelobes erect, overlaid red-violet marginally, midlobe overlaid light red-violet, callus dark red-violet; column white, overlaid red-violet; anther cap cream; substance hard; texture matte.

Phalaenopsis Subgenus Polychilos Section Fuscatae, Christenson, E.A.; Phalaenopsis: A Monograph, (2001) Type: Phalaenopsis [Phal.] fuscata

[fal-en-OP-sis vye-oh-LAY-see-ah]

Characteristic Summary

Phal. fuscata
'Lady Stella' AM/AOS
Feb 2018, NS 4.0 x 4.9 cm

Present Phalaenopsis taxonomy has all of Christensons' subgenus Polychilos in one section, Polychilos, in the subgenus Phalaenopsis (Fighetti, 2015). This report is based on the taxonomy as detailed by Christensons'

Phalaenopsis: A Monograph (2001).

Phal. fascata
Lip detail

This previous section consisted of four species that represent a very distinctive group characterized by having concave striped lips with a longitudinal keel, pale yellow flowers variously marked with brown, and, except for Phal. cochlearis, strongly revolute (rolled back from the margins) sepals and petals. The lip shape and coloration is distinct and strongly dominant in breeding. In reviewing the award clones, it appears that the smaller petals is also passed on to its progeny.

This group of plants are not common in cultivation. Most growers have difficulty keeping plants of these species for long periods of time, and they are in disfavor among phalaenopsis breeders because of their strongly revolute floral segments. Field research to establish the unique habitat requirements of these species is needed.

Generally, you would point scale using the Phalaenopsis point scale.

Table of species, (www.orchidspecies.com – Dec 2020 update)

Species marked with a * are used the most in hybridization				Progeny	AOS Awards											
Kew Name	**Habitat, Country**	**Temp.**	**Season**	**F1/Total**	**FCC**	**AM**	**HCC**	**JC**	**AD**	**AQ**	**CCE**	**CCM**	**CHM**	**CBR**	**Total**	**Breeding Comments**
Phalaenopsis cochlearis	Borneo, Malaya	Hot	Spring - Summer	29/80		1						1		1	3	
Phalaenopsis fuscata*	Borneo, Malaya, Philippines	Warm to Hot	Summer	106/292		2	1							1	4	Stripped or spotted flowers, good substance, red lips, twisted petals, lowers flower count, difficult to breed
Phalaenopsis kunstleri	Malaya, Myanmar	Warm to Hot	Summer	14/16		2									2	
Phalaenopsis viridis	Sumatera	Warm to Hot	Spring	19/18								1		1	2	

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

From the above table one notices none of these species have been used much in breeding or have received many awards. Phal. fuscata has the most F1 and total progeny and the most AOS awards, although not significantly more than the other species. None of this is surprising when you consider the fact that the foral characteristics are similar for the four species.

The other three species are shown below:

Phal. cochlearis
'Dieter' BM/DOG
Jun 2018

Phal. kunstleri
'Highjack' HCC/AOS
Jun 2012, NS 4.3 x 4.8 cm
33 Flwrs, 2 Buds, 6 Inflor.

Phal. viridis
'Stephanie Weiss' CBR/AOS
Apr 1982, NS 4.0 cm
4 Flwrs, 1 Buds, 2 Inflor.

Breeding:

Fuscatae Sect	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	15	98	111	75	38	59	13	409
Assc Awds	0	10	18	19	12	9	2	0	70
F1	0	13	60	32	17	16	25	5	168
AA	0	10	13	2	1	0	0	0	26
F2	0	2	35	42	16	2	8	2	107
AA	0	0	4	16	2	0	0	0	22
F3	0	0	3	32	25	5	2	0	67
AA	0	0	1	1	7	1	0	0	10
F4	0	0	0	5	13	10	7	0	35
AA	0	0	0	0	2	2	1	0	5

To investigate the breeding programs further, the following chart of was composed of the four species to identify any trends, time wise.

Breeding with Fuscatae Section species started in 1965 with the registration of Phal. Janet Kuhn (Phal. Dos Pueblos x Phal. fuscata) by C. Beard. It quickly peaked in the 1970-80s with a rebirth of interest appearing to occur presently as indicated by the increase in registrations in F1 and F2 progeny.

Only Phal. fuscata and Phal. cochlearis have grexes with more than one F1 progeny or have progeny with any awards.

Hybrids (Most F1):

Phal. Moon Probe (Phal. fuscata x Phal. Cindy Brandt), 1968, C. Beard, 18 F1 and 44 total progeny, no awards. Major progeny: Phal. Carol Owens (Phal. Moon Probe x Phal. Barbara Moler), 1975, C. Beard, 5 F1 progeny, 1 AM/AOS award.

Phal. Sunrise Delight (Phal. Rose Tris x Phal. Brother Buddha), 1995, Brother, 12 F1 and 37 total progeny, no awards. Major progeny: Phal. KS Fragrance (Phal. KS Happy Sunset x Phal. KS Delight Sunset), 2009, Kung Sir Orchids, 8 F1 and 9 total progeny, 3 AM/AOS awards.

Phal. Enchantress (Phal. Sun Prairie x Phal. Wyocena), 1985, Hausermann, 11 F1 and 18 total progeny, no awards. No major progeny.

Phal. Frank McClain (Phal. Amblearis x Phal. amboinensis), 1979, H. Wallbrunn, 9 F1 progeny, 1 HCC/AOS award. No major progeny.

Phal. Frank McClain
'Peter' HCC/AOS
Jul 1984, NS 4.3 cm
6 Flwrs, 0 Buds, 2 Inflor.

Hybrids (Most awards):

Phal. Katharine Ross
'Plantation' HCC/AOS
Apr 1985, NS 7.8 cm
6 Flwrs, 2 Buds, 1 Inflor.

Phal. Katharine Ross (Phal. Marcia Leigh x Phal. Jean McPherson), 1983, Zuma Canyon, 1 F1 progeny, 10 HCC/AOS awards. No major progeny.

Phal. KS Fragrance (Phal. KS Happy Sunset x Phal. KS Delight Sunset), 2009, Kung Sir Orchids, 8 F1 and 9 total progeny, 3 AM/AOS awards. No major progeny.

Phal. Helen Kuhn (Phal. Zada x Phal. fuscata), 1966, L. Kuhn, 6 F1 and 12 total progeny. No major progeny.

Phal. Amblearis (Phal. amboinensis x Phal. cochlearis), 1972, H. Wallbrunn, 6 F1 and 16 total progeny, 4 AOS awards (1 AM, 2 HCCs, 1 JC). Major progeny: Phal. Frank McClain, see above.

Phal. KS Fragrance
'KS0620 #2' HCC/AOS
Mar 2010, NS 5.3 x 5.2 cm
19 Flwrs, 0 Buds, 2 Inflor.

Phal. Janet Kuhn (Phal. Dos Pueblos x Phal. fascata), 1965, C. Beard, 10 F1 and 15 total progeny, 4 AM/AOS awards. No major progeny.

Phal. Helen Kuhn
'Monterey Bay' HCC/AOS
Dec 1973, NS 7.3 cm
4 Flwrs, 7 Buds, 1 Inflor.

Phal. Amblearis
'Fortune' HCC/AOS
Oct 2017, NS 3.3 x 3.5 cm
7 Flwrs, 0 Buds, 3 Inflor.

Phal. Janet Kuhn
'Boynton' AM/AOS
Jan 1968, NS 8.3 cm
5 Flwrs, 1 Buds, 1 Inflor.

Phal. Maria Vasquez
'Malibu' FCC/AOS
Aug 1977, NS 7.9 cm
15 Flwrs, 0 Buds, 1 Inflor.

Phal. Maria Vasquez (Phal. Denise Richardson x Phal. fuscata), 1973, Roy Fields, 8 F1 and 19 total progeny, 3 AOS awards (1 FCC, 2 AMs). No major progeny.

References:

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OrchidWiz Database x7.3, update: June 2021
Christenson, E.; *Phalaenopsis – A Monograph*, 2001
Frowine, S. A.; *Moth Orchids – The Complete Guide to Phalaenopsis*, 2008

Species Data Sheet

Phalaenopsis viridis J.J.Sm., Bull. Dép. Agric. Indes Néerl. 5: 21 (1907)

[fal-en-OP-sis VIR-i-diss]

Phalaenopsis [Phal.] viridis is native to the eastern side of Sumatra at elevations of 2600-3300 ft. (790-1000 m) growing on limestone rocks or low on tree trunks in dark nooks. It is a small sized, warm growing with a very short stem carrying a few, oblong-obovate, narrowing towards the base, shiny green, basally clasping leaves. Blooming in the spring on an erect to horizontal, simple or occasionally branching, to 16 to 28" [40 to 70 cm] long, few to several flowered inflorescence with ovate, acute floral bracts and carrying a flush of simultaneously opening, fleshy flowers. The flowers are 1.2 to 1.6" [3 to 4 cm] in diameter, have a greenish yellow ground color almost completely obscured by a dark brown overlay, the lip and columnare white, all segments with strongly revolute margins.

Phal. viridis is rarely shown at shows with it rather small nondescript flowers. It has little to contribute of offspring, consequently it is little used hybridization. It should be noted that mature plants have a high flower count, with a CCM/AOS award to a plant with 27 flowers and 2 Buds on four inflorescense. The flowers open simultaneously, but the inflorescences continue to elongate and periodically reflower, each flush comprising five or six flowers.

Phalaenopsis viridis
'Stephanie Weiss' CBR/AOS
Apr 1982, NS 4.0 cm

Judge using the Phalaenopsis scale.

Synonyms / Varieties / forms:

Synonyms – Polychilos viridis, 1982

Awards:

Below are AOS awards that Phal. viridis has received:

	FCC	AM	HCC	AQ	AD	JC	AQ	CCE	CCM	CHM	CBM	TOTAL
AOS									1		1	2
Year(s) Awarded									1989		1982	

This species has received only 2 awards since initially being shown in 1982.

Breeding Characteristics:

There are presently only 18 total progeny associated with Phal. viridis and none of the progeny have received an award or are there pictures available of any of the progeny. There are only two second generation progeny, clearly this species has been little used hybridization and therefor nothing can be said about its breeding characteristics. The table below list the Phal. viridis progeny registered and awards associated with the grex (per OrchidWiz 7.3).

viridis	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	Total
Reg	0	1	2	1	0	4	1	2	2	5	0	18
Assc Awds	0	0	0	0	0	0	0	0	0	0	0	0
F1	0	1	2	1	0	3	1	2	1	5	0	16
AA	0	0	0	0	0	0	0	0	0	0	0	0
F2	0	0	0	0	0	1	0	0	1	0	0	2
AA	0	0	0	0	0	0	0	0	0	0	0	0

From this table you can see that Phal. viridis has a low level of breeding interest although there may be interest picking up with over a third of the hybrids registered in the last decade.

Hybrids (with pictures):

There are no hybrids with awards or pictures.

References:

www.orchidspecies.com

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

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

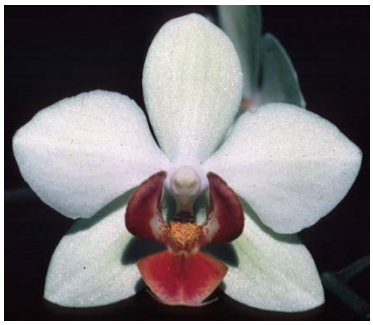
OrchidWiz Database x7.3, update: June 2021

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

Frowine, S. A.; *Moth Orchids – The Complete Guide to Phalaenopsis*, 2008

Award Descriptions (July 2021)

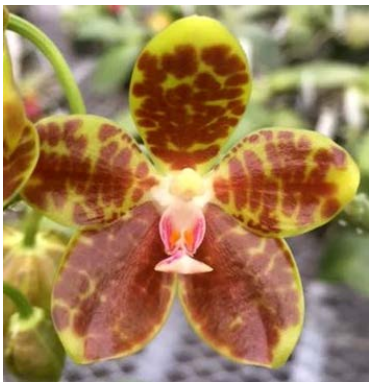
Phal. KS Balm – Quality Award Description
(Phal. Tzu Chiang Balm x Phal. KS Delight Sunset)
Thirty-two slighty recurved flowers and six buds on one inflorescences; sepals and petals elliptic, obtuse, recurve, golden yellow overlaid red, narrow golden yellow picotee; sepals recurved; lateral sepals basal one-quarter barded red; petals erect, smaller than sepals; lip trilobed, golden yellow, side lobes and mid lobes heavily overlaid red, callus yellow, speckled red distally; column and anther cap creamy-yellow; substance firm; texture matte.



Phal. Henry's Peneterry – Quality Award Description
(Phal. Penetrate x Phal. Terry-Beth Ballard)
Seven stellate flowers well arranged on two inflorescences; sepals lanceolate, obtuse, white lightly blushed green centrally; petals trullate, acute, white, lightly blushed lavender basally; lip trilobed, white, side lobes broad overlay dark maroon marginally, spotted dark maroon basally and centrally, midlobe overlaid maroon fading marginally, dark central strip central basally, callus, clypeata, golden yellow heavily spotted marron; column white, lightly blushed lavender; anther cap cream; substance firm; texture diamond dust.

Phal. Memoria Jussi Bjoerling – Cultural Award Description
(Phal. Joey x Phal. Frank McClain)
Thirty flat stellate flowers and two buds on 10 inflorescences that are up to 18 inch (46 cm) in length borne on a on robust 20 inches (50 cm) diameter multiple crown clean plant in a 7 inch (14 cm) plastic pot; sepals and petals lanceolate, chartreuse, uniformly barred old rose, forming circles basally to blotches distally, white halo basally; lip trilobed chartreuse, sidelobes erect spotted old rose distally, midlobe overlaid old rose leaving a narrow chartreuse picotee and central strip; column and anther cap chartreuse; substance firm; texture waxy.

Phal. Gamelan – Quality Award Description
(Phal. javanica x Phal. Frank McClain)
Eight flat stellate flowers on two erect inflorescences up to 23 in (58 cm) in length; sepals and petals lanceolate, chartreuse, barred maroon, white halo basally; lip trilobed, chartreuse, sidelobes erect, lightly blushed maroon, midlobe orange-red; column and anther cap chartreuse; substance hard; texture waxy.



Phal. Pylo's Gift – Quality Award Description
(Phal. gigantea x Phal. kunstleri)
Four flowers on a 28 in. (71 cm) inflorescence; sepal and petals obovate, yellow, heavily blotched dusty maroon; lateral sepals almost solid overlaid dusty maroon; lip trilobed cream, sidelobe erect, overlaid carmine, mid lobe, lightly overlaid carmine; column and anther cap creamy yellow; substance hard; texture waxy.

Terminology – Q –

quad- (KWAD) Latin used more often as a prefix for four.

quadratus, -a, -um (kwad-RAY-tus) Nearly square; having four side. (9)

Grammatophyllum scriptum var. minahassae – … quadrate terminal lobe of lip, with a flat, truncate apex, …

quadricolor (KWAD-ri-ko-lor) Having four colors. (2)

Cattleya trianae – … petals peloric, quadricolored (fuchsia, yellow, white, light lilac) imitating lip; …

quadricornis, (kwad-ri-KOR-niss) With four horns.

quadrigeneric (kwad-ri-jen-AIR-rik) Concerning four genera.

quaquaversal (kwa-kwa-VERS-al) Twisting or turning variously.

quadernatus, -a, -um (kwa-ter-NAY-tus) In fours.

quin- (Kwin) Latin, used in compound words to mean five.

quinatus, -a, -um (kwin-AY-tus) In fives.

quinquenervis, -e (kwin-kwe-NER-viss) With five nerves or veins.

quinquepartitus, -a, um (kwin-kwe-PAR-ti-tus) Having five parts.

quinquevulnerus, -a, -um (kwin-kwe-VUL-ner-us) With five wounds or blood-red spots.

