



Phalaenopsis cornu-cervi

Karl Varian
November 2021





9/11/2021



Karl Varian



Continuously blooming for over 3 years

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Agenda

Why

Background

Forms/Varieties

Key Hybrids

Recent awarded Hybrids / Trends

Choices

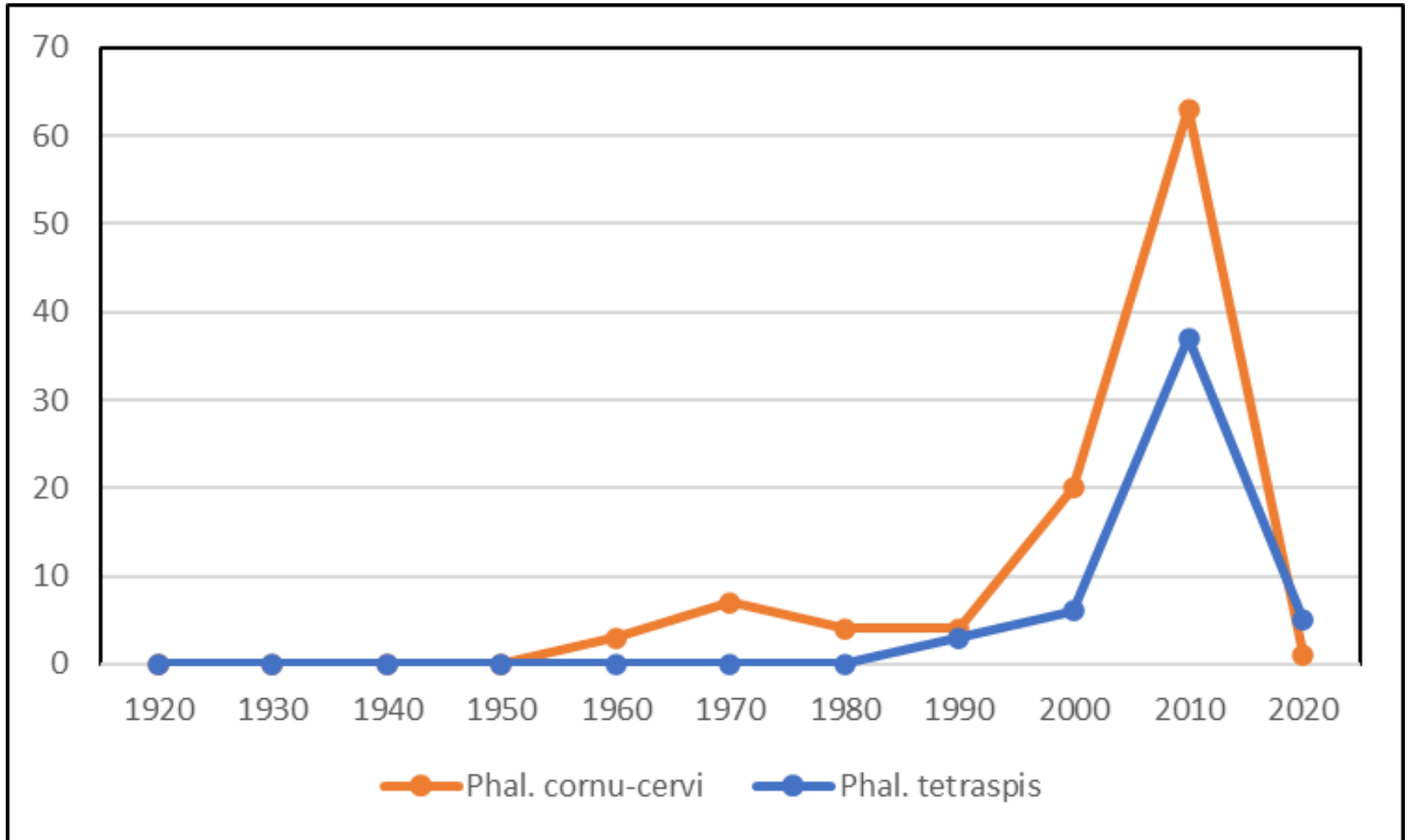


Phal. cornu-cervi

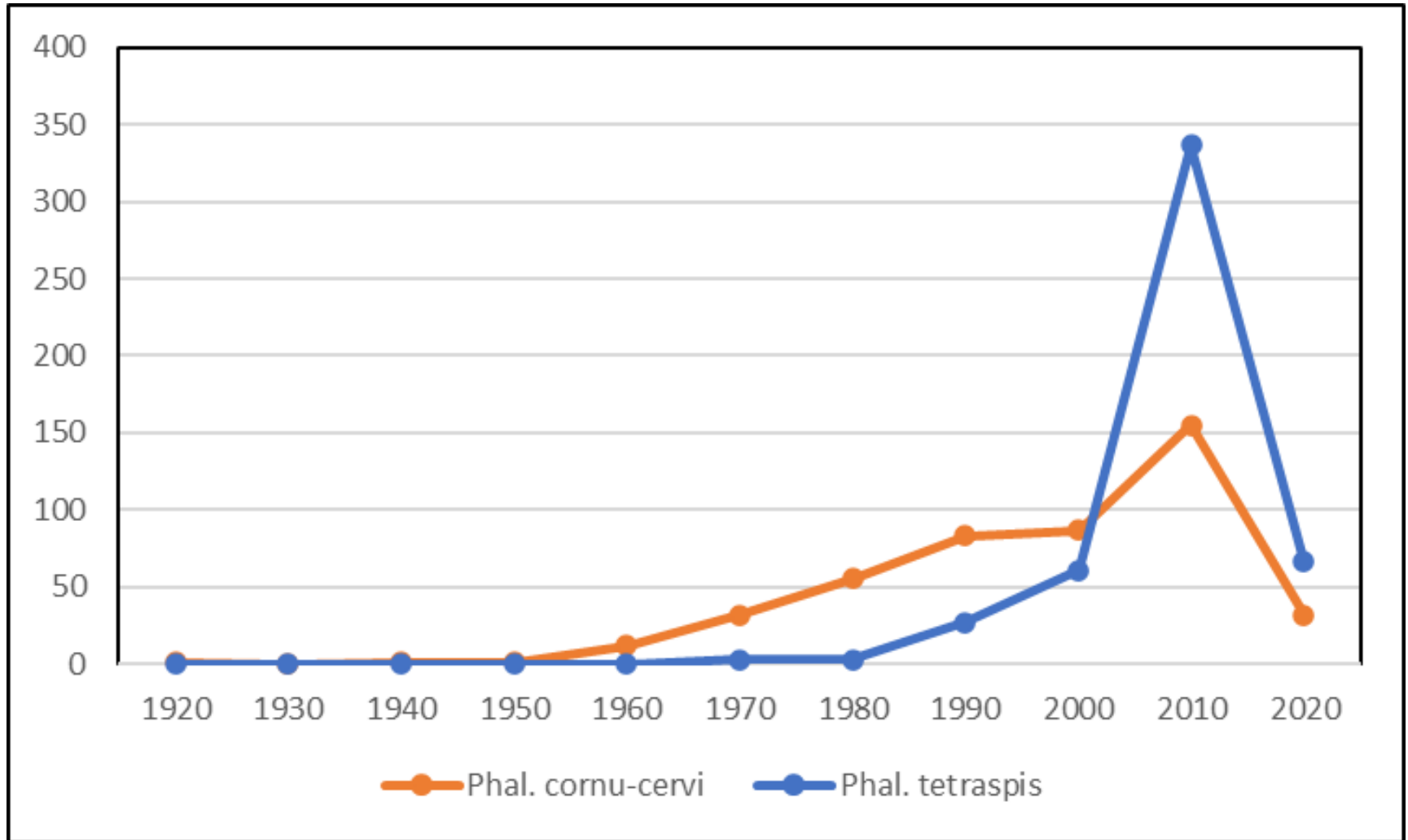
Phal. tetraspis (Phal. speciosa)



