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.

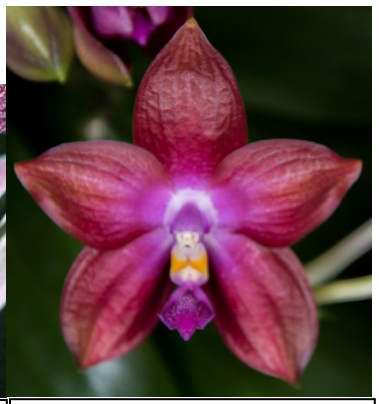
Phal. Paskal Indukbaru (Phal. javanica x Phal. inscriptiosinensis), 1985, A. S. Parnata, no progeny, 1 AD/AOS award.

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.

References:

www.orchidspecies.com
http://apps.kew.org/wcsp/qsearch.do
https://secure.aos.org/aqplus/SearchAwards.aspx
http://www.phals.net/
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 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:

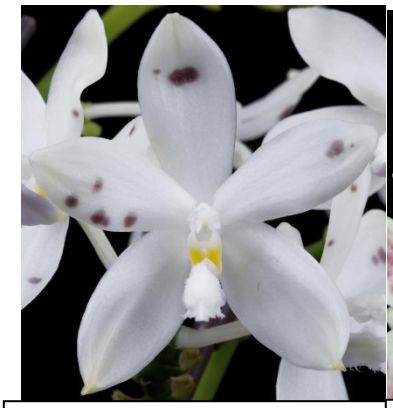
Synonyms:

Phalaenopsis speciosa Rchb.f., Gard. Chron., n.s., 15: 562 (1881).

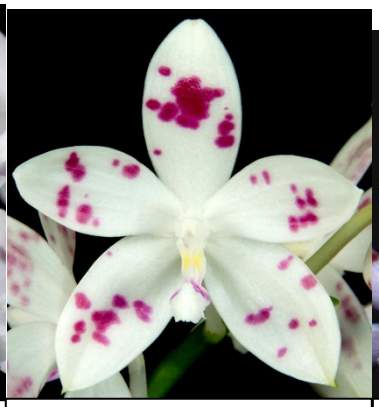
Phalaenopsis speciosa var. tetraspis (Rchb.f.) H.R.Sweet, Amer. Orchid Soc. Bull. 37: 1092 (1968), nom. superfl.

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.

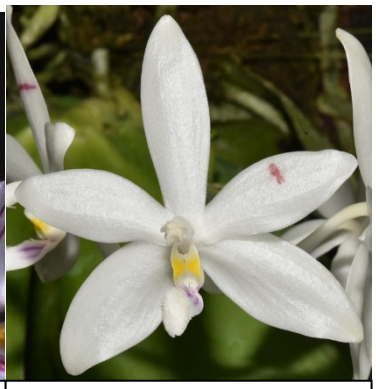


Phal. tetraspis
'Cyan's Nightime Fiasco' AM/AOS
Feb 2020, NS 4.0 x 4.1 cm
30 Flwrs, 2 Buds, 6 Inflor.
'blotched violet-brown'



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.

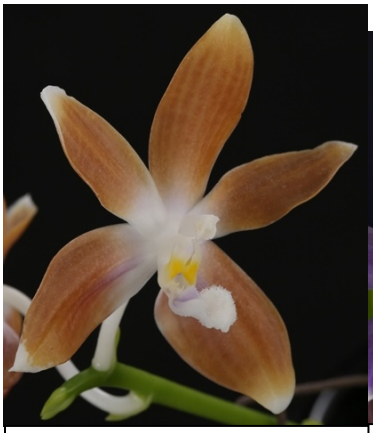
f. imperatrix – Solid deep purple flowers without any barring at the base of the sepals. The reverse of the flowes do show some barring but not the spotting found in the f. speciosa variety.

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.

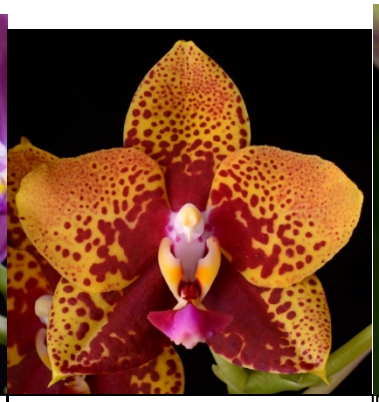
Phalaenopsis [Phal.] Zheng Min Anaconda (Phal. Sunrise Red Peoker x Phal. Fusheng's Super Man), 2011, Zheng-Min Su, 22 F1 and 24 total progeny, 2 AM/AOS awards. No major progeny.

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.

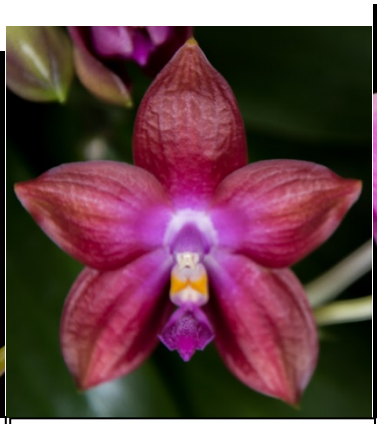
Phalaenopsis [Phal.] Germaine Vincent (Phal. violacea x Phal. speciosa), 1994, L. Vincent, 16 F1 and 23 total progeny, 7 AOS awards (4 AMs, 2 HCCs, 1 CCM). No major progeny.

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.

References:

www.orchidspecies.com
http://apps.kew.org/wcsp/qsearch.do
https://secure.aos.org/aqplus/SearchAwards.aspx
http://www.phals.net/
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 (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.

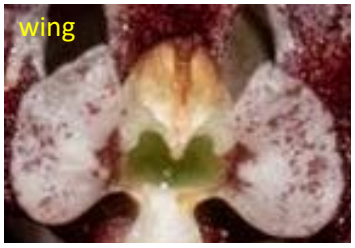
Phal. Krull's Red Dragon – Quality Award Description
(Phal. Ken Avant x Phal. Dragon Tree Eagle)
Three slightly cupped flowers on two inflorescences; sepals and petals lanceolate-ovate, light red, magenta halo basally, heavily barred and splotched marron; lip tri-lobe, cream, side-lobes magenta distally, 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.)