Phalaenopsis Section Zebrinae (Christenson) Korth. & Rchb.f., Hamburger Garten- Blumenzeitung 16: 115 (1860), nom. cons.

Type: Phalaenopsis [Phal.] sumatrana

[fal-en-OP-sis soo-ma-TRAY-na]

Characteristic Summary

The Zebrinae section comprises species with a cucullate (hooded) clinandrium (anther bed), see picture, at right, of lip detail. This distinctive feature separates the species of the Zebrinae Section from the often similarly colored species of section Amboinenses. There are presently four species that compose the Zebrinae Section of the Polychilos subgenus (presently these species and all of the prior Polychilos subgenus are in the Polychilos section, Phalaenopsis subgenus). The plants are distributed in Southeast Asia, Sumatra, Islands of the Andaman Sea, Borneo, and the Philippines with Borneo and Sumatra being the centers of distribution. The plants are epiphytic. The species of this section are uniform in morphology except for the highly variable color in Phal. sumatrana.

Phal. sumatrana, lip detail
Note tissue over column

Phal. sumatrana
'Ellyn' AM/AOS
May 2015, NS 5.8 x 6.8 cm
8 Flwrs, 1 Bud, 3 Inflor.

The table below is a summary of the four species that are in Zebrinae Section.

Species marked with a * are used the most in hybridization				Progeny	AOS Awards											
Kew Name	**Habitat, Country**	**Temp.**	**Season**	**F1/Total**	**FCC**	**AM**	**HCC**	**JC**	**AD**	**AQ**	**CCE**	**CCM**	**CHM**	**CBR**	**Total**	**Breeding Comments**
Phalaenopsis corningiana	Borneo	Hot	Spring - Summer	71/248		6	3				1	2		2	14	Solid red color
Phalaenopsis inscriptiosinensis	Sumatera	Warm to Hot	Summer	24/26		1							1		2	
Phalaenopsis speciosa	Now Phalaenopsis tetraspis															
Phalaenopsis sumatrana	Southeast Asia, Borneo, Philippines	Hot	Spring - Summer	169/5527		9	4	2				2		2	19	
Phalaenopsis tetraspis	Andaman Island, Nicobar Island, Sumatera	Hot	Yearround	133/497	1	18	12	4				2	4	1	42	

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

Breeding:

The first thing to note from this table is that Zebrinae Section species vary considerably regarding use in hybridization. The species with the most progeny is Phal. sumatrana, 5527 total progeny, while Pha. Inscriptiosinensis has the least progeny with 26 total progeny. But the question is are any of these species used much in breeding today. To address this issue, the following table was generated with registration per decade.

Zebrinae Section	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	1	0	1	14	128	297	703	1974	2869	311	6298
Assc Awds	0	0	0	7	23	83	221	517	1071	387	1	2310
F1	0	1	0	1	6	86	90	46	51	108	7	396
AA	0	0	0	7	16	46	11	13	7	20	0	120
F2	0	0	0	0	7	21	104	64	31	140	28	395
AA	0	0	0	0	7	4	37	13	3	11	0	75
F3	0	0	0	0	1	17	29	76	36	124	26	309
AA	0	0	0	0	0	11	13	5	6	10	0	45

In reviewing the above F1 and F2 registration information, two things stick out. The first item is that the first hybrid was registered in 1938, Phal. Sumabilis (Phal. amabilis x Phal. sumatrana), by F. Atherton.

The second item is that the table clearly shows a peak in hybridizing with Zebrinae section species in the 1970's and 1980's and then another peak in occurring today. This raises the question is second peak in breeding with Zebrinae Section species the result one or more species or is a general interest in all species of this section. To address this question the follow two tables this question. The first table is for F1 registrations.

F1, Zebrinae Sect	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Phal. corningiana												
Reg	0	0	0	0	0	12	24	10	6	19	0	71
Phal. inscriptiosinensis												
Reg	0	0	0	0	0	0	5	4	8	6	1	24
Phal. sumatrana												
Reg	0	1	0	1	6	71	58	9	10	12	1	169
Phal. tetraspis												
Reg	0	0	0	0	0	3	3	23	27	71	5	132

And the second table is for F2 registrations

F2, Zebrinae Sect	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Phal. corningiana												
Reg	0	0	0	0	0	0	21	16	5	21	2	65
Phal. inscriptiosinensis												
Reg	0	0	0	0	0	0	0	0	0	1	1	2
Phal. sumatrana												
Reg	0	0	0	0	7	21	83	45	7	13	0	176
Phal. tetraspis												
Reg	0	0	0	0	0	0	0	3	19	105	25	152

Looking at the species individually, Phal. corningiana has a breeding peaks in 1980 and a second peak currently. This follows the trend for the overall group.

Phal. inscriptiosinensis appears to at a relatively low but constant interest level with the first interest in exploring F2 impact currently.

Phal. sumatrana peaked in 1970 for F1 and 1980 for F2 with interest since then at a relatively constant low to moderate level for both F1 and F2 progeny registrations.

Phal. tetraspis is currently at a high and appears to be growing. Number of registered F1 hybrids in 2010s is as high as the highest for species in this group and for F2 progeny in 2010s it is the highest for all species. Clearly the most breeding interest in this section is with Phal. tetraspis.

The other three species are shown below:

Phal. corningiana
'Jia Ho' AM/AOS
Mar 2014, NS 5.0 x 5.6 cm
5 Flwrs, 0 Buds, 1 Inflor.

Phal. inscriptiosinensis
'inscriptionensis' AM/AOS
May 2009, NS 4.1 x 3.4 cm
11 Flwrs, 3 Buds, 3 Inflor.

Phal. tetraspis
'Bredren's Ruby' AM/AOS
Mar 2021, NS 3.8 x 3.7 cm
7 Flwrs, 0 Buds, 1 Inflor.

Hybrids (Most F1, for each species, F3 or lower):

Phal. Corning's Violet (Phal. violacea x Phal. corningiana), 1976, C. Sheviak, 42 F1 and 146 total progeny, 5 AOS awards (2 AMs, 3 HCCs). Major progeny: Phal. Grebe, see below; Phal. Cherokee Chief (Phal. Coral Isles x Phal. Corning's Violet), Hausermann, 26 F1 and 49 total progeny, 3 AOS awards (2 AMs, 1 HCC).

Phal. Inscript-micholitz (Phal. inscriptiosinensis x Phal. micholitzii), 2004, Big Leaf Orchids, 1 F1 progeny, no awards.

Phal. Ambotrana (Phal. sumatrana x Phal. amboinensis), 1965, Fredrick L. Thornton, 35 F1 and 227 total progeny, 9 AOS awards (3 AMs, 5 HCCs, 1 CCM). Major progeny: Phal. KS Super Zebra, see below; Phal. Star of Florida (Phal. Princess Kaiulani x Phal. Ambotrana), 1967, Fredrick L. Thornton, 32 F1 and 172 total progeny, 2 CCM/AOS awards.

Phal. KS Super Zebra (Phal. KS Red Zebra x Phal. KS Tetra Jewel), 2014, Kung Sir Orchids, 67 F1 progeny, 5 AOS awards (2 AMs, 1 HCC). No major progeny.

Phal. Corning's Violet
'Sally' AM/AOS
May 1980, NS 5.6 cm
5 Flwrs, 7 Buds, 7 Inflor.

Phal. Inscript-micholitz

Phal. Ambotrana
'Fort Caroline Orchids' AM/AOS
Mar 1972, NS 6.7 cm
59 Flwrs, 9 Buds, 8 Inflor.

Phal. KS Super Zebra
'Pylo' AM/AOS
May 2016, NS 5.2 x 5.6 cm
4 Flwrs, 2 Buds, 2 Inflor.

Hybrids (Most awards, for each species, F3 or lower):

Phal. Grebe (Phal. Pretty Nice x Phal. Corning's Violet), 1982, R. Griesbach, 3 F1 progeny, 8 AOS awards (4 AMs, 2 HCCs, 1 JC, 1 AQ). No major progeny.

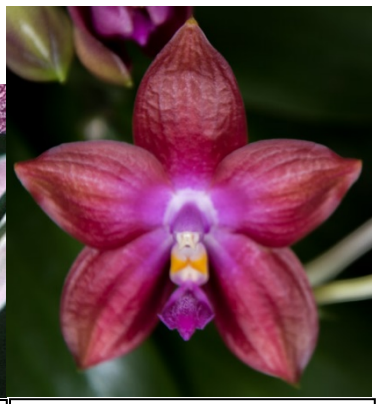
Phal. Paskal Indukbaru (Phal. javanica x Phal. inscriptiosinensis), 1985, A. S. Parnata, no progeny, 1 AD/AOS award.

Phal. Musical Adventure (Phal. Music x Phal. Malibu Adventure), 1983, Livingston's Orchids, no progeny, 9 AOS awards (2 AMs, 7 HCCs).

Phal. Grebe
'Ann Griesbach' AM/AOS
May 1984, NS 6.0 cm
8 Flwrs, 0 Buds, 2 Inflor.

Phal. Paskal Indukbaru
'Stones River' AD/AOS
Jun 1988, NS 2.7 cm
7 Flwrs, 1 Buds, 2 Inflor.

Phal. Musical Adventure
'Olivia' AM/AOS
Mar 1983, NS 8.0 cm
6 Flwrs, 1 Bud, 1 Inflor.



Phal. Tying Shin Fly Eagle
'Cherry Bomb' AM/AOS
Apr 2019, NS 5.5 x 6.5 cm
14 Flwrs, 6 Buds, 8 Inflor.

Phal. Tying Shin Fly Eagle (Phal. tetraspis x Phal. Dragon Tree Eagle), 2011, Tying Shin Orchids, 16 F1 and 17 total progeny, 10 AOS awards (6 AMs, 4 HCCs). No major progeny.

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Species Data Sheet

Phalaenopsis tetraspis Rchb.f., Xenia Orchid. 2: 146 (1870)

[fal-en-OP-sis teh-TRAS-pis]

Phalaenopsis [Phal.] tetraspis is found in Sumatra, the Andaman Islands and Nicobar islands in very shady, dim forests and on mangroves above braqckish water at elevations of sea level to 400 meters. It is a medium sized, hot growing epiphyte with a short stem carrying obovate, shortly acute to obtuse leaves that blooms in the summer. The lateral, arching, 12 to 16" [30 to 40 cm] long, racemose or paniculate, many flowered inflorescence is longer than the leaves and has small triangular, concave floral bracts. It can carry anywhere from 4 to 8, fleshy, glossy, strongly fragrant flowers. Typical flower natural spread is 1.6" to 2.4" [4 to 6 cm], the sepals and petals are +/- concave, variable in color, the sepals and petals white with a few transverse purple bars a the base. The sepal and petals can range in color from pure white, purple bars, random purple elements, to pure purple, more about that in the next section on forms. The lip is white with faint purple suffusion, the lateral lobes bright yellow, the column is usually white.

Phal. tetraspis
'Bredren's Ruby' AM/AOS
Mar 2021, NS 3.8 x 3.7 cm
7 Flwrs, 0 Buds, 1 Inflor.

The species is highly variable, see below.

Judge using the Phalaenopsis scale.

Phal. tetraspis
'Whippoorwill' CBR/AOS
Oct 1994, NS 4.0 x 4.5 cm
2 Flwrs, 6 Buds, 2 Inflor.

Synonyms / Varieties / forms:

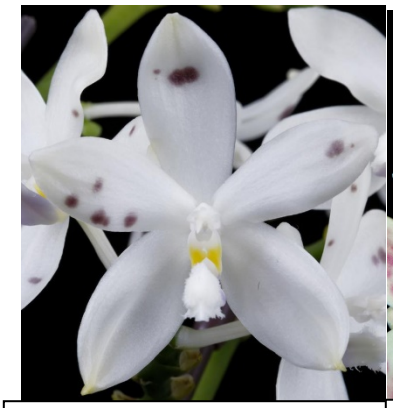
Synonyms:

Phalaenopsis speciosa Rchb.f., Gard. Chron., n.s., 15: 562 (1881).

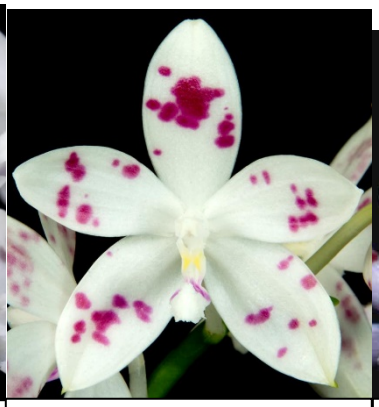
Phalaenopsis speciosa var. tetraspis (Rchb.f.) H.R.Sweet, Amer. Orchid Soc. Bull. 37: 1092 (1968), nom. superfl.

Polychilos speciosa (Rchb.f.) Shim, Malayan Nat. J. 36: 26 (1982).

Varieties / forms: Currently no varieties or forms are reckonized by the RHS, but the general public still uses some if not all of the following forms. But before discussing the various forms what is a 'typical' Phal. tetraspis. The above botonical description of Phal. tetraspis states 'the sepals and petals white with a few transverse purple bars at the base.' I take this description to describe the typical form of Phal. tetraspis, see Phal. tetraspis 'Whippoorwill'. Some observations / comments is that the bars are NOT at the base, the bars are not consistent, the bars in some cases appear to be made up of 'blotches', and in one case the bar is a single 'blotch.' This inconsistentence would lead some more seasoned individuals to say 'well' it is a tetraspis. Samples of this typical form, dimenstrating some of the variability, are shown in the following awarded clones. From this collection one sees that there can be bars and / or blotches, different colors, and densities ranging from a single mark to large blotches of color.

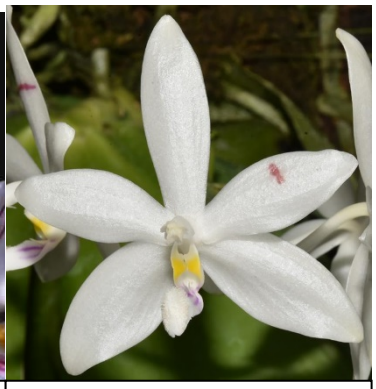


Phal. tetraspis
'Cyan's Nightime Fiasco' AM/AOS
Feb 2020, NS 4.0 x 4.1 cm
30 Flwrs, 2 Buds, 6 Inflor.
'blotched violet-brown'



Phal. tetraspis
'Arnie' HCC/AOS
Oct 2019, NS 4.5 x 4.6 cm
6 Flwrs, 1 Bud, 2 Inflor.
'dark fuschsia spot-like blothes'

Phal. tetraspis
'Countryside' HCC/AOS
Sep 2000, NS 4.2 x 4.9 cm
3 Flwrs, 3 Bud, 2 Inflor.
'irregular maroon bars'



Phal. tetraspis
'KBCC' AM/AOS
Nov 2019, NS 4.3 x 4.6 cm
22 Flwrs, 0 Buds, 4 Inflor.
'thin tranverse purple lines'

Phal. tetraspis
'Caladrius' HCC/AOS
Oct 2018, NS 5.5 x 6.0 cm
4 Flwrs, 2 Buds, 2 Inflor.