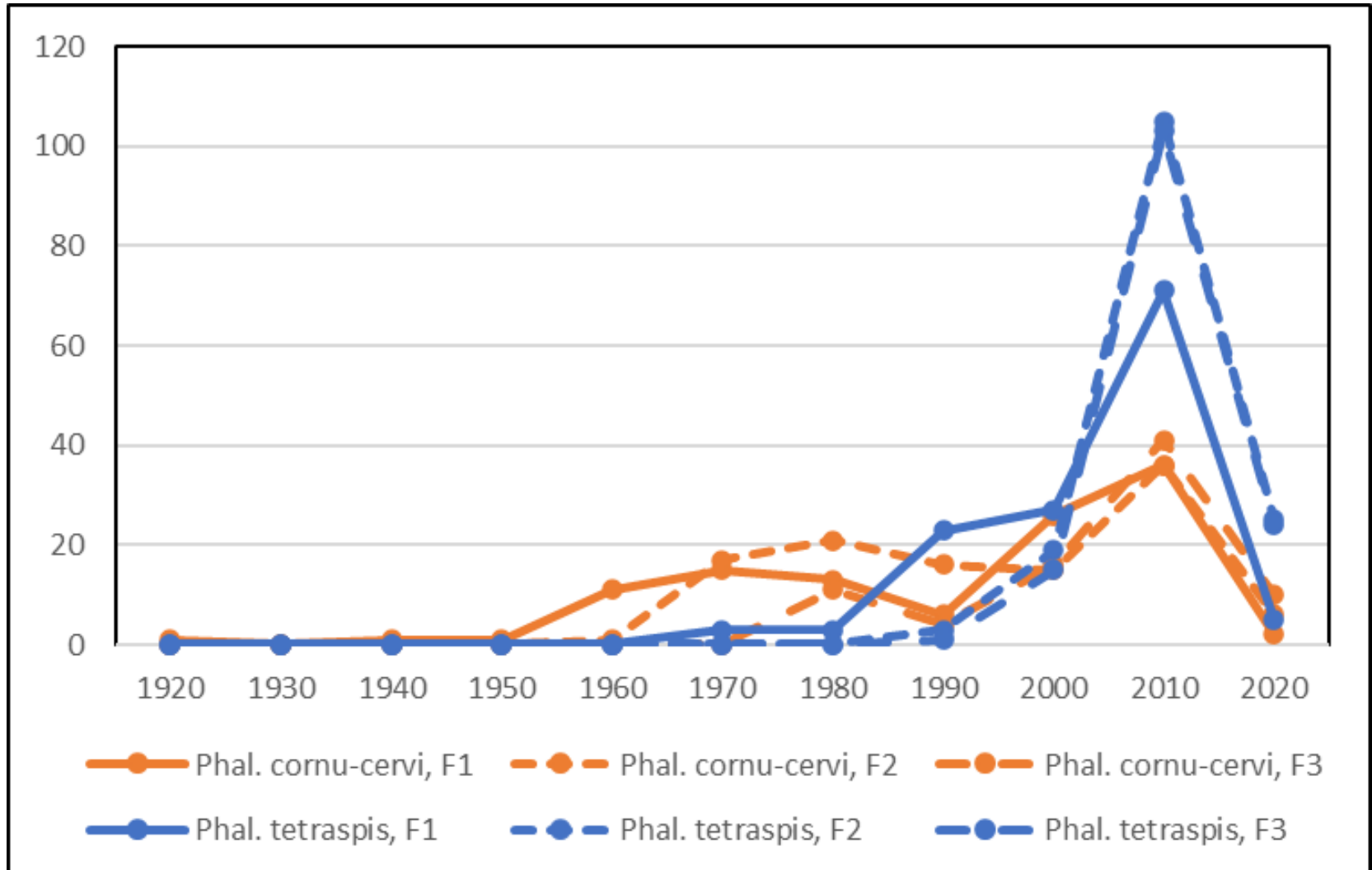
Awards (In AOS Database)



Progeny, Total



Progeny, Generational



Comparison

	Phal. cornu-cervi	Phal. tetraspis
Awards (AOS database), total	102	51
Awards (AOS database), 2020	0	3
Varieties, based on awards	5	10
Color Variability	Limited (Red, yellow green)	Wide color range (lavender, white, brown, blue, yellow green) Random Pattern, flw to flw
Progeny, Total	459	497
Initial Hybrid Registration	1923	1978
Generational Registration	Equal F1 thru F3	F1 Slightly less than F2,F3
Generational Registration, 2020	2, 3, 8	3, 19, 23
Hybrids Registered 2020	27 (to F5)	53 (to F5)

**Phal. cornu-cervi Selected, Projected a More Manageable Report,
True Red Form Recently Widely Distributed**

Phal. cornu-cervi

General Information

- Presently placed in Subgenus Phalaenopsis, Section Polychilos
 - Previously (Christenson) in Subgenus Polychilos, Section Polychilos
 - KRV hybrid bridge Subgenus Phalaenopsis, Section Polychilos, Subsection Polychilos

The Genus *Phalaenopsis*

Subgenus *Phalaenopsis*

Section *Phalaenopsis*:

amabilis, *aphrodite*, *celebensis*, *equestris*, *lindenii*, *philippinensis*, *sanderiana*, *schilleriana* and *stuartiana*.

Section *Polychilos*:

amboinensis, *bastianii*, *bellina*, *borneensis*, *cochlearis*, *conringiana*, *cornu-cervi*, *doweryensis*, *fasciata*, *fimbriata*, *floresensis*, *fuscata*, *gigantea*, *hieroglyphica*, *inscriptiosinensis*, *javanica*, *klunsteri*, *lueddemanniana*, *maculata*, *mannii*, *mariae*, *mentawaiensis*, *micholitzii*, *modesta*, *pallens*, *pantherina*, *pulchra*, *reichenbachiana*, *robinsonii*, *rundumensis*, *speciosa*, *sumatrana*, *tetraspis*, *venosa*, *violacea* and *virides*.

Subgenus *Parishianae*:

Section *Parishinae*:

appendiculata, *gibbosa*, *lobbii*, *malipoensis*, *parishii* and *thailandica*.

Section *Esmeralda*:

buyssoniana, *pulcherrima*, *regnieriana* and *ubonensis*.

Section *Deliciosae*:

chibae, *deliciosa*, *findleyi*, *mirabilis* and *mysorensis*.

