

# Species Data Sheet

## **Paphiopedilum charlesworthii** (Rolfe) Pfitzer, Bot. Jahrb. Syst. 19: 40 (1894)

[Paff-ee-oh-PEH-di-lum Charles-WOR-thee-eye]

*Paphiopedilum charlesworthii* is found in Southeast Asia on isolated peaks at elevations of 1200 to 2000 meters (4000 – 6600 ft.) in deep shade on western or northwest facing slopes where it is a cool growing epiphyte growing in leaf mold on limestone rock. It is as a relatively small plant, with 4 – 6 green leaves (up to 15 cm (6 in.) long) in the fan. A distinctive leaf feature when not in bloom is the leaf undersurface is covered with purple marbling toward the base, making it easy to recognize when not in bloom. The long-lasting flowers occur in the late summer and fall on a single flowered, pubescent, terminal, erect, to 10" [25 cm] long inflorescence covered with reddish spots.

The flower has a distinct dorsal sepal almost twice as broad as it is long, its color is pink with deeper pink venation. The margins pale to white with soft pink veins and reflex to some degree basally. The dorsal measures 4.5 – 5.5 cm (1.75 – 2.25 in.) in length by 5.5 – 7 cm (2.25 – 2.75 in.) in width. The synsepal is smaller 4 cm (1.5 in.) long by 2 – 3 cm (0.75 – 1.2 in.) wide and is pale green veined ocher.

The spatulate petals are pale yellowish green veined with reticular patterns in ocher. They are held horizontally and curve forward, measuring 4 – 4.5 cm (1.5 – 1.75 in.) long by 1 – 1.5 cm (0.3 – 0.7 in.) wide. The pouch is ocher flushed with pink and veined with brown. The inner surface is hirsute. The distinctive staminode is bone-white.

Modern line breeding has changed the shape of the flower from angular with a reflexed dorsal sepal to a rounded flower with a flat dorsal sepal. This is one of the most important species for breeding modern mini slippers and has also played a significant role in the breeding of the large standard-complex hybrids. It makes excellent hybrids that retain their fertility when mated to species in section *Barbata*.

### **Synonyms:**

No modern synonyms

### **Varieties / forms:**

*Phap. charlesworthii* f. *sandowiae* – is the album form, recognized in 1998.



*Paphiopedilum charlesworthii*  
'Miao Hua Star' FCC/AOS  
Mar 2012, NS 9.0 x 9.0 cm



*Paph. charlesworthii* f. *sandowiae* (album)  
'Sam's Choice', FCC/AOS  
Feb 2012, NS 9.0 x 9.0 cm

## Awards:

	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS	3	31	25		1	5				65
Year(s) Awarded	1991-2012	1973-2018	1975-2016		1991	1973-2010				

It is interesting that *C. charlesworthii* has only recently been receiving awards and that of the 65 awards 17 have been for the album (*f. sandowiae*) form (first award, HCC, in 1993; next AM in 2008).

## Breeding Characteristics:

Initial glance at *Paphiopedilum charlesworthii* registration data would seem to indicate that it has been used quite a bit in breeding, with a steady growth in use and a surge in 1970s. But when one looks at the generation data it takes on a different indication.

	Registration Decade														
	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	Total
<b>Paph. charlesworthii</b>															
Register Crosses	0	16	72	53	55	87	63	76	60	374	326	402	545	652	2781
Assoc. Awards	0	0	11	7	4	11	6	20	104	164	150	126	111	93	807
Register F1 Crosses	0	16	68	4	7	7	3	2	0	8	10	36	49	52	262
Assoc. F1 Awards	0	0	11	4	2	0	1	0	0	11	17	36	37	18	137
Register F2 Crosses	0	0	3	45	28	32	19	11	4	7	13	19	28	55	264
Assoc. F2 Awards	0	0	0	3	2	2	0	0	0	2	1	6	15	10	41
Register F3 Crosses	0	0	0	3	20	40	15	20	8	18	13	5	17	25	184
Assoc. F3 Awards	0	0	0	0	0	8	0	0	3	11	1	0	0	5	28

From the above table, there has been almost 3,000 hybrids made with *Paph. charlesworthii* as a parent, but there was defiantly a peak in breeding interest around 1900s and that interest was NOT rekindled until 1970s and is still growing. This trend also shows up in the second and third generation data but offset from the previous generation data by 10 to 20 years. Looking closer at the data, there are two grexes that make up the majority of the early *Paph. charlesworthii* progeny, *Paph. Bingleyense* (1899) (*Paph. charlesworthii* x *Paph. Harrisianum*) and *Paph. Cynthia* (1) (*Paph. charlesworthii* x *Paph. Nitens-Leanum*). The impact of these two crosses is shown in the following table.