With this forming a descriptive Phal. tetraspis baseline, will now review the various forms.

f. alba – Flower void of all purple pigment, see clone 'Caladrius' as an example.

f. christiana – Sepals and petals are unstablely colored on the same plant. No other species of Phalaenopsis exhibits such an unstable pigment condition.

When grown under cooler temperatures and brighter light as it flowers, the amount of red expressed in the flower segments is increased dramatically. When grown under warmer temperatures the flowers have more white. It produces multiple spikes and can flower repeatedly on old spikes for several years as well as flowering on new spikes. See clone 'Philippe Leblond' as an example.

Phal. tetraspis f. christiana
'Philippe Leblond' HCC/AOS
Oct 2017, NS 6.0 x 7.0 cm
7 Flwrs, 2 Buds, 2 Inflor.

Phal. tetraspis f. speciosa
'Prince' AM/AOS
Nov 2019, NS 4.5 x 4.6 cm
14 Flwrs, 0 Buds, 4 Inflor.

f. speciosa – Plants previously associated with Phal. speciosa type 'sepals and petals purple with +/- white at the base,' see clone 'Prince' as an example.

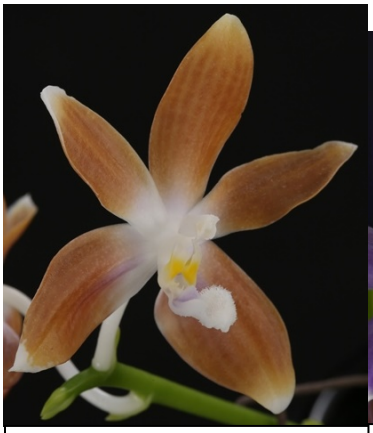
f. imperatrix – Solid deep purple flowers without any barring at the base of the sepals. The reverse of the flowes do show some barring but not the spotting found in the f. speciosa variety.

f. brunneola – Flower color a light golden brown color, color pattern similar to f. speciosa, see clone 'Jiaho Coffee.'

Phal. tetraspis f. imperatrix
'Monster' AM/AOS
Nov 2020, NS 5.1 x 6.4 cm
2 Flwrs, 8 Buds, 2 Inflor.

f. livida – This form is characterised by 'blue' flowers with a pigment distribution in the 'christiana', 'speciosa', and 'imperatrix' forms, see 'Norman's Blue' and 'Pendragon' clonal examples below.

An as yet named form is where the flower pigment is anywhere from a yellow-green to an apple green with a pigment distribution in the 'christiana', 'speciosa', and 'imperatrix' forms, see clone 'Montclair Jade' below.



Phal. tetraspis f. brunneola
'Jiaho Coffee' CHM/AOS
Mar 2014, NS 4.3 x 5.2 cm
2 Flwrs, 0 Buds, 1 Inflor.

Phal. tetraspis f. livida
'Norman's Blue' FCC/AOS
Jul 2019, NS 4.7 x 4.8 cm
6 Flwrs, 0 Buds, 1 Inflor.

Phal. tetraspis f. livida
'Pendragon' AM/AOS
Mar 2019, NS 4.5 x 5.0 cm
7 Flwrs, 0 Buds, 2 Inflor.

Phal. tetraspis
'Montclair Jade' AM/AOS
Apr 2018, NS 4.9 x 5.5 cm
4 Flwrs, 2 Buds, 1 Inflor.

Awards:

Below are AOS awards that Phal. sanderae has received:

	FCC	AM	HCC	AQ	AD	JC	CCE	CCM	CHM	CBM	TOTAL
AOS	1	23	12			4		3	4	1	**48**
Year(s) Awarded	2019	2008-2021	1998-2019			2007-2019		2010-2020	1995-2019	1994	

This species has received a relatively large, 48, awards since initially being shown in 1994.

Breeding Characteristics:

There are presently 497 progeny associated with Phal. tertraspis and the number has been exploding during the 2010's in all generations. To this day, Phal. tetraspis progeny can be showstoppers, when a well grown plant is shown. The table below list the Phal. tetraspis progeny registered per decade and awards associated with the grex (per OrchidWiz 7.3).

tetraspis	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	3	3	27	61	337	66	497
Assc Awds	0	0	0	10	12	35	0	57
F1	0	3	3	23	27	71	5	132
AA	0	0	0	10	6	18	0	34
F2	0	0	0	3	19	105	25	152
AA	0	0	0	0	3	9	0	12
F3	0	0	0	1	15	103	24	143
AA	0	0	0	0	3	6	0	9

From this table you can see that the progeny of Phal. tetraspis are exploding, with almost 68% of all progeny being registered in 2010s. In reviewing F1 progeny it appears that the breeding traits that are passed on to it progeny are flower count and enhancement of color / color pattern (depending on the form used).

Hybrids (top four in awards and five in progeny):

Phalaenopsis [Phal.] KS Super Zebra (Phal. KS Red Zebra x Phal. KS Tetra Jewel), 2014, Kung Sir Orchids, 67 F1 progeny, 5 AOS awards (2 AMs, 1 HCC). No major progeny.

Phalaenopsis [Phal.] Jennifer Palermo (Phal. tetraspis x Phal. violaea), 1998, J. Palermo, 27 F1 and 49 total progeny, 3 AM/AOS awards. No major progeny.

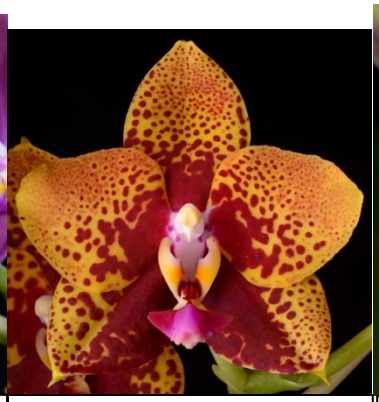
Phalaenopsis [Phal.] Zheng Min Anaconda (Phal. Sunrise Red Peoker x Phal. Fusheng's Super Man), 2011, Zheng-Min Su, 22 F1 and 24 total progeny, 2 AM/AOS awards. No major progeny.

Phalaenopsis [Phal.] Tying Shin Fly Eagle (Phal. tetraspis x Phal. Dragon Tree Eagle), 2011, Tying Shin Orchids, 16 F1 and 17 total progeny, 10 AOS awards (6 AMs, 4 HCCs). No major progeny.

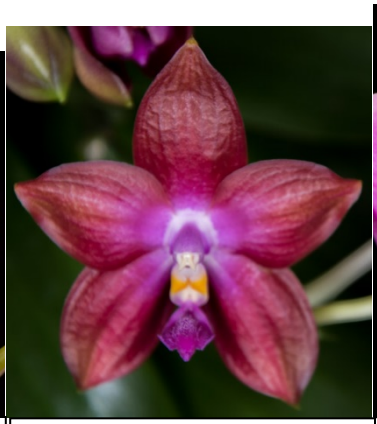
Phalaenopsis [Phal.] Germaine Vincent (Phal. violacea x Phal. speciosa), 1994, L. Vincent, 16 F1 and 23 total progeny, 7 AOS awards (4 AMs, 2 HCCs, 1 CCM). No major progeny.

Phal. KS Super Zebra
'Pylo' AM/AOS
May 2016, NS 5.2 x 5.6 cm
4 Flwrs, 2 Buds, 2 Inflor.

Phal. Jennifer Palermo
'Montclair' AM/AOS
Apr 2019, NS 6.0 x 7.0 cm
5 Flws, 0 Buds, 3 Inflor.



Phal. Zheng Min Anaconda
'Pylo' AM/AOS
Apr 2018, NS 7.0 x 6.5 cm
3 Flwrs, 1 Bud, 1 Inflor.



Phal. Tying Shin Fly Eagle
'Cherry Bomb' AM/AOS
Apr 2019, NS 5.5 x 6.5 cm
14 Flwrs, 6 Buds, 8 Inflor.

Phal. Germaine Vincent
'Lady Stella' AM/AOS
Sep 2018, NS 5.1 x 5.1 cm
7 Flwrs, 2 Buds, 8 Inflor.

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Award Descriptions (Aug 2020)

Phal. Helga Lukassen – Quality Award Description
(Phal. tetraspis x Phal. amabilis)
Fourteen stellate recurved flowers and three buds on two inflorescences; sepals lanceolate, white, barred fuchsia basally, blotched fuchsia distally; petals spatulate, white occasionally, randomly blotched fuchsia; lip white, tri-lobed, occasionally, randomly blotched fuchsia, callus yellow; column and anther cap ivory; substance waxy; texture diamond dust.

Phal. Pylo's Apple – Quality Award Description
(Phal. OX Golden Apple x Phal. Tying Shin Fly Eagle)
Eleven full well arranged red flowers and two buds on one 33 cm inflorescence; sepals and petals magenta halo basally; lip tri-lobe, red, side- and mid-lobes magenta, callas red; column and anther cap white, apically blushed light magenta; substance firm; texture matte.

Phal. Cecile – Cultural Award Description
(Phal. belina x Phal. inscriptiosinensis)
Fifty-three stellate flowers and four buds on eight inflorescences up to 23 cm long on a robust clean plant 10 in (25 cm) in diameter in a 5 in (12 cm) plastic pot; sepals and petals creamy pink, heavily overlaid darker creamy pink splotches, basally barred marron pink, creamy pink picotee, distally, random, blotches, marron pink, creamy pink picotee, magenta halo basally; lateral sepals, inferior heavy magenta overlay; lip tri-lobed, yellow, side lobes white distally, mid-lobe overlaid dark magenta, callus yellow; column and anther cap cream; substance firm; texture matte.

Phal. Pylo's Magician – Quality Award Description
(Phal. Dragon Tree Eagle x Phal. Paifang's Ambotratea)
Three flat flowers and two buds on one inflorescence; sepals, lanceolate, golden-yellow, heavily splotched dark brick-red, centrally; petals, lanceolate-ovate, golden-yellow, heavily barred dark brick-red basally, splotched dark brick-red distal half; lip tri-lobe, white, side-lobes lightly overlaid magenta distally, mid-lobe overlaid magenta-rose distally; column and anther cap, white, overlaid magenta basally; substance hard; texture waxy.

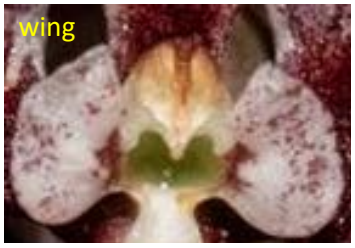
Phal. Krull's Red Dragon – Quality Award Description
(Phal. Ken Avant x Phal. Dragon Tree Eagle)
Three slightly cupped flowers on two inflorescences; sepals and petals lanceolate-ovate, light red, magenta halo basally, heavily barred and splotched marron; lip tri-lobe, cream, side-lobes magenta distally, orange basally, mid-lobe , red-magenta, callus light orange; column and anther cap white, overlaid light magenta; substance hard; texture matte.

Terminology – W –

weed (WEED) Any plant growing where it is not wanted.

wetting agent (WEH-ting AY-jent) A substance that increases the contact of the liquid being used and the material to which it is being applied.

whorl (HWURL) An arrangement of leaves, floral parts, etc. in a circle around the stem or central axis. (35)
Himantoglossum calcaratum subsp. jankae – '… leaves pale green, lanceolate, decurrent, arranged in an ascending whorl, …'
Eurystyles cotyledon – '… flowers minute, borne in tight whorls of 9 to 12 …'
Cynorkis gibbose – '… flowers and 17 visible buds arranged in a corymbaceous whorl …'



wing (WING) Any thin expansion from a surface bordering or surrounding an organ or part of an organ. (3871, most plant names, and chould not find)
Tolumnia Walnut Valley Queen – '… column winged, white, speckled maroon …'

woolly (WOOL-i) Covered with long and tortuous or matted hairs. (2, no pictures)
Dracula Jake Sprankle – '… texture woolly.'
Acianthera pectinate – '… dark green leaf with blue-gray glaucous, woolly overlay

wort (WURT) Archaic word meaning plant. (997, a sampling of the first ~25 all were in a name such as worth, Wortel, etc.)

Phalaenopsis Section Polychilos (Christenson)
(Breda) Blume & Rchb.f., Hamburger
Garten-Blumenzeitung 16: 116 (1860)
Type: Phalaenopsis [Phal.] cornu-cervi

[fal-en-OP-sis kor-new-SIR-vee]

Characteristic Summary

The Polychilos section of the Polychilos subgenus comprises species with a fleshy flattened rachis (terete in Phal. mannii), non-fragrant flowers produced singly in succession over long periods of time, petals conspicuously narrower than the sepals, a triseriate (with three sharp teeth pointing forward) callus, a slightly saccate lip base created by folding, the lip mid-lobe transversely anchoriform or lunate, the lip base continuous with the column foot, and a pair of fleshy knee-like projections at the base of the column. The flowers of this section do not exhibit post-pollination chlorophylly.

Phal. cornu-cervi, lip detail
Note 'knees' on column

Phal. cornu-cervi
'Breezy Hill' CCM/AOS
Jul 2012, NS 3.0 x 4.5 cm
56 Flwrs, 14 Bud, 10 Inflor.

The flat, sheet-like triseriate callus is located in the center of the lip, terminating in two narrow, elongate teeth, like the forked tongue of a snake. This callus plate may have lateral teeth as well, but these are variable, and individual flowers may often have one lateral tooth on one side and not tooth or two lateral teeth on the other side. Finally, an erect, terminal, bilaterally flattened, tooth-like callus stand between the elongate teeth of the central plate.

There are presently four species that compose the Polychilos Section of the Polychilos subgenus (presently these species and all of the prior Polychilos subgenus are in the Polychilos section, Phalaenopsis subgenus). The plants are distributed in India to Southeast Asia, Indonesia, Borneo, and the Philippines with Phal. cornu-cervi having the widest distribution. The plants are epiphytic.

Two of the species of this section, Phal. mannii and Phal. cornu-cervi, are clearly recognized species with Phal cornu-cervi describe as 'highly variable,' a hybrid swarm or complexes of superficially similar valid species with clearly defined morphological differences. The other two species, Phal. borneensis and Phal. pantherina, are VERY similar to Phal. cornu-cervi, in fact Kew does not recognized Phal. borneensis as a species. The major difference of Phal. borneensis and Phal. pantherina from Phal. cornu-cervi is the width of the lip mid-lobe Phal. cornu-cervi being less than 0.9 cm and for Phal. borneensis and Phal. pantherina, being up to 1.2 cm.

The table below is a summary of the four species that are in Polychilos Section, all agreed to at the WOC2014 but only three agreed to by Kew.

Species marked with a * are used the most in hybridization				Progeny	AOS Awards											
Kew Name	**Habitat, Country**	**Temp.**	**Season**	**F1/Total**	**FCC**	**AM**	**HCC**	**JC**	**AD**	**AQ**	**CCE**	**CCM**	**CHM**	**CBR**	**Total**	**Breeding Comments**
Phalaenopsis borneensis	Borneo														0	Large flower form of Phal. cornu-cervi, broad (1.2 cm) flat lip midlobe wide
Phalaenopsis cornu-cervi	India to Philippines, Indonesia	Warm to Hot	Summer - Fall	113/454	2	35	28	4			1	20	4	1	95	Yellow, greenish, or cream colored pigments, sometimes barring, does not improve flower form.
Phalaenopsis mannii	India to Southeast Asia	Warm to Hot	Spring	173/1519		18	6	3		1	1	4	2	1	36	convex and twisting flower parts, fading yellow color, green color
Phalaenopsis pantherina	Borneo		Summer - Fall	18/35		2							1	1	4	

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

Breeding:

The first thing to note from the above table is that Polychilos Section species only two have a significant number of progeny. The species with the most progeny is Phal. mannii, 1519 total progeny, while the species Phal. cornu-cervi has the most AOS awards. But has breeding been uniform over time for the entire section and is any one species used much more in breeding today. To address this issue, the following table was generated with registration per decade.