Section *Aphyllae*:

honghenensis, *lowii*, *natmatungensis*, *stobartiana*, *taenialis*, *wilsonii* and *zhejiangensis*.

Subgenus *Ornithochilus*:

cacharensis, *difformis* and *yingjiangensis*.

Subgenus *Hygrochilus*:

japonica, *marrotiana* and *subparishii*.

Species in Subgenus Phalaenopsis, Section Polychilos, "Subsection Polychilos"



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.



Phal. cornu-cervi

General Information, Distribution



Phal. cornu-cervi

General Information

- Small sized, hot to warm growing epiphyte
- Found
 - 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.
- 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 inflorescence have 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].



Phal. cornu-cervi

General Information



- The sepals and petals
 - Translucent yellow with reddish brown spots and transverse bars
- The lip is tri-lobed, to 0.8 x 1 cm
 - The lateral lobes erect
 - The lip midlobe
 - Clear whitish yellow to pale yellow
 - Highly variable, transverse, +/- crescent-shaped, obtuse
- Callus
 - Central triseriate
 - Bifid plate with long primary filiform divisions, often with a pair of smaller divisions to either side
 - The anterior callus is a suberect bilaterally flattened tooth that separates the divisions of the central callus.
- The column is somewhat arching yellow apically.



Phal. cornu-cervi

- 'Typical' form
- Highly variable species
 - Hybrid swarm
- Four recognized 'form / variety'
 - f. flava
 - f. borneensis
 - var. rubescens
 - f. chataladae



Continuously blooming for over 3 years

Phal. cornu-cervi f. flava

- Anthocyanin-free form, pure yellow flowers without any spots or bars on the sepals and petals
- 16 AOS awards from 1977 to 2019



Phal. cornu-cervi f. flava
'Orchidphile' AM/AOS
Oct 2009, NS 3.2 x 5.0 cm
12 Flwrs, 0 Buds, 3 Inflor.

Phal. cornu-cervi f. borneensis

- Spreading segments, yellow-green, with transverse brown spots.
- Known as a large flower form of Phal. cornu-cervi.
- Similar to Phal. pantherina
 - Broad lip midlobe up to 1.2 cm wide, well above the maximum size seen in Phal. cornu-cervi.
 - Separable from Phal. pantherina by its flat midlobe, which lacks a raised pad of tissue on the upper surface and is without any trichomes.
- Not recognized by Kew as a species or a form.
 - Fighetti [Orchids, June 2015, pg. 353] states change to elevate to species agreed upon at the WOC2014.
 - AOS database using Phal. cornu-cervi f. borneensis as Aug. 2021.
- 5 AOS awards 1998 to 2018



Phal. cornu-cervi f. borneensis
'Iowa' AM/AOS
Sep 2018, NS 4.5 x 5.3 cm
17 Flwrs, 13 Buds, 7 Inflor.

Phal. cornu-cervi var. rubescens

- This form is characterized 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 prominent 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
- Also identified as Phal. *cornu-cervi* f. *sanguinea*
 - Christenson (2001) considers Phal. *cornu-cervi* var. *rubescens* to be an invalid name (not a synonym, “nom. nud.”) for Phal. *cornu-cervi* f. *sanguinea*.
 - The AOS database has no awards for f. *sanguinea*, but var. *rubescens* cultivars have received AOS awards, recent 2012.
- 5 AOS awards 2005 to 2012



Phal. *cornu-cervi* var. *rubescens*
'Paraiso Tropical I' AM/AOS
May 2012, NS 3.5 x 4.1 cm
9 Flwrs, 4 Buds, 3 Inflor.

Phal. cornu-cervi 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. Two different field collected cultivars are the basis for this form.
- f. chattaladae, is a major reason for increase in Phal. cornu-cervi awards and probably increased number of progeny.
- f. thalebanni – This was an early forma name for what is now f. chattaladae.
 - 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)
 - Conclusion is that this form is an 'out-of-date' form name and should not be used.
- 29 AOS awards 2007 to 2021. Does not include initial AM/AOS in 1979, 'Pravit Chattalada'



Phal. cornu-cervi f. chattaladae
'Crownfox' FCC/AOS
Mar 2021, NS 4.2 x 4.7 cm
7 Flwrs, 6 Buds, 7 Inflor.

AOS Awards

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	2007-2016	2012-2018				2018	2016-2018	2008		2007-2021
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	

99 awards since the first award in 1967. The majority of the awards (82) have been since 2000 with roughly half of the awards to the 'non-pattern' cultivars such as f. flava, f. chattaladae, and var. rubescens.