	Registration Decade														
	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	Total
<b>Paph. charlesworthii</b>															
Register Crosses	0	16	72	53	55	87	63	76	60	374	326	402	545	652	2781
Assoc. Awards	0	0	11	7	4	11	6	20	104	164	150	126	111	93	807
<b>Paph. Bingleyense (1899)</b>															
Register F1 Crosses	0	1	0	10	6	27	30	19	21	168	105	132	145	185	849
Assoc. F1 Awards	0	0	0	3	1	10	5	0	30	34	92	38	17	30	260
<b>Paph. Cynthia (1) (There are at least 57 duplicate Paph. Bingleyense (1899) grexes)</b>															
Register F2 Crosses	0	0	2	2	6	8	8	16	33	196	200	225	327	363	1386
Assoc. F2 Awards	0	0	0	0	0	0	0	20	74	123	40	56	42	34	389
<b>P. charlesworthii - (P. Bingleyense + P. Cynthia) (There are at least 57 additional grexes due to progeny duplication)</b>															
Register F3 Crosses	0	15	70	41	43	52	25	41	6	10	21	45	73	104	546
Assoc. F3 Awards	0	0	11	4	3	1	1	0	0	7	18	32	52	29	158

NOTE: The 56 duplicate progeny start in 1969 thru 2018, no major joint lines (most progeny 4), and account for 10 awards to 6 grexes.

Clearly, Paph. Bingleyense (1899) and Paph. Cynthia (1) are both major lines of Paph. charlesworthii breeding, but there has been interest in investigating new lines in the last 30 to 50 years. The remainder of this report will attempt a very brief review of not only the two established breeding lines but also investigate some of the new breeding lines as identified in the following table.

Species marked with a * are used the most in hybridization					Progeny	AOS Awards								Total	
Kew Name	Parent 1	Parent 2	Year	Hybridizer	F1/Total	FCC	AM	HCC	JCAD	AQ	CCE	CCM	CHM	CBR	Total
Paphiopedilum Bingleyense	Paph. charlesworthii	Paph. Harrisianum	1899	Keeling	30/826										0
Paphiopedilum Nubian	Paph. Bingleyense	Unknown	1934	Unknown	27/719										0
Paphiopedilum Redstart	Paph. Nubian	Paph. Nitens	1935	Unknown	50/493										0
Paphiopedilum Orchilla	Paph. Paeony	Paph. Redstart	1963	Ratcliffe	84/126	1	1	1							3
Paphiopedilum Startler	Paph. Masked Light	Paph. Redstart	1962	Ratcliffe	47/65		5	1							6
Paphiopedilum Conrad	Paph. Redstart	Paph. Condia	1952	Mansell & Hatcher	1/176										0
Paphiopedilum Tapestry	Paph. Conrad	Paph. Gitana	1965	Ratcliffe	29/175		1								1
Paphiopedilum Baroque	Paph. Tapestry	Paph. Peter Adam	1965	Ratcliffe	36/70										0
Paphiopedilum Royale	Paph. Paeony	Paph. Tapestry	1965	Ratcliffe	26/56										0
Paphiopedilum Tafel Rose	Paph. Hellas	Paph. Nubian	1965	Ratcliffe	7/136										0
Paphiopedilum Anja	Paph. Tafel Rose	Paph. Deadwood Trail	1982	F. Hark	28/123		1	1							2
Paphiopedilum Lippewunder	Paph. Anja	Paph. Memoria Arthur Falk	1989	F. Hark	89/94		3	4							7
Paphiopedilum Cynthia (1)	Paph. charlesworthii	Paph. Nitens-Leeanum	1907	Sir George Holford	4/1341										0
Paphiopedilum Muriel II	Paph. Cynthia (1)	Paph. Hera (1892)	1920	Sir George Holford	4/1328										0
Paphiopedilum Decameron	Paph. Garibaldi	Paph. Muriel	1932	Alexander	14/1312										0
Paphiopedilum Sheba (1941)	Paph. Decameron	Paph. Memoria J. H. Walker	1941	Alexander	22/550										0
Paphiopedilum Gigi	Paph. Sheba (1941)	Paph. Momag	1958	Alexander	101/421		3	2				1			6
Paphiopedilum Margaret	Paph. Decameron	Paph. Eider	1941	Alexander	7/761										0
Paphiopedilum Santa Margarita	Paph. Margaret	Paph. Paterglen	1957	E. W. McLellan	45/531		1	3							4
Paphiopedilum Sandra Mary	Paph. Nayo	Paph. Santa Margarita	1963	Rod McLellan Co.	76/405			3							3
Paphiopedilum Progress	Paph. John Dovan	Paph. Decameron	1969	J. Hanes	9/92										0
Paphiopedilum Telesis	Paph. Vallarow	Paph. Progress	1972	J. Hanes	27/82			1							1
Paphiopedilum Blacklight	Paph. Red Maude	Paph. charlesworthii	1993	T. Root	12/15		6								6
Paphiopedilum Tatung Stronger	Paph. Blacklight	Paph. Black Velvet	2004	Ching Hua	0/0										0
Paphiopedilum Doll's Kobold	Paph. charlesworthii	Paph. henryanum	1992	H. Doll	5/15		4	2				2			8
Paphiopedilum Hilo Charlee	Paph. Hilo Glory	Paph. charlesworthii	2012	J. Fang	0/0		3	3							6
Paphiopedilum Mrs. Haywood	Paph. charlesworthii	Paph. T. B. Haywood	1905	Mrs. Haywood	6/6			1	1			1			3
Paphiopedilum Schaezchen	Paph. Maudiae	Paph. charlesworthii	1974	A. Rohl	1/1		1	1	1			1			4
Paphiopedilum Flasher	Paph. charlesworthii	Paph. Goultenianum	1988	T. Root	11/38		4								4
Paphiopedilum Western Sky	Paph. Yerba Buena	Paph. charlesworthii	1988	T. Root	15/17		1	2							3