Polychilos Section	**1880**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Total**
Reg	0	1	1	0	1	2	1	6	126	170	267	295	346	687	123	2026
Assc Awds	0	0	3	0	0	0	0	38	67	36	101	83	123	71	2	524
F1	0	1	1	0	1	2	1	4	62	44	43	21	53	65	5	303
AA	0	0	3	0	0	0	0	36	47	18	13	3	10	19	0	149
F2	0	0	0	0	0	0	0	2	55	94	90	64	47	88	13	453
AA	0	0	0	0	0	0	0	2	18	17	6	18	11	6	0	78
F3	0	0	0	0	0	0	0	0	9	29	100	39	92	123	20	412
AA	0	0	0	0	0	0	0	0	2	1	19	5	35	11	2	75

In reviewing the above F1 and F2 registration information, two things stick out. The first item is that the first hybrid was registered in 1898, Phal. Stuartiano-Mannii (Phal. mannii x Phal. stuartiana), by Veitch.

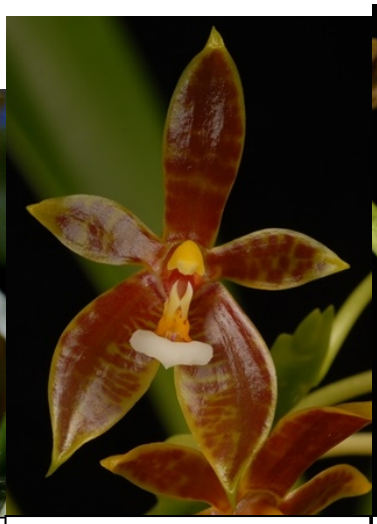
The second item is that the table clearly shows when looking at the total registration data little interest in hybridizing with Polychilos section species until mid 1950's and breeding with progeny from this section has yet to slow down since. However, looking at the individual generations there was an earlier peak (1960s for F1, 1970s for F2, and 1980s for F3), follow by a low (1990s for F1 and F3, 2000s for F2), follow by current peaking interest. This section is clearly of interest to today's hybridiziers. This raises the question related to the current breeding peak with Polychilos Section species, is this second peak a current fad or has new breeding stock been found. To address this question the following table was generated on F1 registrations for each species.

F1																
Polychilos Sect	**1880**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Total**
Phal. cornu-cervi																
Reg	0	0	0	0	0	0	0	0	1	17	21	16	15	36	6	112
Phal. mannii																
Reg	0	1	1	0	0	2	0	3	51	24	24	15	24	25	3	173
Phal. pantherina																
Reg	0	0	0	0	0	0	0	0	0	5	6	0	3	4	0	18

Looking at the species individually, there does appear to be a renewed interest in breeding with Phal. cornu-cervi. Details as to why this increased interest will be discussed in the next section on Phal. cornucervi, but it is related to wide spread distribution of a recently found, and not formally recognized, form, Phal. cornu-cervi f. chattaladae a solid dark red form.

Pictures of the four species and lip details are shown below:

Phal. borneensis
'Iowa' AM/AOS
Sep 2018, NS 4.5 x 5.3 cm
17 Flwrs, 13 Buds, 7 Inflor.



Phal. cornu-cervi
'Breezy Hill' CCM/AOS
Jul 2012, NS 3.0 x 4.5 cm
56 Flwrs, 14 Bud, 10 Inflor.

Phal. mannii
'Max Thompson' AM/AOS
Apr 2021, NS 4.2 x 5.7 cm
9 Flwrs, 22 Buds, 2 Inflor.

Phal. pantherina
'Fco Katiana' AM/AOS
Sep 2019, NS 4.0 x 5.3 cm
3 Flwrs, 0 Buds, 2 Inflor.

Hybrids (Most F1, for each species, F3 or lower):

Phal. Corona (Phal. cornu-cervi x Phal. amboinensis), 1973, Shaffer's, 30 F1 and 45 total progeny, 12 AOS awards (1 FCC, 8 AMs, 2 HCCs, 1 CCM). Major progeny: Phal. Corona de Oro (Phal. Misty Green x Phal. Corona), Coqui, 6 F1 progeny, 3 AM/AOS awards.

Phal. Mambo (Phal. amboinensis x Phal. mannii), 1965, Fredrick L. Thornton, 113 F1 and 477 total progeny, 13 AOS awards (2 AMs, 2 CCMs, 9 HCCs). Major progeny: Phal. Caribbean Sunset (Phal. Cassandra x Phal. Mambo), 1970, Fredrick L. Thornton, 38 F1 and 147 total progeny, no awards; Phal. Sierra Gold (Phal. Deventerian x Phal. Mambo), 1979, Rex D. Smith, 14 F1 and 31 total progeny, 8 AOS awards (1 FCC, 2 AMs, 4 HCCs, 1 CCM).

Phal. Doris Blomquist (Phal. sumatrana x Phal. amboinensis), 1965, Fredrick L. Thornton, 35 F1 and 227 total progeny, 9 AOS awards (3 AMs, 5 HCCs, 1 CCM). Major progeny: Phal. KS Super Zebra, see below; Phal. Star of Florida (Phal. Princess Kaiulani x Phal. Ambotrana), 1967, Fredrick L. Thornton, 32 F1 and 172 total progeny, 2 CCM/AOS awards.

Phal. Corona
'Red Kitsune' AM/AOS
Dec 2020, NS 4.7 x 6.0 cm
4 Flwrs, 0 Buds, 2 Inflor.

Phal. Mambo
'SYK' AM/AOS
Mar 2016, NS 4.8 x 4.8 cm
13 Flrs, 0 Buds, 4 Inflor.

Phal. Doris Blomquist
'Sky Island' CCM/AOS
Apr 1994, NS 5.6 x 6.5 cm
53 Flwrs, 25 Buds, 12 Inflor.

Hybrids (Most awards, for each species, F3 or lower):

Phal. Valentinii (Phal. cornu-cervi x Phal. violacea), 1959, hort., 28 F1 and 114 total progeny, 9 AOS awards (3 AMs, 4 HCCs, 2 CCMs). Major progeny: Phal. Carolina Red Zeller (Phal. venosa x Phal. Arthur Zeller), 1992, Lenette, 16 F1 and 19 total progeny, no awards; Phal. Ann Krull (Phal. Alida x Phal. Royal Satin), 1986, J. Ewing, 3 F1 progeny, 11 AOS awards (6 AMs, 5 HCCs)

Phal. Golden Chief (Phal. Chieftain x Phal. mannii), 1958, L. C. Vaughn, 10 F1 and 12 total progeny, 16 AOS awards (5 AMs, 10 HCCs, 1 AQ). No major progeny

Phal. Valentinii
'Perla' AM/AOS
Oct 2020, NS 4.2 x 4.1 cm
1 Flwr, 1 Bud, 1 Inflor.

Phal. Golden Chief
'Longwood Gardens' AD/AOS
Apr 1980, NS 7.0 cm
29 Flwrs, 6 Buds, 2 Inflor.

Phal. Jiaho Panthers
'Jia Ho' AM/AOS
Mar 2014, NS 4.5 x 4.0 cm
5 Flwrs, 4 Buds, 2 Inflor.

Phal. Jiaho Panthers (Phal. mannii x Phal. pantherina), 2015, Jia Ho Orchids, no progeny, 2 AOS awards (1 AM, 1 CCM). No major progeny.

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Species Data Sheet

Phalaenopsis cornu-cervi

(Breda) Blume & Rchb.f., Hamburger Garten-Blumenzeitung 16: 116 (1860)

[fal-en-OP-sis kor-new-SIR-vee]

Phal. cornu-cervi, lip detail
Note 'knees' on column

Phal. cornu-cervi
'Breezy Hill' CCM/AOS
Jul 2012, NS 3.0 x 4.5 cm
56 Flwrs, 14 Bud, 10 Inflor.

Phalaenopsis [Phal.] cornu-cervi is found in India, Myanmar, Thailand, Laos, Vietnam, Nicobar Islands, Malaysia, Java, Borneo, Sumatra, and the Philippines in exposed lowland locations on stunted vegetation in fairly exposed areas or in dense riverine or lowland forests with heavy dews high up in the canopy at elevations of 200 to 1000 meters. It is a a small sized, hot to warm growing epiphyte or lithophyte with a short stem enveloped by imbricating leaf bases carrying fleshy, oblong-ligulate to oblong-oblanceolate, obtuse leaves. Blooms occur on a lateral, 4 to 18" [9 to 42 cm] long, rachis branched and flattened, racemose or paniculate, many [7 to 12] flowered inflorescence with small bracts arranged in two rows, and having fragrant, long-lasting, fleshy flowers. The flattened, flexuous, winged inforescence with ovate cucullate bracts has sequential flowers that can reappear at a later time, so, keep the inflorescence as long as it is green. It can bloom at any time of year but especially from spring till autumn. Typical flower natural spread is 1 to 2" [3 to 5 cm]. The sepals and petals are translucent yellow with redish brown spots and transverse bars, the lip midlobe clear whitish yellow to pale yellow. The lip is tri-lobed, to 0.8 x 1 cm, the lateral lobes erect, the midlobe highly variable, transverse, +/- crescent-shaped, obtuse, the central triseriate callus a bifid plate plate with long primary filiform divisions, often with a pair of smaller divisions to either side, th anterior callus a suberect bilaterally flattened tooth that separates the divisions of the entral allus. The column is somewhat arching yellow apically.

This species can be mounted or potted with coarse free draining medium with semi-shade, high humidity, with a distinct dry spell in winter, and hot to cool temperatures.

The species is highly variable, see below. Despite concerted research efforts, no discernible pattern of variation has emerged to explain the remarkable variaion seen in this species.

Judge using the Phalaenopsis scale.

Synonyms / Varieties / forms:

Synonyms:
Polychilos cornu-cervi Breda, Gen. Sp. Orchid. Asclep. 1: t. 1 (1828).

Varieties / forms: Currently no varieties or forms are reckonized by the RHS, but the general public still uses some if not all of the following forms. But before discussing the various forms what is a 'typical' Phal. cornu-cervi. The above botonical description of Phal. cornu-cervi states 'The sepals and petals are translucent yellow with redish brown spots and transverse bars, the lip midlobe clear whitish yellow to pale yellow.' I take this description to describe the typical form of Phal. cornu-cervi, see in-situ photo at right from OrchidWiz with flower enlargement. Some observations / comments is translucent yellow is in the left lateral sepal, clearly being able to detect the leave behind the sepal, I suspect the back lighting has enhanced the red of the redish brown spots (blotches) and transvese bars, and the lip appears white but that is against the existing background.

Phal. cornu-cervi
In-situ, typical?

Phal. cornu-cervi f. flava
'Orchidphile' AM/AOS
Oct 2009, NS 3.2 x 5.0 cm
12 Flwrs, 0 Buds, 3 Inflor.

With this forming a descriptive Phal. cornu-cervi baseline, will now review the various forms.

f. flava – this anthocyanin-free form of Phal cornu-cervi bears pure yellow flowers without any spots or bars on the sepals and petals, 16 AOS awards have been awarded to Phal. cornu-cervi f. flava cultivars from 1977 to 2019.

Phal. cornu-cervi f. chattaladae
'Crownfox' FCC/AOS
Mar 2021, NS 4.2 x 4.7 cm
7 Flwrs, 6 Buds, 7 Inflor.

f. chattaladae – Sepals and petals completely lacking dots, bands or blotches and on both sides (see flower in background in 'Crownfox' photo), even to the margin, uniformly blood-red. Native to the Khun Tan area of Northern Thailand. 29 AOS awards have been awarded to Phal. cornu-cervi f. chattaladae cultivars from 2007 to 2019.

This form, f. chattaladae, is a major reason for increased interest in Phal. cornu-cervi breeding and awards.

Phal. cornu-cervi f. borneensis
'Iowa' AM/AOS
Sep 2018, NS 4.5 x 5.3 cm
17 Flwrs, 13 Buds, 7 Inflor.

f. borneensis – (Note: Not reconized by Kew as a species or a form. Per Fighetti [Orchids, June 2015, pg. 353] states change to elevate to species agreed upon at the WOC2014. AOS database is using Phal. cornu-cervi f. borneensis as the current way to identify until something is done by Kew.) Flower description: produced sequentially, with spreading segments, yellow-green, with transverse brown spots. Known as a large flower form of Phal. cornu-cervi. Phal. cornu-cervi f. borneensis is similar to Phal. pantherina in having a broad lip midlobe up to 1.2 cm wide, well above the maximum size seen in Phal. cornu-cervi. It is instantly separable from Phal. pantherina by its flat midlob, which lacks a raised pad of tissue on the upper surface and is witout an trichomes.

Phal. cornu-cervi var. rubescens
'Paraiso Tropical I' AM/AOS
May 2012, NS 3.0 x 4.1 cm
9 Flwrs, 4 Buds, 3 Inflor.

f. sanguinea (aka. **var. rubescens**) – Christenson considers Phal. cornu-cervi var. rebescens to be an invalid name (not a synonym, "nom. nud.") for Phal. cornu-cervi f. sanguinea. The AOS database has no awards for f. sanquinea, but var. rubescens cultivars have received five AOS awards from 2005 to 2012. This form is characterised by a nearly red flower brought about by the coalescing of red spots and bars. The pattern is still visible and a yellow picotee is still evident (most prominate distally on the lateral sepals but can be seen on the petals and dorsal sepal in most cases). Note: the green color on the lateral sepals in the flower to the right, unlike f. chattaladae which is solid red on both sides to the margins.

f. thalebanni – This was an initial forma name for what is now f. chattaladeae. David Grove in an article (Orchids, Aug 2006) points out why this initial description is in error. Based on this article and the fact that the AOS database does not include any awarded f. thalebanni (at least one attempt was made and the cultivar was identified as var. rubescens), I conclude that this f. is an 'out-of-date' form name and should not be used.

Awards:

Below are AOS awards that Phal. cornu-cervi and it various currently accepted forms have received:

AOS Awards	FCC	AM	HCC	AQ	AD	JC	CCE	CCM	CHM	CBM	TOTAL
Phal. cornu-cervi		12	15			3	1	13	1		**45**
Year(s) Awarded		1978-2018	1998-2016			1979-2005	2019	1967-2018	2007		**1967-2018**
Phal. cornu-cervi f. flava		7	3			1		3		1	**15**
Year(s) Awarded		1977-2009	2008-2016			2014		2006-2014		1977	**1977-2016**
Phal. cornu-cervi f. chattaladae	3	12	9				1	3	1		**29**
Year(s) Awarded	2012-2021	2006-2016	2012-2018				2018	2016-2018	2008		**2006-2021**
Phal. cornu-cervi f. borneensis		2	1					1	1		**5**
Year(s) Awarded		2006-2018	2018					2006	1998		**1998-2018**
Phal. cornu-cervi var. rubescens		4							1		**5**
Year(s) Awarded		2010-2012							2005		**2005-2012**
Total	3	37	28			4	2	20	4	1	**99**
Year(s) Awarded	2012-2021	1978-2018	1998-2018			1979-2014	2018-2019	1967-2018	1998-2008	1977	

This species has received a relatively large, 99, awards since the first award in 1967. But the majority of the awards (82) have been since 2000 with ruffly half of these awards to the 'non-pattern' cultivars such as f. flava, f. chattaladae, and var. rubescens.