Form Characteristics

Flower Quality AOS Awardees

Form name	NS – H	NS – V	Flwrs	Buds	Inflor.	Date Rng.	Nbr. Grx.
f. flava	3.2	4.7	11.5	4.5	5.0	1977-2013	8 (6)
Max.	4.0	5.2	35	7	10		
Min.	2.8	4.2	4	0	3		
f. borneensis	4.0	5.0	16	8	5	2006-2018	3
Max.	4.5	5.3	21	13	7		
Min.	3.8	4.5	10	1	2		
f. chattaladae	3.2	4.2	6.6	3.1	3.3	2007-2021	20 (23)
Max.	4.8	5.1	27	12	15		
Min.	2.2	3.4	2	0	1		
var. rubescens	3.1	4.0	7.0	3.5	3.0	2010-2012	4
Max.	3.3	4.5	13	4	4		
Min.	3.0	3.3	5	2	2		

f. flava appears to have a large vertical natural spread
 f. borneensis is almost a centimeter larger

Awarded (AMs) cultivars without a form identified



Should judges suggest putting a cultivar into a specific form during judging process?

Breeding / Future

- Contribution to Hybrids
 - “Historical” yellow, greenish, or cream-colored pigments and sometimes barring
 - When bred with whites it can yield various shades of green and rust-colored tones
 - Does not improve flower form if roundness is a breeding goal
- *Phal. cornu-cervi* f. *chattaladae* breeding [Grove]
 - Selfing of initial clone fail – “... no future for breeding because repeated efforts ...to make selfing all failed.”
 - Crossing “... with other *Phalaenopsis* species and hybrids with no success.”
 - Crossing with another clone discovered 25 years later “... was successful on the first try.” as well as 2nd generation sib crosses.
 - “... uniformity of the offspring of the two collected specimens when they are paired with each other.”
 - Some clones have been confirmed to be tetraploid

Progeny

- Most Progeny (top three)
 - Phal. Corona (30 F1, 12 Awards)
 - Phal. Valentinii (28 F1, 14 Awards)
 - Phal. Maraldee (22 F1, 46 Awards)
- Most Awarded (not included above [1, 2, & 3])
 - Phal. Cornustris (4 F1, 12 Awards)
 - Phal. Ann Krull (3 F1, 11 Awards)
 - Phal. Memoria Helen Morgan (0 F1, 8 Awards)
- Most Recently Awardees
 - Phal. Corona (Dec. 2020)
 - Phal. Valentinii (Oct. 2020)
 - Phal. Corona (Mar. 2020, 2)
- Awarded Cultivars, Most Recently Registered
 - Phal. Bredren's Cutie Pie (Regr. 2017)
 - Phal. Roman's Golden Star (Regr. 2015)
 - Phal. Meidarland Yellow Ribbon (Regr. 2015)
 - Phal. CTL Macu CornuQueen (Regr. 2015)

Phal. Corona

- Phal. cornu-cervi x Phal. amboinensis
- Register 1973, Shaffer's
- 30 F1 and 45 total progeny
- 13 AOS awards (1 FCC, 9 AMs, 2 HCCs, 1 CCM)
- Major progeny
 - Phal. Corona De Oro (Phal. Misty Green x Phal. Corona)



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Phal. Corona
'Maria Teresa' FCC/CCM/AOS
Apr 2017, NS 4.2 x 5.0 cm
18 Flwrs, 3 Buds, 1 Inflor.

Other Recently Awarded Cultivars



Phal. Corona
'Red Kitsune' AM/AOS
Dec 2020, NS 4.7 x 6.0 cm
4 Flwrs, 0 Buds, 2 Inflor.



Phal. Corona
'Krull-Smith' AM/AOS
Mar 2020, NS 4.1 x 4.7 cm
11 Flwrs, 6 Buds, 5 Inflor.



Phal. Corona
'Whalloper' HCC/AOS
Mar 2020, NS 3.5 x 4.7 cm
19 Flwrs, 3 Buds, 6 Inflor.



Phal. Corona
'Mark's Joy' AM/AOS
Oct 2017, NS 4.5 x 5.0 cm
9 Flwrs, 1 Bud, 5 Inflor.



Phal. Corona
'Lemon Bomb' AM/AOS
Oct 2015, NS 4.2 x 4.6 cm
14 Flwrs, 0 Buds, 7 Inflor.



Phal. Corona
'Luz Nelly' AM/AOS
Mar 2015, NS 4.2 x 4.8 cm
12 Flwrs, 4 Buds, 2 Inflor.



Phal. Corona
'Memoria Red Drain' AM/AOS
May 2014, NS 5.0 x 5.7 cm
8 Flwrs, 0 Buds, 3 Inflor.



Phal. Corona
'Marley' AM/AOS
Jul 1984, NS 4.4 x 5.0 cm
3 Flwrs, 2 Buds, 1 Inflor.



Phal. Corona
'Green Valley' HCC/AOS
Apr 1984, NS 4.5 cm
6 Flwrs, 2 Buds, 3 Inflor.



Phal. Corona
'Harford' AM/AOS
May 1982, NS 4.8 cm
12 Flwrs, 0 Buds, 5 Inflor.