Paph. charlesworthii has made a smaller contribution overall to Paphiopedilum breeding than one would expect. The broad pink dorsal sepal and the enhancement of purple / red colored flowers are dominant but so is a shortening of the inflorescences and the narrow brown petals (major negatives).

## Major Hybrids:

**Paph. Bingleyense (1899)** (Paph. charlesworthii x Paph. Harrisianum), 1899, Keeling, 30 F1 and 848 total progeny, no awards. Major progeny in this line are:

**Paph. Lippewunder** (Paph. Anja x Paph. Memoria Arthur Falk), 1989, F. Hark, 89 F1 and 94 total progeny, 7 AOS awards (3 AM, 4 HCCs); **Paph. Orchilla** (Paph. Paeony x Paph. Redstart), 1962, Ratcliffe, 84 F1 and 126 total progeny, 3 AOS awards (1 FCC, 1 AM, 1 HCC); **Paph. Redstart** (Paph. Nubian x Paph. Nitens), 1935, Unknown, 50 F1 and 493 total progeny, no awards; **Paph. Startler** (Paph. Masked Light x Paph. Redstart), 1962, Ratcliffe, 47 F1 and 65 total progeny, 6 AOS awards (5 AMs, 1 HCC); **Paph. Plumfairie** (Paph. Plumly x Paph. fairrieanum), 1982, Rod McLellan Co., no progeny, 6 AOS awards (2 AMs, 4 HCCs).



Paph. Lippewunder  
'Joyce' AM/AOS  
Dec 2013, NS 12.8 x 11.6 cm



Paph. Orchilla  
'Chilton' FCC/AOS  
Jan 1973, NS 10.0 cm



Paph. Redstart  
'Exbury' AM/RHS  
Nov 1931



Paph. Startler  
'Glace' AM/AOS  
Dec 1969, NS 10.2 cm



Paph. Plumfairie  
'Little Plum' AM/AOS  
Nov 1982, NS 8.5 cm

**Paph. Cynthia (1)** (Paph. charlesworthii x Paph. Nitens-Leeanum), 1907, Sir George Holford, 4 F1 and 1341 total progeny, no awards. Major progeny in this line are:

**Paph. Gigi** (Paph. Sheba (1941) x Paph. Momag), 1958, Alexander, 101 F1 and 421 total progeny, 6 AOS awards (3 AMs, 2 HCCs, 1 CCM); **Paph. Sandra Mary** (Paph. Noyo x Paph. Santa Margarita), 1963, Rod McLellan Co., 76 F1 and 414 total progeny, 3 HCC/AOS awards; **Paph. Sioux** (Paph. Winston Churchill x Paph. Gigi), 1969, W. W. Wilson, 47 F1 and 118 total progeny, 39 AOS awards (25 AMs, 13 HCCs, 1 AQ); **Paph. Frostlight** (Paph. Stoke Poges x Paph. Gigi), 1975, J. Hanes, 5 F1 and 8 total progeny, 6 AOS awards (2 AMs, 4 HCCs); **Paph. Edward Marshall Boehm** (Paph. Peralta x Paph. Santa Margarita), 1969, Rod McLellan Co., 16 F1 and 17 total progeny, 8 AOS awards (4 AMs, 4 HCCs).



Paph. Gigi  
'Claymore' AM/AOS  
Nov 1973, NS 12.3 cm



Paph. Sandra Mary  
'Empire' HCC/AOS  
Mar 1966



Paph. Sioux  
'Dove' AM/AOS  
Dec 1986, NS 12.0 cm



Paph. Frostlight  
'Julio Franchini' AM/AOS  
Nov 1984, NS 10.6 cm



Paph. Edward Marshall Boehm  
'Green Wood' AM/AOS  
Mar 1976, NS 11.0 x 10.0 cm

Top award winners without Paph. Bingleyense (1899) or Paph. Cynthia (1) parentage.

**Paph. Tatung Stronger** (Paph. Blacklight x Paph. Black Velvet), 2004, Ta-Tung Orchids, no progeny, no AOS awards;  
**Paph. Doll's Kobold** (Paph. Red Maude x Paph. charlesworthii), 1993, T. Root, 14 F1 and 18 total progeny, 6 AM/AOS awards;  
**Paph. Blacklight** (Paph. Red Maude x Paph. charlesworthii), 1993, T. Root, 14 F1 and 18 total progeny, 6 AM/AOS awards;  
**Paph. Hilo Charlee** (Paph. Hilo Glory x Paph. charlesworthii), 2012, J. Fang, no progeny, 6 AOS awards, (3 AMs, 3 HCCs).



Paph. Doll's Kobold  
 'Mindi' AM/AOS  
 Sep 2004, NS 7.0 x 7.4 cm

Paph. Blacklight  
 'Konrad' AM/AOS  
 Feb 1997, NS 10.9 x 8.4 cm

Paph. Hilo Charlee  
 'Sunprarie' AM/AOS  
 Sep 2014, NS 10.1 x 8.8 cm

Paph. Tatung Stronger  
 'Gemini' TRO/TOGA  
 Mar 1966

**AOS 'Awardees' Registered in 2018-2019 (less than 7<sup>th</sup> Generation):**



Paph. Little Linda  
 'Deerwood' HCC/AOS  
 Jan 2019, NS 8.5 x 6.0 cm  
 (Paph. Linda Sizer x  
 Paph. Little by Little)

Paph. Giant Wunder  
 'Mem. Patricia June' AM/AOS  
 Feb 2019, NS 12.4 x 11.5 cm  
 (Paph. Giantstone x  
 Paph. Lippewunder)

Paph. Pacific Wunder  
 'White Summit' HCC/AOS  
 Jan 2018, NS 12.3 x 11.5 cm  
 (Paph. Pacific Fire x  
 Paph. Lippewunder)

Paph. Mem. Robert Wimmer  
 'Beverly, Brad & Patty' AM/AOS  
 Nov 2018, NS 9.7 x 7.3 cm  
 (Paph. Rainbow Sky x  
 Paph. Coconut Candy)

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# Species Data Sheet

**Paphiopedilum coccineum** Perner & R.Herrm., Orchidee (Hamburg) 51: 623 (2000)

[Paff-ee-oh-PEH-di-lum kok-SIN-ee-um]

Found in Vietnam this miniature, intermediate growing as scattered plants or small colonies in thin soil, leaf litter filled cracks or on ridges near the summits of eroded limestone mountains at elevations of 600 to 1000 meters (2000 to 3300 feet) in light shade. The fan consist of 4 to 6 leaves that range from 8 to 14 cm (3 to 6 in.) long by 0.5 to 1.5 cm (0.2 to 0.6 in.) wide and are uniformly green. It blooms in the