Breeding Characteristics:

There are presently 459 progeny associated with Phal. cornu-cervi and the number has been exploding during the 2010's in all generations. To this day, Phal. cornu-cervi progeny can be showstoppers, when a well grown plant is shown. The table below list the Phal. cornu-cervi progeny registered per decade and awards associated with the grex (per OrchidWiz 7.3).

cornu-cervi	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	1	0	1	1	12	32	55	83	87	155	32	459
Assc Awds	0	0	0	0	14	15	13	71	32	14	15	0	174
F1	0	1	0	1	1	11	15	13	6	26	36	2	112
AA	0	0	0	0	14	14	13	4	2	5	8	0	60
F2	0	0	0	0	0	1	17	21	16	15	36	6	112
AA	0	0	0	0	0	1	0	0	4	4	1	0	10
F3	0	0	0	0	0	0	0	11	4	16	41	10	82
AA	0	0	0	0	0	0	0	6	0	5	4	0	15

From this table you can see that the progeny of Phal. cornu-cervi are exploding, with almost 60% of all progeny being registered since 2000. Historically, Phal. cornu-cervi is added to a breeding line for its yellow, greenish, or cream colored pigments and sometimes barring. It does not improve flower form. But with the recent finding of Phal. cornu-cervi f. chattaladae the belief is that red progeny are sure to follow.

Hybrids (top three in awards and progeny, third generation or less):

Phalaenopsis [Phal.] Corona (Phal. cornu-cervi x Phal. amboinensis), 1973, Shaffer's, 30 F1 and 45 total progeny, 12 AOS awards (1 FCC, 8 AMs, 2 HCC, 1 CCM). Major progeny: **Phal. Corona De Oro** (Phal. Misty Green x Phal. Corona), 1992, Coqui, 6 F1 progeny, 3 AM/AOS awards.

Phalaenopsis [Phal.] Valentinii (Phal. cornu-cervi x Phal. violaea), 1959, horticultural, 28 F1 and 114 total progeny, 10 AOS awards (4 AMs, 4 HCCs, 2 CCMs). Major progeny: **Phal. Carolina Red Zeller** (Phal. venosa x Phal. Arthur Zeller), 1992, Lenette, 19 F1 and 19 total progeny, no awards; **Phal. Ann Krull** (Phal. Alida x Phal. Royal Satin), 1986, J. Ewing, 11 AOS awards (6 AMs, 5 HCCs).

Phalaenopsis [Phal.] Yaphon Evergreen (Phal. Chang Maw Evergreen x Phal. Ho's Kuangfeng Glory), 2002, Tin-Fan Ho, 8 F1 and 84 total progeny, 1 HCC/AOS award. Major progeny: **Phal. KS Evergreen** (Phal. Yaphon Evergreen x Phal. KS Green Star), 2011, Kung Sir Orchids, 7 F1 and 11 total progeny, 1 HCC/AOS award.

Phalaenopsis [Phal.] Cornustris (Phal. equestris x Phal. cornu-cervi), 1967, H. Wallbrunn, 4 F1 and 7 total progeny, 7 AOS awards (3 AMs, 2 HCCs, JC, CCM). No major progeny.

Phal. Corona
'Krull-Smith' AM/AOS
Mar 2020, NS 4.1 x 4.7 cm
11 Flws, 6 Buds, 5 Inflor.

Phal. Valentinii
'Perla' AM/AOS
Oct 2020, NS 4.2 x 4.1 cm
1 Flwr, 1 Bud, 1 Inflor.

Phal. Yaphon Evergreen
'Yaphon' HCC/AOS
Jun 2014, NS 3.6 x 4.1 cm
4 Flwrs, 1 Bud, 4 Inflor.

Phal. Cornustris
'Queen of Spades' AM/AOS
Jun 2019, NS 2.8 x 3.3 cm
17 Flwrs, 8 Buds, 6 Inflor.

Hybrids (Recently registered and awarded):

Phalaenopsis [Phal.] Bredren's Cutie Pie (Phal. Tying Shin Golden Eagle x Phal. cornu-cervi), 2017, Bredren Orchids, no progeny, 1 HCC/AOS award.

Phalaenopsis [Phal.] Roman's Golden Star (Phal. Mambo x Phal. cornu-cervi), 2015, R. E. Garcia, no progeny, 1 AM/AOS award.

Phalaenopsis [Phal.] Meidarland Yellow Ribbon (Phal. Liu's Gold Coin x Phal. Mituo Shin Perfume), 2015, Nan-Huei Su, no progeny, 1 AM/AOS award.

Phalaenopsis [Phal.] CTL Macu CornuQueen (Phal. maculata x Phal. CTL Cornu Queen, 2015, C-H. Kuo, no progeny, 1 HCC/AOS award.

			
Phal. Bredren's Cutie Pie 'Bredren' HCC/AOS Aug 2017, NS 4.0 x 4.4 cm 5 Flws, 3 Buds, 1 Inflor.	Phal. Roman's Golden Star 'Irma Saldana' AM/AOS Jul 2015, NS 4.0 x 5.6 cm 3 Flwrs, 1 Bud, 1 Inflor.	Phal. Meidarland Yellow Ribbon 'MD' AM/AOS Mar 2016, NS 3.0x 3.5 cm 13 Flwrs, 0 Buds, 1 Inflor.	Phal. CTL Macu CornuQueen 'Memoria Hank Horton' HCC/AOS Sep 2015, NS 3.4 x 3.9 cm 3 Flwrs, 1 Bud, 2 Inflor.

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Species Data Sheet

Phalaenopsis pantherine, Rchb.f., Bot. Zeitung (Berlin) 22: 298 (1864)

[fal-en-OP-sis kor-new-SIR-vee]

Phalaenopsis [Phal.] pantherina is found in Borneo in lowland to mixed montane forests in the canopy of tall trees from sealevel to 800 meters (0 to 2600 ft.). It is a a small sized, hot to warm growing epiphyte with extremly thick, white roots and a short stem that is leafy throughout carrying oblong to narrowly oblong-elliptic, pale green leaves. Blooms in the winter and summer on a basal, to 8 to 18" [20 to 45 cm] long, racemose or few branched, terete, fleshy, strongly flattened, few flowered inflorescence and carries successively single over long periods of time, somewhat sweetly fragrant, waxy flowers. Typical flower natural spread is 2 to 2.4" [5 to 6 cm]. The sepals and petals are translucent yellow with redish brown spots and +/- transverse bars, column somewhat arching, base dark red, apex yellow, the lip white. The lip is tri-lobed, to 1.5 long x 1.2 wide cm, the lateral lobes erect, the midlobe lunate, with a fleshy central pad bearing sparse trichomes. The callus triseriate, the central callus plate-like, deeply bifid, usually with a smaller tooth to each side, the apical callus an erect bilaterally compressed tooth held between the bifid arms of the central callus.

Phal. pantherina, lip detail
Note central pad bearing sparse trichomes

Phal. pantherina
'Fco Katiana' AM/AOS
Sep 2019, NS 4.0 x 5.3 cm
3 Flwrs, 0 Buds, 2 Inflor.

Phal. pantherina has been rarely collected either for botany or horticulture. It is readily distinguished from related species by the large white lip midlob, which bears on its upper surface a central raised keel with sparse trichomes. Phal. pantherina is often confused with Phal. borneensis due to similar large lip midlobe. The lip midlobe of Phal. borneensis is usually ivory-white to pale yellow, not the stake white of Phal. pantherina.

Judge using the Phalaenopsis scale.

Synonyms / Varieties / forms:

Synonyms:

Synonyms Phalaenopsis cornu-cervi var. pantherina (Rchb.f.) O.Gruss & M.Wolff 2007
Polychilos pantherina (Rchb. f.) Shim 1982

Varieties / forms: Currently no varieties or forms are reckonized by the RHS, but breeders have identified one.

f. flava – This anthocyanin-free form of Phal pantherina, yellow-green flowers with just a hint of spots or bars on the sepals and petals, no awards for Phal. pantherina f. flava.

Phal. pantherina f. flava

Awards:

Below are AOS awards that Phal. pantherina have received:

pantherina	FCC	AM	HCC	AQ	AD	JC	CCE	CCM	CHM	CBM	TOTAL
Awards		2							1	1	**4**
Year(s) Awarded		2018-2019							1997	1980	**1980-2019**

This species has received a relatively few, 4, awards since the first award in 1980. But the two quality awards were awarded in 2018 and 2019.

Breeding Characteristics:

As commented above this is species is not common in general collections and consequently there are VERY few progeny, 18 F1 and 35 total progeny. The table below list the Phal. pantherina progeny registered per decade and awards associated with the grex (per OrchidWiz 7.3).

pantherina	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	7	13	4	3	5	3	35
Assc Awds	0	1	0	0	0	2	0	3
F1	0	5	6	0	3	4	0	18
AA	0	1	0	0	0	2	0	3
F2	0	2	6	2	0	1	3	14
AA	0	0	0	0	0	0	0	0
F3	0	0	1	2	0	0	0	3
AA	0	0	0	0	0	0	0	0

From this table you can see that the use of Phal. pantherina in breeding has been limited, with over half of all progeny registered in the first two decades of breeding. There appears to be some renewed interest in breeding with Phal. pantherina in the last ten years, as well as receiving some awards, but time will tell. With the limited breeding, it appears that flower shape and blooming pattern are dominate.

Hybrids (All awarded grexes and all hybrids with photos):

Phalaenopsis [Phal.] Doris Blomquist (Phal. pantherina x Phal. amboinensis), 1975, A. Kolopaking, 5 F1 progeny, 1 CCM/AOS awards. No major progeny.

Phal. Doris Blomquist
'Sky Island' CCM/AOS
Apr 1994, NS 5.6 x 6.5 cm
53 Flws, 25 Buds, 12 Inflor.

Phalaenopsis [Phal.] Jiaho Panthers (Phal. mannii x Phal. pantherina), 2015, Jia Ho Orchids, no progeny, 2 AOS awards (1 AMs, 1 CCMs).

Phal. Jiaho Panthers
'Jia Ho' AM/AOS
Mar 2014, NS 4.5 x 4.0 cm
5 Flws, 4 Buds, 2 Inflor.

Phalaenopsis [Phal.] Professor Asmino (Phal. pantherina x Phal. Star of Rio), 1972, Liem Khe Wie, 3 F1 and 6 total progeny, no awards. No major progeny.

Phalaenopsis [Phal.] Datu Chan San-Chang (Phal. violacea x Phal. pantherina), 2000, Tham Chee Keong, 1 F1 progeny, no awards. No major progeny.

Phalaenopsis [Phal.] Sri Rejeki (Phal. Elaine-Liem x Phal. Professor Asmino), 1975, A. Kolopaking, 1 F1 progeny, no awards. No major progeny.

Phal. Professor Asmino

Phal. Datu Chan San-Chang

Phal. Sri Rejeki

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Terminology –X–

xanthinus, -a, -um (zan-THYE-nus) Yellow or yellowish. (1) Of the 74 references all but one referenced a plant name / form / variety.

Masdevallia angulifera – "… awarded for xanthina color; …"

xanthodon (ZAN-thoh-dun) With yellow teeth.

xantholeucus, -a, -um (zan-tho-LEW-kuss) Yellowish white.

xanthophlebius, -a, -um (zan-tho-FLEE-bi-us) Having yellow veins.

xanthophyllus, -a, -um (zan-tho-FILL-us) With yellow leaves.

xaxim (SHAH-sheem) Brazilian word for tree fern and also for its fiber.

xerophyte (ZERO-fyte) A plant very resistant to drought or lives in very dry places.

xiphifolius, -a, -um (ziff-i-FOH-li-us) Having swordlike leaves.

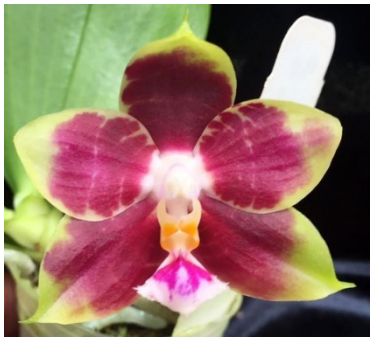
xylem (ZYE-lem) A plant tissue consisting of tracheid, vessels, parenchyma cells and fibers making up the wood and functioning as a part of the vascular tissue to conduct water.

Award Descriptions (September 2020)

Phal. Professor Asmino – Quality Award Description
(Phal. pantherina x Phal. Star of Rio)
Three stellate flat flowers and two buds on two inflorescences; sepals and petals white, centrally overlaid light lime green, basal halo marron blotches, sparsely spotted marron marginally; lip tri-lobed, white, marron blotches basally, sidelobes erect, yellow basally, midlobe hastata, white, light yellow basally, callus yellow; column and anther cap white; substance firm; texture diamond dust.

Phal. Pylo's Neon – Quality Award Description
(Phal. Pylo's Green Gelb x Phal. Dragon Tree Eagle)
Two full flat flowers and two buds on two inflorescences up to 10 cm length; sepals lanceolate, yellow-orange; dorsal sepal lightly overlaid red basal half; lateral sepals superior half, lightly overlaid red basal half, inferior half heavily overlaid dark red basal three-quarters; petals ovate, basal light red to white halo; lip tri-lobe, white, sidelobes erect, light fuchsia overlay distally, bright yellow-orange centrally, stippled light red basally, mid-lobe lanceolate, broad magenta picotee; column and anther cap cream; substance heavy; texture matte.

Phal. Pylo's Ruby Stars – Cultural Award Description
(Phal. Su's Milk Puff x Phal. cornu-cervi)
Twenty-three stellate flowers and four buds on twelve inflorescences up to 23 cm long on a robust clean plant 10 in (25 cm) in diameter in a 5 in (12 cm) plastic pot; sepals and petals chartreuse, heavily overlaid marron occasionally showing base color on distal margins; lip tri-lobed, side lobes erect, white, yellow basally mid-lobe hastata, stem orange stripped red, magenta centrally, white distally, callus yellow; column and anther cap yellow; substance firm; texture matte.



Phal. Pylo's Passion Dream – Quality Award Description
(Phal. Hannover Passion x Phal. Joy Dreamy Jade)
Two slightly cupped flowers on one 10-cm inflorescence; sepals, lanceolate, chartreuse, very heavily barred marron, white basally; petals, lanceolate-ovate, heavily barred marron, white basally forming halo around column; lip tri-lobe, white, side-lobes erect, overlaid creamy-yellow, mid-lobe quadrata, overlaid magenta basally; column and anther cap, white; substance hard; texture matte.

Phal. Mituo Coral Queen – Quality Award Description
(Phal. Cituo Coral Mambonosa x Phal. LD's Bear Queen)
Three slightly cupped full flowers on two inflorescences; sepals and petals lanceolate-ovate, light red, white halo basally, very heavily barred marron; lip tri-lobe, white, side-lobes erect, yellow, mid-lobe, lanceolate, magenta, callus light yellow; column and anther cap white; substance hard; texture waxy.