Phal. Valentinii

- Phal. cornu-cervi x Phal. violacea
- Register 1959, hort.
- 28 F1 and 114 total progeny
- 10 AOS awards (4 AMs, 4 HCCs, 2 CCM)
- Major progeny
 - Phal. Ann Krull (Phal. Alida x Phal. Royal Satin)
 - Phal. Arthur Zeller (Phal. Siren's Song x Phal. Malibu Heir)
 - Phal. Carolina Red Zeller (Phal. venosa x Phal. Arthur Zeller)



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Phal. Valentinii
'Lexian' AM/AOS
May 2012, NS 3.3 x 4.7 cm
11 Flwrs, 8 Buds, 3 Inflor.

Recently Awarded Cultivars



Phal. Valentinii
'Perla' AM/AOS
Oct 2020, NS 4.2 x 4.1 cm
1 Flwrs, 1 Bud, 1 Inflor.



Phal. Valentinii
'Bryon' AM/CCM/AOS
Aug 2019, NS 3.8 x 4.6 cm
18 Flwrs, 11 Buds, 12 Inflor.



Phal. Valentinii
'Lixian' AM/AOS
May 2012, NS 3.3 x 4.7 cm
11 Flwrs, 8 Buds, 3 Inflor.



Phal. Valentinii
'E. Orchids' HCC/AOS
Oct 2011, NS 4.1 x 4.6 cm
8 Flwrs, 2 Buds, 2 Inflor.



Phal. Valentinii
'Verdav' HCC/AOS
Oct 2007, NS 4.5 cm
3 Flwrs, 3 Buds, 2 Inflor.



Phal. Valentinii
'Pure Pleasure' AM/AOS
Oct 2007, NS 3.8 x 4.9 cm
7 Flwrs, 7 Buds, 4 Inflor.



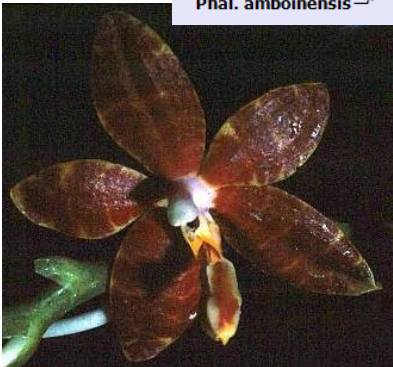
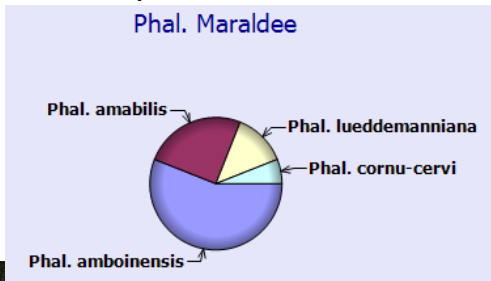
Phal. Valentinii
'Marcus' AM/AOS
Sep 2007, NS 3.5 x 4.5 cm
9 Flwrs, 3 Buds, 3 Inflor.



Phal. Valentinii
'Memoria John Wik' AM/AOS
Aug 2006, NS 3.4 x 4.5 cm
2 Flwrs, 1 Bud, 1 Inflor.

Phal. Maraldee

- Phal. Maestro Rafael Alers x Phal. Deventeriana
 - 4th Generation Phal. cornu-cervi
- Register 1988, Zuma Canyon
- 22 F1 progeny
- 42 AOS awards (18 AMs, 20 HCCs, 1 JC, 3 CCMs)
- Major progeny
 - Phal. Memoria Helen Morgan (Phal. Taipei Gold x Phal. Maraldee)



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Phal. Corona
'Queen of Hearts' AM/AOS
May 1993, NS 6.9 cm
5 Flwrs, 1 Buds, 1 Inflor.

Phal. Cornustris

- Phal. equestris x Phal. cornu-cervi
- Register 1967, H. Wallbrunn
- 4 F1 and 7 total progeny
- 7 AOS awards (3 AMs, 2 HCCs, 1 JC, 1 CCM)
- No major progeny



X



Phal. Cornustris
'Crystelle' AM/CCM/AOS
Nov 2013, NS 4.3 x 4.4 cm
39 Flwrs, 41 Buds, 12 Inflor.
Color form all prior awards



Phal. Cornustris
'Maria Teresa' AM/AOS
Jun 2019, NS 2.8 x 3.3 cm
17 Flwrs, 8 Buds, 6 Inflor.