Paphiopedilum coccineum

September – November on a terminal, 14 to 18 cm [5 to 7 in.] long, single flowered brown-purple inflorescence. The flowers have a horizontal natural spread of 6 to 10 cm (2 to 4 in.). The dorsal sepal is white with carmine or carmine – brown center and the synsepal is pale green. The petals are dull brown to greenish brown with yellowish – brown to carmine – brown overlay centrally. The lip is yellowish – brown to carmine – brown with a light yellow staminode.

The plants are similar to

Paphiopedilum barbigerum but are different by the larger flowers and the carmine or carmine-brown center of the dorsal sepal.

## Synonyms:

Paphiopedilum barbigerum var. lockianum

Paphiopedilum barbigerum var. coccineum

## Varieties / forms:

Paph. coccineum f. aureum: Dorsal sepal white; petals yellow – green; pouch white, rim pale yellow-green; staminode pale yellow-green.

## Awards:

Paphiopedilum coccineum has received only one AOS award.



Paphiopedilum coccineum  
'Cao Bang' CHM/AOS  
Nov 2017, NS 6.3 x 6.1 cm



Paphiopedilum coccineum f. aureum

	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS								1		1
Year(s) Awarded								2017		

## **Breeding Characteristics:**

Only two hybrids have been registered both in 2018, although in reading the literature there was at least one cross made and registered with *Paphiopedilum barbigerum* var. *coccineum* as one parent. No breeding information available, potential stepping stone for red miniature paphiopedilums.

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Paphiopedilum Rene  
(Paph. tranlienianum x  
Paph. barbigerum var coccineum)

## Award Descriptions (September Report)



### **Paphiopedilum Irish Tiger – Quality Award Description**

(Paph. Hawaiian Shamrock x Paph. Hung Sheng Tiger Cat)

One round slightly cupped flower on one inflorescence; dorsal sepal white, centrally yellow-green, spotted dark maroon; synsepal pale green; petals yellow, superior overlay maroon, inferior lightly veined maroon, proximal maroon spotting; pouch yellow; distally overlaid maroon, interior finely spotted maroon; staminode yellow basally heavily fine spotted maroon; substance hard; texture glossy.

### **Paphiopedilum Wei-Ling Ting –**

#### **Quality Award Description**

(Paph. Ruby Voodoo x Paph. charlesworthii)

One flower on one inflorescence; dorsal sepal slightly cupped, red-purple, darker basally; synsepal cream overlaid light red-purple; petals dark red-purple, margins hirsute; pouch dark red purple; staminode light red-purple; substance firm; texture glossy.



### **Paphiopedilum Pacific Wonder – Cultural Award Description**

(Paph. Pacific Shamrock x Paph. Lippewunder)

Nine cupped round flowers on nine inflorescences presented on a robust plant with blemish-free dark-green foliage in a 6 inch [15 cm] plastic pot; dorsal sepal yellow, centrally overlaid brown, transitioning brown veins; synsepal pale green; petals yellow, lightly veined brown, darker superiorly, broad brown mid vein; pouch yellow-green, light brown overlay distally, spotted brown interior; staminode yellow, orange-yellow central spot; substance

firm; texture waxy.

### **Paphiopedilum Tsububa Redstar – Quality Award Description**

(Paph. Tokyo Red Mary x Paph. Katsutawin)

Two slightly cupped flowers on two inflorescence; dorsal sepal white, proximally overlaid light yellow-green, centrally spotted dark mahogany convelescung along veins; synsepal pale green; petals yellow green overlaid dark mahogany, very dark mahogany central vein; pouch yellow green heavy overlay dark mahogany, interior spotted mahogany; synsepal yellow green, orange-yellow central spot, finely spotted mahogany convelescung at base to heavy overlay; substance firm; texture shiny.



### **Paphiopedilum Veiled Charm – Quality Award Description**

(Paph. In Shape x Paph. Satin Veil)

One flat flower on an 15-cm inflorescence; dorsal sepal white, dark lime green centrally; synsepal pale green; petals yellow-green, lime green veins, margins undulating; pouch yellow green; staminode light yellow, orange-yellow central spot; substance firm; texture glossy.