Phalaenopsis Sections (Christenson)
Parishianae, Aphyllae, Proboscidiodides
(Rolfe) E. A. Christenson, (2001)
Parishianae Type: Phalaenopsis [Phal.] parishii
Rchb.f., Bot. Zeitung (Berlin) 23: 146 (1865)
[fal-en-OP-sis PAR-ish-ee-eye]
Aphyllae Type: Phalaenopsis [Phal.] stobartiana
Rchb.f., Gard. Chron., n.s., 8: 392 (1877)
[fal-en-OP-sis stu-BAR-tea-ann-ah]
Proboscidiodides Type: Phalaenopsis [Phal.] lowii
Rchb.f., Bot. Zeitung (Berlin) 20: 214 (1862)
[fal-en-OP-sis LOW-ee-eyy]
Characteristic Summary

In the present Phalaenopsis taxonomy these three sections are now two sections under the subgenus Parishianae. The prior section Parishianae has been move to the section Parishianae. The other two sections, Aphyllae and Proboscidiodides, have been combined into the section Aphyllae.

Phal. parishii, lip detail
Note 'column wings'

The **Parishianae Section** comprises species characterized by their miniature plant size, deciduous leaves, for pollinia, mobile lip midlobe, and prominent column swellings ('column wings') at the base of the column. In addition, the lip sidelobes are erect, subparallel, and diverging at the middle to form a U-shaped compound structure.

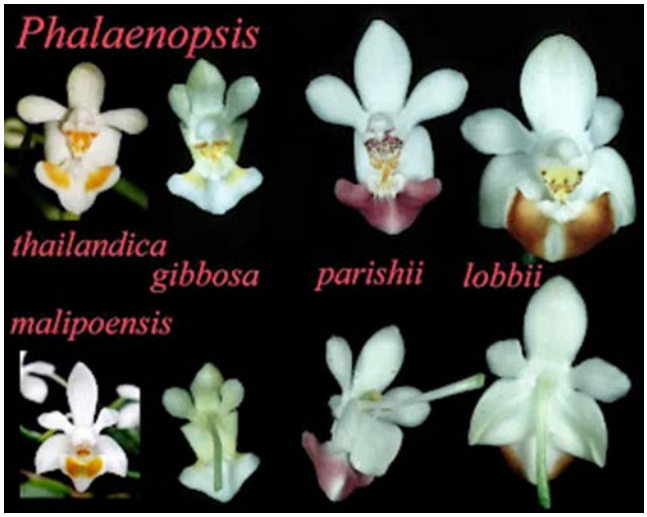
The leaves are normally deciduous in their native habitat, which is subjected to a pronounced monsoonal climate of alternating wet and dry seasons. In cultivation the leaves are normally evergreen. Growers with less-than-optimal growing conditions may grow these species on the cool and dry side during the winter months.

Phal. parishii
'Jardin botanique de Montreal' AM/CCE/AOS
Apr 2009, NS 1.6 x 1.8 cm
38 Flwrs, 54 Buds, 19 Inflor.

The species within this section are difficult to breed with because the pollen is usually not 'accepted' and when the cross is successful, the seed usually shows high levels of sterility, except when crossed with Phal. pulcharrima.

The species of this section are found in the Himalayan foothills to southeast Asia.

As a general comment the species of this section are distinctive and easy to identify as a member of this section, but it is there has been a common difficulty in separating the various species. The three most common identifying features are habitat location, lip coloration, and callus details. Two of the species, Phal. thailandica and Phal. malipoensis, have been identified since 2005 with Phal. thailandica previously identified, separated out in 2009, as Phal. gibbosa or sometimes as Phal. gibbosa f. thailandica. Also, Phal. parishii and Phal. lobbii are often misidentified with each other. Only Phal. appendiculata has not had any issues at being identified correctly and Phal. malipoensis has only recently, 2005, been introduced to the general public. The picture to the right shows the five most common species. Below is an excerpt from Christenson of the species key to the Parishianae Section



1. Sepals and petals white without any other pigmentation, the midlobe marked with yellow, brown, or wine-color, but never with violet margins or streaks; the midlobe of the lip without multiple keels.
    2. Midlobe of lip shallowly three-lobulate, with a definite sinus between the apex and lateral points, white with a pair of large transverse yellow spots…….**Phal. gibbosa**
2. Midlobe of lip broadly rounded without any lobing, pigmentation different.
    3. Midlobe of lip wine-colored; below the long filiform callus with a transverse ridge bearing long, whisker-like appendages …… **Phal. parishii**
    3. Midlobe of lip with two longitudinal brown stripes on either a white or a yellow base color; below the long filiform callus with a transverse ridge at most obscurely denticulate …….. **Phal. lobbii**

Comment on Phal. thailandica – Can only be found in Thailand and Myanmar, and the flower has two more noticeable yellow lines on the lip.

Comment on Phal. malipoensis – Differs in the narrower petals, a straight rachis [not zig-zag], and a larger callus at the base of the deeply forked midlobe.

The **<u>Aphyllae Section</u>** species are characterized by being small deciduous plants, having strongly flattened roots, short, unbranched or branched, few-flowered inflorescences, small scarious floral bracts, subequal, subsimilar floral segments, lateral labellum lobes with flap-like flanges, biseriate callus, four pollinia on a spatulate stipe, obscure to prominent spur, pink or green flowers, and corolla chlorophyllous and persistent in post-pollination. Flower color may be variable within a species consisting of a green or pink state.

Phal. stobartiana, lip detail

Phal. stobartiana
'Gilbert' HCC/AOS
Aug 2012, NS 3.5 x 4.1 cm
17 Flwrs, 0 Buds, 1 Inflor.

The Aphyllae Section is distributed thoughout the Himalayan foot Hills from Nepal to Thailand with a center of diversity in southern China. Most species have not persisted in cultivation. In the United States this appears to be due primarily the quite distinct horticultural requirements of these species from the more common Phalaenopsis species.

The monotypic **Proboscidioides Section**, now included in the Aphyllae Section, is unique in a having an extremely long, beak-like rostellum (like an elephant's head and trunk). The long rostellum is at a more or less right angle to the column. Another unique feature is the lip lateral lobes are in the form of recurved hooks.

Phal. lowii, lip detail

Found in rather small area of Myanmar and Thailand, Phal. lowii has a deciduous habit and bears four separate pollinia, characteristics it shares with sections Aphyllae and Parishianae.

Phal. lowii
'Myra' AM/AOS
Oct 2015, NS 3.9 x 3.8 cm
3 Flwrs, 2 Buds, 1 Inflor.

The table below is a summary of the thirteen species that are in Proboscidioides, Aphyllae, and Parishianae Sections.

Kew Name	Section	Country	Temperature	Season	F1/Total	Awards	FCC	AM	HCC	JC	AD	AQ	CCE	CCM	CHM	CBR	Total
Phalaenopsis appendiculata	Parishinae	Malaya	Warm to Hot	Fall	13/13	7		1	1						1		3
Phalaenopsis gibbosa	Parishinae	China, Laos, Vietnam	Warm to Hot	Winter	5/6	6		3	2								5
Phalaenopsis honghenensis*	Aphyllae	China, Vietnam	Cool to warm	Winter-Spring	27/29	11		1	2					2	1		6
Phalaenopsis lobbii*	Parishinae	China, Southeast Asia, Philippines		Year round	68/130	83		12	4	2			2	6	1	1	28
Phalaenopsis lowii	Proboscidioides	Myanmar, Thailand	Cool to Warm	Fall	13/20	8		1	2					1	1		5
Phalaenopsis malipoensis	Parishinae	China, Vietnam	Warm	Spring	5/5	2									1	1	2
Phalaenopsis natmatungensis	Aphyllae	Myanmar			0/0	0											0
Phalaenopsis parishii*	Parishinae	India, Southeast Asia	Warm to Hot	Winter - Spring	36/82	29		3	3				1	9	3	1	20
Phalaenopsis stobartiana	Aphyllae	China	Cool to warm	Spring - Summer	21/21	8			3					1		2	6
Phalaenopsis taenialis	Aphyllae	Southeast Asia	Cool to warm	Spring	15/21	16		3	3					1	1	2	10
Phalaenopsis thailandica	Parishinae	Thailand		Spring	10/12	1									1		1
Phalaenopsis wilsonii*	Aphyllae	China, Southeast Asia	Cool	Spring	30/30	8		1	2						1	1	5
Phalaenopsis zhejiangensis	Aphyllae	China	Cool	Spring	0/0	0											0

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

Breeding:

The first thing to note from the above table is that the species from these three sections, Proboscidioides, Aphyllae, and Parishianae, are not used much in breeding programs, with Phal. lobbii, from the Parishinae Section, used the most with 68 F1 and 130 total progeny and has received the most awards, 28 AOS awards. Phal. parishii has the second most in both categories with 36 F1 and 82 total progeny and 20 AOS awards. But has breeding been uniform over time for the entire section and is any one species used much more in breeding today.

To address this issue, will start with Parishianae section with the following table generated with registration per decade.

parishianae	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	1	2	9	11	39	75	107	5	249
Assc Awds	0	0	5	2	21	29	89	29	0	175
F1	0	1	2	9	5	11	47	60	5	140
AA	0	0	5	2	17	2	53	14	0	93
F2	0	0	0	0	6	18	25	38	0	87
AA	0	0	0	0	4	24	36	13	0	77
F3	0	0	0	0	0	9	3	9	0	21
AA	0	0	0	0	0	2	0	2	0	4

In reviewing the above F1 and F2 registration information, two things stick out. The first item is that the first hybrid was registered in 1959, Vandaenopsis (Vdnps.) Memoria Hugo Peiris (V. suavis x Phal. parishii), by Dr. J. W. L. Peiris.

The second item is that hybridizing with Parishianae Section species has continued to grow since 1959 and breeding with progeny from this section has yet to slow down. This raises the another question, is any one species such as Phal. lowii or Phal. parishii the sole reason for this constant rise or is there some other reason. To address this question the following table was generated on F1 registrations for each species with over 10 total progeny.

F1										
Parishianae Sect	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Phal. appendiculata										
Reg	0	0	0	0	0	0	2	10	1	13
Phal. lobbii										
Reg	0	0	0	4	2	5	31	25	1	68
Phal. parishii										
Reg	0	1	2	5	3	5	6	14	3	39
Phal. thailandica										
Reg	0	0	0	0	0	1	7	2	0	10

Looking at the species individually, there does appear to be a constant interest in breeding with Phal. parishii. There was a potential peak in using Phal. lobbii in the 2000s while there is a definite peak in Phal. thailandica in the 2000s. Breeding with Phal. appendiculata started in 2000s. Individual reports on each species will provide insight into potential reasons.

The next section to look at is the Aphyllae Section with the following table generated with registration per decade.

Aphyllae	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	0	2	3	0	11	16	67	2	101
Assc Awds	0	0	0	0	0	5	1	14	0	20
F1	0	0	2	1	0	11	16	61	2	93
AA	0	0	0	0	0	5	1	14	0	20
F2	0	0	0	2	0	0	0	6	0	8
AA	0	0	0	0	0	0	0	0	0	0
F3	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	0	0	0	0

Two crosses were registered in 1968 by W. W. G. Moir Phal. Burma (1968) (Phal. Purple Gem x Phal. taenialis) and Phal. Penang Gardens (Phal. pulcherrima x Phal. taenialis), no major progeny from either one. The most obvious item from the above table are the few F2 progeny, 8 total, and the complete lack of third generation progeny. Based on this limited data, I would assume that the breeding with Aphyllae Section species has not yield the expected results, breeding has just started, and/or the progeny are not well received by the general public.

Another item, interest in breeding with Aphyllae Section species really kicked off in the 1990s and does not appear to have reached a peak yet. This raises the question, is any one species the sole reason for this constant rise or is there some other reason. To address this question the following table was generated on F1 registrations for each species with over 10 total progeny.

F1										
Parishianae Sect	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Total**
Phal. honghenensis										
Reg	0	0	0	0	0	0	4	21	2	27
Phal. stobartiana										
Reg	0	0	0	0	0	3	3	15	0	21
Phal. taenialis										
Reg	0	0	2	0	0	0	1	12	0	15
Phal. wilsonii										
Reg	0	0	0	1	0	8	8	13	0	30

Looking at the species individually, there does appear to be any significant difference between these species regarding use in breeding.

The third section is the monotypic Proboscidioides Section, now included in the Aphyllae Section. The registration / award table for Phal. lowii per decade is below.

lowii	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**	**Total**
Reg	0	0	0	0	0	1	7	11	2	21
Assc Awds	0	0	0	0	0	12	1	0	0	13
F1	0	0	0	0	0	1	2	9	2	14
AA	0	0	0	0	0	12	0	0	0	12
F2	0	0	0	0	0	0	5	2	0	7
AA	0	0	0	0	0	0	1	0	0	1
F3	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	0	0	0	0

The first cross was registered in 1997 by T. Lusup-anan, Phal. Siam Treasure (Phal. lowii x Phal. pulcherrima), no major progeny. Phal. Siam Treasure was the only F1 cross with progeny. It appears that the main breeding emphasis was on blue flowers.

Hybrids (Most F1, for each section):

Phal. Anna-Larati Soekardi (Phal. pulcherrima x Phal. parishii), 1980, A. Kolopaking, 29 F1 and 38 total progeny, 9 AOS awards (7 HCCs, 1 AD, 1 AQ). Major progeny: Phal. Joy Nancy Lady (Phal. Anna-Larati Soekardi x Phal. Bright Peacock), 2007, J. Wu, no progeny, 6 AOS awards (3 AMs, 2 HCCs, 1 AQ); Phal. Sogo Chabstic (Phal. Golden Peoker x Phal. Anna-Larati Soekardi), 2003, Sogo, 2 F1 progeny, 2 AOS awards (1 AM, 1 HCC).

Phal. Indra Bahadur Rai (Phal. taenialis x Phal. mannii), 2012, U. C. Pradhan, 3 F1 progeny, no awards. No major progeny.

Phal. Siam Treasure (Phal. lowii x Phal. pulcherrima), 1997, T. Lusup-anan, 7 F1 progeny, 9 AOS awards (2 AMs, 6 HCCs, 1 AQ). Major progeny: Phal. Peter Blue Sky, see below.

Phal. Anna-Larati Soekardi
'Bryon' HCC/AOS
Apr 2012, NS 2.5 x 2.8 cm
8 Flwrs, 3 Buds, 2 Inflor.

Phal. Indra Bahadur Rai

Phal. Siam Treasure
'Crystelle' AM/AOS
Oct 2014, NS 4.3 x 3.7 cm
13 Flwrs, 8 Buds, 1 Inflor.

Hybrids (Most awards, for each section, not already mentioned):

Phal. Mini Mark (Phal. Micro Nova x Phal. philippinensis), 1992, Breckinridge, 7 F1 progeny, 14 AOS awards (7 AMs, 4 HCCs, 1 JC, 1 AQ, 1 CCM). No major progeny.

Phal. Memoria Herman Sweet (Phal. equestris x Phal. stobartiana), 1999, Breckinridge, no progeny, 4 AOS awards (3 AMs, 1 HCC). No major progeny.

Phal. Peter Blue Sky (Phal. Siam Treasure x Phal. pulcherrima), 2003, W. H. Chen, no progeny, 1 AM/AOS award.

Phal. Mini Mark
'Mt. Vernon' AM/AOS
Apr 1997, NS 4.2 x 4.7 cm
53 Flwrs, 1 Bud, 2 Inflor.

Phal. Memoria Herman Sweet
'Hilltop's Sweetie' AM/AOS
Jun 2008, NS 3.0 x 3.2 cm
66 Flwrs, 0 Buds, 3 Inflor.

Phal. Peter Blue Sky
'Stones River' AM/AOS
Aug 2012, NS 3.0 x 3.0 cm
19 Flwrs, 18 Buds, 2 Inflor.