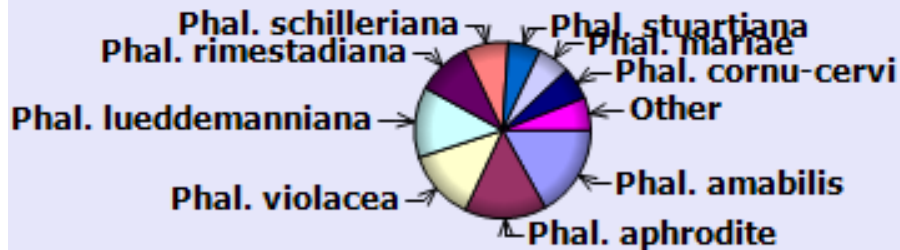
Phal. Ann Krull

- Phal. Alida x Phal. Royal Satin
 - 4th Generation
- Register 1986, J. Ewing
- 3 F1 progeny
- 11 AOS awards (6 AMs, 5 HCCs)
- Major progeny
 - Phal. Pecosilla de Caso (Phal. Georges Seurat x Phal. Ann Krull)



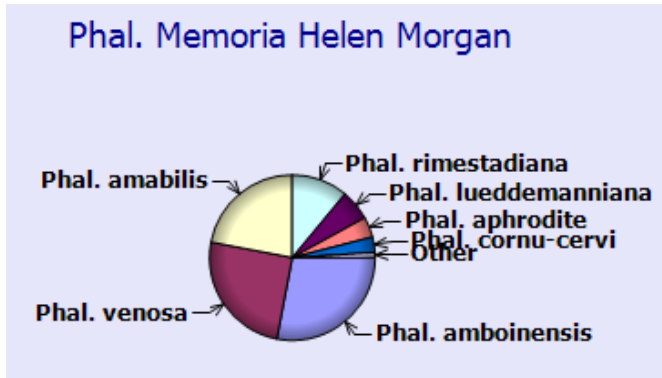
Phal. Ann Krull
 'Plum Confetti' AM/AOS
 Jan 1994, NS 10.3 x 9.6 cm
 8 Flwrs, 5 Buds, 1 Inflor.

Phal. Ann Krull

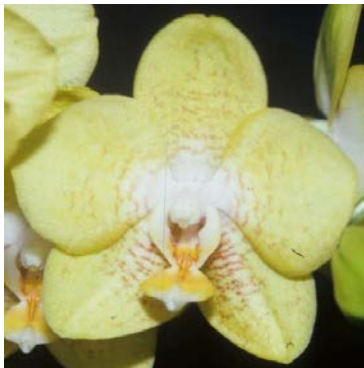


Phal. Memoria Helen Morgan

- Phal. Taipei Gold x Phal. Maraldee
 - 5th Generation
- Register 1997, Sun Moon Orchids
- No progeny
- 8 AOS awards (1 AM, 6 HCCs, 1 AQ)



Phal. Memoria Helen Morgan
 'Susan Grasso' AM/AOS
 Mar 2000, NS 7.2 x 6.7 cm
 15 Flwrs, 19 Buds, 5 Inflor.

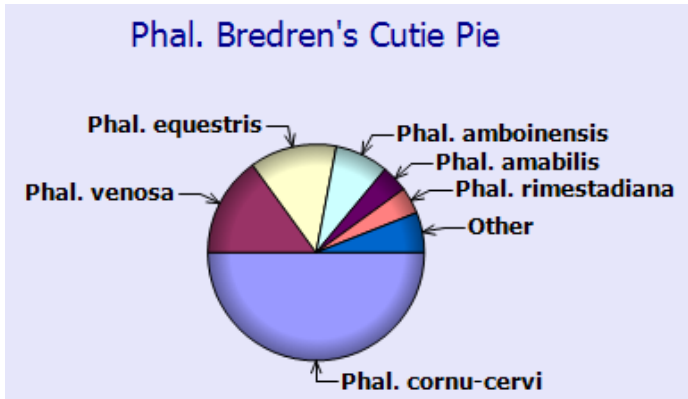


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Phal. Bredren's Cutie Pie

- Phal. Tying Shin Golden Eagle x Phal. cornu-cervi
- Register 2012, Kuo Liang Hung
- No progeny
- 1 HCC/AOS award



Phal. Bredren's Cutie Pie
'Bredren' HCC/AOS
Aug 2017, NS 4.0 x 4.4 cm
5 Flwrs, 3 Buds, 1 Inflor.



X



Phal. Roman's Golden Star

- Phal. Mambo x Phal. cornu-cervi
 - Phal Mambo (Phal. amboinensis x Phal. mannii)
- Register 2015, R. E. Garcia
- No progeny
- 1 AM/AOS award



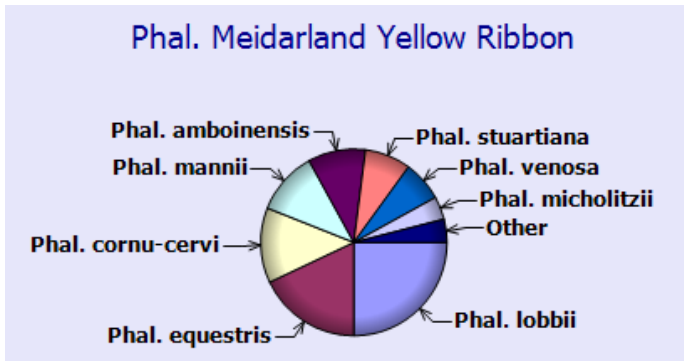
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Phal. Roman's Golden Star
'Irma Saldaña' AM/AOS
Jul 2015, NS 4.0 x 5.6 cm
3 Flwrs, 1 Bud, 1 Inflor.