Recently Registered awardees:

Phal. LOC Mahogany Gem
'Bee Boppin' AD/AOS
(Phal. chibae x
Phal. honghenensis)
Mar 2019, NS 0.7 x 1.7 cm
13 Flwrs, 10 Buds, 2 Inflor.

Phal. Tying Shin Little Prince
'Marshall's Luck' AM/AOS
(Phal. Fuller's Lily x
Phal. Liu's Triprince)
Mar 2017, NS 6.1 x 4.8 cm
17 Flwrs, 21 Buds, 2 Inflor.

Phal. Meidarland Yellow Ribbon
'MD' AM/AOS
(Phal. Liu's Gold Coin x
Phal. Mituo Shin Perfume)
Mar 2016, NS 3.0 x 3.5 cm
13 Flwrs, 0 Buds, 1 Inflor.

Phal. Chienlung Little Orange
'Lady Stella' AM/AOS
(Phal. Yaphon Lobspis x
Phal. Kuntrarti Rarashati)
Jun 2018, NS 3.4 x 3.5 cm
13 Flwrs, 0 Buds, 1 Inflor.

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Species Data Sheet

Phalaenopsis zhejiangensis

(Z.H.Tsi) Schuit., Renziana 2: 50 (2012)

[fal-en-OP-sis zhuh-ZHAANG-en-sis]

Phalaenopsis [Phal.] zhejianngensis is found Found in eastern Zhejiang China on tree branches in sparse woods or at forest margins at elevations of 1000 to 3000 feet [300 to 900 meters]. It is mini-miniature sized, hot to warm growing epiphyte. It has a very short stem enveloped by leaf bearing sheaths and carrying 1 to 3, thin, obovate to obovate-oblong, slighly hooked-mucronate apically, often dark purple spotted beneath and along margin leaves. Blooms occur in the summer on a basal, solitary, slender, 3.2 to 5.2" [8 to 13 cm] long, racemose, 8 to 19 flowered inflorescence with the 0.3 inch [1 cm] non-fragrant flowers lasting 15 to 25 days. The sepals and petals are white with various shades (light to bold) of magenta baring.

Phal. zhejiangensis, lip detail

Phal. zhejiangensis

Phal. zhejiangensis is distinctive because of its narrow lip, the infra-stigmatic appendage, the four separate pollinia, and the much elongated rostellum (part of the column that separates the stamen from the gynoecium, commonly preventing self-fertilisation). However, the vegetative characters are consistent with other species of Phalaenopsis, as are the prominent callus at the base of the midlobe of the lip and the erect, basal sidelobes. Apart from its unusual combination of floral features, which presumably represent adaptations to its as yet unknown pollinator(s), Phal. zhejiangensis is noteworthy for occurring well outside the tropics in a region with a humid subtropical climate. This suggests that it could have some potential for breeding cold tolerance into Phalaenopsis.

Judge using the Phalaenopsis scale.

Synonyms / Varieties / forms:

Synonyms:

Nothodoritis zhejiangensis Z.H.Tsi, Acta Phytotax. Sin. 27: 59 (1989).

Doritis zhejiangensis (Z.H.Tsi) T.Yukawa & K.Kita, Acta Phytotax. Geobot. 56: 157 (2005).

Varieties / forms: None.

Awards:

None

Breeding Characteristics:

No progeny

References:

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https://secure.aos.org/aqplus/SearchAwards.aspx
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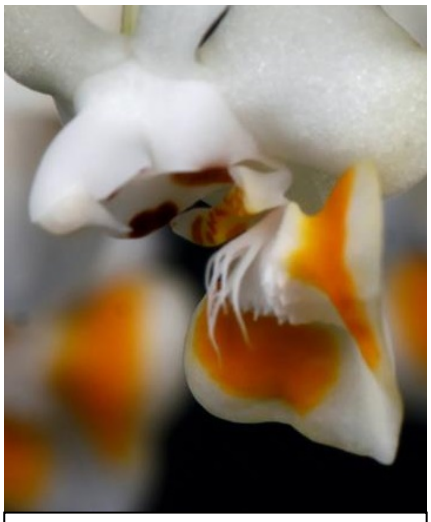
OrchidWiz Database x7.3, update: June 2021
Christenson, E.; *Phalaenopsis – A Monograph*, 2001
Renziana, Nov 2012, *Phalaenopsis – NothodorIts zhejiangensis transferred to Phalaenopsis*, Schuiteman, A., Vol. 2 (Nov), pgs 48-51
Orchid Digest, Dec 2019, *An Annotated Checklist of Phalaenopsis Species*, Higgins, W. E., Vol 83 (4), pgs-206-263.

Species Data Sheet

Phalaenopsis gibbosa, H.R.Sweet, Amer. Orchid Soc. Bull. 39: 1095 (1970)

[fal-en-OP-sis gibb-OH-sa]

Phalaenopsis [Phal.] gibbosa is found Found in Laos, and Vietnam in bright, open, broadleafed, evergreen, lowland forests from sealevel to 1000 meters (0 to 3300 ft.). It is a mini-miniature sized, hot to warm growing epiphyte with a short stem carrying a fan of 4 to 5, very broad oblong, 4.7 x 1.8 inches [12.0 x 4.5 cm], deciduous leaves. Blooms in the later winter and early spring on a 4 to 6" [10 to 15 cm] long, branched, somewhat zigzag, several [8 to 10] flowered inflorescence arising on a near leafless stem and carrying slightly fragrant flowers. Typical flower natural spread is 0.6" [1.5 cm] and last for 15-28 days. Flowers white with greenish suffsion toward the apices of the sepals and petals, the base of the column and the swellings a the base of the column bright yellow. The lip is trilobed. Lateral lobes erect, the two lobes nearly touching at the middle with the combined structure U-shaped, white with the leading edge brown barred on yellow. Lip midlobe triangular-reniform, obscurely three-lobulate, the lateral lobules rounded, the central lobules subacute, white, a pair of large, clear, bright yellow spots on lateral lobules. The callus biseriate, the basal callus four thread-like appendages superposed over a transverse, crescent-shaped denticulate callus..



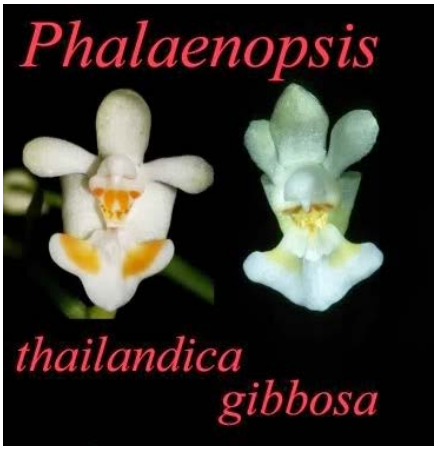
Phal. gibbosa, lip detail

Phal. gobbosa
'Emma' AM/AOS
Jan 2019, NS 1.3 x 2.4 cm
17 Flwrs, 2 Buds, 2 Inflor.

Phal. gibbosa appears to be a reluctant parent, possible due to fertility issues. The very clear flower colors, which lack any purple-toned pigmentation, appearing almost like an alba form of Phal. parishii, suggest this species might be useful in breeding concolor miniature hybrids. This is the only species I the Parishiane Section reported to have branced inflorescenes.

NOTE: This species is commonly confused with Phal. thailandica is the only side-by-side picture that I could find showing the differences.

Judge using the Phalaenopsis scale.



Synonyms / Varieties / forms:

Synonyms:

Polychilos gibbosa (H.R.Sweet) Shim, Malayan Nat. J. 36: 23 (1982).

Doritis gibbosa (H.R.Sweet) T.Yukawa & K.Kita, Acta Phytotax. Geobot. 56: 156 (2005).

Varieties / forms: Currently no varieties or forms are reckonized by the RHS.

Awards:

Below are AOS awards that Phal. gibbosa, some maybe of Phal. thailandica, have received:

gibbosa	FCC	AM	HCC	AQ	AD	JC	CCE	CCM	CHM	CBM	TOTAL
Awards		3	2								5
Year(s) Awarded		1999-2019	2013-2016								1999-2019

This species has received a relatively few, 5, awards since the first award in 1999 with the most recent award being an AM in 2019.

Breeding Characteristics:

As commented above this is species is not common in general collections and consequently there are VERY few progeny, 5 F1 and 6 total progeny. The table below list the Phal. pantherina progeny registered per decade and awards associated with the grex (per OrchidWiz 7.3).

pantherina	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	0	0	0	1	5	0	6
Assc Awds	0	0	0	0	0	2	0	2
F1	0	0	0	0	1	4	0	5
AA	0	0	0	0	0	0	0	0
F2	0	0	0	0	0	1	0	1
AA	0	0	0	0	0	2	0	2
F3	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	0	0

From this table you can see that the use of Phal. gibbosa in breeding has been extremely limited, six total progeny registered. My guess is that the main purpose of breeding with this species is to get miniature Phalaenopsis.

Hybrids (Only one hybrid has awards / photos):

Phalaenopsis [Phal.] Dendi's Smile (Phal. Tying Shin Smile x Phal. Tying Shin Miracle), 2013, Tying Shin Orchids, no progeny, no AOS awards.

Phal. Dendi's Smile
'Timo' HCC/AOC
Oct 2013, NS 5.1 x 4.4 cm
8 Flws, 1 Bud, 2 Inflor.

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https://www.slippertalk.com/threads/phal-thailandica-the-former-gibbosa.19425/
OrchidWiz Database x7.3, update: June 2021
Christenson, E.; *Phalaenopsis – A Monograph*, 2001
Orchids, Aug 2010, *Breeder's Notes 5: Three Phalaenopsis Species – A Look at Phalaenopsis gibbose, Phalaenopsis Lobbii and Phalaenopsis parishii*, Rohrl, H., Vol 79 (8), pgs. 440-449
Orchid Digest, Dec 2019, An Annotated Checklist of Phalaenopsis Species, Higgins, W. E., Vol 83 (4), pgs-206-263.

Species Data Sheet

Phalaenopsis parishii, Rchb.f., Bot. Zeitung (Berlin) 23: 146 (1865)

[fal-en-OP-sis par-ISH-ee-eye]

Phalaenopsis [Phal.] parishii is found in the eastern Himalayas, Assam India, Myanmar, Thailand and Vietnam on moss covered trees overhanging streams at lower elevations to 500 meters (0 to 1600 ft.). It is miniature sized, hot to warm growing epiphyte with elliptic to obovate, fleshy, pendant leaves. Blooms in the spring on an arching, 2 to 4 3/4" [5 to 14 cm] long, lightly fractiflex, racemose or rarely paniculate, few to several, densely 5 to 6 flowered inflorescence. The flowers are simultaneously opening, having a strong lily of the valley scent, and a natural spread of under 0.6 to 0.8" [1.5 to 2 cm]. The sepals and petals are white, the base of the column spotted with dark brown. The lip is trilobed, the erect lateral lobes are light brown spotted over a yellow ground, parallel and nearly touching at the middle, forming a U-shaped structure. The midlobe is triangular-reniform, obtuse, minutely notched at the apex, wine-colored with white apex and white base to the leading edge of the transverse callus. The callus biseriate, the basal callus of four thread-like filaments projected above a depression and supperposed over a transverse, semicircular callus termininating in a fringe of long teeth-like fimabriations.

Phal. parishii, lip detail

Phal. parishii
'Jardin botanique de Montreal' AM/CCE/AOS
Apr 2009, NS 1.6 x 1.8 cm
38 Flwrs, 54 Buds, 19 Inflor.

Phal. parishii has long been confused with Phal. lobbii. In addition to differences in the callus (the transverse, semicircular plate minutely irregular-denticulate in Phal. lobbii versus long-fimbriate in Phal. parishii), lip of Phal. parishii is consistently a solid wine-color.

NOTE: Most of the hybrids registered prior to 2000 that supposedly used Phal. parishii as a parent wer actually made with Phal. lobbii.

Judge using the Phalaenopsis scale.

Phal. parishii f. alba
'OrchidPhile' CHM/AOS
Apr 2013, NS 2.0 x 2.3 cm
2 Flws, 5 Buds, 1 Inflor

Synonyms / Varieties / forms:

Synonyms:

Grafia parishii (Rchb.f.) A.D.Hawkes, Phytologia 13: 306 (1966).

Polychilos parishii (Rchb.f.) Shim, Malayan Nat. J. 36: 25 (1982).

Doritis parishii (Rchb.f.) T.Yukawa & K.Kita, Acta Phytotax. Geobot. 56: 157 (2005).

Varieties / forms: Currently no varieties or forms are reckonized by the RHS, but breeders have identified one.

f. alba – This anthocyanin-free form of Phal parishii, white flowers with bright yellow callus, two awards for Phal. parishii f. alba.

Awards:

Below are AOS awards that Phal. parishii have received (based on looking at award pictures and descriptions, many are actually Phal. lobbii, total awards list is 32, and not included in total below. NOTE: some of the awarded Phal. lobbii, not included in table below, are identified as Phal. parishii var. lobbii and some as Phal. parishii.):

parishii	FCC	AM	HCC	AQ	AD	JC	CCE	CCM	CHM	CBM	TOTAL
Awards		2	2				1	6	3		**14**
Year(s) Awarded		2009-2013	1996-1997				2013	1997-2019	1995-2013		**1995-2019**

This species has received 14 awards, 4 quality and 10 cultural, since the first award in 1995.

Breeding Characteristics:

As commented above, most of the hybrids registered prior to 2000 that supposedly used Phal. parishii as a parent were actually made with Phal. lobbii. IT is beyond the scope / capability of this author to try to separate the two species, therefor the table below includes ALL hybrids that list Phal. parishii in its parentage. The table below list the Phal. parishii progeny registered per decade and awards associated with the grex (per OrchidWiz 7.3).

parishii	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Reg	0	1	2	5	9	11	21	31	3	83
Assc Awds	0	0	5	2	13	1	37	6	0	64
F1	0	1	2	5	3	5	6	14	3	39
AA	0	0	5	2	9	0	8	1	0	25
F2	0	0	0	0	6	2	14	14	0	36
AA	0	0	0	0	4	0	29	3	0	36
F3	0	0	0	0	0	3	1	3	0	7
AA	0	0	0	0	0	0	0	2	0	2

From this table you can see that the use of Phal. parishii in breeding has been limited but constantly increasing interest. I am guessing, based on awarded cultivars, that plants registered after 2000 are probably Phal. parishii progeny and NOT Phal. lobbii parentage. After review the hybrids below, Phal. parishii appears to contribute miniature plant size, floriferous, flower crowding, and enhances the lip midlobe.

Hybrids (Most Awarded):

Phalaenopsis [Phal.] Joy Nancy Lady (Phal. Anna-Larati Soekardi x Phal. Bright Peacock), 2007, J. Wu, no progeny, 6 AOS awards (3 AMs, 2 HCCs, 1 AQ).

Phalaenopsis [Phal.] Liu's Berry (Phal. Eduardo Quisumbing x Phal. parishii), 2006, Hwa-Tung Liu, one F1 progeny, 4 AOS awards (1 AM, 3 HCCs). No major progeny

Phalaenopsis [Phal.] Partris (Phal. equestris x Phal. parishii), 1965, Fredrick L. Thornton, no progeny, 3 HCC/AOS awards.

Phalaenopsis [Phal.] Sogo Chabstic (Phal. Golden Peoker x Phal. Phal. Anna-Larati Soekardi), 2003, Sogo, 2 F1 progeny, 2 AOS awards (1 AM, 1 HCC). No major progeny.

Phal. Joy Nancy Lady
'Krull-Smith' AM/AOS
Mar 2010, NS 4.0 x 3.5 cm
7 Flws, 7 Buds, 1 Inflor.

Phal. Liu's Berry
'Orchid House SW#1' AM/AOS
Apr 1994, NS 3.8 x 3.8 cm
29 Flws, 10 Buds, 1 Inflor.

Phal. Sogo Chabstic
'Vini Harlequin' AM/AOS
Apr 2011, NS 4.9 x 4.9 cm
21 Flws, 8 Buds, 1 Inflor.

Phal. Partris
'Stones River' HCC/AOS
Mar 1986, NS 2.6 cm
9 Flws, 2 Buds, 2 Inflor.

Hybrids (Most Progeny):

Phal. Anna-Larati Soekardi
'Bryon' HCC/AOS
Apr 2012, NS 2.5 x 2.8 cm
8 Flws, 3 Buds, 2 Inflor.

Phalaenopsis [Phal.] Anna-Larati Soekardi (Phal. pulcherrima x Phal. parishii), 1980, A. Kolopaking, 29 F1 and 38 total progeny, 9 AOS awards (7 HCCs, 1 AD, 1 AQ). Major progeny, see other hybrids in this section.

Phalaenopsis [Phal.] Memoria Val Rettig (Phal. Anna-Larati Soekardi x Phal. pulcherrima), 1989, H. Wallbrunn, 3 F1 and 4 total progeny, 2 AOS awards (1 AM, 1 HCC).

Phal. Memoria Val Rettig
'Spirit Creek' HCC/AOS
Mar 2012, NS 5.6 x 6.5 cm
17 Flws, 24 Buds, 1 Inflor.

Hybrids (Most Recently Registered and Awarded):

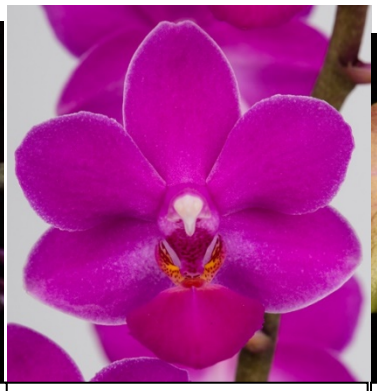
Phalaenopsis [Phal.] Walnut Valley Itty Bitty (Phal. Anna-Larati Soekardi x Phal. honghenensis), 2014, Rinke & Thompson, no progeny, 3 AOS awards (1 AM, 1 HCC, 1 AQ).

Phalaenopsis [Phal.] Krull's Little Prince (Phal. Jiaho Cherry x Phal. parishii), 2013, Krull-Smith, no progeny, 1 HCC/AOS award.

Phalaenopsis [Phal.] Dendi's Smile (Phal. Tying Shin Smile x Phal. Tying Shin Miracle), 2013, Tying Shin Orchids, no progeny, no AOS awards.

Phalaenopsis [Phal.] Tying Shin Pink Kite (Phal. Anna-Larati Soekardi x Phal. Stone Dance), 2007, Kuo Liang Hung, no progeny, 2 AOS awards (1 AM, 1 HCC).

Phal. Walnut Valley Itty Bitty
'Max & Bryon' AM/AOS
Feb 2019, NS 3.1 x 3.2 cm
17 Flws, 7 Buds, 2 Inflor.



Phal. Krull's Little Prince
'Purple Martin' HCC/AOS
Mar 2013, NS 3.0 x 3.0 cm
6 Flws, 12 Buds, 2 Inflor.

Phal. Dendi's Smile
'Timo' HCC/AOC
Oct 2013, NS 5.1 x 4.4 cm
8 Flws, 1 Bud, 2 Inflor.

Phal. Tying Shin Pink Kite
'Geneva' AM/AOS
Jan 2011, NS 3.2 x 3.6 cm
36 Flws, 0 Buds, 1 Inflor.

References:

www.orchidspecies.com
http://apps.kew.org/wcsp/qsearch.do
https://secure.aos.org/aqplus/SearchAwards.aspx
http://www.phals.net/
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Orchid Digest, Dec 2019, *An Annotated Checklist of Phalaenopsis Species*, Higgins, W. E., Vol 83 (4), pgs. 206-263.

Terminology –E–

E- or Ex-, A prefix in compound words meaning destitute of or without.

ebracteatus, -a, -um (ee-brak-tee-AY-tus) Without bracts. (23) Grex names only.

eburneus, -a, -um (ee-BURN-ee-us) Ivory-white; like ivory. (74) Grex names only.

ecalcarate (ee-KAL-kar-ayt) Lacking calcar or spur.

ecallose (ee-KAL-lohz) Without hard protuberances or callosities.

echinatus, -a, -um (ek-in-AY-tus) Provided with prickles or bristles. (6) 19 grex names
Bulbophyllum romyi – "… lateral sepals fused, distal ¾ tightly twisted surface echinate, cranberry bristles; …"

echinocarpus, -a, -um (ek-in-o-KAR-pus) A spiny fruit.

ecocline (EE-ko-clyn) Series of biotypes within a species that shows a genetic gradient correlated with a gradual environmental gradient.

ecology (ee-KOL-o-ji) The study of life in relation to the environment.

ecornutus, -a, -um (ee-kor-NEW-tus) Without horns. (3) Grex name only

ecostate (ee-KOS-tayt) Without a rib or midrib.

ecotype (EE-ko-type) A genetic variant within a species which is adapted to a particular environment yet remains interfertile with all other members of the species.
Grouping of Paphiopedilum venustum – "… commended for showing natural variation, ecotypes, and potential variation created in their hybrids."

edaphic (ee-DAFF-ik) Environmental factors that work through the soil.

edentate (ee-DEN-tayt) Without teeth.

effusus, -a, -um (ef-FEW-sus) Very loosely spreading. (3) Grex name only

eglandulose (ee-GLAN-dyew-lodz) Lacking glands.

elatus, -a, -um (el-AY-tus) Taller than expected in regards its parts or organs. (62) Grex name only

elatior (el-AY-ti-or) Taller. (6) Grex name only

elegans (EL-e-ganz) Graceful in appearance; excellent. (49) Grex name only

ellipsoid (e-LIP-soyd) Solid but with an elliptical outline. (7)
Maxillaria parviflora – "… pseudobulbs ellipsoid, …"
Miltoniopsis Keiko Komoda – "… petals white overlaid red raspberry centrally with a solitary white "eye" spot encircling deep red raspberry ellipsoid markings; …" (should have been elliptical markings)

elliptical (e-LIP-ti-cal) With the form of an ellipse, rounded almost equally at both ends. (363)
Pomatocalpa angustifolium – "… leaves …, elliptical and bilobed ends; …"
Cattleya Elisabeth Calov – "… sepals elliptical, …"

elongate (e-LONG-ayt) Stretched out in length. (465)
Paphiopedilum Judge Philip – "… petals elongate, …"

emarginatus, -a, -um (ee-mar-jin-AY-tus) Having a shallow notch at the extremity. (28)
Dendrobium bilobulatum – "… lip emarginate, …"

embryo (EM-bri-oh) The rudimentary plantlet within the seed.

endemic (en-DEM-ik) Confined geographically to a single area. (117) Used most in association with CBRs and CHMs, judges comments.
Caucaea sanguinolenta – "… more highly colored example of a cold growing species endemic to the mountains of Colombia …"

endocarp (EN-do-carp) The inner layer of the pericarp.

endogenous (en-DODGE-en-us) Growing throughout the substance of the stem, instead of by superficial layer; growing or developing from or on the inside.

epigynous (e-PIDJ-i-nus) Said of a flower in which the floral parts arise from the top of the ovary.

epseudobulbous (e-soo-do-BUL-bus) Lacking pseudobulbs.

equalis, -e (ee-KWAY-lis) Equal; even. There were 201 instances of the term 'equal' used descriptions. Of the first 10 instances of use, nine had the term 'unequally' and one used the term 'equal,' examples of both are both are below.
Aerides houlletiana (Alba) – "… leaves … ,apex unequally bilobed; …"
Dendrobium serratilabium – "… callus broad and channels equal in width to the column; …"

equestris, e (ee-KWES-tris) Pertaining to a horse; handsome like a knight
equitant (EK-kwi-tant) Said of leaves folded lengthwise and in two flat rows; used of condupicate leaves which enfold each other at the base in two rows. (169) All references are to Phal. equestris and its progeny.

erectus, -a, -um (er-REK-tus) Upright; erect. (4278)
Cattleya tigrina – "Eleven flowers on one erect, 17-cm inflorescence …"

ericoides (e-rik-OH-i-deez) Resembling the heath of the genus Erica.

erinaceus, -a, -um (r-rin-AY-see-us) Spiny like a hedgehog.

erosus, -a, -um (ee-ROH-sus) Having an irregular margin as if chewed.

erostrate (e-ROSS-trayt) Lacking a beak.

erubescens (e-roo-BESS-enz) Becoming rosy red; with a blush. (3) Grex name

erythrocarpus, -a, -um (e-ri-thro-Kar-pus) With red fruit.

esculentus, -a, -um (es-kew-LEN-tus) Edible or referring to eating.

estriatus, -a, -um (es-tri-AY-tus) Without stripes.

ethylene (ETH-ill-een) A gas that acts as a growth regulating substance and causes premature flower senescence.

europaeus, -a, -um (yoor-o-PEE-us) European.

etiolated (e-ti-o-LAY-ted) Blanched and without chlorophyll that is commonly accompanied elongation and weakness of the entire plant or plant part.

evanescent (ev-a-NESS-sent) Short lived; lasting a short time.

evectus, -a, -um (e-VEC-tus) Stately in appearance.

evergreen (EV-er-green) Keeping the green foliage all year; the oppositive of deciduous. (154) Used three ways: 1) Grex Name; 2) Plant details, Phalaenopsis evergreen inflorescence most common; 3) Exhibitor name.
Dendrobium lineale – "… borne on a very large, evergreen plant grown in a 36-cm clay pot …"
Phalaenopsis hieroglyphica – "Thirty-seven stellate blooms and one bud on five multiple branched, evergreen inflorescences; …"

evocation (ev-o-KAY-shun) The beginning of the development of an organ.

evolution (ev-o-LEW-shun) The process by which a species or group of organisms have changed over time, in response to the selective factors in the environment.

exaltus, -a, -um (eks-as-per-TAY-tus) To glorify; praise; tall. (8) Grex name

exasperatus, -a, -um (eks-as-per-AY-tus) Having a rough surface. (7) Grex name

excavatus, -a, -um (eks-kav-AY-tus) Hollowed out. (6) Grex name 6 times
Pecteilis sagarikii – "… column quadrate with excavated stigma; …"

excellens (eks-CELL-ens) Excellent.

excelsus, -a, -um (eks-SELL-sus) Tall. (26) Grex name

excentric (eks-CEN-trik) Off-centered or one-sided. (1) Grex name

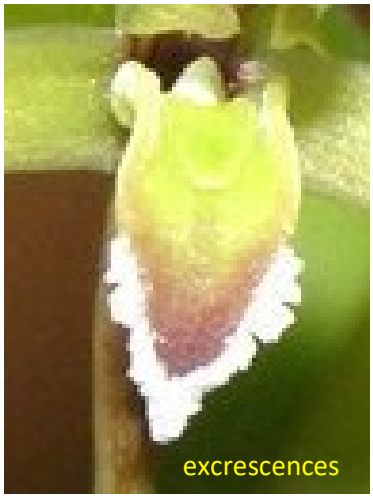
excisus, -a, -um (eks-SYE-sus) To cut out or off. (1) Grex name

exfoliating (eks-foh-lee-AY-teng) Scaling or peeling off in thin layers. (2) Fredclarkeara After Dark – "… on two sharply pendent inflorescences eminating from one large exfoliated pseudobulb; …"

exiguus, -a, -um (eks-IGG-yew-us) Scanty; small; poor. (2) Grex name

eximius, -a, -um (eks-IMM-i-us) Select, extraordinary; excellent. (13) Grex name

excrescences (eks-KRESS-en-ses) Outgrowths from the surface. (1) Poor award picture, picture from OrchidWiz
Maxillaria cerifera – "… pointed lip distinguished by white waxy excrescences along lateral borders at tip, …"



excurrent (eks-KUR-rent) Running out or projecting, as a leaf base which extends beyond the margin of the blade.


expansive

exine (EKS-ine) The outer coat of a pollen grain.

exotic (ek-ZOTT-ik) Foreign; not native; strange. (478) Grex name, exhibitor, comments

expansus, -a, -um (eks-PAN-sus) An increase in size; to spread out. (34) Most are grex name
Phalaenopsis Star's Handlebar Mustache – "… lip side lobes expansive, rich purple basally shaped liked a handlebar mustache; …:

explant (EX-plant) A piece of tissue taken from a plant to be transferred to an appropriate tissue culture medium.

expressivity (Ex-pres-siv-i-tee) A measure of the uniformity of the phenotypic exingression of a gene in a particular environment.

exserted (ek-SER-ted) Projecting beyond an envelope.

exsiccated (EK-sik-kay-ted) Dried or giving that appearance.

extrorse (eks-TRORS) Facing outward.

exudans (eks-YEW-danz) To sweat out; gradually ooze out.

Award Descriptions (October 2020)

Phal. Wossner Wilson-Chabstic – Quality Award Description
(Phal. Sogo Chabstick x Phal. wilsonii)
Thirteen flat flowers and two buds on an erect arching 25 cm inflorescence; sepals and petals lanceolate, white, basal half overlaid magenta; lip tri-lobed, hinged, white, sidelobes erect, yellow basally, blotched marron, midlobe heavily overlaid magenta, callus yellow, keels magenata distally; column and anther cap white; substance firm; texture matte.

Phal. Liu's Hua Lien Star – Quality Award Description

(Phal. Anna-Larati Soekardi x Phal. Sogo Mini Dog)
Seventeen flat flowers and two buds on one 18 cm inflorescence, two immature inflorescesces; sepals lanceolate, white; petals ovate, white; lip tri-lobe, white, sidelobes erect, dark red-violet, mid-lobe lanceolate, overlaid dark red-violet; column and anther cap white; substance firm; texture diamond dust.

Phal. Paris Star – Cultural Award Description
(Phal. stuartiana x Phal. parishii)
Forty-eight full flat flowers and twelve buds on three inflorescences up to 23 cm long on a robust clean plant 6 in (15 cm) in diameter in a 4 in (10 cm) plastic pot; sepals and petals white, speckled rose-violet; lateral sepals, inferior half heavily blotched dark red; lip tri-lobed, white, side lobes, midlobe, and callus yellow, regularly blotched dark red; column and anther cap white; substance firm; texture matte.

Phal. Yaphon Cupid – Quality Award Description
(Phal. Yaphon Lobspis x Phal. Tying Shin Cupid)
Twenty-three slightly reflexed burnt orange flowers and two buds on two up to 24-cm inflorescences; sepals and petals, lanceolate; lip tri-lobe, side-lobes erect, red-orange, mid-lobe rhomboid, red-orange; column and anther cap, white, light yellow basally; substance hard; texture matte.

Phal. Millie's Lemon Berry – Quality Award Description
(Phal. Fantasy Musick x Phal. equestris)
Twenty-three slightly reflexed stellata flowers on one inflorescence; sepals and petals lanceolate-ovate, white, yellow blush basally; lip tri-lobe, cream, side-lobes erect, yellow, red speckles; mid-lobe, lanceolate, yellow, callus yellow; column and anther cap white, light yellow halo basally; substance firm; texture matte.