Phal. Meidarland Yellow Ribbon

- Phal. Liu's Gold Coin x Phal. Mituo Shin Perfume
 - 3rd Generation
- Register 2015, Nan-Huei Su
- No progeny
- 1 AM/AOS award



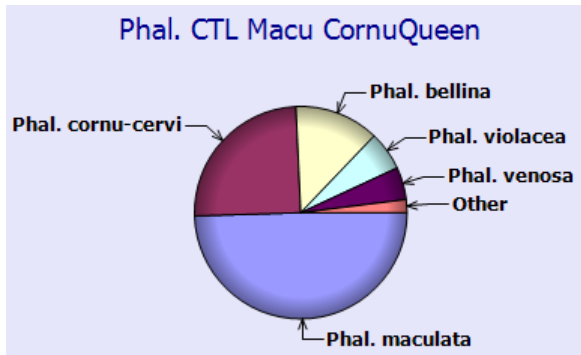
Phal. Meidarland Yellow Ribbon
 'MD' AM/AOS
 Mar 2016, NS 3.0 x 3.5 cm
 13 Flwrs, 0 Buds, 1 Inflor.

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Phal. CTL Macu CornuQueen

- Phal. maculata x Phal. CTL Cornu Queen
 - Phal. CTL Cornu Queen (Phal. cornu-cervi x Phal. LD's Bear Queen)
- Register 2015, C-H. Kuo
- No progeny
- 1 HCC/AOS award



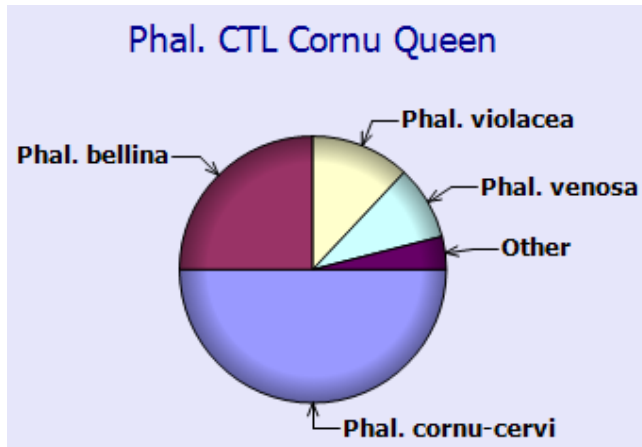
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Phal. CTL Macu CornuQueen
'Memoria Hank Horton' HCC/AOS
Sep 2015, NS 3.4 x 3.9 cm
3 Flwrs, 1 Bud, 2 Inflor.

Phal. CTL CornuQueen

- Phal. cornu-cervi x Phal. LD's Bear Queen
- Register 2012, C-H. Kuo
- 4 F1 progeny
- 1 AM/AOS award



Phal. CTL Cornu Queen
'Purple Haze' HCC/AOS
Jul 2019, NS 4.0 x 5.0 cm
18 Flwrs, 9 Bud, 8 Inflor.

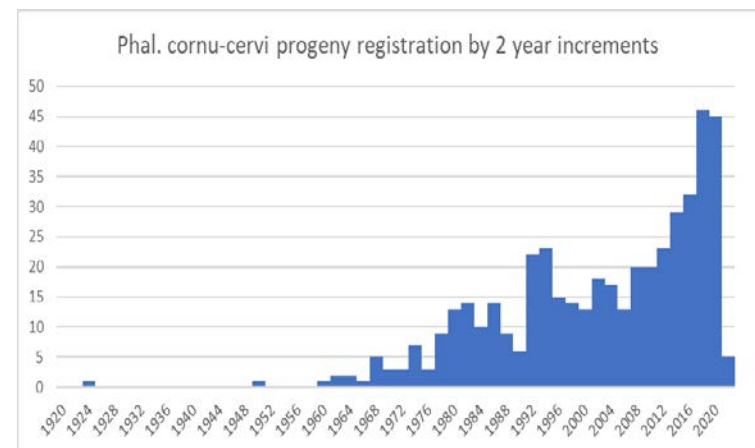


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Breeding Future

- Historically known for
 - Yellow, greenish, or cream-colored pigments
 - Compact plants
 - Blooming year round
 - Dominate floral shape and size
- With *Phal. cornu-cervi* f. *chattaladae* breeding red could be added, keeping other traits
 - Trend towards solid red
- Clearly interest is increasing



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